

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

Transwave Bonanza

Craig Anderton



For: EPS-16 PLUS, ASR-10, TS-10/12.
Product: *Transwave Sound Library* (V1.0 reviewed).
Price: \$69.00.
From: Waveboy Industries, PO Box 233,
Paoli, PA 19301, phone: (610) 251-9562.

Ever wonder how a review happens? Here's how. Jane called me up one day and said "There's a new Waveboy product coming soon. Should I send it to you for review?" That's kind of like asking if I'd like to review what two weeks in the south of France would be like. Well, maybe it's not quite that big a deal, but even this occasionally-cynical reviewer gets a genuine twinge of excitement whenever new weirdness is slated to come out of Paoli, PA.

We've already covered the *Parallel Effects*, *Audio In Effects*, *Resonant Filter*, and *Voder* disks; all are excellent. The latest is a five-disk set of new transwaves, and if you're into dance music, weird effects, sound design, resonant filter sweeps, pulse width modulation, hard sync, and other hallmarks of analog synthesis, this is a must-have set.

What? Analog synths? Aren't we invariably dialing for digital in Ensoniq-land? Well, call me foolish (or maybe it's because I was around for the first iteration), but I think that analog synths have acquired an unwarranted hip status. The only things they do substantially better than digital are:

1. Smooth modulation sweeps, thanks to no quantizing.
2. White noise.
3. Filtering, especially resonant filtering.

Of these, (1) is the most important to me and the reason why I still have analog synths. (2) is less crucial, and besides, you can always sample analog white noise if you want that sound. (3) is also important, but digital filters are getting good enough so that even if they don't do analog perfectly, neither can analog filters get the same crispness as digital filters.

The bottom line: The myth that only

In This Issue ...

Articles:

- Customizing Your KT Workspace – Part III
Robby Berman 4
- Using the Ensoniq Presets – Part II
Frank Fortunato 7
- Audio for the Internet
Steve Vincent 10
- Waveform Mutilation 101 – Roll-Ups
Jack Stephen Tolin 13
- Drum Sequencing From A Keyboard
Steve Byhurst 19
- Why I (Still) Love My Mirage
Johnny Klonaris 22
- Music Business Computer & Software
Jeffrey Fisher 23

Reviews:

- Transwave Bonanza
Craig Anderton cover
- Sonic Arts CDR-6
Pat Finnigan 6

Regular Stuff:

- Random Notes 3
- Hypersoniq 3
- Hacker Reinitialization – SQ/KS/KT Series
Filters
Clark Salisbury 17
- Hackerpatches – *Rhoads*
SQ/KS/KT: Merlin, Jack Carder 21
- Classifieds 25
- Current O.S. 25
- The Interface 26
- Hacker Booteeq 30

analog synths work for particular types of music (dance, techno, jungle, etc.) is bogus. Analog sweeps create a particular "feel," and there's no need to slavishly imitate the same exact sound as long as you remain true to the concept of the sound changing over time, unlike the static snapshots of sample playback-only synths.

The Transwave Sound Library provides 27 evolving waveforms that range from dead-ringer analog to clangorous digital. Most are based on Transwave loop modulation (these vary from approximately 150 to 600 blocks in size, averaging around 300) with a few based on LoopStart-X modulation (these are generally well under 100 blocks).

LoopStart-X options sound the roughest when swept, so they work well when modulated by velocity or noise. Standard Transwaves are generally much smoother, although with some, the transitions between wave steps are fairly obvious. Changing the modulation source, throwing on some reverb (the sonic equivalent of caulking), or pulling back on the filter a tad usually fixes this. This doesn't impair your ability to enjoy the sounds, just that after going on about how "analog" these disks are, I don't want to raise false expectations that every sound is an analog clone. On the other hand, it's the blend of the classic and new sounds that make this set so successful to me.

Here's the disk-by-disk rundown. Note that if you select patch 4 (both patch buttons pushed), you can hear the raw Transwave sound, while the other patch select buttons add effects and other goodies to give more of a musical context.

Disk 101: Cyborg, a vocal-sounding wave, is a little rough when you sweep the mod wheel — sort of like hard sync. The three resonant filter waves (Fat Sqr Rez, 303 Saw, and Classic Pad) are dance-ready analog sweeps that are smooth and defined. If I had to be picky, the range isn't quite as wide as the analog equivalent, but it's close enough. LSX25 Squeek uses the LoopStart-X mode; as expected, it sounds pretty rough when you slide through it with the mod wheel. The example patch uses white noise to modulate the index, which tames the sound considerably. It also works well when modulated by velocity.

Disk 102: Harmonicom is a cross between a vocoder, hard sync, and something possibly extraterrestrial. I'm sure Julie Vox, based on sampled vowels, will provide the "talking machine" sound in some sci-fi flick before the end of the year. Rez Fretless is the ultimate ambient swept bass sound, while Draw Monkey is organ-like — as the manual says, it's like playing a Hammond with an infinite number of monkeys changing the drawbars. Moving to the two LoopStart-X patches we have XStinct, a rude, hard sync patch that will greatly impress your industrial friends, and LSX27 Pad,

which is somewhat darker and reminiscent of FM clav-type sounds.

Disk 103: Check out the Arnd Kaiser techno dance sequence, which loads Instruments from Waveboy disks 1, 3, and 4. Individual sounds include PWM Synth, which is just like analog pulse width modulation emulation except the duty cycle doesn't go below 5%. FM Xmitter is an FM-based Transwave, and Glass Cave makes burbly, hollow kind of sounds when swept. A bonus Instrument, Alibi Drums, is also on disk for use with the demo sequence.

Disk 104: 2 B Random is bell-like; sweeping the raw Transwave reveals a bunch of seemingly disconnected waves, but using random modulation brings out its best qualities. Rez Clovis is "clavinet meets resonant Moog filter." Hai Qu is more of a straight-ahead analog filter sound. Bell Bip FM makes those great FM sounds you can get by having way too much modulation feeding a carrier. Warm Bass is, simply stated, worth the price of admission: double-dare your friends to distinguish it from analog in a blind test. I just wish you could sweep the high end up a few more notches.

Disk 105: This has five Transwaves and three LoopStart-X waves. Lightyears is a kinder, gentler Transwave that sounds like sine waves at a hard sync convention. Rez Wheely is a high-resonance, vaguely out of control sound, while Rude Rez is actually the more polite of the two in its raw form — top-notch, smooth resonant pulse wave effects. However, the associated patch adds a little distortion to create the rudeness referred to in the name. In its raw form, Corona sounds identical to Lightyears — I could hear no difference at all. Hmm...

Sweeping Saw(tooth) is just that, although like some of the other analog sounds, I wish it had just a bit wider range, especially on the high end. The three LoopStart X patches close out the set with hard sync-like and filter sweep sounds; these are tuff patches that require some filtering and effects to be tamed properly. Fun stuff.

So what's the verdict? Even though this five-disk set is priced a little higher than previous single-disk products, the sounds you get are worth the bucks. Once again, Waveboy has come up with a way to enhance your EPS/ASR/TS that's innovative and useful.

Bio: Craig Anderton wants to take these few lines to plug his site on AOL ("Craig Anderton's Sound, Studio, and Stage," keyword SSS). It has forums, demo software, over 40 megabytes of AIFF and WAV samples, an articles library, events calendar, online magazines, and much more. It's totally subscriber-supported, and way cool.

Front Panel

RND ()

Hacker News

We're still looking for someone who can put SQ, KT, VFX or TS patches into an "Internet-able" format. Give us a call: 503-227-6948. Speaking of opportunities for fame... this is also a good time to try a shot at writing for the *Hacker*. Share your wit and wisdom. Same phone number. Make the call.

Third-Party News

We'd like to welcome a new advertiser, the oddly named *DinosaurRemains* — vintage sounds for the EPS, or, as they put it, "bits of musical DNA from the '60s and '70s, brought back to life for the '90s"

* * *

Gary Giebler has posted the following to the EPS/ASR e-mail list:

IOMEGA ZIP Drives manufactured after September 1995 can *not* be used with Ensoniq keyboards to format data cartridges. IOMEGA's latest revision of the drive rejects the industry-standard SCSI FORMAT UNIT command which Ensoniq keyboards send. The variation of the FOR-

MAT command which Ensoniq uses was chosen because the command *must* be supported in order for a drive to claim SCSI compatibility. The latest rev of the Zip drives DO NOT support this mandatory command. Earlier revisions of the ZIP drives support the format command and can be formatted on Ensoniq keyboards as long as the data cartridge is not write-protected. We have not yet determined the exact starting date of the affected drives, but it appears to be within a three month period from July to September 1995.

It may be possible to identify the drives by their serial number: Drives manufactured before Serial# RA751681-AM correctly implement the Format command. Drives manufactured after Serial# RA9F46B91F do not correctly implement the Format command. The cutoff point is somewhere between these two serial numbers.

PLEASE NOTE: The current drives can still be used to read or write Ensoniq formatted cartridges — they just can't format them. Also, the drives can still be formatted and used on the PC and MAC since Iomega's utilities use an optional variation of the SCSI FORMAT command which the drives still support.

Ensoniq, Giebler Enterprises, Iomega and Glyph are currently investigating this problem. More information should be available soon, and we will keep you informed.

HYPERSONIQ

New Product Announcements

MIDI Mark Productions announces a price revision on "*Powerhouse — the bomb CD-ROM*." It now sells for only \$199 — down from its former \$299 price. This CD-ROM contains everything from drums to strings and includes over 1,100 multi-sampled instruments. Also new is the ASR CD-ROM drive which will also sell for \$199 when purchased along with the "*Powerhouse*" CD-ROM disk. Alone, the drive sells for \$249 plus \$7 shipping. For further information, contact, MIDI Mark Productions, P.O. Box 217, Whittier, CA 90608, phone: 800-301-MIDI (6434), Fax: 310-699-0864, e-mail: MIDIMARK7@aol.com.

Tech Star announces the *Variety Pack*. The *Variety Pack* consists of many of the best sounds from the *Collection*

Sets including realistic choirs, B3 Organs, D50 pads, thick and deep analog and digital basses, warm Oberheim strings, Rhodes and Wurlitzer Electric Pianos, analog and digital pads, a full acoustic piano and many more. There are over 50 sounds in this set! Also, with the purchase of the *Variety Pack* customers can add on *Drum Collections* 1 and 2 (6 HD or 12 DD disks) for only \$29.95 (regularly \$39.90). Both *Drum Collections* give you over 350 Acoustic and electric percussion sounds (bass and snare drums, tom toms, cowbells, rimshots, blocks, handclaps, bongos, hi-hats, cymbals, mallets, vibes, percussion FX, African drums, tambourines, bells and more). Tech Star is also now accepting Visa and Mastercard. For further information, contact: Tech Star, PO Box 463236, Mt. Clemens, MI 48046, phone: 810-783-0470.

Customizing your KT Workspace

Part 3 — Feet, Don't Fail Us Now

Robby Berman

Okay, what's the state of your feet? Shod or unshod? If shod, are you sneakered, shod or booted? If non-shod, sox or barefoot? If barefoot, dirty or clean? You may think this is none of my business, but you're going to need those peds for this article in our (so-far-) continuing series on customizing your KT work environment. And you're gonna need them clean. Tootsies together? Good.

The Joy of Bipedalism

Let's take a moment to discuss the virtues of double foot-pedals, or in Ensoniq-speak, the SW-10. You can certainly use the KT with a single footswitch, the SW-2 or SW-6 (Hmmm. It seems like it would take two SW-2's and a 6 to equal an SW-10, no?). But you'll find playing the KT a lot more enjoyable with a double. For one thing, it won't drift away from you on the floor as much as a single. More importantly, you can use the double footswitch to make your KT experience significantly more pianistic on one hand, or more convenient if you're a sequence jockeying one-person band. You'll see what I mean in what follows. Double foot pedals can also make life more spatially interesting: a friend was over here last night playing my keyboard, and I noticed this morning that my double foot pedal was positioned sideways. I've been trying all day to figure out what he knows that I don't.

You Put Your Left Foot In...

Press the System*MIDI button, and then the lower 2 button. The display will show FtswL= and FtswR=. "Ftsw" stands for "foot sweat." Wait. That's wrong; it's "foot-switch. (I told you you'd need clean footsies.)

FtswL is only relevant for users with, yup, you guessed it, dirty feet. NONONO, I mean a double footswitch. We'll get to FtswL in a moment, but in deference to the

monopeds among us, we'll deal with FtswR first, which is always relevant.

The FtswR parameter lets you change the behavior of the right-hand footswitch, or the plain-old-footswitch if you've only got one. Typically, this footswitch is set to SUSTAIN, in which case, obviously, it behaves like a sustain pedal on an acoustic piano. This is probably how you want it set when you're playing normally (something only some of us are capable of, and then only some of the time).

If you perform using the KT sequencer, however, you should consider setting it to the other possibility, STOP/CONT. Setting the footswitch to STOP/CONT lets you start your sequencer with your foot. This is especially handy for giggers who play guitar or another hands-requiring instrument along with their sequences. It allows you to kick in the backing music with your foot while you play along, using your upper digits.

A warning though: since this is a STOP/CONT switch instead of a START switch, you'll want to make sure your sequence is cued up to where you want it to start before you hit the pedal. It won't search for the top of the music, but will continue from wherever it is. If you want to use the STOP/CONT switch in situations where you're starting and stopping the sequence in the middle—for instance, when you practice—you'll need to use the Goto command to get back to the top of the song/sequence before you press the footswitch again. If you're gigging, simply selecting the song will cue you up properly at the top.

On to the FtswL setting. If you've only got a single footswitch, you'll want to leave this set to UNUSED; the KT will be happier that way. If you've got a double footswitch, the left pedal can be set to either STOP/CONT, just like the right switch, or to sostenuto, which emulates the pedal of the same name in acoustic pianos.

This pedal will sustain any notes you're actually fingering when you depress it (oh, wow, bummer, man), and any new notes you play subsequently will not be sustained. Setting this pedal to *sostenuto* and the right to sustain (or, if my friend were playing them, the lower pedal to *sostenuto* and the upper to sustain) makes playing KT piano sounds feel quite organic, what with the weighted keys and all them notes.

Yikes, another warning. Make sure you know what your footpedals are set to, especially if you gig with the KT. This same guy I've been mentioning all through this article loaned his keyboard (I think it was an SD-1) to a friend a few years back without telling him the left pedal was set to STOP/CONT. Honest-to-Whoever, his friend was playing a wedding processional when he went — poor man — for the left pedal, expecting *sostenuto*. What he got instead was the sequencer, and the happy couple crossed the threshold to wedded eternity to the tune of "You Can't touch This," or at least the few bars that escaped before the SD was frantically slammed off.

The Joys of Tri-Pedalism

Okay, none of us has three feet, but it's still a good idea to get a CV pedal. CV pedals can go a long way toward making your music more animated and exciting. Press the lower 3 button-voila! The top line sez "CV-Pedal= something or other."

If you're an organ player, you know the value of volume swells and decrescendi ("—does"?). With this parameter set to VOL #7, the CV pedal becomes a volume pedal for any KT sound you choose to use. The #7, by the way, refers to MIDI controller #7, which is used for volume control. If you're running an outboard sound module or effects box from the KT, you can control its volume via MIDI using this pedal. You can also use the CV pedal to record track volume changes into the KT's sequencer (or an external sequencer, for that matter).

If you set the CV pedal to MOD #4, you can employ pedal moves as a modulator for KT sounds, just as you would use a mod wheel or any other controller. This can be a heaven-send when your hands are too busy on the keyboard to allow you to twiddle the mod wheel; you can program sounds to use the PEDAL as a modulation source instead of the wheel. Truthfully, the feel of a foot-pedal is so different from flipping a wheel that you may find the pedal is a more musically appropriate modulator for any sound where body English seems in order. The #4

signifies, yup, that your pedal moves are also transmitted via MIDI. Any outboard stuff you have that can respond to MIDI controller #4 can be programmed to respond to your KT footpedal.

Clean-Up Time

Though it's got nothing to do with your feet, there is one more parameter we should knock off here to clear the decks for our next group of System params. They're MIDI params, and they're a rowdy bunch, I'll tell ya.

Back in the old daze — yes, before there were effect processors built into workstations — Ensoniq keyboards had a cool feature that would let you play a sound and, while its notes were still ringing off, select a new sound that you could play over the sustained notes. Most other companies killed off the earlier notes when a new sound was selected. Ensoniqs can still do what they used to do, but the advent of effects has complicated things. When two sounds use different effects, the audio has to shut down for a moment in between sounds as the new effects parameters are downloaded into the effects chip. This can lead to a rag-tag, probably undesirable, cutting off of the sustaining notes. If the two sounds use the same effect algorithm, they don't have to shut down, and everything is hunk-groovy. The Voice Muting parameter lets you decide how this will all occur. If you're going to be switching between sounds helter skelter (or hither and thither), you're probably safest setting Voice Muting to ON, so that when the KT goes from one sound to another, the notes of the first sound cut off predictably and smoothly. If, however, you want to be able to switch between sounds that use the same effect without the notes being deliberately lopped off, turn Voice Muting OFF. I've used this to great effect, playing sustaining string pads and then switching to flutes or bells and playing over the still-sounding strings.



Next time: MIDI Heck! ■

Bio: Robby Berman is a musician with many more pedals than feet, living in New York's Mid-Hudson Valley. His latest album is "Rings and Rings."

The Sonic Arts CDR-6 Review

Pat Finnigan

Product: Sonic Arts CDR-6 CDROM.

For: ASR & TS variants.

Price: \$199.95.

From: Sonic Arts & distributed by Ensoniq, 155 Great Valley Parkway, Malvern, PA 19355. Phone: (610) 647-3930 or contact your local Ensoniq dealer.

This month's CD du jour comes from those crafty people up in Michigan who took over Eltekon. If you don't remember, Eltekon was the first company to offer SCSI drives for the EPS back in 1988; if you're a veteran reader, you'll also remember they advertised their wares, including the first rackmount and roadworthy hard drives right here in the *Hacker* (in full page ads!). I still have one of their \$1200 80 MB rackmount drives (and still ticking since 1988), and they're still doing business under the aegis of Sonic Arts/Ramtek. [Ed. — *From here at the Hacker, Ramtek's continuing existence is at least somewhat in doubt (deja vu all over again...).* However, Sonic Arts assures us that they are a separate company, and, in any case, the disk is also distributed by Ensoniq — so not to worry.] Since those days, prices have fallen (considerably!), hardware is plentiful and affordable, and, where Ramtek is the hardware antennae, Sonic Arts is the software antennae. These guys have culled favor from Ensoniq and released this latest CD-ROM as Ensoniq's own CDR-6. So let's warm up the Hackerizer and puree this latest offering.

Precis

This CD-ROM is actually the R & B songwriter's kit masquerading as a plain vanilla Ensoniq offering (which it ain't). Every instrument you need to lay down circa-70-80-ish Motown rhythm section stuff is right here. No horn splats, trick orch hits or other trendy stuff here, simply meat and potatoes. A smoky nightclub on a disk, a session date with Holland/Dozier/Holland on CD, this is not GenX fare, although the inclusions of looped/unlooped drum grooves might point otherwise.

The Roses

Sound quality is excellent. These samples are taken in the Ensoniq fashion of capturing not only the essence of the instrument, but its particular character as well. The B-3 samples are not just B-3 samples, they're Father Franklin's

B-3 samples (yeah, like Aretha's dad's B-3). The grand piano samples are taken from the Motown Grand Piano used by The Temptations, The Spinners, et al. Samples were taken with equally vintage gear (remember Fairchild?) and representative outboard gear like Pultec EQ's, tube U47's and mondo representin' goodies. Big fat juicy sounds here, and the Rhodes is the definitive Rhodes of *any* library. Velocity xfades are perfect; nuance with soft touch, and the tines buzz just right and bite at the perfect velocity level. On an ASR-88, it's Roberta Flack's Dyno-My- Rhodes, voiced perfectly with the muddy primary tine harmonics removed. The B-3 split points are much better than the DeFrancesco *Signature* samples; the leslie rotor "munchkinization" effect is barely discernible, and only if you're looking for it.

The CD is well organized and documentation is very good: once again, set your CD reader to SCSI ID #4 (just like you default your drums to MIDI channel #10) for the macros and bank loads to work properly. And the drum maps for both trap kits and latin percussion kits aren't mapped to the GM spec; I think they did this deliberately so you'd have to play every note to see what drum lies under it. Not really: they've included the map for both, although I didn't look at it until I listened to all the percussion instruments and mentally tagged keys to them. Resistance to standards *can* be a good thing...

Also breaking tradition is Sonic Arts' use of macros. No "setup default directories?" here. You won't find "My Banks" under load nine; the only remotely similar factory macro is load 1 to select the floppy drive. I won't tip their hand here; suffice it to say it's *very* refreshing to see other variations of the Ensoniq Macro Theme present here.

The Thorns

The Wulitzer Electric Piano is awful. Depending on your perception (and your familiarity with this 96-pound anaerobic harmonica), the samples capture the awful buzz in digital accuracy. So, awful in this case, may be quite accurate on the particular Wurlie they sampled. I've filed enough reeds on these (maternal expletive deleted) to realize the attack envelope on these samples ain't Wurlie attack: they're more brass VCA than instant on. The patch selects help the bite but steal the sustain. I've gotten more accurate Wurlie samples from 4-operator DX's changing the

modulator ratio from 1.0 to 2.0 in algorithm 5 (a very simple tweak in FM-speak).

The 15,858 block Steinway stole notes/oscillators if I played more than eight notes. While mondo cool for eating up 8 layers for velocity xfades, it pulls the plug on the polyphony pool, giving a new nautical meaning to the term "Australian crawl." Unacceptable. Clavinets don't sustain nearly as much as they should, although if I didn't replace the "Eraserhead" hammers and restring my old D6 every year it probably would've sounded just like this.

And enough of Father Franklin! I really do like the representative B-3 samples, but does he have to play on all the demos? One chorus of "Watermelon Man" and I wanted to ask him to leave. He wasn't listening, anyway, so it didn't matter. Mr. Boombastic must've scared him off with some gangsta rastamojo before they took the "Conga Demo"; too little too late. Too little on this CD too; all you get is drums, pianos (Ac and Ep-types), basses (including one lonely upright bass), a lone acoustic guitar, and organs (w/Voxes and Farfizzles for Barry Carson). Pretty sparse fare...

And you better go talk to Max SIMMS before you discover you need all the memory you can get to load these samples. The demos won't shoehorn into an 8 MB TS, no way, no how, although most single instruments will (i.e., you too can load Father Franklin into your TS-xx and pray he'll lay out once in a while). Don't even consider this CD if you've got a single-speed reader, you'll do lunch between bank loads on a 16 MB ASR without a 2X. And since Ensoniq doesn't support 4X readers yet (pleez, Malvern?), I'm not talking a soup and salad bar special here...

The Deal

Like a few other CDs I've reviewed, the Sonic Arts CD is a study of insidious duality. Some will give it a cursory listen,

not get knocked out by some spectacular demo, diddle with the B-3 samples and move on. Sad to say, this comprises about 75% of the market: not everybody can throw together a "Time Bomb" demo on every CD ever made to showcase their warez. Of that other 25%, around 20% of that will draw the same conclusion I did on first listening and gloss it over. That leaves 5% who'll really hear it. We've come to take glossy over-production as a scratch take.

And that belies the substance of the CD: not the 3-week mix sessions just to get Jimmy Bralower's multi-tap delayed-snare in tempo with the last half of the first measure of the second ending into the second verse of Celine's "Only One Road" (and yeah, Jimmy, it's bloody perfect).

This CD is about the five studio guys in a smoky corner of one of Berry Gordy's rooms just grinding out the next five hits for Jimmy Ruffin, the O'Jays, Smokey Robinson, Aretha, and The Supremes in a single afternoon session. Those days may be gone, but those sounds are preserved here, and for old farts like me who remember exactly where they were and what they were doing when they first heard the Motown Sound, nothing else but this CD will do. Sonic Arts is betting my math is wrong...

I hope they're right. I'd love to see a CDR-7 (with Father Franklin tacet)... ■



Bio: When not answering NTSC/PAL video-capture questions for TrueVision, Pat is a tech support person for RasterOps. He still uses a B-3 for a keyboard stand and watches the alpha channel.

Using The Ensoniq Presets

Part II

Frank Fortunato

Last time we looked at some of the fantastic preset features of the TS family of synths. The VFX and SD people were able to get in on most of the action, since these features are so similar on the two synths. We looked at ideas for layers, splits, octave settings, the tuning pages, using velocity, etc. Let us continue with more features.

G: ON AND OFF CONTROLS: Like most others playing splits with synth bass, I find it helpful to turn the sustain off on the bass but to keep the sustain on for my rhythm and layered sound. (As stated already, all of these settings are quickly accessed and of course are stored as part of the preset). I also find it helpful to reduce the

reverb on the bass and (when doing some sequencing) to even set the bass "dry," but we will touch on that a bit when we get to effects.

H. THE AMAZING PERFORMANCE OPTIONS:

When we come to the performance options we see another instance when the Ensoniq keyboards move into a class all their own. Here are several options:

1) **DISABLING UNWANTED SOUNDS:** While most of the time the performance page can remain untouched in its default "live" setting, I find it helpful to play it safe by customizing the performance options. For instance when using the foot switch pedal as a patch select device there are times when patch selecting will add unexpected and undesirable (and often sheer ugly) results when I patch select by mistake. To avoid that I disable the performance option by setting the patch select from "live" to "00."

2) **STORING ALTERNATE PERFORMANCE SETTINGS:** On the other hand, when patch selecting produces fantastic new and creative alterations of sounds from the live settings, the performance feature allows the preset to be stored with either the left, right or both left and right patch selects instead of the normal "live" setting. It is worth repeating what all Ensoniq TS and SD players sooner or later come to appreciate: each sound or preset has four different variations possible through the patch selection feature.

3) **THE "HELD" SETTING:** I have found from time to time the delight of storing certain presets in the "held" mode. Especially for sounds that have widely varying changes when patch selected, it is wonderful to "hold onto" the altered sound from the patch select for as long as needed without having to keep the patch button or pedal depressed. Then, with a mere flick of the button or pedal we bring back the original setting.

Since I find this takes a good bit of practice to control very well in live performance, this feature works best for me in slow songs where I'm able to control the "held" option much easier.

I. PRESSURE AND VOLUME: For the volume settings, the CV pedal set to volume (instead of control voltage) is yet one more feature that is often underrated and under-used. Again, for my use in contemporary worship settings, it is very helpful to have presets programmed so that I can subtly bring the layered strings in and out with the CV (volume) pedal. This gives that extra real time control that is so crucial during quieter moments in the worship service.

J. MIDI OPTIONS: The track MIDI page is particularly well laid out and builds on the strength of the VFX and SD-1 predecessors, but the TS adds more options. The MIDI page settings allow both the TS and SD to be a powerful controller when using additional modules. This allows for modules to stack together with the three preset internal sounds, making for some gigantic synth layers. To avoid getting the wrong sounds coming through be sure to set the MIDI channels of each of the modules differently.

One of the few limitations on the MIDI page is that there is no separate MIDI volume control for both the internal and module settings on the same track or channel. But the module can have its own program number setting separate from the internal sound.

K. THE AWESOME EFFECTS PAGES: Everything in every other preset option pales in comparison to the customization that is possible on the TS track effects page, with up to 12 different pages of settings. This whole area deserves a separate article. Here are some of the effects things I always try to do:

1) **REVIEW THE EFFECT SETTINGS:** Many of us need basic "bread and butter" sounds like strings layered to keyboard. To get the cleanest possible settings I have found it helpful taking the time (it will take *much* time in fact) to continuously review different effects settings for the sounds and layers, as well as the variations of the effects that are stored with each of the TS effects. This allows me to keep refining the effects for these important presets. On the TS, effects numbers 27, 47 and 49 have worked well for me.

2) **SELECT THE ROUTING IF NECESSARY:** At times I would also change the routing for FX 1 or FX2, as needed. For the multiple effects settings I usually find I want to have certain layered sounds go directly to reverb and bypass the combined effect. This is usually FX2 on the TS. Next I go in and adjust the amount of FX2 reverb to taste.

As mentioned earlier, some sounds will work well totally bypassing the effects. Bass guitars often punch through better in a sequence when "dry," or with just a tiny reverb amount. Always remember that "dry" settings will help sounds that don't work well with some of the more exotic effects settings for various pads, and so forth.

L. WRITING THE PRESETS AND STORING THEM: I must admit I prefer the simpler preset storage of the SD where one or two keystrokes immediately lock my preset in place. I was happy with only had 20 places to choose

from with the internal bank and another 20 from the cartridge bank.

Now with the TS I have the advantage (or bother, depending on how you look at it) to name the preset as part of the storage routine. This takes more time, but of course I don't need to memorize my preset locations as on the SD.

M. PRESETS IN SEQUENCER MODE: It was a brilliant concept to link both the preset and the sequencer feature together by using the same sound parameters for both. It was equally brilliant to be able to have the option of storing presets as sequences (sequences with no recorded data on any track). When on the road I often use the lighter SD-1 and when not using all of my sequence locations I can stay in sequencer mode and go back and forth between playing sequences or playing live using presets stored as sequences. As most Ensoniq players realize, having presets in the sequencer page allows us to build some gigantic splits and layers as well. One warning however for those on the SD-1 that may switch between sequences and presets in sequencer mode. The SD-1 will

"lock up" if an unrecorded "preset sequence" is selected while a recorded sequence is playing. I had to learn to press the preset sequence only after I knew the recorded sequence was at STOP. This was "fixed" on the TS by not allowing the preset sequence to even be accessed while the normal sequence was playing. Pressing the preset during performance would yield the all too familiar "sequencer must be stopped."

I trust a few of these basic reminders will keep you inspired to explore the incredibly great preset features of some incredibly great keyboards.

I would be interested in any feedback or ideas to start a possible users group for the SD-1 or the TS. I can be reached at Operation Mobilization, tel. 770-631-0432, fax: 770-631-0439, email: Internet: fort@omusatom.org. ■

Bio: Frank has been a college music theory teacher, and has spent 15 years directing music on two ocean liner ships. He is currently music director for Operation Mobilization.

TAKE CONTROL OF A TRANSWAVE.

Experience something you've never heard - something you've never felt. The WAVEBOY TRANSWAVE Sound Library uses a unique feature of Ensoniq samplers: transwave loop modulation. Transwaves bring dramatic, dynamic modulation to the usually static world of samplers. They can capture the dripping sweep of a resonant filter, subtle pulse-width mod, or the organic morphing between vocal sounds. (This is synthesis; there are no pianos.)



While normal samples can only be a "still photo" of a sound, each Transwave is a series of 128 "frames" that go together like a movie to create motion. That motion is under your control. As you move the wheel, the filter sweeps, as you bang the keys harder, the FM barks, when you change the envelope decay time, the morph happens faster.

The waves in this sound library have been painstakingly manufactured using a computerized phase-alignment process to assure smooth and clickless modulation. Accept no substitute - insist on genuine WAVEBOY Transwaves. For ASR-10 and 88, TS-10 and 12, EPS-16 PLUS.

WAVEBOY TRANSWAVE SOUND LIBRARY

The Price is only \$69, which includes 28 sounds on 5 disks, includes shipping, and a manual which covers editing of Transwaves for your own devious purposes. Overseas add \$6. To order, send a check or money order, or call or fax to pay by VISA or Mastercard. WAVEBOY Industries P.O. Box 233 Paoli, PA 19301 USA tel: 610-251-9562 fax: 610-408-8078

Audio for the Internet

Using Your Ensoniq Sampler to Prepare Soundfiles for Websites

Steve Vincent

You wring every last drop of your soul's life-blood (and most of your money) into your first independent release, and you hold in your trembling hands the DAT master of your brilliance (make a backup copy quick before you sweat all over it), dreaming of the fame and riches that await you as soon as your CD hits the market. Three weeks later, your living room is filled with boxes and boxes of CDs and cassettes from DiscMakers, and as the UPS guy leaves, cursing, reality (and your wife) slaps you in the face. You start to panic as you realize that you've got to switch gears from musician/engineer to marketing genius!

Relax! Market your CD on the Internet, and just watch the money roll in! HA HA HA HA HA HA HA HA HA HA HAAAAAAHHH!!!!!! Sorry, but I couldn't help that one! Seriously, many independent artists are using Internet webpages to showcase their wares, and it's a medium for marketing that is wonderfully suited for making your music accessible to literally millions of people, often at ridiculously reasonable advertising rates (sometimes free!). And file formats have become standardized to the point where just about anyone can download soundfiles of your audio tracks from your website to their computer and give a test-listen to your CD before buying.

But how do you get those gorgeous tones from your CD or DAT master into your computer for tucking into a webpage if you don't have an umpteen-jillion dollar *Pro Tools III* system to import your audio into your computer and massage your data into a Web-friendly format? If you have an Ensoniq sampler (not including the Mirage, with my sincere apologies), all you need are a couple of shareware programs, possibly even just one program, and you're in business!

I recently opened up a page on *Kaleidospace* (<http://www.kspace.com>) to showcase my Christmas CD, "A Winter's Tale." My webpage includes cuts from two different tracks that 'net surfers can download and listen to on their computers, which I prepared in my own studio. A

couple weeks ago I sat frowning at my gear, wondering how I was going to get my DAT master into my Macintosh without a digital audio I/O interface. Then I realized that my EPS is a perfectly fine interface! The only drawback to this procedure is that the data must cross the digital/analog boundary once more before reaching its final digital resting place in the computer. But if you have clean gear (excusing, of course, your EPS or ASR; no hate letters, please!), this should be a non-issue.

The process is quite simple: sample your audio clip from your CD or DAT master into your EPS/ASR, transfer the EPS/ASR sample into your computer, then convert it to an acceptable file format for Internet travel.

Let's take it step-by-step.

"Pre-Mastering" Your Sample

Since you are going to be sending an audio signal from your CD player or DAT to your sampler, you have one more chance to tweak the sound. Now is the time to "fix it in the mix" if you didn't like the EQ of your final mix, or you want to add just a touch of reverb, or a bit of compression to tame those highs and lows (works better than Prozac). If you have lots of time on your hands, you can go through this entire file-conversion process and monitor the final soundfile from a computer, then go back to square one and re-pre-master the audio, optimizing the mix for computer playback. Remember that due to the standard 22kHz sampling rate for computer soundfiles, you're going to lose any frequencies above 11kHz, so don't waste your time fine-tuning the high end.

The length of your audio clip is important for a number of reasons. First, some Internet services (like *Kaleidospace*) have a 30-second time limit for audio clips. Second, if your file is too large, 'net surfers may be discouraged from auditioning the file due to excessive downloading time. For example: a 21 second soundfile takes up 460k of space, and takes 3 1/2 minutes to download. And third, your sampler only has so much memory!

Carefully choose the section of the song you want to showcase — thirty seconds goes by really fast! Don't be like me and show off the guitar solo just because you think it sounds cool. Get opinions from others; ask what sections they think you ought to showcase. Think about what will help you sell your music. Also consider using a fade-in at the beginning of the sound clip, and fading out at the end. I am surprised at how few artists pay attention to this detail — it makes all the difference between a classy presentation, and an abrupt, jolting, click-infested listening experience.

Sample It

The next step is to actually take a sample from your CD or DAT. Use the highest sampling rate you can get away with (no use sampling higher than 44.1), just to ensure the highest fidelity before converting the rate downwards. Also, sample at the highest input level you can without clipping (lighting up the "AMP" signal on the sampler). You may need to try it a few times before you get the levels right, since sampling 30 seconds of a song is a bit different from sampling one note of a DX7. It's a good idea to sample a bit of extra material both before and after the section you actually want to keep, so you can have the flexibility to edit the sample start and end times with precision and without those pesky digital pops and clicks that plague us. After finding the perfect start and end times, TRUNCATE the sample to save disk storage space.

Make sure you NORMALIZE GAIN. This is very important; it maximizes your sample's amplitude level to ensure that you're getting the best possible signal-to-noise ratio.

The Conversion Experience Part I: Using Floppies

From this point on, the article will assume a Macintosh-based system. I have not (yet) gone through this process on a PC, but the procedure should be very similar. At the end of the article I will list PC-equivalent programs along with where to find the Mac programs.

The procedure at this point splits into two paths: floppy-based, and SCSI-drive based. If you don't have a SCSI hard-drive connected to your sampler, you'll need to transfer the data to your computer by floppy disk. But since your Macintosh won't read EPS/ASR formatted disks, you'll need to use EPSm, a brilliant, must-have application written by Terje Finstad, in order to coax your Mac's superdrive not to hurl out your EPS disk. But even with EPSm, you can't just shove any old EPS/ASR disk

into the Mac's drive; it must be a specially formatted disk, which Mr. Finstad has called a "B10" format disk. And furthermore (hang on), you cannot format a B10 disk on your Macintosh; you must use an IBM-PC utility included with EPSm called "MakeB10.EXE." This program must be copied from your Macintosh to an MS-DOS formatted floppy, from there copied to an IBM-PC's hard drive, and then you can run MakeB10.EXE on the PC, which will format a B10 disk (using a blank formatted DD EPS floppy) in the PC's floppy drive. Make as many B10 floppies as you need to transfer your sample (which may be rather large), keeping in mind that the B10 floppy only holds 1245 blocks vs. the EPS's normal 1585 blocks. (Note: if you absolutely cannot make a B10 floppy on a PC, Terje has offered to mail a B10 floppy to the PC-access impaired. Make sure you do him the common courtesy of registering for the program; it's the best \$20 you'll ever spend on software.)

Whew! Okay. Once you have saved the sample of your audio clip from your sampler to B10 floppies, then launch EPSm on your Macintosh, and from the "Floppy" menu, select "Read EPS/ASR/TS floppy," inserting the B10 disk into the drive when prompted. EPSm will save your file to the Mac's hard drive. Make sure you save it as an "EPS2" image (default), not a "B10i" image.

To convert your sample to a format usable on the Internet, open an EPS2 image ("Open" under the "Image" menu), and click on the sample you want to convert; it must be highlighted (selected). From the "EPSfile" menu, select "exPort," and choose the sample format you wish to convert to: SFIL (Sound Designer I), SDII (Sound Designer II), or AIFF (Audio Interchange File Format). The AIFF format is widely used as a transfer format on the Internet. If you choose AIFF, EPSm will translate the sample to mono 16-bit linear .aiff at the original EPS/ASR sample rate. At this point, your sample may be ready to use on the Internet, but it may require other conversions. For example, *Kaleidospace* requires the sound files to be 8-bit with a 22kHz sample rate. We will discuss other conversion options below, but first...

The Conversion Experience Part II: Using SCSI

If you have a SCSI hard drive attached to your EPS/ASR, the process of transferring the sample to your Mac is easy using EPSm. Assuming you have saved your Instrument (sample) to your SCSI drive, you must connect your SCSI drive to your Macintosh, if it isn't already (mine is daisy-chained, EPS -> SCSI Drive -> Mac). After launching

EPSm, select "Connect..." from the "EPS SCSI" menu. This brings up a dialog box with a directory of your EPS/ASR SCSI drive. Double-click down through the SCSI drive directories until you find the sample you want to convert. Click on the Instrument to convert, highlighting it. Click on the "menu" menu in the upper right-hand corner of the dialog box; this drops down a number of editing functions. Choose "exPort..." which brings up another dialog box with all the Wavesamples in the EPS/ASR Instrument (there should be just one Wavesample if you sampled one clip from a CD or DAT). Click on the Wavesample you want to convert, then choose "Sample Format" (SFIL, SDII or AIFF). Click "Save," name the new sample file, click "Save" again, and you're done! You now have an Internet-ready soundfile to include in your webpage!

The Conversion Experience Part III: Other Conversion Formats and Applications

Again, you may need to convert your EPS/ASR sample into some other formats besides .AIFF at the originally-sampled EPS/ASR sample rate. There are a couple of other utilities for the Mac that I use for these duties. "SoundHack" by Tom Erbe is a sophisticated shareware (\$30 registration) program for waveform editing, providing many DSP functions including file conversion. It provides conversion to/from AIFF, Audiomedia, DSP Designer, IRCAM, MacMix, NeXT, Sun, SDII and Text. Be aware, because the file conversion/export functions in SoundHack are really buried in the menu system. Here's a quick run-through for converting a soundfile in SoundHack: "File -> Open" (find your soundfile), then "Hack -> Varispeed". Click the "Varispeed" box, then click on "Process"; click on the "Varispeed" function, then click "Write" and choose the file format you want to convert to. While you're at it, this is where you would convert the sample rate of your soundfile. Since EPSm saves your file at the EPS/ASR original sample rate, you may need to use a utility like SoundHack to convert the sample rate to 22kHz or even 11kHz, depending on the requirements of the server.

One more must-have Mac application is "SoundApp" by Norman Franke, a freeware soundfile playback program that also contains some conversion utilities. SoundApp will convert files to System 7, Sound Suitcase, AIFF, Windows .WAV and NeXT formats. The process is simple: "File -> Convert," choose file to convert, then choose file format to convert to, naming the new soundfile.

Where to Find This Stuff...

EPSm by Terje Finstad (shareware \$20) can be obtained directly from Terje via email at t.g.finstad@fys.uio.no.

SoundApp 1.5.1 by Norman Franke (freeware) can be found at <ftp://fu-berlin.de/mac/sound/> or <ftp://water.ca.gov/pub/mac/www/>, among other ftp sites.

SoundHack by Tom Erbe (shareware \$30 or "artware" — send the author some music or art you've created) is at <ftp://music.calarts.edu/pub/SoundHack/>. For information on which version to download for your system, contact <http://shoko.calarts.edu/~tre/SndHckDoc/>.

If you own a PC/Windows system, the following programs are roughly equivalent:

EPSm (file management, format conversion): No real equivalent for SCSI transfers, but for floppies you can use Giebler's EDM, then use `efe2aif.exe` and Sox for conversion duties.

SoundHack (waveform editing, format conversion): Cool Edit, Sox, Sample Vision.

SoundApp (soundfile playback, format conversion): MS Windows and Windows 95 come with soundfile playback programs. For format conversion, see the utilities listed above.

For examples of files I have converted using this process, feel free to visit my webpage at *Kaleidospace's Music Kiosk* (<http://www.kspace.com>), or download an audio clip from my CD "A Winter's Tale" from the *Hacker's* ftp site at <ftp://teleport.com/pub/vendors/trnsoniq>.

Special thanks to Terje Finstad for his contribution to this article, although he refuses to fix a bug in his program (the menu item for converting \$.02 to \$1 million doesn't work). ■



Bio: Portent Music runs Steve Vincent. He can be reached at vincents@harbornet.com.

Waveform Mutilation 101

Synthesizer Roll-Ups (Some Fruity Flavors)

Jack Stephen Tolin

If you have ever played role-playing games like *Star Wars*, *Marvel* or *DC Super Heroes*, *Dungeons & Dragons*, etc., then you know what a person has to go through to roll up a character. In one particular game I played as a mere youth, in order to determine the level of intelligence of my character, I had to roll three six-sided dice. If the characters had an intelligence of 18, they were brilliant geniuses, thinkers of theories of general universal relativity. If characters had an intelligence of 3, they needed help eating. And so it was for their wisdom, charisma, strength, constitution, and so on. Thus, the process went on until you had a complete character with some description of her or his abilities, characteristics, possessions, and so on.

The more things change, the more they change while, to some degree, they stay the same. You are probably expecting maybe some instruction on new synthesis techniques that you can integrate into your current process of making sounds that are highly interactive, intuitive, systematic, and even organic. Well, surprise surprise, here is something new to complement something old that requires almost no preplanning whatsoever. You can use it with any other synthesis techniques you may happen to be using.

And now, will you please allow me to introduce to you the most revolutionary method of creating synthesizer programs on digital instruments: synthesizer roll-ups.

In theory, a synthesizer roll-up is much the same along the lines of rolling up a character for role-playing games. You start with your program (or patch) sheet and then proceed to determine what values each ability or characteristic will be hold according to the roll of a die. "A childish way to determine synthesizer settings," you say? Of course. Let's continue.

What you will need for this to become a reality is, of course, a set of dice. I, myself, have a dice collection from all the games I have ever played. There are 4-sided, 6-sided, 8-sided, 10-sided, 12-sided, 20-sided, and 30-sided dice. If you have this variety of dice, you are well-equipped for this kind of experimental synthesis. If all you have are 6-sided dice, do not fear, for you may still partake of the revelry.

It is also of the utmost importance to know your synthesizer intimately enough to know what choices you have in terms of selection. How many wave classes are there from which you can choose? What is the range from which you can modulate any of your modulators? How many modulators are provided at any given time? I will be using my SQ-1 PLUS 32 voice as a guide. You will be able to pick up principles, however, that may be used on any synthesizer. If you can, pick up an Ensoniq flyer of your specific synthesizer. All of your wave(form)s will be listed in numerical order which makes things much easier in determining which number coincides with which wave(form). I am using SQ series copyright 1992, TS series copyright 1994.

Keep in mind that there are some operations in your synthesis engine that you would probably do well to evaluate with your own discretion than to simply leave as to be determined by a die roll. For example, when considering the volume level in the Output bank, it would be best not to simply leave it to a die roll. If you do and you end up having the roll determine your value to be "01" you will hardly be able to hear the sound. These kinds of areas will not allow themselves to be determined entirely by chance. This is the reason that entirely random generation of programs will not always work well.

The first method to use is the most basic. When you come upon such things as FC1-Mod-FC2 in the Filter bank, or Boost in the Output bank, you have only two choices: Yes or No. For these kinds of characteristics you need only roll any die for a determination of hi or low (ie., one through three would equal "No" and four through six would equal "Yes.") You can also use this method if you are determining whether a value is negative or positive.

The second method to use is the default method, and may end up taking the most time. This is simply to roll for each choice, and then take the highest roll. If there are ties, you simply take the highest ties as the new group of choices and then re-roll them with the original stipulations until you eventually end up with your one winner.

The third method is to have each choice stand for each

side of a die. This method works the best. However, not many of the options that most synthesizers today have will equal the exact same number of sides contained by most dice.

The fourth method is to compartmentalize your choices into the same number of sides of the most convenient die. For example, if you have twelve choices on your synthesizer, then the best die to roll to determine your choice would be a 12-sider. Two 6-siders would be inadequate because their totals would only range from two through 12, hence you would only have 11 choices. This method will be used as much as possible.

There is one other method for those of you who have 10 sided dice, or percentiles. Regardless of the range of values from which you have to choose, you can simply roll two of these dice and determine what value (x) would equal the percent of whatever number is rolled. For example, if we rolled a "five" on the first die and a "zero" on the second die, we could then determine the value (x) by dividing the full number of choices by "50" percent. This is probably the quickest way to roll up a program for any value.

The SQ/KS program that was included with this article was developed from the method of being rolled-up with the use of dice. I am not quite sure if that is something that will sell you, but one can always try. Let's take a look at some of the roll-ups that are possible so that you can learn first hand some handy techniques to roll-up your own synthesizer program.

In order to determine what wave(form) you will use for each oscillator, there can be a variety of ways you can go about it. For the expanded SQ series, there are a total of 13 wave classes or 168 wave(form)s from which to choose. For the first voice I rolled a 12-sider and used the following table:

Table 1: SQ/KS Wave(form)s	1: 1 — 14	7: 85 — 98
	2: 15 — 28	8: 99 — 112
	3: 29 — 42	9: 113 — 126
	4: 43 — 56	10: 127 — 140
	5: 57 — 70	11: 141 — 154
	6: 71 — 84	12: 155 — 168

(An alternate way to do this is [die] 4 divisions of [die] 6 divisions of seven [die 6 (+ one yes/no)].) I rolled a "9" (113 — 126). Next, I rolled the 12-sider again. This is the number designating the position of the choice of the designated sub-group. I rolled a "7" (119). Now, following method one, I determine a yes/no. If the roll determines a

"No" response, keep the value and enter it into your program. If the roll determines a "Yes" response, add two to your value, and enter this new value (if possible). I rolled a "6" on a 6-sider which indicates a "Yes" response (121). The resulting wave is "All Waves." (To be honest, on the second reading of this article, I could not figure out why one would need to have a yes/no roll for adding two. However, I must have known what I had been thinking at some point, so I allow this anomaly to remain.)

On a TS series synth, you have 14 different wave classes with 254 wave(form)s. Since it can be a problem here, as well as other places, to determine a proper system of dice rolls to appropriate every value, one can always choose the way they prefer. I would, again, suggest using the table in the Ensoniq TS series brochure as a guide. You can roll a die 10 to determine which of the five columns to choose from to hasten your approach (1 or 2 = one; 3 or 4 = two; etcetera). Or, again, use the wave class approach (die 6 with a yes/no for determining whether or not to add one for a range of seven). Since there are 50 wave(form)s in each column — 51 in the middle three — you could roll something along the lines of a die 10 five times (range = 1 to 50) OR roll two dice 10 (the first equals the tens' place and the second equals the ones' place) and then divide by two. Let's face it: many people won't necessarily like the idea of having 008 Wurlie-Lo without 009 Wurlie-Hi. It may therefore be to your advantage to dismiss certain wave(form)s from your choices. On the other hand, this may be something strange enough to possibly work depending on your other wave(form)s.

The easiest usage that exists is with percentiles, or 10-siders. These are the dice to use if you are selecting something from a pool of 100. Rolling two of them, your range will be from 00 through 99. This kind of selection (a range of +/-99) can be found on any of Ensoniq's newer synthesizers. The values rolled can be translated directly. For example, if you were to determine the value for the attack level for an envelope, simply roll a 10-sider to determine the tens place, and then again to determine the ones place. Thus, if you roll an "8" followed by a "3," then you would enter "83" as your attack level. Simple, no?

If we were to compare this to an older one (ESQ-1, ESQ-m, SQ-80), we would have a range of +/-63. This may seem somewhat difficult with which to work but it might translate something like this:

Table 2: ESQ/SQ Value ranges	1: 0 — 7	5: 32 — 39
	2: 8 — 15	6: 40 — 47
	3: 16 — 23	7: 48 — 55
	4: 24 — 31	8: 56 — 63

0 through 63 equals a nominal range of 64 parts; 64 parts divided by an 8-sided die equals eight sub-parts. You would then roll an 8-sided die first to determine the sub-part of 64 with which you are dealing, and then roll an 8-sider to determine the exact value within that sub-part you will be using. For example, rolling a seven on an 8-sider will yield the sub-group 48 — 55; rolling a two will yield 49, the second number of sub-group 7; enter the number "49."

On an SQ/KS, you have a choice of 13 effects. This could be determined by rolling a die 12 and then determining a yes/no to add one. On a TS you have a choice of 73 effects (nine categories of [die] 8 with one left over — oh no!). There are seven classes of effects (die 6, do/not add one). But, again, these are just some ideas that you might want to develop or change later.

For the modulation sources, the SQ/KS engine has 16 (including "OFF") and the TS 15 (imagine that!). If you roll three die 6, this will give you a result of three to 18, a range of one through 16. If you roll two die 8, this will give you a result of two to 16, a range of one through 15.

With options like the Delay Time setting, we have a small

problem in terms of range. The value is adjustable from 000 to 250. That leaves us with a range of 251 — not a very nice number with which to deal. For starters, 250 is divisible by [die] 10 — not withstanding one left over — but 25 is a difficult value. At a juncture such as this, it would be best to keep in mind the function of which you are dealing. After all, how long should most sounds be delayed, anyway? You only have so long to wait before you get bored. So this is an excuse, I admit it. But the best thing I could suggest for this kind of problem is to roll a high number die, like 20 or 30 sided, and split the differences. In 250 there are 12.5 20s and 8.3 30s. Since there are 12 and 8 sided dice we have a possible solution.

Table 3:

250 x die 20
Via die 12

1: 000 — 020	7: 125 — 145
2: 021 — 041	8: 146 — 166
3: 042 — 062	9: 167 — 187
4: 063 — 083	10: 188 — 208
5: 084 — 104	11: 209 — 229
6: 105 — 124	12: 230 — 250

If anything but a "six" is rolled, a yes/no must be rolled to determine whether or not one should be added to the sum.

SQ, KS, KT Prog: Random Acts 1

By: Jack Stephen Tolin

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	Multiwave	Waveform	Perc
Wave	AllWaves	ClavVar	ToyHmnr
Delay Time	234	032	063
Wave Direction	Backward	-	Backward
Start Index	23	41	41
MODSCR	Off	Off	Wheel
MODAMT	-	-	+60
Restrk Decay	15	65	39

PITCH	1	2	3
Octave	-1	-1	+0
Semitone	-04	-09	+02
Fine	+55	-10	+39
ENV1	+74	-03	+24
LFO	+24	+50	-28
MODSCR	Timbre	Pressure	Velocity
MODAMT	-71	+65	-82
KBD Pch Track	On	On	On
Glide	Legato	Retrig	Off
Glide Time	95	19	-

ENV1	1	2	3
Initial	05	22	25
Peak	75	39	27
Break	64	61	60
Sustain	63	70	65
Attack	33	53	04
Decay 1	57	37	33
Decay 2	10	94	54
Release	53	98	25
Vel-Level	06	93	26
Vel-Attack	53	72	79
Vel Curve	Convex	Quikrise	Convex
Mode	Repeat	Finish	Repeat
KBD Track	+84	-42	-28

LFO	1	2	3
LFO Speed	56	23	28
Noise Rate	59	06	33
Level	91	23	67
Delay	26	93	00
MODSRC	Velocity	Amp	Noise2
Wave	Saw	Sine	Sine
Restart	On	Off	Off

FILTER	1	2	3
Filter 1	2LP	3LP	3LP
Filter 2	2HP	1LP	1LP
FC1 Cutoff	127	127	127
ENV 2	-45	-39	-14
FC1 KBD	+00	+00	+00
MODSCR	Keybrd	Wheel	Pressure
MODAMT	-11	-91	+37
FC2 Cutoff	000	127	127
ENV2	+55	+62	+86
FC2 KBD	+00	+00	+00
FC1MOD-FC2	On	On	On

ENV2	1	2	3
Initial	47	04	35
Peak	26	30	50
Break	16	88	49
Sustain	38	14	12
Attack	61	79	49
Decay 1	31	31	65
Decay 2	62	20	92
Release	24	01	44
Vel-Level	53	46	99
Vel-Attack	06	66	46
Vel Curve	Convex	Convex	Quikrise
Mode	Normal	Finish	Normal
KBD Track	+28	-56	+00

AMP	1	2	3
Initial	18	99	63
Peak	99	35	93
Break	90	64	43
Sustain	90	20	99
Attack	00	04	04
Decay 1	33	34	11
Decay 2	79	88	55
Release	39	05	33
Vel-Level	72	40	26
Vel-Attack	00	13	26
Vel Curve	Quikrise	Concave	Linear
Mode	Repeat	Normal	Finish
KBD Track	+00	+00	+00

OUTPUT	1	2	3
VOL	99	99	99
Boost	On	On	On
MODSRC	Timbre	LFO	Noise2
MODAMT	+23	+47	-18
KBD Scale	+00	+00	+00
Key Range	A0-C8	A0-C8	A0-C8
Output Bus	Dry	Dry	Dry
Priority	High	High	Medium
Pan	-42	+56	+28
Vel window	<=088	>124	>052

EFFECTS — None

Notes —

Some areas of caution include:

Output:	Vol	Key Range
Amp:	Init Attck	KbdTracking
Filter:	Filter1	FC2 Kbd
Pitch:	Oct	Env1

Table 4:	1: 000 — 031	5: 126 — 156
250 x die 30	2: 032 — 062	6: 157 — 187
Via die 8	3: 063 — 093	7: 188 — 219
	4: 094 — 125	8: 220 — 250

All numbers need to have a yes/no rolled to determine whether or not one should be added; 1, 4 and 7 need to have this done twice.

Filter one and two (for the SQ/KS, at least) can easily be determined by rolling a die 4: one = 3LoPass, 1LoPass; two = 2LoPass, 2LoPass; three = 3LoPass, 1HiPass; four = 2LoPass, 2HiPass. LFO waves can be determined by rolling two die 4 and subtract one.

Not everything has been so explicitly detailed. Of course, I have given a few examples to get everyone going. The program that was included is to prove that it isn't all for naught. Output volume was determined by two die 10 (percentiles); the highest was raised to 99 and to the others were added the same difference. In the Amp bank, within each voice, the same thing was done to the first four values (envelope levels). This is called normalization. Some necessary editing is also needed in the areas of cau-

tion mentioned in the Notes section of the program sheet (I have already somewhat edited the program at which you are looking). You may even want to save time by not determining these values by die rolls necessarily, or by placing their ranges within certain limits.

You will notice that this program is pretty raw. If you don't hear anything right away, keep trying. Though edited, there could be much more editing done with this in many ways. One of the most fun things to do with synthesizer roll-ups is to figure out what makes them do what they do and then edit from there. Feel free to put your creative mathematical mind to work, and don't hesitate to break any rules you feel necessary. Just be kind, considerate, and eat all you want — we sell the rest! ■

Bio: Jack is currently attending Nazarene Theological Seminary in Kansas City, MO, has been married now since 8/20/94 to Janice Fay, programs alternative music with a contemporary flavor, and tries his best to take experimental sequencing, synthesis and sampling to new heights.



opti-case

Cases for Ensoniq Equipment

Now available direct from factory (except in current dealer areas) our full line of ATA cases Category I and II

Keyboards: EPS, EPS-16 PLUS, VFX, VFX-sd, SQ-80, SQ-1, SQ-1+, SQ-2
Module rack cases: 3-space, 4-space, 5-space, 6-space. (2-space racks available with surface mount hardware only.)

Mention the (TH) code number 839 when inquiring to receive our special factory direct pricing.

CALL US AT 1-800-637-6635

8:00 am to 4:30 pm CT, Mon. – Fri.

We accept: COD, Visa, Mastercard, American Express.
Dealer Inquiries Welcome!

OPTI-CASE • RT. 6, BOX 235 • HENDERSON, TX 75652 • FAX: 903-657-6030



Shown: 4-space rack with EPS-16 PLUS module, 2-space rack, Eagle-I VFX-sd case



One of our most common requests from new subscribers (new owners) is for more basic tutorial information. We've all been there. Unfortunately, the *Hacker* is usually "there" when a new instrument first makes its appearance — and then we move on. While back issues can answer many questions, not all are still available and they do represent an additional expense for the new reader. Hence, "*Hacker Reinitialization*" — yup, old goods in a new wrapper. We feel a little funny about the whole reprint thing — so we're going to keep it small. Clark's series on the SQs is the most requested, least available, and the most generally applicable (KSs & KTs in particular — and he's checking 'em for freshness), so here we go...

The SQ Filters

Clark Salisbury

Hi there. Back so soon? Guess it must be time to do a little more SQ programming, eh?

So far, we've been using the envelope generators to control only amplitude. But envelopes are a source of modulation that can be applied in many other ways.

One of the more common uses of the envelope is to control the harmonic content of a sound. This is generally accomplished using envelope 2, which is "hard wired" to the filter (although any of the other envelopes can be used as well). This allows you to control how a sound might get brighter or darker over time.

Select the ROM program "L.A. Brass." Hit "Edit," then "Wave" then the "0" buttons to move to the [Select-VOICE:] page. You'll find that this sound uses voice 1 and voice 2. To keep things simple, let's turn off voice 2 for now — select it and hit the "Down/No" button. Now select voice 1 for editing (scroll once to the left — the word "ON" in the display should begin flashing).

Now hit the "1" button — you'll find that the wave being used is "Brass Ensemble." Let's change this to something a bit more generic — say, "Sawtooth" (located in the Waveform waveclass). Any changes we make to the filter will be more obvious using this more generic wave.

Head over to the filter page and press the "0" button to get to the filter mode page. The display should be showing:

FILTER1=3LoPass

FILTER2=1HiPass

A synthesizer filter does pretty much what you might think — it filters the input signal, which removes harmonics. There are two basic filter types available in the SQ — "high pass" and "low pass." High pass filters remove lower harmonics, letting the higher harmonics "pass through." Low pass filters do just the opposite. The exact range of fil-

tering that will occur is controlled by the "filter cutoff frequency" — this is the frequency at which filtering begins to occur. For example, a low pass filter with its cutoff frequency set to 1760 Hz will begin to attenuate (reduce the amplitude of) frequencies above 1760 Hz, leaving those below 1760 Hz unaffected. A high pass filter with its cutoff point set to 1760 Hz will attenuate frequencies below 1760 Hz, leaving those above unaffected.

The question arises, then, of how much of these filtered frequencies is actually attenuated by the filter? And the answer (as with many things in life) is, "that depends." It depends on the particular mode that the particular filter is set to. Take the low pass filter, for example.

The lowpass filter can be set to any of three modes: 1 pole, 2 pole, or 3 pole. The term "pole" comes to us from the analog world; each pole represents 6 decibels of attenuation per octave. In other words, in a 1 pole lowpass filter, frequencies at one octave above the cutoff point will be attenuated by 6 db; frequencies at two octaves up will be attenuated by 12 db, and so on.

In a two pole lowpass filter, frequencies are attenuated at the rate of 12 db per octave (6 db X 2), and in a three pole lowpass filter frequencies are attenuated at the rate of 18 db per octave. Highpass filters work the same way, except that it's the lower frequencies that are attenuated, rather than the upper.

In the SQ, a number of filter configurations are available. That's the beauty of a multi-mode filter — lots of options as to how it will work. Lowpass filters can be configured for 1, 2, or 3 pole operation; a highpass filter can be configured for 1 or 2 pole operation. There are always two filters available, which can be configured as either 2 lowpass filters, or as one lowpass and one highpass filter.

Why would you want to have two lowpass filters? Well, the effect of two lowpass filters is cumulative. Therefore, if you want to filter upper harmonics at the rate of 24 db per octave, (which happens to be the type of filtering found in most "classic" analog synthesizers), you can do so by simply stringing together two lowpass filters, with each set to "2 pole" mode — this gives you, in effect, a 4 pole lowpass filter, yielding a 24 db per octave slope.

But what if you don't want any filtering at all? No problem. Simply set the cutoff point of any lowpass filter you may using to a value of 127. This leaves the filter "wide open" — it will not filter out any frequencies. If you are using a highpass filter, set its cutoff point to 0 — this also has the effect of leaving it wide open. That is, as long as you aren't using any sort of modulator to change the cutoff point of the filter dynamically. But we're getting ahead of ourselves here.

At any rate, you should still be looking at the filter mode display — it's showing that the SQ multi-mode filter is currently configured as a 3 pole low pass filter and a 1 pole high pass filter. Let's check out what the filter can actually do.

Scroll one click to the right — you should be at the [FC1 Cutoff] page. This page is showing the initial cutoff point for filter 1 and the amount of envelope 2 modulation that's being applied to filter 1. First, let's set the envelope 2 amount to 0 — this will allow us to play with the filter cutoff point without having to worry about any influence envelope 2 might have over the filter's cutoff point.

Set the envelope 2 amount to "+00." Notice that the sound has immediately become quite a bit darker. This is because envelope 2 is no longer pushing FC1 (filter 1 cutoff point) above its preset level of 042. Now select FC1 and change it to 127. Notice that the sound is quite bright again. This is because we've opened filter 1 up all the way — it's no longer filtering any of the upper harmonics.

Now hold down a note and use the data slider to change the filter cutoff up and down. The resulting sound is called a "filter sweep" and is the result of changing the filter cutoff while a note is playing — a familiar sound indeed. Filter sweeps are usually not controlled manually, as we are doing here, but are more often controlled by an LFO or envelope, or even pressure. We'll set one up in a minute so that you can see precisely how it's done.

For now, set FC1 to a value of 036 and play some notes

eTH — A Faster, Cheaper Hacker

If you can receive e-mail via the Internet, you can take advantage of avoiding the post office and get a faster, cheaper, e-mail version of the *Hacker*. The e-mail *Transoniq Hacker* contains all of the same information and advertising as the printed version, but it's only \$20/year — anywhere on the planet. Plus, if you convert over from the printed version you'll get extra issues added to your sub. Interested? Just send a message to us at eTH@transoniq.com and we'll e-mail back complete subscription information. Let us know if you'd like a free copy of the current issue and we'll send one along.

going up from the low end of the keyboard to the high end. Notice how the notes get quieter and quieter as you play higher, finally disappearing once you reach the upper end? This is because the filter is removing the frequencies above its cutoff point, and as you play higher and higher on the keyboard, the lowest frequencies contained in the sound eventually go above the filter's cutoff point, the result of which being that all sound is filtered out. If you think about it for a minute, though, you'll realize that you could get around this problem if you could use the keyboard itself as a modulator for the filter. You could set it up so that playing higher notes on the keyboard would cause the filter cutoff point to move correspondingly higher — in this way, the filter could "track" the keyboard, as it were.

Well, surprise surprise! A parameter exists whose sole function is to do just this — use key position to control filter cutoff. It's called "FC1 (or FC2, as the case may be) Keyboard," and you can find it by pressing the "2" button.

You'll find that this parameter is currently set to 00. Select it and try setting it to a value of +28 — this will cause FC1 to precisely track the keyboard and the filter cutoff point is raised approximately one octave for every octave higher that you play on the keyboard. This control will most commonly be used to balance the brightness of a sound up and down the keyboard, giving you a means for evening-out the timbre of a sound up and down the keyboard.

Notice that this parameter can also be set to values above and below those which yield precise tracking. For example, if you want to have notes played higher on the keyboard brighter than those played lower, you could set this parameter to a value above +28. The "keyboard tracking" parameter, as it's commonly referred to, can be quite useful for balancing voices across the keyboard — particularly when you are doing multi-voice programming.

Set the keyboard tracking parameter back to a value of +28 ("FC1 Keyboard =+28"), hit button "1," and set FC1 cutoff to a value of 96. Now let's go take a look at filter 2, currently configured as a 1 pole highpass filter.

Press button "3" and you'll be at the [FC2] page. Once again, set the envelope 2 amount to "+00" — the display should look something like this:

FC2 Cutoff = 000
Envelope2 = +00

Select "FC2 Cutoff=" and try holding a note or chord, and varying FC2 cutoff using the data slider. Notice that the sound gets thinner as you move the slider up; this is characteristic of a highpass filter. To accentuate this effect, you

may want to try switching FC2 from a 1 pole to a 2 pole highpass filter. Hit the "0" button, and press the "Down/No" button once. Now the filters are configured as a single 2 pole lowpass filter and a single 2 pole highpass filter. If you're curious about the other combinations available, try scrolling up and down through the listing. You'll find that there are four configurations: 3LoPass/1LoPass; 2LoPass/2LoPass; 3LoPass/1HiPass; and 2LoPass/2HiPass.

At any rate, with the filter configured as 2LoPass/2HiPass, the effect of the highpass filter sweep becomes more pronounced. Also, as with the lowpass filter, there is a keyboard tracking parameter available. The difference is that it allows you to use key position to control the amplitude of low (rather than high) frequencies. Also, it should be mentioned that using a combination of high- and low-pass filters results in a third filter category, called "bandpass." A

band pass filter is one which filters out both highs and lows, while letting a center band of frequencies pass through.

Next month we'll start applying all this stuff about filters and envelopes in some practical ways, so stay tuned. See ya then. ■



Bio: Clark Salisbury has been involved with synthesizers and electronic music for a dreadfully long time.

Drum Sequencing From A Keyboard

Steve Byhurst

Many of you reading this article will probably own one of Ensoniq's excellent and unrivalled keyboards (a completely unsolicited opinion — but any equipment in gratis would be gratefully received). As you know, the majority of these give us a complete recording studio in one unit and offer a very quick, direct way of translating musical ideas into reality. You only have to put the sequencer into record mode and it becomes a trivial matter to enter that amazing tune that has just miraculously appeared from nowhere.

At some point this seed of an idea has to be worked on to produce something a little more developed. Personally, I enjoy working out harmonies, adding keyboard parts, etc., but when I come to the drum/percussion track I find myself much less at home.

You see I, and I am sure the majority of us owning this type of instrument, play the keys and not the drums. Drums and percussion are a vital requirement of most songs, especially now that dance sounds have dominated popular music for so long. So how can those of us who are not percussionists produce a decent drum track of our own on our keyboards? Well, like most things it has to be worked at. This is what I have come up with and it works well for me.

The details are based around using the sequence/song track structure that most Ensoniq sequencers use.

Basic Drum Track

Let's say that we have recorded one or more sequences which perhaps contain the melody, bass line, some harmony chords, etc., of a new piece. These will have been recorded using the click function to provide guide timing.

The next thing to do is to add a basic drum track to what you have, even if it is just a simple alternating bass/snare rhythm. Don't worry about sounds for now, any old program or sample will do. Set aside a spare track of your sequence or sequences, and record one or two bars, listening to the click to keep time. Play it back to check for accuracy. If your timing is not that great use appropriate quantization to firm it up. When you are happy, copy it to all other bars in all sequences so that you have a continuous drum track.

An alternative would be to use a drum track from a sequence that you already have, or maybe cheat a little and use one of the drum loop libraries that are available. De-

velopment of these later will produce a unique drum part which fits and compliments your new piece.

Drum Track Development

Now that you have a basic track, play all the sequences in their correct order and listen for where different parts naturally begin and end. Make some notes about the points in the sequence where extra beats will be needed to provide build-up to new parts and where more complicated percussion may be required to add interest. If you find this difficult, try listening to how some of your favorite artists arrange their drum and percussion parts.

The sort of drum arrangement you decide on will also be affected by what sort of feel you want for the piece. Does it need simple or complicated parts? Do you want it to be very busy or much more laid-back? Sometimes the answers are obvious, but if they aren't use your basic track to try out different feels and arrangements. Try using the Looped record mode to keep adding new parts to a track like you can with some drum machines. Eventually you will find something that fits and that you can build on later.

During this process you may find that you need to switch around sequences and/or add short new ones to improve upon your basic arrangement. If, as in a lot of pieces, drums and percussion dominate sound-wise, it is very important that the complete structure of the work is decided early-on and that sequences have been created that let the drum track fully integrate with the overall scheme.

Using Song Tracks

Once you are happy with the structure of your piece and how your revised drum track is sounding, it is time to create a Song. This gives you a way of overcoming a problem inherent with recording separate sequences.

Many drum patterns can be fitted nicely into sequences because they directly relate to the bar structure, like bass and snare on alternating beats. However, you will almost always want some percussion sounds to span across and link two sequences, and sometimes it can be difficult to hear the effect of this in relation to your overall piece. This is not a problem with song tracks because they are continuous over the whole song and therefore it is much easier to add extra percussion parts at any point.

The combination of having your main drum beats on sequencer tracks and extra "added interest" parts on song tracks gives you the freedom to create drum parts which are as complicated as the song demands.

Methods For Realism

If your piece is one which needs to sound like a real drummer is playing on it, rather than a drum machine, there are many things you can do to achieve a more realistic sound.

First, get the right basic sound for each drum part as this can give you a good head start. Samplers offer more here than synths but Ensoniq synths usually offer fairly good basic waveforms from which realistic drum sounds can be made.

Make the most of performance parameters, particularly Volume, Pan, Timbre and Effects. The essential feature of most percussion instruments is that they offer an extremely dynamic range so the less you make your program or sample sound like an identical repeated playback the better. Try programming four similar but subtly different versions of a sound using the patch select buttons and use them at random. Also make use of accessories to control appropriate sounds, like a foot pedal to control hi-hats or a volume pedal for crescendos.

If you want to create the impression of a "pushed" feel for excitement or a "lazy" feel for a laid-back treatment, try experimenting with the Edit Track Shift command to shift your drum track slightly forward or backward in relation to the main timing of the song.

Effects are also important, with reverbs making a particular contribution. There is no rule-book here, just try what you think would suit a particular sound and change it if it doesn't work. The main thing to remember is to listen not only to how an individual sound responds but also how it changes the overall impact of your piece.

Non-keyboard Controllers

Finally, why not consider using a more appropriate MIDI controller than a keyboard to play your drum programs/samples? Just plug a drum pad controller into your MIDI In socket, get hold of a couple of drum sticks and anyway you go! It is easier, and more fun, to input drum and percussion parts in this way. After a bit of practice the realism of your drum tracks could improve dramatically. Happy drum sequencing! ■

Bio: Steve Byhurst is a British composer of electronic music. He is still trying to convince people that his work is serious enough to be paid for.

Prog: MERLIN

By: Jack Carder, Springfield, VT

Notes: A nice, quiet sound. The wheel brings in the Leslie effect.

WAVE	1	2	3
Select Voice	On	On	Off
Wave Class	Bass	String	
Wave	PickdBass	GuitarHarm	
Delay Time	0	0	
Wave Direction	For	For	
Start Index	0	0	
MODSCR	Off	Off	
MODAMT	-	-	
Restrk Decay	42	42	

PITCH	1	2	3
Octave	+1	0	
Semitone	+05	0	
Fine	0	0	
ENV1	0	0	
LFO	0	+01	
MODSCR	Off	Off	
MODAMT	-	-	
KBD Pch Track	On	On	
Glide	Off	Off	
Glide Time	-	-	

ENV1	1	2	3
Initial	00	53	
Peak	99	00	
Break	99	00	
Sustain	99	00	
Attack	20	00	
Decay 1	20	00	
Decay 2	40	00	
Release	20	00	
Vel-Level	0	0	
Vel-Attack	0	0	
Vel Curve	Linear	Linear	
Mode	Normal	Normal	
KBD Track	0	0	

LFO	1	2	3
LFO Speed	43	20	
Noise Rate	66	0	
Level	0	72	
Delay	0	46	
MODSRC	Wheel	Wheel	
Wave	Tri	Tri	
Restart	On	Off	

FILTER	1	2	3
Filter 1	2Lo	3Lo	
Filter 2	2Hi	1Hi	
FC1 Cutoff	127	061	
ENV 2	+50	+19	
FC1 KBD	+25	0	
MODSCR	Env2	Wheel	
MODAMT	+29	+30	
FC2 Cutoff	029	0	
ENV2	0	0	
FC2 KBD	0	0	
FC1MOD-FC2	On	On	

ENV2	1	2	3
Initial	99	00	
Peak	75	99	
Break	37	74	
Sustain	00	27	
Attack	50	47	
Decay 1	50	44	
Decay 2	99	67	
Release	50	48	
Vel-Level	46	13	
Vel-Attack	0	0	
Vel Curve	Linear	Convex	
Mode	Normal	Normal	
KBD Track	0	0	

AMP	1	2	3
Initial	99	86	
Peak	50	99	
Break	00	88	
Sustain	00	87	
Attack	43	35	
Decay 1	50	56	
Decay 2	99	33	
Release	30	55	
Vel-Level	33	13	
Vel-Attack	0	0	
Vel Curve	Linear	Linear	
Mode	Finish	Normal	
KBD Track	0	0	

OUTPUT	1	2	3
VOL	77	97	
Boost	Off	Off	
MODSRC	Off	Off	
MODAMT	0	0	
KBD Scale	0	0	
Key Range	C2-C7	C2-C7	
Output Bus	FX1	FX1	
Priority	Medium	Medium	
Pan	0	0	
Vel window	0	0	

EFFECTS — ROTERY SPEAKER & VERB

FX-1	20	FX-2	25
Decay Time	47		
HF Damping	40		
Slow Speed	10		
Fast Speed	68		
Rotor Center	50		
Rotor Depth	39		
Speed Mode	Switch		
MODSRC	Wheel		

The Hack:

Merlin has a very scant, chop-chop duration — so anything that happens had better happen quickly. Voice 1 overpowers Voice 2 so before we go running Voice 1 at its output, let's go to Voice 2's Filter Section. Let Filter 1 = LoPass and Filter 2 = LoPass. Then adjust FC1 Cutoff to 093. Hear Voice 2 now? It sounds plucked. (So what if it sounds more like a guitar harmonic.) If you'd like the perfect 5th generated between the two voices to be, er... not so perfect, for either voice go to the Pitch Section and tweak Env1 to +01 or better. Anyway, the voices are balanced now.

Somehow the Picked Bass Waveform sounds mighty pushy in this context. To enhance the Far Eastern nod here, try Acoustic Bass or even Synth-Bass1. Oh, and speaking of things that

happen quickly, make sure to move the modwheel as you strike each key or else you're liable to miss the fast Leslie entirely.

Jeffrey Rhoads



Bio: Jeffrey Rhoads has been a keyboardist/composer on the Philadelphia Jazz and R & B scene for a period of time resembling forever. He has an interest in cinema and has developed some film courses. Jeff still believes in magic and longs for city lights.

Hackerpatch is intended to be a place where patch vendors can show their wares and musicians can share their goodies and impress their friends. Once something's published here, it's free for all. Please don't submit patches that you know to be minor tweaks of copyrighted commercial patches unless you have permission from the copyright owner. All submitted patches are subject to consideration for mutilation and comments by Sam Mims and Jeffrey Rhoads — our resident patch analysts. If you send in a patch, please include your phone number. Requests for particular patches are also very welcome.

Why I (Still) Love My Mirage

Johnny Klonaris

(Sorry. I just walked into the studio like I have thousands of times, but for some reason, this time I was suddenly overtaken by the bizarre idea to write a little homage to the old black beast with the funny, yellow eyes. It musta hypnotized me. Yeah, that's it.)

My Mirage, old number 11884, is sitting there; those two yellow digits flickering not quite evenly. Always a strange thing those two digits and their little dots. You can learn to tell a lot from the way they flicker and flash. I can often spot a busy MIDI stream or a badly looped sample. Not the kind of displays you see much of these days.

This one's one of the original steel-cased beasts; lots of black with just a touch of yellow and gray surrounding that horrible keyboard (you can't have everything). Back then I was much more interested in having something that would play waveforms that I would create, and play them in sequences that I'd work out. I did do those things and I learned a lot about the nature of sound playing with waveforms and complex samples alike. With a total memory of just 128k, it was not unreasonable to scan through every cycle of every wave in the machine (the phrase "late nights, all alone with a test tube" comes to mind). It had its nerdy boy charms.

But what I really appreciate is utility. My favorite tools are always the ones that do what they're supposed to do, efficiently and with no trouble. No trouble. Geez, I seem to recall taking it in once for some small repair a little after I got it. Then there was the free update (well, I think there was \$50 for labor) that lowered the noise and included an OS upgrade to 3.2. Hey — it's still 3.2 and it may be bug free for all I know. Since then: just plain no problems. And I haven't exactly been all that nice to it. It's been turned on and left with a non-bootable disk in it for a day or two; every few seconds it would read the first bit off the disk and flash ".O.S" for a few seconds then repeat. Not good. It's been left in the car in the summer with just a sun roof popped open on its way to a weekly practice: moved about, not just left on a stand. I've piled stuff on it without thinking and had it get hot enough to just stop. After it cooled down, it was just fine.

I've gotten nicer to it over the years and it just keeps hanging in there. I keep going back to it for one more sound on channel one; where it lives. Those cellos on one of those

first disks still have such a great sound; they give simple synth strings just enough character to keep them interesting.

And with the stereo mod (yup, I've been inside), the somewhat unusual voice assignment can be used for special effect, letting you access eight sounds panned across the stereo field, if you know the trick. (You don't want to know, but it does great crickets.). With Midicaster, the Mirage became my only librarian and my only portable sequencer for a while. Pretty soon I'll be receiving Sound-Process for it and more of Dick Lord's great, old multi-temperament OS's. I expect I'll keep using it until it finally goes off to the great keyboard graveyard (insert your own ivory reference here?).

Thanks to Ensoniq and all those that started it all off on such a positive note.

Shameless Plug — If you've read this far, there's a good chance you might even have one of these old beasts. Or not. But if you're interested in keeping connected to Mirage info and have an e-mail address, you might consider joining the Mirage-Net e-mail list. We've got some general info and hope to have a web page pretty soon. The data rate is pretty low and that seems to be pretty cool with our fifty or so members. If you're interested, send e-mail to: mirage-request@jawknee.ptp.hp.com and tell me what you want (it isn't automated — it's me). ■

Bio: Johnny has been Ensonized since before the beginning; anybody remember the SID chip? The SID, the cellos and even the crickets appear on his new CD, Unfinished Dreams.

Back Issues

Back issues are \$2.00 each. More than 10: \$1.75 each, more than 21: \$1.50 each. (Overseas: \$3 each.) E-mail copies of back issues are available for all issues since #118: \$1 each (anywhere). Orders for e-mail issues should be sent to: issues@transoniq.com.

Issues 1-40, 61, 67-74, 77, 79 and 82-85 are no longer available. A free back issue index is available for all issues since #43.

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 ASRs). 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 & KT-76/88.) DP/4 coverage started in #88 (much of which also applies to the ASR-10, and most of which also applies to the DP/2). TS-10/12 coverage got going with #98 but owners should also check out sample reviews (EPS/ASR) and SD & VFX programming tips.

Music Business Computer & Software Secrets

Jeffrey Fisher

To survive in the music wilderness you need a survival kit. What you put into that kit depends on your circumstances. You wouldn't take a life preserver to the desert, would you? What needs to be in your kit? It depends on what aspects of the music industry you will pursue. And, of course, that may change from time to time as you begin to diversify and wear many musical hats. There is one constant though, and that is probably your Ensoniq gear. The next constant is a place for that stuff. That usually means a studio of some kind. So, the minimal survival kit for many is a project studio especially suited to your skills.

The next item essential to your survival kit is a computer. You can't be in business without one anymore no matter what music products and services you offer. Though you may need some professional help occasionally such as legal, accounting, and often other ancillary services, I do suggest you *take charge* of your own musical career. And that means handling most matters yourself. That can be a formidable task. If your resources are limited you probably can't afford or don't wish to hire employees or independent outside help. By necessity you will need to handle your daily business demands and the most cost-effective tool you can add is a computer.

Why is your computer so important? The computer becomes your indispensable helper and often your memory. It helps you handle routine tasks with increasing efficiency. You should use your computer to find, reach, promote, sell, help, and maintain clients. It's the quintessential marketing tool.

Let's avoid a lengthy discussion about computer hardware specifics. My personal philosophy is for you to find the software you that mirrors the way you think and work... and then buy the hardware platform it runs on. Too many people do this the other way around. I advocate you consider my approach. The bare minimum software you should consider is:

- Good, all-purpose word processor

- Contact management system or personal information manager
- Mailing list manager or database system
- Accounting software geared toward small business

And anything else you consider essential to your music business success.

Word Processors

For many of you, a solid word processing program is all you'll ever need. Use it to draft and store all your marketing and promotional material. You can also use it to keep track of clients, meetings, long range goals, and more. Some even have a rudimentary database that you can use for both contact and mailing list management.

Contact Management or Personal Information Manager

You'll be reaching hundreds, maybe even thousands of people throughout your career. Keeping track of all those details in your head is impossible. This software helps your track inquiries, clients, meetings, to do lists, and more.

Mailing Lists Manager or Database

Again, let this software manage all the details of your business contacts. Some contact managers have extensive database features, so you may get by with one program. If you need more intensive data management features, a dedicated database program is definitely the way to go.

Small Business Accounting software

Even a simple money management program can make your life so much easier. If you think that this software is the equivalent of balancing your checkbook on computer, you are in for a huge surprise. How can you know your true financial position if you don't meticulously track both income and expenses?

Two secret software tools

Have you ever wondered if there is an easier way to keep track of all your random ideas and information? Or maybe you've wondered if there is a way to generate ideas and spark your creativity? Well, the wait is over. There are two clever software products ready to help you file information easily and lead you down a path toward more creative thinking.

Think of all the time you waste dealing with random information. If you're like me, you're always writing little notes and thoughts on scraps of paper, backs of envelopes, napkins, etc. Now there's help in the form of a nifty little computer program (available for both Mac and PC) called *Info Select*.

It's called a *Personal Information Manager* or *PIM*, but unlike similar products there is no set structure. Instead of following precise guidelines, you just enter your thoughts into windows, a kind of computer note card. You store your random thoughts in stacks — again the note card analogy is helpful here. And when you need to find something, just type in a few letters or key words and *Info Select* locates what you need immediately. This program is fast.

I use it primarily for ideas and to do lists, adding information about projects due and stuff I want to undertake. Next, I review my stacks periodically, combine thoughts and actions, then transfer the information to my word processing software when I'm ready to work. It's also great for holding phone numbers, contact information, marketing and sales information — you name it — *Info Select* is that flexible. And it's easy to use. This is one effective productivity tool and could be a whole new way for you to work and think!

Info Select, Micro Logic, P. O. Box 70, Hackensack, NJ 07602, (201) 342-6518.

Here's the slickest and most useful piece of software around (also available for both Mac and PC). *IdeaFisher* is a brainstorming tool ideal for writers, lyricists, and

anyone else who just needs a creative push in the right direction. It helps you generate ideas for names, titles, slogans, songs, stories, and more. It doesn't make decisions for you, but rather it stimulates your own creative juices through its unique free association structure.

The software has two parts, the *IdeaBank* and the *QuestionBank*. The *IdeaBank* is a storehouse of words and phrases designed to stimulate your thinking. It leads you down a path of exploration as you review categories, ideas, phrases, words, and such. It's hard to explain exactly how this works, but it might help you to think of a thesaurus. You move from word to word and look up new words and meanings based on the options available to you.

The *QuestionBank* asks you a series of questions to help you define your problem or need. Your answers can give you new insight into your creativity. Or you can use the *IdeaBank* for further exploration after you've answered the questions.

Ultimately, by providing thousands of questions, tens of thousands of words and phrases, and virtually limitless associations, *IdeaFisher* stimulates your creativity and help you make connections and form new ideas. This is one indispensable product that no creative person should be without.

IdeaFisher Systems, Inc., 2222 Martin St., #110, Irvine, CA 92715, (714) 474-8111.

If you need help organizing all your random thoughts or you face an incurable case of writer's block, check out these secret weapons. ■



Bio: Jeffrey's written so many articles for the Hacker he's run out of things to say in this biographical tag. How 'bout this? His favorite color is plaid. And another thang: How come nobody notices he's posing with a guitar in a magazine geared for keyboardists?

Change of Address

Please let us know at least four weeks in advance to avoid missing any issues. The Post Office really will *NOT* reliably forward this type of mail. (Believe us, not them!) We need to know both your old and your new address. (Issues missed due to late or no change notification are your own dumb fault — we mailed them!)

Missing or Damaged Issues?

Every month we mail out thousands of issues and every month about a dozen get "misplaced" by the Post Office. If you're ever one of the winners of this lottery, just give us a call (503-227-6848, 8 am — 8 pm Pacific Time) and we'll be happy to mail a replacement copy — no prob. (However, if you accuse us of nefarious schemes to "rip you off," you will be offered a refund and given helpful subscription info for other musician magazines.)

Classifieds

HARDWARE/SOFTWARE

RAM for sale: four- 4 Mb 30 pin, 70 ns SIMMS (total of 16) \$420 for all Rick; Ph/fax: 601-792-5723 or e-mail: smalldog@netdoor.com

EPS, 4x, Case, stand, 400+ disks plus disk holders, two 50-W speakers w/cords. \$1400. (503) 261-1613.

Pro Midi Software for PC: Cubase Score 1.11, orig \$520, sell \$270. Vision 1.4, orig \$250, sell \$99. Free Drumtrax or EPS/ASR Tools 2.5 with your purchase. All latest versions, with manuals, etc. Call Alex, 703-370-2760.

Ensoniq EPS Performance Sampler with 2x Expander, case and 25+ disk library. Good to excellent condition. \$650. (209) 683-6156. Call 7-8 am or 5-10 pm Calif. time. Also looking for used help videos for the TS-12.

SAMPLES/PATCHES/SOUNDS

ASR-10 Sounds: Synth Collection 1. Hand-drawn and additive synthesis. Crisp, metallic to warm, analog sounds. HD, 10 disks – only \$30 plus \$3 s/h. Send certified check or money order to: G. Bolton, 19 Third St., Ayer, MA 01432-1844.

Calling all Hip-Hop, Techno, and Jungle junkies! ASR-10. Rare, hard-hitting drum and percussion sounds. Bass, snare, hi-hat combos (7 disks, 100 sounds); Percussion (2 disks, 30 sounds). Only \$4 a disk. Get all for \$30. Free catalog with order. Mail to: Carl Rushing, 100 Springbrook Dr.,

Silver Spring, MD 20904.

ASR-10 samples of the TS-10. Hi fidelity, fully programmed. \$6 per HD disk, \$30 for all six (36 sounds). Check or M.O. Or send SASE for complete documentation. James Samp, 90 N. Bell St., Fond du Lac, WI 54935. Phone: (414) 922-4337.

TH's Jack Tolin presents SYNTH-BITS! Classic HR-16 drums (2 disks; 49 sounds), M1 synth-textures (5 disks; 50 sounds) come in easy to manage samples that turn your EPS-16+ or ASR-10 into a synthesizer! Star-Trec SF blurbs (2 disks; 20 sounds). Only \$3 per disk. SF blurbs for your PC: \$2 per disk, 12 disks available. Jack Tolin, 9314 Myrtle Ave., # 186, Kansas City, MO 64132.

FINALLY! A new set of 16-bit samples from Tom Shear. This time he tackles the Waldorf Microwave! For only \$15 + \$3 S/H, you can have 3 disks packed with the fattest digilog synth sounds you've ever heard! Send an SASE or e-mail (tomshear@AOL.com) for free catalog. Tom Shear, 805 5th Avenue, Williamsport, PA, 17701.

MUSIC

Unfinished Dreams is a self-produced album by Johnny Klonaris that features the Ensoniq VFX, DP/4 and good old Mirage on 17 vocal and instrumental tracks. Send \$10 US for the CD to Catharsis Records West, P.O. Box 361074, Milpitas, CA 95035-1074.

MISC

ASR-10 Covert Videos instructional tape. Full 8 hours. This is an original set — not copies. Excellent condition. Best offer. Call Charles at 213-860-8831. (One set only.)

OUT-OF-PRINT BACK ISSUES

M.U.G. will provide Out-of-Print issues

for cost of materials and postage. M.U.G. Hotline: 212-465-3430 or write: G-4 Productions, PO Box 615TH, Yonkers, NY 10703. Attn: TH Back Issues. Phone: (212) 465-3430. * * * Folks in the New York City area can get copies of unavailable back issues of the *Hacker* — call Jordan Scott, 718- 983-2400.

FREE CLASSIFIEDS!

Well — within limits. We're offering free classified advertising (up to 40 words) for your sampled sounds or patches. Additional words, or ads for other products or services, are \$0.25/ word per issue (**BOLD** type: \$0.45/word). Unless renewed, freebie ads are removed after 2 issues. While you're welcome to resell copyrighted sounds and programs that you no longer have any use for, ads for *copies* of copyrighted material will not be accepted. Sorry — we can't (we won't!) take ad dictation over the phone!

Current Ensoniq O.S. (Disk/EPROM)

EPS	2.49/2.40
EPS-M	2.49/2.41
EPS-16 PLUS	1.3/1.00F
MASOS	2.0
MIRAGE	3.2
ESQ	3.5
ESQ-M	1.2
SQ-80	1.8
VFX	2.30
VFX-SD	2.1/2.00
SQ-1	1.11
SQ-1 32	2.03
SQ-1 PLUS	1.15
SQ-R	1.20
SQ-R 32	2.03
SQ-R PLUS	1.15
SQ-2	1.2
SQ-2 32	2.03
SD-1	4.10/4.10
SD-1 32	4.10/4.10
DP/4	1.15
DP/4+	2.02
KS-32	3.10
ASR-10	3.53/1.5
ASR-88	3.53/3.50
KMX-8	2.00
KMX-16	1.50
TS-10/12	3.05
KT-76/88	1.62
Soundscape	1.3.03

If you're selling your gear...

Please be sure to pass along how absolutely vital it is to have a subscription to the *Transoniq Hacker*. And — we're always happy to do a sub transfer. No charge, and it's a nice extra to help close the deal.

The Interface

Letters for The Interface may be sent to any of the following addresses:

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

Electronic mail - GENie Network: TRANSONIQ, Internet: interface@transonik.com. In many cases a quick answer can be obtained by posting to our interactive, on-line Interface at our Web site (<http://www.transonik.com/~trnsonik/interface.html>) or calling Ensoniq CS at 610-647-3930.

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.

[TH - Readers may notice some unusual names contributing to the responses. These are from folks checking out our interactive on-line Interface page at our web site. Drop by at <http://www.transonik.com/~trnsoniq/>]

Dear Hacker,

For several years I have been using Ensoniq products and reading the *Hacker*. It has helped me a great deal in finding out about current Ensoniq products, studio uses, and has often clarified some points in the manuals. So, since I am new to this e-mail thing, just a few general comments:

1: I have owned many different Ensoniq keyboards. That said, as a general rule the manuals are excellent and the support staff at the factory very courteous and helpful. It is always amusing to read a letter from someone who insists on trying to make the machine do something it just was not designed for.

2: I just may be easy on my equipment (serious home hobby) but with the exception of the keyboard problem on my VFX, I have never had any problems with any Ensoniq hardware. I rarely use the on-board sequencer though, preferring to use the machines with an external sequencer (Mac/Performer).

3: I installed the SCSI board and extra RAM with no trouble and found that my few problems with the "reboot" message were generally my own fault - i.e. rushing the "key punching thing," strange SCSI requests (no, it does not like being connected to another computer) and again trying to make it do something that it was never designed for.

4. Multiple SCSI devices were no problem, but often took trial and error to sort out what should go where (keyboard

> 240 quatum > Apple CD Rom > Zip Drive).

5. The hard disk recording feature is great for scratch use but after getting used to the procedures (again, the manuals are great) find that I wish for more features (just can't swing the computer based disk recording). The main improvement would be a way to sync to SMPTE. The new Zip Drive is wonderful, 100 megs of songs, digital tracks, banks, etc all on 1 disk for about \$15.00!

Anyway, I wanted to try out this e-mail thing and tell you folks about the great job you're doing keeping us informed and entertained, while we use some of the finest musical equipment available, at any price!

P.S. I would like to try the e-mail version, but without a decent printer, I would not be able to enjoy picking up the magazine late at night and trying to read the same sentence over and over and...

Thanks *Hacker* and thank you Ensoniq.

Sincerely,
Keary Calman

[CS - Well, the e-mail thing seems to be working pretty well so far. But I know what you mean about wanting a printed copy of the Hacker; there are just some places where a video display is not all that convenient.]

[TH - On the other hand, we all know how user-friendly the "search" function is for the paper version. Many of our eTHers have chosen to go the "combo sub" route.]

Dear TH,

I thought the other TH readers would like to know about a new electronic jazz publication I am starting called *The Jazz*

Friends Review. Of particular interest is an outlet for jazz musicians to list and sell their independently produced CDs and tapes through *Jazz Friends*. The publication also will feature articles, calendars, reviews and other info about jazz. Those interested will be able to voluntarily contribute articles. The publication will be free (and hopefully remain so). To join the mailing list, contribute articles or list your music, send e-mail to jazzfriend@aol.com for details.

Rob Fisch
Via Internet

[TH - Good luck on your new venture!]

Hi there,

Do you have any experience in connecting an Apple PowerCD CD-ROM player to an Ensoniq ASR-10?

I can read a directory but loading a sample seems to fail.

Thanks for your help,
Casper Idsinga
cidsinga@guide.nl

[CS - I've heard nothing but good things about Apple CD-ROM players, so I suspect your problem lies elsewhere - but we'll see what Ensoniq has to say. In the meantime, here are a few basic SCSI troubleshooting tips (for whatever drive you end up with):

1) Ensoniq devices use a SCSI ID of 3; you can use any ID other than this for your SCSI peripherals.

2) Be sure to terminate properly. The first and last devices in a SCSI chain should be terminated. For complex systems some sort of active termination (such as the SCSI Sentry from APS) may prove helpful.

3) Use the shortest SCSI cabling possible.

SCSI chains should not exceed 20 feet in length, and can become troublesome even at shorter distances.

4) Make sure your SCSI cables are functioning properly. SCSI cables seem to have an inordinately high failure rate.

5) It may seem obvious, but power up your SCSI devices before your Ensoniq instrument. The ASR will check for SCSI devices as part of its boot routine. If it finds none, it will assume none are attached. SCSI devices cannot be mounted once the ASR has been powered up.]

[Ensoniq – Unfortunately, the Apple PowerCD player is a special case – it was not designed by Apple and is the one glaring exception to our usual compatibility with their products. It will not work with any of our products.]

Subject: VFX-SD Sysex

My question:

Is there a SYSEX message for the VFX-sd to change the PERFORMANCE EFFECT?

In general, does anyone have good sysex messages for the VFX-sd or know where I can find them? The manual has me lost on this subject!

I love my VFX-sd and have no intention of swapping it for anything unless it totally dies on me. But the manual just doesn't get me into the heart of its sysex. I know it isn't as "sysex sophisticated" as later equipment, but any help would be greatly appreciated.

Thanks,
Ted Hyatt
Via Internet

[Denis Joiret – You have to use the virtual buttons (see manual page A-3) for this purpose. There is no special SysEx to change the performance parameters (like the ones for the program parameters). You can also change the whole preset using preset Dump (page A-5 & A-7), after modifying the effect para-

meters (see structure of a preset page A-12). My only source is the manual!]

[CS – Denis provides an excellent workaround for the problem. In addition, I believe that if you send the correct sequence of program changes you can cause the VFX-sd to load a sound along with its associated effect. It's been a while since I worked with any of the VFXs, but you should be able to find more specific info in your manual (if I'm not mistaken, you first send a high program change number, such as 127, then send the program change for the sound you want to load). Of course, this will only help if the effect you want to use is associated with one of the VFX-sd sounds.

And still another approach: use song select messages to select different sequence templates, each with its own effect.]

[Ensoniq – We have detailed System Exclusive documentation available for all of our products. Contact Doug at 800-553-5151 or write to us, attn: MIDI Sys Ex., Ensoniq Corp, 155 Great Valley Parkway, Malvern, PA, 19355-0735.

Regarding Clark's answer, you can bring an effect along with a program in a Sequence or Song by first sending program change 125 then the program change for the sound you want. This is much simpler than virtual button pushes!

Clark's Song Select idea is also a good method. Note: We haven't tried it to see how smooth it is, but it should work in theory. Try it and let us know how it works for you!]

Hi Hackers,

I've been out of it for a while. Has anyone come up with a good editor for the KT-76 and Atari?

Thanks,
Martin

[TH – Can't say for sure, but I suspect that unless you speak German the only

editors for the Atari will be some pretty old, pretty general ones. You should probably check the last few issues of ST Format (the British mag) and see if they have some kind of MIDI roundup. Also check out our web page (<http://www.transoniq.com/~trnsoniq>) and go to the "other links" section and check out "Ensoniq sites" – there may be some public domain program out there.

Meanwhile, we'll pass your letter on to see if anyone can add anything.]

[CS – At one time there was a universal editor for the Atari called X-or. Eventually, this program transmogrified into the program now known as Unisyn, which is available from Mark of the Unicorn (617-576-3066). It's a longshot, but you might give them a ring, and see if X-or is still available anywhere, and if there is a profile for your synth that will work with it.]

[Ensoniq – We know that Unisyn supports the KT series, but aren't sure about its Atari status. Contact Mark of the Unicorn for the final answer.]

Dear TH:

I noticed an unintentional typo in the January, 1996 TH. The correct address for my Ensoniq Resources on the Internet Web page is: <http://www.netaxs.com/~mikeh/ensoniq.html> (There is no trailing "/" character.)

This World Wide Web page is a very comprehensive listing of Ensoniq Resources on the Internet. It contains links to dozens of Internet Web pages; Ensoniq-related software, file, patch, and sample sites around the world; details on subscribing to various Internet mailing lists; links to companies; and more!

All of this will be of interest to the well-connected Ensoniq user. There are links for Mirage, ESQ-1, SQ-80, VFX, VFX-SD, EPS, EPS-M, EPS-16+, SD-1, SQ1, SQ1+32, SQ2, KS-32, ASR-10, ASR-10R, ASR-88, TS-10, TS-12, KT-76, KT-88, DP/4, DP/4+, DP/2, & Soundscape owners.

All TH readers are invited to check it out!

mikeh@netaxs.com

[CS - Thanks for the correction. I can attest to the usefulness of this site - I've visited it several times myself.]

Dear TH,

I'm having some problems with RAM Tracks. When I press the stop button, the display shows, "Locating..." and then nothing else happens and I have to reboot. (I have an ASR-10-M with 10M RAM, O.S. 3.53.)

Best regards,
Javier Pozzi
Montevideo, Uruguay

[CS - Either one of two things is happening: your ASR is broken or you're not waiting long enough. To determine which it is, try making a short recording into your ASR after a fresh boot-up. If you have to wait more than a couple of minutes, the machine needs service.

You will find, though, that an ASR (particularly one with a lot of RAM) can take a while shuffling memory around after recording. The situation can become exacerbated if most of the ASR's memory is full, as this leaves little RAM for it to use as workspace. The wait in such cases can actually come to several minutes.]

Dear Hacker,

I would like to know whether the SCSI port that is optional for the TS-Series will also fit future Ensoniq products? Case in point: The SCSI option is rather expensive and it sure would be nice to be able to install the same kit to a next generation instrument instead of having to buy an instrument specific kit. For instance, I understand that the sequence memory expander kit is the same for both SD-1 and TS-10. Will I be able to recycle the SCSI add-on?

Thanks,

Markku Perala, Finland
Via Internet

[CS - Don't hold your breath (as we in the US are fond of saying), Markku. So far, none of the SCSI interface kits Ensoniq has produced has been compatible with instruments other than those within the same family. For example, an EPS-16 PLUS SCSI interface could work with an EPS-16 PLUS rack, but it won't work with an EPS Classic, or any of the ASR- or TS-series instruments.]

[Ensoniq - The SP-4 SCSI interface for the TS will not work with any of our other products. With recent developments in SCSI (i.e. SCSI-2) it is likely that our future designs will take advantage of these more advanced designs.]

TH:

Here's a question regarding the sequencer on the ASR-10:

I make house music averaging at a bpm of 125 bpm. It seems when I use a 4/4 count on my drum tracks that when a sequence changes, a slight pause is heard in the track. I have also heard this from other ASR users. Is there a way to correct this deficiency?

Chris Obrien
Via Internet

[CS - I'm not sure I completely understand the nature of your problem. Are you driving the ASR with the clock from your drum machine, or vice-versa? Is the drum machine a Sequential "Drumtraks," or are you using that term generically?

I haven't heard too many complaints along these lines, so I don't think your problem is with the ASR per se. There are a couple of things to be aware of, though. First, if control of the ASR effects processor rests with the sequences, it's possible to experience a small interruption in output if the ASR is required to load a new effect when changing to the next sequence. If this is the case, you

may want to see if you can't stick with the same effect setup throughout the song. Either give effects control to the song, or use the same effect for each sequence in the song.

Timing can also be a problem if you ask the ASR to do too much all at once. For example, if you are using different mix, pan and program change information in each sequence, the ASR will attempt to implement all these instructions during the first clock of the new sequence. If you also have a lot of notes and/or a several multi-layered ASR instruments all trying to sound at once, timing can loosen up a bit. Wherever possible, try to space events (particularly controllers) so they aren't all occurring on the same beat. Along the same lines, check what aftertouch is doing. If you're not using aftertouch on a particular track, make sure that you're not recording it; the ASR will try to process aftertouch on a track even if the instrument assigned to the track doesn't use it.]

[BrosRyan@aol.com - If you are using a SCI Drumtraks, it'll work great if you match both tempos, that is to say: set the Drumtraks' tempo to 125 also. It should also do flawless slowdowns, etc.]

[Ensoniq - This is a common thing we hear - the answer usually lies in the amount of notes and controllers you have on the new sequence's bar 1, beat 1, clock 001. By shifting some events across the first 2-4 clocks you can significantly clean up the "lurch" you describe without any noticeable timing changes in your performance.]

Subject: Mirage disk-drive replacement

I need to replace a non-working disk drive in my Mirage, and understand that the replacement drive is a standard PC single-sided drive with some slight modifications. I have asked my authorized Ensoniq dealer the cost of replacing this drive through Ensoniq. The price is quite expensive, and leads me to attempt a replacement myself. Does anyone know what mods need to be done with a standard PC-drive to make it installable

into the Mirage?

Steve Haas
Via Internet

[TH - Actually, way back in November and December of '89 we ran articles on converting an earlier Mirage to a double-sided drive. About the only requirements about the drive were that it fit mechanically, be addressable as drive 0, and have the 34-pin cable connector on the back. There were some modifications mentioned in the article but they were just some switching/indicator changes so the Mirage could use both sides of the floppy. (Both of these back issues are still available - #52 & #53, \$2 each.)]

[Ensoniq - Make sure the 4-pin power connector is mechanically compatible with the Mirage power cable (there are variations out there). Also, check the 5-volt power consumption. The Mirage was designed to use a disk drive that required +12 volts and +5 volts. Newer drives require only +5 volts, but demand more power from the +5 volt supply than the old ones. Be careful not to overload the power supply.]

Dear everyone:

Perhaps I will herewith "kill a multiple of avians w/one stone" (ahhh the '60s!). But, I love the birdies too, so...I'm satisfied to "cover a multitude of subjects" within this; my one missive this month, written 8:59 PM 12/31/95 HAPPY NEW YEAR!

But seriously folks... A regular writer reported that he had an accident and was "on crutches." I hope he's all repaired. Might it have been Jeff Rhoads? Anyway - be well Bro...

Thanks this year for knowledge imparted RE: "Normalizing" from, was it Mr. Tom Shear or another? My only question now is: when would you not use "Normalize"?

Thanks too for tutorial on: "Event Edit" ...Garth maybe? I discovered that if you move through the track events you'll

hear them passing faster and faster (the notes I mean). If you go backwards the thing will go into a ping pong delay when it reaches the beginning of the track. Just hold the direction key (the Down arrow). This is cool when used as an intro or ending. Very "effectable" effect. Or should that be "affectable"? Whatever.

Lastly and not leastly - thanks bigtime to Tony at Ensoniq for replacing my most favorite piano when my no back-up lame self got caught. Lesson: Often loaded disks are going to go bad on ya. Back up if you don't have other storage. I wonder how long before my seldom and unused floppies give it up?

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. 610-647-3930. Ensoniq's Fax On Demand line, (1-800-257-1439) can also be used to retrieve specs, OS info, hard-drive info, and the like.

All Ensoniq Gear - Electric Factory (Ensoniq's Australia distributor). E-mail address: elfa@ozemail.com.au; their web site at <http://www.ozemail.com.au/~elfa>; or e-mail their resident clinician, Michael Allen, at mallen@geko.com.au. Phone calls, Business hours - Victoria. (03) 480-5988.

All Ensoniq Gear - The Electric Factory in New Zealand, phone (64) 9-443-5916, fax (64) 9-443-5893, or e-mail geoffm@elfa.co.nz (Geoff Mason).

TS Questions - Pat Esslinger, Internet: pate@execpc.com, Compuserve: 74240,1562, or AOL: ESSLIP.

TS, VFX, and SD-1 Questions - Stuart Hosking, stuh@ozemail.com.au.

MIDI users and ASR-10 Questions - Ariel and Meiri Dvorjetski, Internet: s3761921@techst02.technion.ac.il, or dvorjet@technix.technion.ac.il. You can also call Sincopated BBS at (Israel country code: 972) 4-8776035, 24 hours, 28.8K Modem. Please Login as: ENSONI, Password: MIDI.

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

VFX Sound Programming Questions - Dara Jones, Compuserve: 71055,1113 or Internet: ddjones@netcom.com or call 214-361-0829.

SD-1, DP/4, ASR-10 Questions - John Cox, 609-888-5519, (NJ) 5pm - 8 pm EST weekdays. Any time weekends.

SQ-80, VFX Questions - Robert Romano, 607-898-4868. Any ol' time (within reason) EST.

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

EPS, EPS-16 PLUS, & ASR-10 Questions - Garth Hjelte. Rubber Chicken Software. Call anytime. If message, 24-hour callback. (612) 235-9798. Email: chickenEPS@willmar.com.

ESQ-1 AND SQ-80 Questions - Tom McCaffrey. ESQUPA. 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.

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.

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

ESQ-1, MIDI & Computers - Joe Slater, (404) 925-8881. EST.

Well I'm now embarked upon the cyberspace frontier, sufficiently engrossed. I'm not yet convinced that this stuff really works.

HAPPY NEW YEAR!

J.D. Ryan
BrosRyan@aol.com

[CS - To answer your only question, I'd recommend normalizing pretty much any sample. Although I know a professional sound designer or two who claim that normalizing can screw up a decent sample, I'd guess they're thinking of samples made a too quietly in the first place. Bottom line - back the sample up before normalizing, and go with the version that sounds best.]

[TH - Yes, that was Jeff, and he's on the mend - but it's a slow process.]

Interface:

I'm considering the purchase of an EPS-16+ w/memory expander. How much will it cost to add the SCSI interface and flashbank or P-RAM - whichever is applicable? Also, what else can be done - added to this unit to optimize it to its full potential?

Thanks,
AlC43@aol.com
Via Internet

[Ensoniq - The SP-2 sells in the US for \$199.95 installed. We no longer offer the FB-1 or FB-2 Flash memory options, but you could look for them on the used market. You don't mention whether you are looking into a keyboard or rack. If it's a keyboard you might want to add the 6 output expander, the OEX-6sr, which sells for \$249.95. And don't forget about pedals and sounds!]

[PMI Staff <staff@phylum.com> - Dude, what you are looking for is an EPS-16+ TURBO. The TURBO is the factory top-of-the-line, fully-loaded EPS-16+ complete with flashbank, SCSI port, full memory expansion, etc. It should be easy to find on the used market.]

Subject: ASR-10 OS

Is there any place I can download the latest operating system for the ASR-10 on the 'net? I checked out Ensoniq's site, but didn't find it.

Thanks,
jhsu@panix.com
Via Internet

[Goran Ekstrom - Hi, I'm new to this site and just about the first I read was a letter about OSs for the ASR. On the Ensoniq Compuserve forum, OSs for both ASR and EPS are available but I don't know how/if they work because I have

never downloaded any of them.

Hope this helps!

Goran Ekstrom
Stockholm, Sweden
100337.3217@compuserve.com]

[CS - Some Ensoniq operating systems are available at the Oakland University site, although there doesn't seem to be anything for the ASR available there. I spent a little time at Compuserve looking for the files mentioned by Goran Ekstrom but couldn't find operating systems for anything other than Ensoniq's Soundscape stuff. However, we are looking into the possibility of making disk-loadable Ensoniq OSs available at the Hacker's ftp site. We'll keep you posted.

In the meantime you should be able to get a copy of the latest OS from your local dealer, or directly from Ensoniq Customer Service. There's no charge for the OS (although you'll probably have to cover incidental expenses such as postage and the price of a floppy disk).]

[Ensoniq - We have no problem with the Hacker supporting our OSs at your site. It would have to be in Giebler format for PC users only.]

[TH - Now all we have to do is get 'em there...]

HACKER BOOTEEQ

DINOSAUR REMAINS

CLASSIC VINTAGE SOUNDS FOR EPS

Orchestron, Taurus,
Mellotron, Vocoder
Plus & more.

Call for free catalog.
713-481-1256

MAKE MONEY

FREE booklet reveals dozens of
moneymaking success secrets.

Jeffrey P. Fisher Music
8341 Ripple Ridge
Darien, IL 60561
(708) 971-1641

Turn your music
into CASH!

YO ADVERTISERS!

Try an economical size ad in the Hacker. Our one-twelfth page ad (the size of this ad) is the perfect size for testing the waters, moving up from the classifieds, dropping back from larger ads, or just maintaining visibility over long periods with minimal expense.

2.25" x 2.25" Only \$30!

And now - Booteeq Jumbo:

2.25" x 4.6" Only \$45!

Transoniq Hacker
1402 SW Upland Dr., Portland, OR 97221
503-227-6848

HACKER BOOTEQ

PROFESSIONAL QUALITY

Low-cost sequences for
The EPS/EPS-16+, SQ-80, ESQ-1,
VFX-sd, SD-1, Roland, IBM/DOS

Rock ('50s, '60s, '70s, '80s)
Big Band - Top 40 Country

Call or Write - Any time, 24 Hours

Music Magic

10541 EARL AVE.
BENNINGTON NE 68007
1-402-238-2876

MUSIC LABS

Sequences for the gigging musician...

For the Ensoniq...
EPS, 16+, ASR 10/12 and TS-10/12

All titles also available in...
IBM & ATARI... GM, GS - SMF
Popular requests, blues, country and classic rock.
Write or call for a catalog!

Music Labs
5109 Point Fosdick DR NW #E268
Gig Harbor, WA 98335
Ph (206) 265-3091

Online E-mail support 76243.2623@compuserve.com

Tech Star™ software

ASR/EPS/TS SAMPLES

Variety Pack (8 HD or 16 DD disks) only \$49.95

The Variety pack consists of many of the best sounds from our Collection Sets which include sounds from Moog, Oberheim, Junos, ARP, OI/W, E-MU, Wuritzer, D50, B3, AX-80, Prophet 5, PPG, Jupiter8 and more. Over 50 sounds! Add Drum Collections 1+2 (6 HD or 12 DD disks) for only \$29.95 (reg. \$39.95)

Call or write for FREE catalog and demo!

Mastercard/Visa (810) 783-0470
P.O. Box 463236 Mt. Clemens, MI 48046

Protective Dust Covers

20% discount on all Ensoniq Covers

(Must mention ad)

For these & others call:

1-800-228-DUST(3878)



• Fast Service •
• Custom Fit •



The Le Cover Company
1223 Kingston Lane
Schaumburg, Ill. 60193

L. B. Music Sequences

We Support Ensoniq • Roland
Korg • Yamaha • SMF-GS/GM Formats

Why not give L. B. Music a try and see
why so many people love our sequences
— and keep coming back for more!!

Music And Lyrics Now Available!!

Toll Free Orderline: 1-800-3LB-MUSIC

Visa and Mastercard Accepted

L. B. Music

51 Charter Oak Drive
Newton Square, PA 19073-3044
610-356-7255 / Fax: 610-356-6737

3D SOUNDS

NEW! VINTAGE SYNTHS CD-ROM for
ASR/TS/EPS/K-2000. Hundreds of killer and professionally
programmed synth sounds from the classic analog and
digital synthesizers. Bases, synths, leads, pads, effects,
synth loops and electronic percussion. Specify Ensoniq or
PC disk extractor format.

PRICED AT ONLY \$39!

THE ASR/TS/K-2000/EPS SAMPLER BANK

Hundreds of instruments: bases, synths, leads, pads,
drums, drum loops, orchestral, acoustic, guitars, pianos and
much more. Fully programmed. Specify Ensoniq or PC disk
extractor format.

NEW PRICE AT \$45!

7000+ MIDI File CD-ROM \$39
1900+ Instrument .wav File CD-ROM \$35
AUDIO SAMPLE CDS:
Drum Sample CD #1 \$25
Drum Sample CD #2 \$25
Loop Bank CD \$25
Orchestral/Acoustic/Guitar CD \$25
Super Synths \$25
Monster Synths \$25
Classic Synths \$25

BOX 22065
50 WESTMOUNT RD. N.
WATERLOO, ONTARIO
CANADA, N2L 6J7
519-747-0282
WE NOW ACCEPT VISA
dwhite@in.on.ca
Add \$2 Shipping Per CD

PHAT Loops

FOUR EPS/ASR DISKS OF THE
PHATTEST DRUM LOOPS FOR
RAP AND DANCE TRACKS.

\$29.95

99

PERCENT
PHAT-FREE?
NOPE.

EAST-WEST LOOP
EASIE E-ING
DA GLIDE
N-I-N
NAUGHTY LOOP
CLUB 2010
MEAT-BEATIN
ATTITUDE LOOPS
SQUIGGLY BOY
CRUSH LOOP
WARM LEATHERETTE

ORDERS MUST INCLUDE \$4 SHIPPING (\$6 FOR
FOREIGN ORDERS). MASTERCARD, VISA, AND AMEX
ACCEPTED. WRITE OR CALL FOR FREE CATALOG OF
SOUNDS FOR ALL ENSONIQ KEYBOARDS!

Syntaur Productions

5402 W 43RD ST HOUSTON TX 77092
(713) 682-1960 (800) 334-1288

ENSONIQ DISKETTE MANAGER

Use Ensoniq Disks on your IBM-PC
Read/Write/Format/Copy and more.
Supports all Ensoniq Disk Formats.

ENSONIQ MIDI MANAGER

Send or Receive Data through MIDI
to your PC for these keyboards:
KS-32 VFX SQ-1 SQ-2 ESQ-1

SEQUENCE CONVERTERS

Convert Standard MIDI Files to/from
Sequences for these keyboards:

TS-10/12 SQ-1 SD-1 VFX-sd
SQ-80 EPS-16 EPS ASR-10
KS-32 KT-76/88 SQ-2 ESQ-1

SD-1 TO TS-10/12 CONVERTER
for VFX-sd or SD-1 sequences & songs.

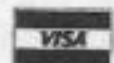
Call now to order or for more information
on these and other software packages.

Giebler Enterprises

26 Crestview Drive
Phoenixville, PA 19460

(610) 933-0332

Fax: 933-0395



DANCE-SAMPLES POWERHOUSE CD-ROM

LOWER PRICE \$199.00

Over 300 Megs, 1,162 instruments containing over 4000 samples.
From drums to strings, every major drum machine, 30 day money
back guarantee, fast loading, highly organized for EPS 16, ASR,
and TS-10. The best drum sounds in the world! Street series
drums from the MPC-60 also included. Classic analog synths
from the minimoog, TB-303, MC-202, SH-101, opus 3, OB 8,
Jupiter 8, Juno-106. Great digital synths from the Wavestation,
JD-800, D-50, D-70, SY-85, DX-7, JX-8P, SQ-80, K3, CZ-101.

ASR CD-ROM DRIVE \$199

With purchase of Powerhouse CD-ROM.
Great CD-ROM drive compatible with MAC,
IBM, ASR. The drive may also be used as
a portable CD player and includes head-
phones. Use it to sample CDs too.
regular price \$249, add \$7 shipping
includes scsi cable
2X speed
scsi 2



SAMPLING CDS

DANCE CONSTRUCTION SET CD - Over 140 drum loops and all
the individual samples that made the loops. Great classic synths
like the Minimoog, TB-303, MC-202 and more. Great Techno hits
and FX. And special hip hop section by producer D.J. Black.
Over 1200 samples. This great all around CD is only \$75.00

VOCAL BYTES Sampling CD Vol. 1 or 2 • 1070 vocals \$99.00
12 Professional singers on CD - NO ADDITIONAL FEES.
Soulful, funky, ultra clean, super nasty, and very useable.
Also included vocoder and computer generated vocals.
"Very Cool CD" Mark Mothersbaugh - Devo, Liquid TV, MTV
"Great CD..." Mark Lewis - D.J., Remixes, Billboard reporter

OVER 400 3.5" DISK CATALOG AVAILABLE

FREE CATALOG - CALL NOW!

800 301-MIDI (6434)

Samples on 3.5" disk for: EPS, EPS 16,
ASR-10, TS-10, S-50, S50, W-30, MPC-60
- VISA, MASTERCARD, AMEX -
CALL FOR YOUR FREE CATALOG!
(800) 301-MIDI fax 310 699-0864

MIDI MARK7@aol.com
MIDI MARK
Since 1989

TRANSONIQ HACKER

1402 SW UPLAND DR., PORTLAND, OR 97221

BULK RATE
U.S. POSTAGE
PAID
PORTLAND, OR
PERMIT NO. 11

ADDRESS CORRECTION REQUESTED

Postmaster: Please return Form 3547 as soon as possible so we can change our records. This is a monthly publication.

SUBSCRIPTION MATERIAL
DATED MATERIAL - TIME VALUE

Publisher: Eric Geislinger
Editrix: Jane Tallman

Our (somewhat regular) illustrious bevy of writers includes: Craig Anderton, Robby Berman, Paul Bissell, Steve Byhurst, Mark Clifton, Anthony Ferrara, Pat Finnigan, Charles R. Fischer, Jeffrey Fisher, Gary Giebier, Jim Grote, Garth Hjelte, Bryce Inman, Jeff Jetton, Dara Jones, Brad Kaufman, Johnny Klonaris, Ray Legnini, John Loffink, Daniel Mandel, Sam Mims, Jeffrey Rhoads, Dan Rohde, Brian Rost, Clark Salisbury, Tom Shear, Kirk Slinkard, Jack Tolin, Steve Vincent and Garry Wasyliw.

Copyright 1996, TransonIQ Hacker, 1402 SW Upland Drive, Portland, OR 97221. Phone: (503) 227-6848 (8 am to 9 pm Pacific West Coast Time).

Advertising rates: Please send for rate card.

Rates for authors: Please send for writer-info card.

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

TransonIQ Hacker is the independent user's news magazine for Ensoniq products. *TransonIQ Hacker* is not affiliated in any way with Ensoniq Corp. Ensoniq and the names of their various products are registered trademarks of the Ensoniq Corp. Opinions expressed are those of the authors and do not necessarily reflect those of the publisher or Ensoniq Corp. Printed in the United States.

Rubber Chicken Software Co. - Your Source for Ensoniq Accessories!

SPECIAL LIMITED OFFER!!!

The Chicken CD-ROM Drive

Only a limited amount available! Specially equipped for Ensoniq compatibility! Order yours today! Desktop or rack cases available!

Try the Introductory Bundle for \$284.95 - that's our CD-ROM Drive with any Chicken CD-ROM!

only
\$99.95!

ANOTHER SPECIAL LIMITED OFFER!!!

Rackmount SCSI Drives! **only \$140!**

Make your choice - a Syquest EZ-135, or a Chicken CD-ROM Drive, or both! Packed in a road-worthy rack cabinet - call for final prices! (price above for the extra cabinet - drives are extra)

YET ANOTHER SPECIAL LIMITED OFFER!!!

"Pre-September" Iomega ZipDrives!

As you may have read, a brand new ZipDrive you buy probably has a serious defect - it can't format ZipDisks! (Read the blurb elsewhere in this Hacker.) We have some of the older ZipDrives that are fully compatible with the EPS/ASR - they format/read/write! We only sell them with a **free cartridge full of RCS sounds of your choice**, but that's a great deal too! **Only \$339.95!**

Covert Instructional Videos!

Covers basic functions as well as advanced techniques. Available for all current E-instruments. **\$119.95 each!**

WaveBoy's Transwave Library!

A new innovative way of manipulating waves in the EPS/ASR - with stunning results! Perhaps the best resonant effects you'll find - at a bargain price! Essential ownership for the serious Ensoniq sampler user. **Only \$69.95!**

Check Out Chicken CD-ROM II

Contains great sounds such as The Guitar Pak, the Electric bass Pak, The French Collection, "XP meets ASR" and much more! **Only \$99.95!**

EPS/ASR Tools for Windows 2.5

Gives you the inside look into your Ensoniq sampler. Includes wave viewing and editing, advanced looping functions, Naming Wizard, parameter editing! **\$59.95!**

WANT TO KNOW MORE? LATEST SPECIALS?

Check out our Web Page at:

<http://members.aol.com/chickenEPS>

WHERE CAN YOU GET ALL THIS?

by phone or fax: 1-800-8-PRO-EPS, 1-612-235-9798

by mail: P.O. Box 100, Willmar, MN 56201

by Internet: chickenEPS@willmar.com