

Review: Valhala's Keel Sounds

Kenn Lowy

For: EPS and EPS-16 PLUS
Product: Keel Sound Library
Price: \$10 to \$15 per disk depending on quantity ordered — Until Feb 29, 1992 special sale prices of \$7 to \$12, Demo disk \$6 US, \$10 outside US.
From: Valhala, Box 20157, Ferndale, MI 48220 (313) 548-9360

Having reviewed some of the Keel samples in the past, I was most interested in seeing how well these newer offerings would stand up to some pretty swell predecessors. Well, Keel seems to have kept up their high level of sampling.

DISK X-5 — Grand Piano

In my neverending search for that perfect EPS piano sample, Keel Productions weighs in with "rev 2.0" of their version of a grand piano. It's actually a pretty decent sounding sample. They've really done their homework and taken a lot of samples throughout the piano's range (16 samples in the open patch). Lowering the octave of the instrument by 1 gets you the lowest bass notes on a piano, and it sounds excellent. The upper end (raising the octave by 1) is less impressive, but frankly I never found much use for last 5-6 notes on a real piano anyway. I could definitely see using this sound and "getting away with it." I was disappointed with the patches (which seem almost non-existent). However, they did make good use of the mod wheel (which adds chorus-ing) and you'll need at least a 2X expander to get this sound loaded. It uses a whopping 1571 blocks. Good, complex sounds have a bad habit of doing that.

DISK DC-2 — "Jazz"

This disk has two samples on it, "Jazz Kit" [967 blocks] and "Traps 2" [611 blocks]. The drum kit sounds realistic enough, and there are the usual assortment of bass, snare, kicks, toms and cymbals. I'm not sure exactly why this is a jazz kit and not a rock kit because it could probably be used for anything that requires drums. The cymbals deserve special mention because they sound particularly good. Again though, no real sign of anything being done with the patch select buttons.

DISK GB-3 — "Acoustic Bass" Jazz Acoustic [675 blocks]

This is an excellent acoustic bass sound — it really jumps right out at you. There's very little to say about it except that it sounds exactly like what it's supposed to sound like. Using the pitch bend wheel a bit, you can come pretty close to a jazz type feel.

Bowed Acoustic [857 blocks]

This does indeed sound like a bowed bass, but there's something about this sample that sort of rubs my ears the wrong way. As a solo instrument it doesn't stand up on its own. In a layered situation it could work well. It's certainly not a bad sample, or noisy, but just has something in it that I'm not thrilled with.

DISK X-4 — Takamine 12-String Takamine Deluxe [1358 blocks]

Another large sample. There's only one sound on this disk, and it sort of sounds

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like a 12 string, but playing it on a keyboard makes things difficult. If you play it like a guitar (which again, is not easy on a keyboard), it sounds pretty close. But it also sounds a little like a harpsichord. The mod wheel adds a nice chorus effect.

DISK EG-2 — Stratocaster

Start Clean [838 Blocks]

Since I own a strat, and I know it has a very distinctive sound to it. And this sound, though it's quite good, doesn't really sound that much like a strat. It sounds like an electric guitar, but not specifically like a strat.

Strat Distortion [651 blocks]

Here's a great electric guitar sample! Again, I can't say it really sounds like a strat, but it sure sounds good. The open patch [00] is a dirty sounding sample, but not too dirty, (aftertouch adds a bit of vibrato). Using the pitch bend wheel (carefully), you can get some great simulations out of this. The other patches are also good, one detunes the guitar (using aftertouch), another is a very dirty sound almost like the guitar sound on "Whole Lotta Love" and a chorused guitar. This sample really sings. And coming from a guitarist, that means something.

DISK EG-4 — Telecaster

Tele Rock [647 Blocks]

Once again, it's a decent sounding sample, but not really a tele sound. One patch that stands out is the sound you can get with guitar when you mute the string and pluck it.

Tele Metal [937 Blocks]

Similar to the strat distortion sound, but slightly thinner. Great patches here too! One patch has the 3rd octave (on the keyboard) sampling a guitarist sliding his/her pick on the strings. You guitarists know what I'm talking about, and everyone else will hear it and say, "Oh yeah, THAT sound." Definitely a heavy metal sound. This sample is impressive. Sounds great in headphones too. There's no question that you could fool some of the people with this sample.

DISK EG-1 — Les Paul

Les Paul Clean [550 Blocks]

Les Paul Overdrive [916]

I love the Les Paul guitar sound, but unfortunately this one falls short. This sounds like a guitar, but it doesn't jump out at you the way a Les Paul does.

DISK EG-3 — Studio

Rockman [933 Blocks]

Hey, I have one of those! The thing about the rockman is that you can get a lot of different sounds out of it.

DISK OP-2 — Mallets II

Vibraphone [829 Blocks]

Xylophone [101 Blocks]

They sound like they should. Xylophone, though, is a little weak, low in volume. If you want to throw some Steve Reich into your top 40 act, you'll probably need these sounds.

Brake Drums [544]

This almost sounds like a gamalon instrument. It doesn't, however, sound like what the name implies — brake pads — which is probably just as well.

DISK KB-4 — Classic

Clavichord [746 Blocks]

Celeste [451 Blocks]

They sound fine — just like they're supposed to. Unfortunately, there's virtually no use of the patch select buttons here.

DISK OP-1 — Mallets I

Marimba [347 Blocks]

Glockenspiel [499 Blocks]

Gongs [720 Blocks]

Once again, as with the sounds on the "Classic" collection, these sounds are clean and nice. The gongs are particularly good.

DISK BR-1 — Flugel/Cornet

Flugel Horn [703 Blocks]

A pretty nice sample of a flugelhorn. The patch buttons are good here, and the aftertouch adds just the right amount of vibrato.

Cornet [854 Blocks]

Same as above (but this time it's a cornet). Some pretty good horn sounds here. Now the trick is to know what key to play them in!

All in all, Keel Sound has once again shown me they are serious about their samples. Although there are a few disks in this set I could live without, that's partially because of the kind of music and sounds I enjoy listening to. All in all you really can't go wrong with ANY of these disks. _

Bio: Kenn Lowy is an e-bowist/guitarist/stick player who uses various synthesizers. For pure relaxation he runs road races and competes in triathlons.

RND (🎵🎵)

Ensoniq News

Ensoniq releases 32-note polyphonic SD-1. Ensoniq has begun shipping a 32-note polyphonic version of the SD-1. The new version gives the user 11 more voices, makes the 75,000-note sequencer memory standard instead of optional, and includes a new "swing" quantize function. Current SD-1 owners who purchased their keyboard after November 1, 1991 can upgrade their unit for \$100. Other SD-1 owners can upgrade for \$250. VFX-sd owners can upgrade to full SD-1 32 Voice status for \$699. For more information contact Ensoniq at 1-800-553-5151.

Hacker News

Don't forget — if you're making money while you're making music, a subscription to the *Hacker* is a tax-deductible business expense (at least in the U.S.).

HEY! We're still looking for some SQ-1 & 2 and VFX & SD-1 Hackerpatches. Instant near-fame!

Oops — In last month's article on the CV interface by Charles R. Fischer the schematic should indicate that the two rings on J2 and J3 are connected together. (Page 10, Issue #78.)

TRANSONIQ-NET HELP WITH QUESTIONS

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

ALL ENSONIQ GEAR — Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:30 pm EST Monday to Friday. 215-647-3930.

SQ-80 QUESTIONS — Robert Romano, 607-533-7878. Any ol' time.

HARD DRIVES & DRIVE SYSTEM — Rob Feiner, Cinetunes. 914-963-5818. 11 am — 3 pm EST.

EPS/EPS-16+ QUESTIONS — Erech Swanston, Maestro Sounds. 718-465-4058. Call anytime. (NY) If message, 24-hr callback.

VFX QUESTIONS — Sam Mims, Syntaur Productions. 818-769-4395. (CA). 10 am to 11 pm PST.

SEQUENCING — Larry Church, Danlar Music, 503-692-3663. Call anytime.

SQ-80 QUESTIONS — Michael Mortilla, 805-966-7252 weekends and after 5 pm Pacific Time.

EPS & EPS-16 PLUS QUESTIONS — Garth Hjelte. Rubber Chicken Software. Pacific Time (WA). Call anytime. If message, 24-hour callback. (206) 467-5668.

ESQ-1 AND SQ-80 QUESTIONS — Tom McCaffrey. ESQUPA. 215-830-0241, before 11 pm Eastern Time.

ESQ-1 QUESTIONS — Jim Johnson, (503) 684-0942. 8 am to 5 pm Pacific Time (OR).

EPS/MIRAGE/ESQ/SQ-80 M.U.G. 24-HOUR HOTLINE — 212-465-3430. Leave name, number, address. 24-hr Callback.

SAMPLING & MOVING SAMPLES — "Mr. Wavesample" — Jack Loesch, (201) 264-3512. Eastern Time (N.J.). Call after 6:00 pm.

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

MIRAGE SAMPLING — Mark Wyar, (216) 323-1205. Eastern time zone (OH). Calls between 6 pm and 11 pm.

SQ-1 QUESTIONS — Pat Finnigan, 317-357-3225. 8:00 am to 10:00 pm EST.

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

HYPERSOIQ NEW PRODUCTS

Optical Media International's Sound Publishing Division, **Reflective Arts**, introduces its newest sound libraries for the Ensoniq EPS samplers: *The Sonic Images Library* — comprised of two CD-ROMS containing 2 MB instruments in the EPS-16 PLUS format. Categories include drum kits, ethnic percussion, grand pianos, stack sounds and musical FX. Every instrument has been recorded digitally, then looped, tuned and categorized for fast retrieval. The musical FX are unique blends of real and synthetic sounds that work well for stingers and cues. The stack sounds are blends of voices, strings, guitars and synth sounds that evolve through time. Audio Demo disk: \$5.00 plus shipping. CD-ROM disks: \$399 each or \$699 for both. (Both volumes and SCSI CD-ROM drive for \$1099.) Available: January 2, 1992.

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—Electronic Musician, July 1990 (V101)

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Yet More SQ EZ FX

Clark Salisbury

Welcome back, SQ fans! Last time out, we started in on the SQ effects — getting a brief look at how to assign sounds to the effects busses, how to adjust the reverb amount, and so on. This time, I want to get started on programming the effects processor to create custom effects to go with your sound programs.

As we've discussed, the SQ contains both single and multiple effects. We'll start by looking at programming single effects; later, we'll move on to looking at how those effects can be used in combination, at dynamic effects control, and finally, at controlling effects from within the context of presets and sequences. For now, we'll start by looking at one of the more ubiquitous and essential of the effects,

Reverb

There are four single reverb effects, and seven multiple effects that include reverb in their algorithms. The four single reverb effects — CONCERT REVERB, HALL REVERB, ROOM REVERB, and WARM CHAMBER are each optimized for the best possible sound. Naturally, these four single algorithms provide the greatest number of variable parameters, so we'll be concentrating on these algorithms this time.

Let's start by checking out the reverb effects with a piano sound — perhaps the first ROM sound, "Dynamic Grand" (number 00). Once you've selected the sound, move to the effects programming page by pressing the "Edit" then the "Effect" button. The display should be showing "Concert Reverb" — if it's not, press the "0" button to move to the top of the effects menu pages.

You'll note that the Concert Reverb effect has a programmed mix of FX1=30, and FX2=25. A little experimentation will reveal that FX2 is not used in this program — varying its mix has no effect on the character of the sound. This would indicate that all voices in the "Dynamic Grand" sound are routed to FX1 — if you want to check this out, you can do so by selecting each voice used in this program (from the "Wave" menu pages), and then checking out its routing by browsing through the "Output" menu pages.

Let's start by setting the mix for FX1 to 50 by selecting the FX1 mix parameter and pressing both the up and down buttons simultaneously. Setting the FX1 mix higher will allow us to better hear the results of any changes we make to the reverb effect parameters.

Now let's run through the reverb parameters and see just

what they do. Press the "1" button to move to the next page in the "Effects" menu — it should be showing two parameters, "Decay Time," and "Diffusion."

DECAY TIME is a pretty straightforward parameter — this is where you control how long it will take for the reverb effect to decay. Higher values will yield longer decay times, giving the impression that the piano sound is occurring in a larger space. For example, try setting the Decay Time parameter to "90," and play a few notes. Sounds like the piano's in a huge cavern, doesn't it? Now check out the sound with a short decay time — maybe a value of "38" or so. Sounds like a much smaller room.

The next parameter is DIFFUSION. This parameter helps to simulate different kinds of room surfaces in the imaginary space that the sound is occurring in. You see, in terms of the actual acoustical reverb that occurs in any space, the character of the reverb sound is affected not only by the size of the space, but also by the texture of the surfaces in that space. A piano in an all-wood room will sound different than a piano in a carpeted room with drapes on the walls. This is an oversimplification, of course, but the point is this. In a room (particularly a large room) featuring more reflective surfaces, such as the wood room, you will be able to hear some discrete (separate) echoes mixed in with the smoother sound of the reverberation. These echoes are the result of the source sound bouncing off the hard surfaces within the room, and eventually they will blend together to form the sound we think of as reverb. The diffusion parameter allows you to adjust for these kinds of effects. Higher values yield greater diffusion, producing a smoother, more blended reverb sound. Lower values produce less diffusion, mixing some subtle echoing in with the reverb sound. Try setting the decay time to a pretty high value — say, "85" or so, and set the diffusion parameter to maximum — "99." Now play a single short note on the SQ, and listen to the reverb decay. Now set the value for diffusion to its minimum, "00," and play another short note. The effect is subtle, but you should be able to hear the gentle echoing, particularly in the onset of the reverb sound. Be aware that the overall effect is meant more to color your perception of the acoustical space that the sound is occurring in, rather than to actually add an echo effect to the reverb sound.

Leave the decay time parameter set to "85" and diffusion set to "99," and move on to the next effects menu page. This page presents us with two related parameters, "DETUNE RATE" and "DETUNE DEPTH." These parameters are also pretty straightforward in terms of what they do. They allow you to program a subtle (or not so subtle, if that's what you

want) pitch shifting which affects only the reverbed portion of the sound.

To check out the Detune parameter, first set Detune Depth to a value of "99" — maximum depth. Now set the Detune Rate to something like "30," and play a short note. It should become immediately apparent the effect detuning has on the reverb. Varying the rate parameter can give you an idea of the range of it's values; the same is true for the depth control.

For the most natural effects, use detuning sparingly. The pitch-shifting should be subtle enough as to be pretty much unnoticeable to the casual listener. However, detuning can add a natural and very beautiful quality to the reverb sound. For example, set the Detune Depth parameter to a value of "00," play a short note, and check out the reverb sound. Now try setting Detune Depth to a value of "12," and Detune Rate to a value of "18" — a much more pleasing effect, at least to my ear.

Now let's move on to the next effects menu page. This is where you control the high-frequency (HF) content of the reverb sound. You are given two parameters to allow you to do so — "HF DAMPING," and "HF BANDWIDTH."

HF Damping (high-frequency damping) allows you to adjust the decay time for the high frequencies contained in the reverbed portion of the sound. Again, this is to help simulate some natural acoustical spaces in which the upper frequencies would decay more quickly than the lower ones. With HF Damping set to a value of "00," the high frequencies will decay at the same rate as the other frequencies contained in the signal. Higher values for the HF Damping parameter will cause the upper frequencies to decay more rapidly. You can easily check this out — try setting the value for HF Damping to "00," then play a short note. Now try setting the value for HF Damping to "99," and play another short note. You'll find that when the value for HF Damping is set to higher ranges, not only do the high frequencies decay more quickly, but the overall reverb effects appears to decay more quickly as well. This can be used to advantage. In some instances, you may want a fairly long reverb decay time, but longer reverbs can sometimes interfere with other sounds in a mix of instruments. You can sometimes open up more space in a mix by using higher values for HF Damping, rather than by lowering the overall reverb decay time.

The other parameter available on this page is the "HF Bandwidth" (high-frequency bandwidth) parameter. This is actually a low-pass filter (you'll remember them from our discussion of filters a while back) placed between the source sound and the reverb, allowing you to adjust the overall high frequency content in the reverbed portion of the signal. This differs from HF Damping in that while HF Damping controls high frequency content over time, HF Bandwidth allows you to limit the overall high frequency content of the reverbed sound with no change in HF content over time. To check this

one out, leave HF Damping set to "00" (no damping) and vary the HF Bandwidth parameter. You'll find that lower values for HF Bandwidth yield darker reverb sounds, and that with HF Bandwidth set to "00," pretty much all the reverb sound has been "filtered out," resulting in a pretty dry sound.

Moving on to the next page, we come to "Low Frequency Decay." This parameter is similar to the HF Damping parameter, except that it acts on low frequencies, and it's range of values go both positive and negative. Using negative values for this parameter will cause low frequencies to decay more quickly than the rest of the reverbed signal; higher values will cause low frequencies to take longer to decay. Again, this one is easy enough to get a feel for simply by trying it out using a variety of values. Note, however, that higher positive values will actually increase the overall reverb time, so you may need to adjust the overall decay time for the reverb when using higher values for Low Frequency Decay. And a good tip — if you're having trouble with a sound smearing in a mix, try using lower negative values for Low Frequency Decay. Cutting the reverb decay in the lower ranges can help to open up space for lower instruments such as bass, drums, and so on.

We've now made it through all the reverb menu pages, with the exception of the last page. This page deals with dynamic effects modulation, and this can be a fairly involved subject, so we'll be leaving it for another installment. Astute readers will also note that we've only talked about the Concert Reverb algorithm. However, the parameters we've discussed here apply to each of the other single reverb effects in the same way that they apply to the Concert Reverb effect. You will also encounter reverb parameters in a number of the multiple effects. In these cases you'll find that the reverbs used in the multiple effects do not have quite as comprehensive a parameter set, so you won't encounter anything not discussed here.

We'll be continuing our discussion of effects next time out, with a focus on the other non-reverb algorithms. Until then, don't get too damp or diffused. ■

Bio: Clark Salisbury is a partner in the MIDI Connection, a Portland-based consulting firm. He has been actively involved in the composition, performance, and recording of electronic music for over 7 years and is now producing his own pop-oriented compositions. His favorite color is chrome.



VALHALA Presents the Complete KEEL Sound Library for the EPS & EPS-16+

MODERN SYNTH

ENSONIQ VFX

- VF-1:** Power Shimmer
Melody Bass
Bamboo Flute
Caribbean Drum
- VF-2:** Elizabethan
Studio Electric
Pop Piano
- VF-3:** Deep Strings
Trans-Tine 1
Trans-Tine 2
- VF-4:** Ritual
Rez Trumpet
Bali & I

- PR-2:** Winston Piano
Lead Strings
Wind Chimes
- PR-3:** Glasnost Men
Opera Chorus
Fanfare

- FM-2:** JazzBass Clav
Troll Drops
Hand Bell
- FM-3:** Lastic Brass
Redwood
Rez Bass

- EG-2:** Fender Strat - Clean
Fender Strat - Distort
- EG-3:** Scholz Rockman
Gibson ES-335

- SS-2:** Solo Viola
Pizzicato Viola
Tremolo Viola
- SS-3:** Solo Cello
Pizzicato Cello
Cello Harmonics

- X-6:** Orchestral Strings
(req memory expander)
- OP-1:** Marimba
Glockenspiel
Gongs

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- OM-3:** Fog Strings
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TiteRope Bass

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Barrock
Arena
- AD-2:** Space Vibe
Benza-Dream
- AD-3:** Spitfire Brass
K-5 Rhodes
Multi Clav
- AD-4:** It Breathes
Quartz Mallet
Toy Trumpet
Melo Waves

- X-1:** Fender Rhodes 88"
(req memory expander)
- X-2:** Steinberger Bass Deluxe
(req memory expander)
- X-4:** Takamine 12-String
(req memory expander)

- SS-4:** Solo Bass
Pizzicato Bass
- WW-1:** Bassoon
Bass Clarinet
- WW-2:** Clarinet
Flute/Piccolo
Bass Flute

- OP-2:** Vibraphone
Xylophone
Brake Drums
- OP-3:** Tubular Bells
Timpani
Hell's Bells
- OP-4:** Roto Toms
Crotals
Traps I
- DC-4:** Orchestral Cymbals
Antique/Finger Cymbals

ROLAND "LA" SYNTHESIS

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Sweet E.P.
Brass Section
- LA-2:** Pipe Dream
Cosmos
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- LA-3:** Royal Pad
Rush Bass
Magic Mallet
- LA-4:** Pressure Lead
Hollow Lead
Kitaro I
Lead Bass

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Sky Diamonds
Punch Bass
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- KB-2:** Yamaha DP-70
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Moog Lead II
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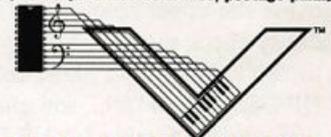
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Orchestral Percussion Secrets on the SQ-1

Part I: Untuned Percussion

Mark Clifton

Just about everybody who's ever heard the SQ-1 knows that it has some deadly percussion sounds for the price. It does lack some important waves (like a shaver of some kind), but for the most part it has a *very* complete range of percussion samples. One area, though, where it is lacking is in orchestral-type sounds. I do a lot of composing and orchestral arranging on the SQ-1 and I eventually found that the preset drum sets just wouldn't work. At first I tried to program a drum map, but I couldn't do the extensive editing that I needed to. So all of the information here applies to normal sound programming only.

Untuned percussion posed a big problem since the SQ untuned waves are all trap set samples. After flipping through the waveforms a couple of times, I couldn't find anything that sounded like a symphonic bass drum, so I took matters into my own hands. Here's how: First take the Timbale wave, detune it two octaves and turn the Keyboard Pitch Tracking to OFF. Then layer it with the Noise Loop wave detuned four octaves with the pitch tracking OFF as well. Then feed them through a 3Lo/1Lo-pass filter with a cutoff around 50 and set the AMP envelope to decay after about a second. Then tweak the volume of both waves until the sound is right for your tastes, and *viola*, you now have a superb excuse for a symphonic bass drum.

As for a snare drum, I found that the Room Snare wave sounds best. Not much editing is involved except to give yourself lots of control over the volume and filter through velocity. As a matter of fact, this is a good idea to do with all your drum sounds since the percussion section has a wider dynamic range than the rest of the orchestra. You should be able to go from pianissimo to fortissimo without touching the volume slider. Also, all percussion instruments get sharper the harder that they're hit, so set MOD= VELOC +30 under the Pitch page. I tried to do drum rolls somehow, but I really couldn't find a way to without using a sequencer. The very nature of the drum waves prevents them from being modulated in that way.

The cymbals on the SQ-1 are excellent and only minimal editing needs to be done to get some very nice sounds. It's a good idea to turn the volume boost on so that your cymbals can cut through a dense arrangement. Use the Ride Cymbal wave for a suspended cymbal and for soft mallets, just program a softer attack. Since there are all kinds of different cymbals used in orchestral music, you can tweak different aspects of the sound to your particular application. Fortunately, the factory waves are very good raw materials to work with.

Well, that's it for this month. Join me next time when we explore the nutty world of tuned percussion! ■

Bio: Mark Clifton is 16 years old and a composer of synthesized and orchestral works. He is the owner of a lone SQ-1 with dreams for more Ensoniq pets, so he writes articles for this magazine while his parents beg him to get a job.

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Christian Music

Daniel Mandel

Tapes: Stand Up & Fight.

Artists: Greg & Debi.

Contact Info: Greg — Route 1 Box 589 West Plains, Missouri 65775.

Equipment Used?: Not a heckuvalot of info here — our only clue is in a cryptic note that says, "All of these songs, with the exception of 'Mighty Man of God,' were sequenced on a VFX-sd."

When all the rewards are handed out, Greg and Debi are going to take "Best presentation." Their tape, "*Stand Up and Fight*," came to me professionally wrapped with an excellent cover. They obviously paid to have this tape done well. The J-card is very classy and the recording is top-notch. The vocals which are very well recorded over the sequences are up-front and distinct. Greg and Debi — "a brother/sister team" — have great voices.

The only other clue that Greg and Debi give us about their use of VFX's is this: "We use a pair of VFX-sd's when performing live. One plays while the other loads." OK, I'll buy that.

This tape was recorded at Noteable Sound, Inc. in West Plains, Missouri — so we can assume that as well as their VFX's they relied on the expertise of the resident engineer to provide the rest of the gear that make them sound great.

Now on to the actual songs. "*His Light Still Shines*" opens the cassette with a light piece with a good solid bass and drum beat beneath a light string sound with an electric piano spelling out the chord progression. This music is very slick, very clean. Debi sings the lead part on this one. I would like to point out, as I have in the past, that since it is of great importance in some cases that the lyrics are clearly understood, Greg and Debi made sure that their voices were audible and their words understandable. No lyric sheet was provided. The mix is very well done. All of the instruments are obvious, but the emphasis is on the vocals.

In the next song, "*Fight*," there is a little bit of a difference in the mix. The vocals are almost too up-front. The music is a flute/drum background until the chorus kicks in much louder, which improves the overall mix by adding in strings and synthy horns. Greg takes the lead on this one.

"*Mighty Man of God*" is the only song in this group which doesn't use a VFX-sd sequence. This uses a really wonderful piano and oboe sound. Greg displays his wide range on this

song and it is beautiful to listen to.

"*Lay It Down*" uses an all out clav, rompin' piano, and horns — with a heavy pumping bass and drums. This is one of those songs where the music sounds a bit too down 'n dirty for the well pronounced clean-smiling performance that Greg & Debi have created. It is, like all the other songs, very well recorded.

"*Don't It Make You Wanna Dance*" uses the timbali portion of the PERCUSSION patch from the VFX as well as a big horn sound and a nice mellow pad for the chords. Then almost everything but the percussion drops out on the next to the last chorus. Dropping all but the bass and percussion is a common method to provide variation and maintain interest. This really helps to build the excitement for the last chorus.

"*Fine, Fine Day*" starts out with a rather ominous spread out sound with Debi speaking about how Jesus rose again. Her voice here is very wet with delay and reverb. Subsequently, this is the only case where I couldn't catch what was being said. This song uses some very synthy wiggling keyboard sounds, with a stabbing horn patch thrown in.

"*Hold Up the Arms*" starts out with a very rhythmic tine-type patch. Debi really opens up her throat on this one. I can almost picture her throwing her head back as she holds out some of these notes. The drums bass and piano here are solid and there're some very nice drum fills. The song fades out a bit awkwardly at the end.

Debi takes the lead on the next song, "*Defender of the Faith*." The harmonies here are powerful and well executed.

"*Changed*" starts out with a very dynamic, reverse envelope sound and percussion section that demands attention. In this case the challenge for Greg is to match the tone of excitement in his voice with the excitement that has been established in the music. This was achieved by the middle of the song.

This cassette is so well done that I would suggest that, for many, it's a good example of how to produce your own work. Whether or not you are a Christian, this is a cassette worth studying. When you listen to this cassette, you are listening to something Greg and Debi have created, not solely what the keyboards can do. These arrangements have been done VERY tastefully; in some cases almost too tasteful to swallow. The VFX is used so well that it is completely transparent. The focus is where it should be on Greg and Debi and their message.

Tapes: His Best in Me.

Artists: Jack Stephen Tolin.

Contact Info: 23 E. Elm Ave., Quincy, MA 92170.

Equipment Used: Ensoniq SQ-80, Alesis HR-16, Korg M3R through a Box BX-800 and Denon PMA-770 onto a JVC TD-W303.

Jack's tape starts off with "*And There Was War in Heaven*," a brooding, marching piece which really works the drums. Some very nice rolls and fills. The overall sound is synthetic with the exception of the bass and drums, with a lilting piano/bell patch in the back. There are some very nice movements in this song. The finale is very wet, bubbling itself away to nothing.

This tape was recorded at a rather low volume. I really had to turn it up to listen to it. "*Bread of the Heart*" uses a bottle/flute sound pitch bent to the point that it sounds like a whistle. Once again the drums are "played" well. There is also a rather Moog-like patch with a very nasal envelope. There is a very interesting placement of beat and emphasis here.

"*Heart Searchin'*" has a very heavy feel to it. A low moaning patch covers the bass line. Here again is another patch reminiscent of The Moog. I'm not sure if the transitions in this song work as well as some others. While Jack is certainly capable of interesting transitions, here they just didn't hit the same way.

"*On the Wings of the Lord*" opens wide with a WAAAH patch. Here again I liked his drum parts. Although Jack is piecing together his sequences like everyone else, his choices are very clever on this song. He uses a horn patch to create a hook and then finish out the song. There are pivots and switches reminiscent of what some have called "art rock." This is big stadium music, a wall of sound. Jack wrote that some of his influences include Kansas, Yes, John Lawry and Keith Emerson.

"*The Commission I, A Valley Away II, The Beat of Grace*" is rather atmospheric and of this world at the same time. There is a weaving in and out of frenetic meter and wash of sounds. This goes on for quite a while seeming absolutely directionless. The end of "*A Valley Away*" is a tight horn blast. The "*Beat of Grace*" is a bit more predictable rhythmically and the finale can only be described as quirky.

"*The Fullness of Time*" is heavy. The bass and beat are heavy. Some nice wet and shimmery sounds are used sporadically on the first section. The second section is somewhat more lilting and "Irish" sounding utilizing that same heavy beat as the first part. There is a very refreshing counter rhythm played by a piano patch halfway through. Part three plants itself, twists and turns to the well planned drum beat that uses several well played techniques that give a feeling of hearing a played instrument. While this does not necessarily

happen all the way through, there are some impressive passages. All three of these parts fade out at the end.

"*In the Beginning*" has many, many sections. Although the introduction has a wandering sensibility it has a definite direction. Jack uses the repetitive wahwahwahwah envelope of one of his sounds to match his beat. This song is different from the others on the tape — it's pared down a bit from the wall of sound, with more of the sounds up front. Each portion seems to be a musical sentence, each sequence more apparent. "OK, here's the loop, oh yeah — there's the next part..." Each part has a percussive signature ending.

On Jack's cassette cover he writes the copyright dates of his music as 1989, '90 and '91. The last two sections do actually sound like his "later" music. Or they sound different in a solid, more confident, more mature way. Maybe it's that sometimes he relies on a wash of sound. It is difficult to say, but it sounds to me as though we can witness Jack's growth as we listen to the tape.

Jack wrote a few interesting comments about his music. "One of my biggest pet peeves is for people to refer to my music (which is for the most part instrumental) as 'religious.' As a musician and synthesist, I strive to create a musical atmosphere that extends beyond a simple melody-harmony-drum beat relationship. I want to do the kind of music that, when people listen to it over and over, they will hear something they haven't heard before — every time. It should be both relaxing and dynamic. As for my style, I refer to it as 'Next Age' music."

My thanks to both Jack Stephen Tolin, and Greg & Debi for their cassettes. ■



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

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

BACK ISSUES

Back issues are \$2.50 each. (Overseas: \$3 each.) Issues 1-9, 11, 13-23, 27, 29, 30, 35, 36, 37, 38 and 68 are no longer available. Subscriptions will be extended an equal number of issues for any issues ordered that are not available at the time we receive your order. ESQ-1 coverage started with Issue Number 13. SQ-80 coverage started with Number 29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage started with Number 30. (But didn't really get going till Number 35.) VFX coverage got started in Number 48. Permission has been given to photocopy issues that we no longer have available - check the classifieds for people offering them. Reprints in our "Quick and Dirty Reprint Series" are available: MIRAGE OPERATIONS, for \$5, and MIRAGE SAMPLE REVIEWS for \$4. Each contains material from the first 17 issues.

Time Stretching/Pitch Shifting on the EPS-16 PLUS and EPS

Scott Fisher

Way back in August 1990 (TH #62) we discovered a way of "pitch shifting/time stretching" (I'll just call it "time stretching") on the Mirage. Now let's have a go at doing the same thing on the EPSs. First we will first consider how sample duration and sample pitch normally interact. Next a little of the theory behind digital time stretching will be discussed and finally that theory will be put to practice on the EPS/16+ (EPS & EPS-16 PLUS). Before we do get started, just a quick disclaimer: Don't expect this procedure to give you "studio-quality" time stretching; it will sound fairly ragged but it will give you some entertainment and hands-on experience with the procedure.

Sample Pitch and Sample Duration

First let us consider the usual relationship between sample pitch and sample duration. Like all complicated problems it will help us to understand this one if we start simply and consider how an analog tape recorder can change the pitch of its recordings. To raise the pitch of a tape recording we all know what to do, simply play the tape back faster than the original recording speed. Similarly, playing the tape back slower than the original recording speed will lower the pitch. No headaches yet. The mathematical relationship between tape speed and pitch is such that a change in the play back speed by a factor N will multiply all frequencies in the recording by N. To exemplify, a 1 octave rise occurs when $N = 2$ and a 1 octave fall when $N = 0.5$.

As our manual points out, the EPS/16+ can simply be thought of as a digital tape recorder. So, how do you think the EPS/16+ raises a sound by 1 octave? "No prob" you say, simply play the digital data (a stream of 1 and 0s) back at twice the speed. Well that is indeed how most samplers manipulate pitch - by varying the speed at which the bit-stream is processed. Unfortunately for our techno-flooded brains the way the EPSs do it is not so simple; pass the aspirin. The EPS family plays back data at a constant rate (EPS = 31.2, 39 or 52 kHz; EPS-16 PLUS = 29.8, 44.6, 78.5 kHz), and change pitch by manipulating the amount of data they process. In practice, then, to raise the pitch of a sample 1 octave most samplers process twice as many numbers in a given period of time while the EPS/16+ only plays every other sample. The principal becomes clearer if we consider a counting analogy.

Consider the value of the numbers to be the amplitude of a wave form. If we repeatedly count from 1 to 10 (over and over) we are in effect generating the values for a saw-tooth wave form. If we count at the rate of one number per second, it takes ten seconds to complete one cycle, thus the frequency of our saw wave is 0.1 Hz. Now let's raise the frequency of our wave

by one octave (remember 1 octave = 2X frequency). In effect we want to halve the time taken to reach a value of 10 so that we get twice as many cycles in a given duration. We could count twice as fast (one number every 0.5 seconds) or as the EPS/16+ does we will only use every other number and count 2, 4, 6, 8, 10 at the old rate of one number per second. Turn these numbers into the amplitudes and we have just doubled the frequency of our sample by removing data (to drop in pitch we would add data, i.e., 1, 1, 2, 2...10, 10).

The consequence of the above is that when we change the pitch of a sample by a factor of N we change the duration of that sample by a factor of $1/N$ and vice versa (something you all knew anyway). What I could have said earlier and saved you all the verbiage is that our EPS/16+ and most other samplers manipulate pitch by stretching and compressing the time scale. This can cause real problems with samples of rhythm loops or vocals because it precludes the playing of chords unless you are after the sonic mess that will follow. No doubt you have all at some stage wished there were some way to change pitch but keep the duration constant. Essentially we want to decouple the relationship between sample pitch and sample duration, something we know is possible. The question is how do they do it?

Digital Time Stretching

And now for a fun example to examine the principle behind digital time stretching. We will concentrate on upward pitch transposition to keep things manageable. We'll start with a 2 kHz sine wave sample with a duration of 1 second. When we double the frequency to 4 kHz by playing it up an octave, the EPS/16+ will knock out every second sample and play it back at the same speed, reaching the end of the sample in 0.5 seconds. To regain the original duration of 1 second we could grab another EPS/16+ (you all have at least four don't you?) and sample this 0.5 sec 4 kHz sound and add a copy of the sample to the end of itself. Now we have a 4 kHz sample with a 1 second duration, the same duration as the original 2 kHz sample. This is NOT how pitch shifters work, for if we follow the above process on a complex sample like the word "EPS" we end up with a squeaky "EPSEPS," the correct duration but not what we had in mind.

We want a high pitched shifted "EPS" but at the original duration. Think not of adding to the end of the sample but adding within the sample or repeating waves within the sample. Let's represent the E with a square wave, the P with a sine and the S with a triangle wave. "EPS" now = square-sine-saw. We play it up 1 octave so that its duration is now 1/2 then we double all the components to produce square-square-sine-sine-saw-saw. The sample duration is back to normal without destroying the

general form of the sound. We now have EEPSS, at a higher pitch but time-stretched. This is basically the principal behind digital time stretching.

Let's try and achieve this with the limitations of the EPS/16+ hardware and software. Forget the aspirin, just go straight for a lobotomy.

Theory Into Practice

Use a sample of a single clearly spoken word or your favorite song. This will let you easily hear what is happening to your sound as we move through the steps below. Try to make it 2 seconds long at 39.1 kHz (EPS-16 PLUS users "convert sample rate" to get somewhere close).

What we aim to do is make a short loop, then run this loop through the sample from start to end at about the rate at which the sample would play at the original pitch. If you type in the commands in the square brackets you should end up at the page where the parameter is to be adjusted. If the EPS-16 Plus differs the commands will appear in the second set of brackets.

1) Set auto loop finding OFF, [EDIT/SYSTEM 8] [EPS-16 PLUS: EDIT/SYSTEM 3].

2) Set wave sample loop play-back mode to LOOP FORWARD, [EDIT/WAVE 0].

3) Make the LOOP START and END points about 500 samples apart. Just set LOOP START to 0 and LOOP END to 500.00, [EDIT/WAVE 3 & 4].

5) Set LOOP POSITION to 0, [EDIT/WAVE 5]. The loop will then start at the beginning of the sample.

6) Set the WAVE MOD to LOOP and SOURCE to ENV1, [EDIT/WAVE 7].

7) Set the MOD AMOUNT 99 and RANGE to around 60K, [EDIT/WAVE 8]. You may have to experiment with values so that the loop moves all the way to the end of the sample.

8) Set soft velocity curve OFF [EDIT/ENV1 7]. Keeps chords in sync.

9) Set envelope 1 to RAMP UP [EDIT/ENV1 0]. You may need to adjust the TIMES values to get the duration right [EDIT/ENV1 3]. If the envelope ramps up too fast the sample will play back as it usually does.

That's it. Now play a note on the keyboard about one octave above the root key (actually this will only work on keys from the root up). Hopefully you will now hear your pitch-shifted sample. With the above implementation of pitch-shifting, crackle and pop is heard as the loop moves through the sample. The reason for the crackle, among other things, has to do with the old problem of loop start and end point amplitudes. As the loop moves forward you can imagine that the start and end amplitudes are constantly varying all over the place, and as we know loop start and end points that are unmatched result in clicks and pops. Well, don't look at me — call up the sparkies (electronic engineers) at Ensoniq if you want to complain.

Apart from that small problem, the above procedure moves the loop through your sample at a constant rate, so a word like "spin" will play back sssppppiiiiinnnn as the loop moves through the sound. The loop is playing back at the pitch of the key you play so the sample pitch will be determined by that key. However, the duration of the sample will be determined by the time it takes the RAMP UP to move the loop from the start to the end of the sample. Thus you can see that we have managed to decouple sample pitch and sample duration. How about for your first assignment finding the combination of parameters that minimizes the crackle and distortion.

Well, that's it. Go for it, make weird sounds, spin-out the cat. ■

Bio: Scott Fisher is in the middle of wallpapering his house with Ensoniq products while also trying to convince his wife, Laura, that an EPS-16 PLUS can "sample" a new washing machine, thus saving money for more important things (like an SD-1).

Distortion — It's Not Just For Guitars Anymore

Tom Shear

Distortion is a wonderful thing. Oh sure, we spend hours to insure that our samples don't have any when we're constructing them, but for those of us with EPS-16 PLUSs, the temptation to scroll through all those glorious effects is pretty hard to resist. And no matter how clean I try to make my samples, I can't seem to help but try to dirty 'em up again with the distortion effects. I'm not talking about my guitar samples. No, no — that's too obvious! I'm talking about weird uses. Uses that we "alternative" musicians like to experiment with. So if

you're not experimentally inclined or find it hard to keep your musical mind open, I suggest you go listen to your Keith Emerson albums or something. This one's for the "rest of us"!

The Skinny Puppy Drum Sound — A favorite trick that Canada's Skinny Puppy and rap terrorists, Meat Beat Manifesto, use to take their drum sounds to a higher level of crush is to intentionally distort them. (I know there's a sound engineer out there somewhere who's shuddering right now.) Yes, I said

distort them! "Yes, but Tom, isn't distortion just for guitars?" Hey, who let him in here? Go play with your electric piano patches, buddy. Ahem... to hear what I'm talking about, boot up your EPS-16 PLUS. Load the TR-808 Kit and punch up the effects page. Scroll upwards through the list of effects until you reach DIST+CHR+RVB. Now play a few notes and feel the fury! Industrial music fans will recognize this sound from numerous records by Meat Beat Manifesto, 'Puppy, and Cyberactif.

You'll find that the notes that sound the best tend to be the ones with lots of tone in them like the congas and bass drums sounds. What's cool about this is that the hihats don't distort, which is the way you want it. I think this sounds good by itself, but try it mixed with non-distorted drums, too. Experiment with using this trick on your other drum sounds.

Another Use For Distortion

Another common trick in industrial music is to manipulate the vocals so they sound like they're coming out of a blown out radio speaker. To simulate this effect on the EPS-16 PLUS, sample a word or phrase. Something like, "If I hear another Minimoog lead patch I'm gonna puke." You can use a very low sampling rate to save memory because we're going to make it sound awful intentionally. Truncate any unnecessary

silence and go to the filter page. Set it to 2/LP 2/HP. The phrase should now have a tinny sort of sound not unlike a radio speaker. Now, if you wish, add distortion to the phrase as well, although you probably don't want to add as much as you do to the drums. I've found that ROMs 11 and 12 particularly well suited for this, although 13 will give you downright strange results.

The Coil Groove — England's Coil have always come up with surprising and original sounds, but one of my favorite is the odd rhythmic noise pattern in their song "Penetralia." I found I could get a similar effect on my 16+ very easily. Use the sequencer to program a four bar rhythm pattern, again using the TR-808 sound. Go for something complex with lotsa percussion. Something real Milli Vanilli-ish, go ahead, it'll sound cool, I promise! Now, simply select the WAH+DST+RVB effect and press start on the sequencer. Pretty bizarre, huh? Try it with other drum sounds and listen to the difference between high and low frequency sounds.

Anyway, there are probably many other creative uses for distortion, but I chose to concentrate on those within industrial music. But if this isn't your style, don't turn your nose up! These tricks will make you stand out no matter what your style. Who knows? Maybe Skinny Puppy will do a country and western album someday! ■

Mystery Waves and Programming of Drum Kits in the VFX via the SD-1

Joseph A. Travo

The Setting

As a subscriber to both Keyboard and the Hacker, I've read the product reviews and made good use of the patch sheets and programming hints and am still learning new things about the capabilities of the instrument. It's been about two years now that I've had my VFX (NO sd).

There are a couple of things that have frustrated (annoyed, bothered) me about the instrument, though. The depth of the system has always given me a lot to do when programming my own sounds — tweaking envelopes, changing waves, but always within very specific, rigid parameters. That's the first thing. The other thing is the fact that for such a deep instrument, the VFX is definitely short in the drumkit department. I'm one of those people with a very basic drum machine (pattern based, two measures and a fill) and I like to supplement my rhythm tracks with kits from the VFX. When a friend got the new SD-1, I thought this might be a good opportunity to find some of the diversity that was lacking in the Internal, RAM and ROM drum sounds that I had been using.

So I paid a visit to my friend, trusty STOR CART 32 in hand, and proceeded to pull some of the SD-1's ROM sounds out of memory. Those of you who have followed development of the Ensoniq line are aware that the VFX and the SD-1 are both 16-bit machines. So far, so good. You're probably also aware that the SD-1 has 1-megabyte piano waves. I figured that these sounds wouldn't fit on the STOR CART, so I only tried one — BIG PIANO. I was right. It didn't sound quite so BIG off the cartridge. Some of the other sounds I copied came out just fine, though. CATHEDRAL, CHICAGO, CROSS BASS, and MANY ROADS sounded great. Then I copied ORCH PERKS, ROCKIN' KIT and some other drums and they sounded fine as well. Best of all, they sounded different from the kits I'd been using on my VFX. I thanked my friend and his SD-1 and took my new sounds home to my trusty VFX (NO sd), OS 2.10. That's when things started to get really interesting.

After I powered up, with my STOP CART in place I began to select some of my new sounds. As before, CATHEDRAL, CHICAGO and CROSS BASS sounded fine, BIG PIANO was sorta medium-big, and then I selected ROCKIN' KIT.

Strange and Weird Mystery Stuff

There were huge gaps between sounds on the keyboard and the sounds that did exist were completely unlike those on the SD-1. I figured it had something to do with the difference in sound architecture of the two units, but didn't have a clue as to what to do. So I hit the SELECT VOICE button in the PROGRAMMING section and saw the following:

```
*UNKNOWN*           *UNKNOWN*           *UNKNOWN*
WOODY HIT           *UNKNOWN*           *UNKNOWN*
```

The only sound that didn't sound like the proverbial anemic weasel fart was the WOODY HIT, so I figured I'd investigate further. Moving on to the WAVE page in the PROGRAMMING section, I discovered that the upper left *UNKNOWN* actually had a name, but one I had never seen. It looked like this:

```
WAVE  STRING SO      NVELOPE - 1E      DELAY - KUP
      START 59      VELOCITY START MOD=+84  FORWARD
```

It sounded somewhat strange so I did some editing, using the normal steps and after a while I got something approximating a kickdrum. Then I went on to WOODY HIT which is pretty standard but sounded like it was tuned way too high so I brought it down a few octaves making it a lot better. The upper middle *UNKNOWN* wasn't making any sound at all, at least any sound audible to humans, so I went through the same motions and when I got to the WAVE page, I decided to scroll down to see what other waves I might be able to find. About this time I remembered an article I'd read by Sam Mims about some "phantom waveforms" that he ported over from his SQ-80 to his ESQ-1. The ESQ-1 wasn't equipped to read these waveforms, so he "confused" it and got some usable sounds in the process. The article mentioned that the ESQ-1 couldn't increment to these waves, but it could decrement, so he just started at the highest number and went backwards. The same was true for these *UNKNOWN* characters as I discovered. As soon as I decremented from *UNKNOWN* down to TRIANG-LP, I was able to go down to seven other familiar waveforms but no further. I should have written down what I saw, but didn't, and you know what happens next. I couldn't increment back up to the wave that had previously been *UNKNOWN* so I settled for TRIANG-LP which sounded better than the weasel fart anyway.

The lower middle *UNKNOWN* was sounding pretty weird too, so I hit WAVE and instead of a waveform I got the following:

```
ENV1      KEYBD TRACK=+00      VEL CURVE - QUIKRISE
MODE = FINISH      VEL LEVEL = 26      VEL ATTACK = 00
```

Look familiar? It should, it's the Envelope 1 page. There was no way I could get a WAVE reading from this *UNKNOWN*. Just because the VFX can't comprehend what it's looking at doesn't mean it can't edit it. Using the normal routines, I

managed to shape the sound of this mystery wave to approximate a pretty good floor tom, with the ALL C4 setting and some changes in PITCH and various envelope parameters. The upper and lower right *UNKNOWN* waves also refused to identify themselves, but by now I was having too good a time to care, so I kept editing until I had a relatively full drumkit. Since the other kits (GATED DRUMS, etc.) and my drum machine have some good cymbal sounds, I concentrated mainly on kick, snare, tom and electronic sounds to complement what already exists. To use these together, I usually load two separate kits into the MULTI and assign them different sequencer tracks or sometimes run them off the MIDI OUT of my drum machine.

I was able to identify one additional mystery wave from the ROM sound ORCH PERK. The *UNKNOWN* occupying the lower middle slot of the display showed the following when I hit WAVE:

```
WAVE  - UNDTUNED      NVELOPE - 1-E      DELAY = 00
      START = 00      VEL START MOD = +00  FORWARD
```

Never saw this one before, either, but I'm working on another drumkit with this sounds. It's been my experience that a lot of these *UNKNOWN* waves are percussive in nature, either because of the differences in the VFX and the SD-1, or maybe because that's just how the waves are supposed to sound. Either way, they make a pretty good starting point for some interesting hacking. Since this is experimentation, I haven't given many exact settings for ENVELOPES, FILTERS, LFOs or any of the other parameters. You need to use your ears and your imagination. This is what working with synthesizers is all about — synthesis. If you can get your hands on the necessary hardware and software, give it a try and see where it leads. Let me know, care of the Hacker, what you find. As for me, I've got some bass sounds that have some mystery waves in them, too and that could be a whole new ball game. ■



Bio: Joe Travo is Manager, Sales Training and Development for Wausau Insurance in Wausau, Wisconsin and a part-time musician and arranger. Although he enjoys living in the midwest with his wife and six-year-old daughter, he misses his Los Angeles-based band, "The Four Seizures."

CURRENT ENSONIQ O.S.

EPS	2.49	VFX	2.1
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MASOS	2.0	SQ-R	1.02
MIRAGE	3.2	SQ-1 PLUS	1.1
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ESQ-M	1.2	SD-1	3.00
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Surrogate Sequences for Sale

— We do it so you don't have to

Daniel Mandel

Product: Sequences.

For: VFX-sd (Also available for the SD-1 and EPS/EPS-16 PLUS — not reviewed here).

From: L.B. Music, P. O. Box 261, Clifton Heights, PA 19018-0261, (800) 3LB-MUSIC.

Price: \$15 per sequence, \$12.50 for 4 or more. \$10 each for cumulative orders above \$500.

Sometimes it seems like there's more and more things to accomplish in less and less time. We must be Renaissance men and women. We must do it all and we must do it well. We must also meet our deadlines! In order to achieve our goals as musicians, we often ask ourselves — what's the best way to...? — basically, do everything and do it well. How can we possibly make that demo tape while we are putting all our energy into auditioning a new bass player and rehearsing our last set? Where in all of this hectic schedule does the time come for actually writing a new arrangement, a new song?

L.B. Music sequences are intended to facilitate live gigs. One of the things we may do, and I say "may" because this product may not be for everyone, is spend a lot of time programming current and standard hit songs into our synth for that next wedding or lounge act or party. Well, you don't really have to do that anymore.

Now, you have to keep in mind how these are used in order to decide how good they would work for you. If you use your keyboard as a totally live instrument, never touch your sequencer, then you might just pass. However if you're the center of the band — you may not even have a full band — and you are in control, these sequences can be a great load off your time.

The example sequences were middlin' to good. The songs range from big band to pop to jazz. "In The Mood" was a good sequence with the exception of the drum patch which was somewhat heavy and rockin for that time. With a minor tweak you can switch to a jazz kit and the feel is much lighter, more in keeping with the sound of the big band era. The horns were great, the sax... well, the sax was passable. I have yet to be really impressed with a VFX sax line! "Lady in Red" had a good guitar part. It was downright flowing and liquid. "Vogue" was very well done — now all you need is to get Madonna to drop in on your world and do a few numbers! The other songs in the demo were "Something Happened on the Way to Heaven," "Europa," "Blue Bayou," "Dancing on the Ceiling," "When Sunny Gets Blue," "Together Forever" and "Here We Are."

The sounds used with these sequences were mostly drawn from the standard palette that comes with your VFX-sd. There are a few L.B. sounds that come with the sequences, but as I poked around and played them I was fairly unimpressed. Mostly electronic keyboard patches and bass sounds that were pretty average.

The blurb from L.B. Music says, "Our sequences are designed for today's musician/entertainers. Technology does the work for you without computer experience. Let us do all of the homework for you. The instruments are assigned to their respective tracks, all volume levels, MIDI mapping and effects are preprogrammed on your disk. With our "QUICK PLAY" system, you are up and playing within seconds."

I don't think it would come as a shock to those of us who use sequences to find out that we can play these sequences easily. Where else would the instruments be assigned but their respective tracks? Of course volume levels are set and effect choices have been made. We do these things every time we put together a sequence and we take it for granted. What this, and other sequence recording companies provide, is time. L.B. Music creates sequences so that you don't have to, because you have more important things to do.

There are other fringe benefits from using pre-sequenced songs. You can listen to and take apart examples of well sequenced songs and learn how to do things you've always wanted to with your own. And if these sequences sound like what you and your band are using and would free you to do the things that are more meaningful (and less tedious), I would suggest that you give them a try. ■

Tested and Approved Hard Drives for the EPSs

Note: The drives listed below are known to be compatible with the EPS and EPS-16 PLUS at the time of testing. Changes in firmware or hardware by drive manufacturers may make later versions incompatible (with the exception of PS Systems, Eltekon, and Frontera whose drives are configured to work specifically with Ensoniq products). Drives not included on this list may also work just fine. For up-to-date information about specific drives call Ensoniq Customer Service: 215-647-3930.

MANUFACTURER	MODEL
Dynatek	All Models
Frontera	All Models
PS Systems	All Models
Eltekon	All Models
Rodime	45plus, 60plus, 100plus, 140plus
Microtech	R45, N20, N40, N80, N100, N150
PL1	45 Meg Removable
Mass Micro	Datapack 45

Drives Reported to Work by Readers

The following drives have been reported to work satisfactorily with reader's EPS systems. No guarantees — but they'll probably work with yours.

Jasmine Direct Drive 100
PowerDrive44
Syquest 555 (removable)
Tech Data Model 60e

Klean (and Kat-proof) Kustom-Krafted Keyboard Covers

Steve Vincent

No, this is not *Family Circle* magazine, but there has been some interest lately in covers for our precious keyboards. The following is a recipe for making your very own dust cover for your axe.

Let me start by telling you a true story. A while back I thought it would be kinda fun to sample my wife's cat, Gretchen, meowing. While a friend held her (Gretchen, not my wife) I placed a microphone close to her mouth and, um, induced a meow. It worked! I now have a nice 79-block sample that is so realistic it fooled all the cats in the neighborhood, including Gordon, my wife's other cat, a male. Gordon was smart enough to know that I somehow put Gretchen into my EPS by way of the disk drive, and he was territorial enough to, yeah you got it, SPRAY into the disk drive of my board. I'll spare you the details of my response to Gordon's not so passive-aggressive behavior.

And then, unbelievably, a few days later Gordon sprayed my EPS's disk drive a second time. I can't adequately express what my feelings were at that moment. Well, guess what happened? Yes, like all good stories, it happened a third time. But in between the second and third incident, I made myself a vinyl cover for my EPS. That vinyl cover probably saved Gordon's life.

Here's the recipe: go to your local fabric store and buy yourself a 20" x 48" (at least) slice of that stuff they put on dining room tables underneath the table cloth; you know, white plastic on one side, a thin layer of foam on the other. This next part gives new meaning to the term "Hacker"... Cut it to the dimensions shown in Figure 1 (note: these dimensions are for ESQ, SQ-80,

and EPS; you'll need to adjust the dimensions for other Ensoniq boards of different sizes). Making sure the foam is on the side contacting your keyboard, glue and/or sew together the edges of the notched-out sections on the corners. After a number of unsuccessful attempts at using a Seal-A-Meal to melt the seams together, I ended up using a hot glue gun, which worked pretty good. A Seal-A-Meal might work with a different kind of plastic (and also has the advantage of enabling you to store leftover spaghetti in your MIDI studio). You might want to sew a strip of bias tape onto the seam for reinforcement.

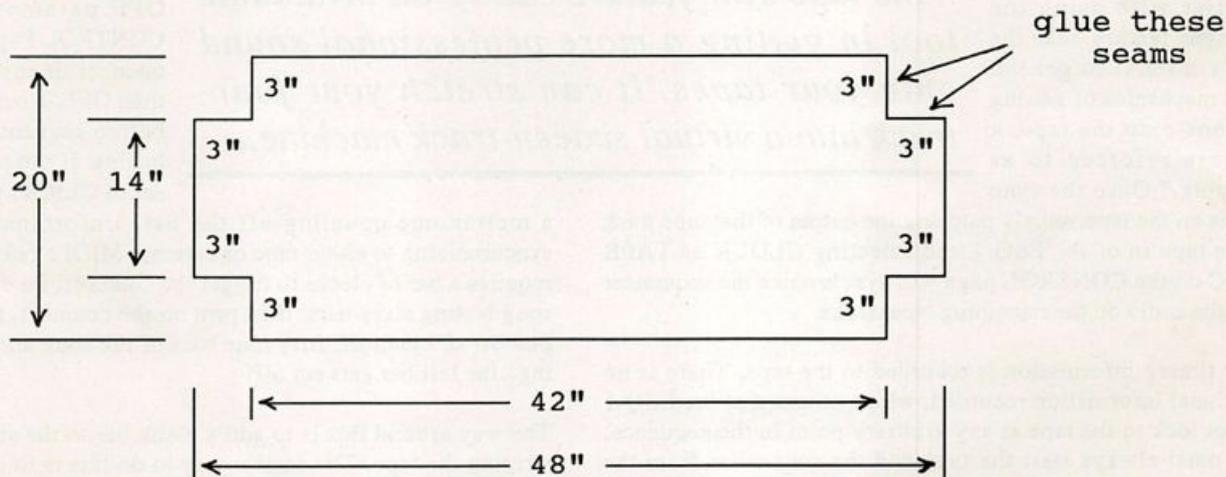
That's all! You're done! Best of all, you only spent a measly couple of bucks and five minutes of your time. Okay, I admit it, the cover looks like you only spent a couple of bucks. So decorate it with Ensoniq decals, anti-cat cartoons, or even buy an extra *Transoniq Hacker* T-shirt and sew the logo onto the cover. You have just constructed a very versatile item which can also be used as a pad underneath your tablecloth.

Oh — in case you were wondering what happened to Gordon, my wife and I worked out a compromise: She makes sure he stays outside and I let him live.

And if you'd like a copy of *Gretchen's Meow*, complete with patch selects (including velocity-controlled pitch), send a formatted EPS disk and a self-addressed stamped mailer to me c/o 3615 66th Ave W, Tacoma, WA 98466. ■

Bio: Steve Vincent is a marriage and family therapist with an addiction to MIDI, and is the compiler of the Hacker Compilation Tape. He does not hate all cats. [And he's been given the assignment of reviewing a real dust cover.]

Figure 1



Using the ESQ-1 and SQ-80 Sequencer with Tape Sync

Brian Rost

If someone told you that there was a way to get over sixteen tracks out of your four-track recorder you might think "Ya, shure." If they told you that all the equipment you needed to do this was built into every ESQ-1 and SQ-80, you might think they were really off. But the fact is, they would be telling you about what is probably the most overlooked and seldom used feature of the sequencer: the tape synchronization capability.

As an ESQ-1 user (or SQ-80 — all further references apply to both) you've no doubt learned to appreciate the ability to do overdubs and edit your music in the sequencer rather than having to make endless takes on tape. However, what if you want to add parts like vocals and non-MIDI instruments to your recordings? One option is to record your sequenced parts to tape, then overdub the other parts onto the tape. Another way is to use tape sync and what has come to be called "virtual tracks."

Let's take a simple example. Assume you have a sequence programmed into your ESQ-1 which has all the instrumental parts for a song and you want to add three-part vocals to this. In order to put the sequenced parts onto tape in stereo, you would need two tracks. Add three tracks for vocals and you're up to five tracks already. Now consider this: use one track to record the tape sync FSK tone generated by the ESQ-1, then add the three vocal tracks. The sequenced parts never go onto the tape, only the sync tone. However, the sync tone allows you to run the ESQ-1 sequencer in perfect time synchronization when playing back the audio tracks you have recorded. There are a number of benefits to this which all can be boiled down to one thing: By not committing the sequence to tape until the final mixdown you are free to experiment with the sequence, making edits, trying different sounds, even using different instruments.

At this point, if you are unfamiliar with using the tape sync feature, read the user's manual to get the basic mechanics of getting the tone onto the tape, a process referred to as "striping." Once the sync tone is on the tape, simply patching the output of that tape track to the tape in of the ESQ-1 and selecting CLOCK as TAPE SYNC on the CONTROL page will synchronize the sequencer with the audio on the remaining tape tracks.

Only timing information is recorded to the tape. There is no positional information recorded, which means that the ESQ-1 cannot lock to the tape at any arbitrary point in the sequence. You must always start the tape and the sequencer from the beginning of the song. You cannot take advantage of the

autolocate functions of the sequencer unless you can do without hearing the audio tracks at the same time.

There are tape sync devices on the market that do allow locking the tape and sequencer together at arbitrary points. The main question about which to use comes down to expense versus convenience. If all you sequence are 30 second jingles, you may not mind the limitation of always starting at the beginning as much as someone wanting to edit the last bar of a 15 minute composition. Clearly, the cost advantage is on the side of the ESQ-1: the tape sync feature is free.

OK, we've mentioned that editing of sequences is possible after you've striped your tape. There are some limits here, but they are simple enough. The overall length, time signature and tempo of the song must remain the same. For example, it does not matter if you take a song comprised of four 12 bar sequences and edit it into eight 6 bar sequences, since the overall length is still forty eight bars. Any other changes you choose to make are fair game. You can add or delete notes and tracks, change assignments of MIDI channels, LOCAL/BOTH/MIDI status, track levels and program change numbers. Cutting and pasting, quantizing and step editing are all possible.

At this point, let's look into some specific examples of using tape sync and mention some techniques to make your life easier integrating sequenced and taped parts together.

One obvious problem is how to set up a click track or metronome to aid in recording the non-sequenced parts. In fact, you may have songs where the sequenced parts don't begin until partway into the song. The obvious solution is to make use of the click feature of the ESQ-1 sequencer. Less obvious is the need for a blank bar at the top of the song.

...the tape sync feature can be an invaluable tool in getting a more professional sound onto your tapes. It can stretch your four-track into a virtual sixteen-track machine...

When you set the COUNT-OFF parameter on the CONTROL Page of the sequencer to anything other than OFF, a bar is inserted before sequence playback begins. If the parameter is set to CLICK, you will get

a metronome counting off the bar. Unfortunately, when synchronizing to either tape or external MIDI clock, the ESQ-1 requires a bar of clocks to trigger the countoff. So if we stripe a song lasting sixty bars, then turn on the countoff, the result is one bar of countoff, fifty nine bars of the song and then nothing...the last bar gets cut off!

The way around this is to add a blank bar to the song prior to striping the tape. The easiest way to do this is to create a one bar sequence with no music in it, then insert this sequence at

the beginning of the song. Then after striping the tape, delete the sequence from the song. When recording parts to tape, set COUNTOFF to CLICK and CLICK to ON if you need a metronome. On playback for mixing, set COUNTOFF to QUIET and CLICK to OFF.

Another issue is tempo changes. Drastic tempo changes are no problem, since the ESQ-1 allows changing the tempo on sequence boundaries. Subtle changes, such as ritards at the end of a song can also be created. Remember that on the SELECT page, adjusting the data slider or up/down buttons will change the tempo. When striping the tape, go to the SELECT page and when the spot for the ritard comes along, use the slider or down button to decrease the tempo. The changes will be encoded into the signal going on tape, so that on playback, the ESQ-1 will track the recorded tempo changes perfectly.

OK, now we've striped the tape and recorded the non-sequenced parts. Let's look into what happens at mixdown. Here is where using tape sync really pays off.

Let's start with a typical application, using only the ESQ-1. Patch the stereo outs of the ESQ-1 into your mixer, and pan the two inputs hard left and hard right. We can now control the panning of all sequenced parts by the PAN settings on each patch. Since many patches use modulated panning, you may wish to modify the patches to give fixed pan locations. Settings of 7 or 8 place things in the center of the stereo spread; to move a sound left lower the value, to move right raise it. For stereo spreading of sounds like pianos and string pads, try using the KBD2 modulator. Experiment by using the COMPARE button to audition how the patch sounds with the new panning. Remember to save the patch once you get the panning set as you like it. To help in keeping track of the edited patches, SQ-80 owners will appreciate the fact that the current internal patches get saved to disk along with sequences (you are prompted on reloading whether or not to restore the patches).

Now let's head down to the MIX/MIDI pages and go to the MIX page where the levels for the tracks are stored. Roll the tape and tinker with the levels as needed to balance the sequenced parts against both each other and the taped parts. If you have chained together a number of sequences into a song, this can get a little messy, since changes you make on the fly during playback are not retained unless you stop the sequence. Keep a pad nearby and jot down edits you would like to make to levels, then when the song is done playing, go make the changes and roll the tape again to hear them. Here's a tip: save a copy of the sequence before editing any MIX/MIDI parameters and always make changes only to a new copy. That way, if you decide the changes aren't working out, you can go back to the original mix and start over.

Since many digital effects processors now allow MIDI control, you may want to use a track in the sequence (if one is available) to control effects to help automate your mixdown. Prior to mixing, about all you can set up is program changes. During mixdown you can overdub the mod wheel and CV pedal to control effect parameters. Since you won't be overdubbing any

notes, you can use the foot pedal to start and stop recording on this track.

Now let's move on to mixdown using multiple MIDI devices. Here's where we start seeing the real impact of using tape sync. Since the ESQ-1 has eight tracks per sequence, we can control eight MIDI devices directly in addition to the ESQ-1. If each one has stereo outputs, we could have up to eighteen signals to mix. Each one could get separate effects, level, panning and so forth depending on the capabilities of your mixing board. Overall level balance will remain under control of the ESQ-1. If we're using a four-track recorder, we could have three tracks on tape plus eighteen external sources. To record this without using tape sync would require a total of twenty-one tracks of tape to get the equivalent isolation.

While that covers the basic aspects of using tape sync, we'd like to close with some hints on how to use tape sync to squeeze more than 8 voices out of your ESQ-1 when recording. Let's again assume four track tape, with one track holding the sync tone. Let's assume you have a sequence that experiences premature cutoff of notes, or you would like to use some layered patches but don't have enough voices to support them. No problem!

We need to decide which tracks can be played at the same time without using up more than eight voices. Separate these into up to three groups. If you can keep it down to two, you can record one group of the two in stereo, the other group will be recorded in mono; with three groups all three will be recorded in mono. For the first pass recording, mute all the tracks except those in the first group by double-clicking on them on the MIX page (brackets will appear around the level values indicating the parts are muted). Now record the first group to tape, striping the tape at the same time. Go back and mute all but the second group and make another recording pass, this time with the ESQ-1 locked to the sync tone. If you need to, make a third pass for the third group.

Using this technique requires you to make some decisions up front about mixing because you are committing some sounds to tape, not to mention you won't be able to hear all the notes until you listen to the tape playback. Trade off that disadvantage against being able to get a "24 voice" ESQ-1 onto tape. For low-budget home productions, this can be a real life-saver in cases where you just need one more voice here and there.

To wrap this up, you may find that in home studio recording applications, the tape sync feature can be an invaluable tool in getting a more professional sound onto your tapes. It can stretch your four-track into a virtual sixteen-track machine... and the best part is that it's free, built right into your synthesizer and ready to go! ■

Bio: Brian Rost spends his evenings either hunched over his SQ-80 or playing bass with the HUBCAPS, a Boston-based roots rock band. To unwind during the day he designs computers.

SAMPLES

3D SOUNDS. EPS/16Plus, TX16W, Mirage, S10/220/ MKS-100, S-50/330/550/770/W-30 & S-900. Only \$5 per disk. Demo Disk \$3. 1200 Sound Drum Sample CD - \$40! Popular Synths including VFX & SD-1. P.O. Box 114, Station C, Kitchener, Ontario, Canada, N2G 3W9.

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Creative Analog for EPS, Avant Garde/New Music sounds using ARP 2600 and others, see review April '91 TH. 10 disk set \$89.95, demo disk \$10. Also available for Macintosh and MS-DOS, \$79.95/set. 1-800-622-2328 (ordering) or 1-505-986-0578 (info).

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SOUND EFFECTS for EPS-16 Plus and EPS, very high fidelity, ideal for studio and post-production work. All effects are original digital recordings sampled at 16 bit, 44.6 kHz, with mono and stereo patch selects. Disks are \$5.95 each, or \$5.45 each for six or more. Send SASE for free listing to: Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602, or call (818) 769-4395.

Mirage samples: Plus moving wavesamples all over. 7 sounds in one bank, much more. Listings: \$1.00. Demo tape: \$6.00 (includes listings). Mr. Wavesample, 162 Maple Place, Keyport, NJ 07735. 908-264-3512. Make checks payable to Jack C. Loesch.

EQUIPMENT

Mirage DMS-8 with disks/MASOS, \$495. Oasis ST waveform editor for Atari ST and Mirage, \$85. Input Sampling Filter ISF-1 for Mirage, \$65. All excellent condition. Dave, (913) 782-7481.

ROLAND TR-909 & ROLAND TR-808 both excellent condition w/manuals. \$600 each. ESQ-M excellent condition w/library of over 1,000 sounds, manual, and original box - \$500. Contact Ever, (312) 878-8960.

EPS w/2X expander. Anvil case, extra pedals & cords, and lots of disks included. Mint condition. \$790. James Werning, (719) 578-5315.

EPS with 4X Expander + over 200 sound disks for \$1650. Will pay shipping. Call (509) 786-2323, after 6 p.m. PST, ask for CESAR.

Trade Amiga 500 with video software and extras for EPS. Call 702-438-7816 after 12 noon PST.

For sale: Boss CL-50 compressor/limiter/gate. Pro specs, half rack size. Great condition. \$135. (708) 427-1615.

RAM cartridge for VFX-sd, \$75. SW-5 footpedal, \$25. Tascam Model 38 8-track reel-to-reel trade for EPS-4X. Tascam Model 32 trade for SQ-80 or ? Michael 618-876-2922.

Mirage DSK, Alesis MMT-8, JL Cooper PPS-1. Best offer. (410) 228-5081, 6 - 10 pm, EST. Roger.

ESQ-1 with 20,000 note sequencer, 160 RAM cart, 2,400 patches plus MDF1 with 20 disks and Harmony Systems MIDI sync/merger, \$850 or will separate. HR-16 \$250. Moog Opus-3 \$250. All original cartons/manuals. 401-431-2963.

WANTED

Wanted: VFX-sd and SQ-80 patches for trade. (708) 427-1615.

Wanted: Mirage Sequence Expander. Mario, (718) 229-4934.

Wanted: VFX programmers to trade their ORIGINAL VFX PATCHES. (I have 105 HI-FI sounds, wide variety). No tweaks / copyrighted sounds please! Send VFX-SD-1 or Alesis DataDisk format to: Brad Kaufman, 11-26 Saddle River Road, Fair Lawn, NJ 07410.

SOFTWARE

Read and Write Ensoniq Diskettes on IBM-PC's. Order our Ensoniq Diskette Manager (EDM) software for only \$22. Transfer Sequences to/from Standard Midi Files (SMF). Each package (VFX-SD/SD-1 or EPS/EPS-16+) includes EDM and costs \$44. Convert SQ-80 sequences and songs to VFX-SD or SMF using our SQ80VFX software (\$44). Giebler Enterprises, 8038 Morgan Road, Liverpool, New York 13090 (315) 652-5741.

Midicaster is still available. The way-cool operating system that turns your Mirage into a very capable System Exclusive data librarian, a 20,000-note sequence player, a disk copier/formatter, and wave-draw synthesizer is still available for a limited time. For more information, or to order, contact Tim Martin, 1510 S 5th W, Missoula, MT 59801. Phone: 406-542-0280 And thank you for your support.

PATCHES/SOUNDS

80 Homemade mind blowing and Avant Garde patches for the SQ-80 on disk. Send \$20 to Arnold Mathes, 2750 Homecrest Ave., Brooklyn, NY 11235. Phone: (718) 646-3214.

Facelift for your ESQ-1. Exclusive totally new double part sounds (40 + 40): synth, classic, jazz, folk, pop, ethereal, experimental, ensemble, organ, brass, percussion, effects, multizones, microtonal scales, rhythmbox-patches! Hidden waveforms... Available Mirage or Atari disk or data cassette. Only \$24 by international money order to P. Timmermans, Steyenhoflaan 33, B-3130 Betekom, Belgium. Includes ultimate ESQ-1 patch manual (25 pp).

NEW SQ-80 SOUNDS from the Hacker's Sam Mims! Soundset 4 takes full advantage of the SQ-80's unique waveforms, and brings "hidden waveforms" to the SQ-80 for the first time. Forty patches on disk, with 22-page booklet of programming notes and performance tips, \$17.95. Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602, (818) 769-4395.

FREE SOUNDS with expander orders, EPS/EPS-16+, VFX-sd/SD-1, SQ-1, SQ-2, ESQ/SQ-80. EPS-16+ FLASHBANK and Sequencer expansion available. Also expanders for AKAI, CASIO, ROLAND, PEAVEY, and YAMAHA. EPS/EPS-16+ Vol. I Sampling Made Easy & Vol. II Advanced Sampling videos: \$30 each or both for \$50. 100 Drum Patterns for EPS/EPS-16+, VFX-sd/SD-1, SR16/HR16: \$12. Best Prices. Wildwood Sounds, 4726 Pebble Creek Terr., Pensacola, FL 32526. Phone: (904) 944-6012, Tony, after 6 pm.

INSTRUCTION

VFX-sd TALKING OWNER'S MANUAL (tm) PLUS disk produced for Ensoniq. The manual "you don't need to read" to understand your VFX-sd intimately. 113 minute comprehensive cassette explains applications and capabilities while your hands operate its controls. Send \$15.00 check/money order; includes P/H/Tx to: Talking Owner's Manuals-VFX 21405 Brookhurst, Huntington Beach, CA 92646.

SERVICES

Turn your Ensoniq sequences into professional recordings! Production team with major credits will take your tunes from data to digital masters, complete with vocals and necessary instrumentation. For more information, contact Mulholland Music, 1335 Newport Circle, Thousand Oaks, CA 91360.

Typesetting. Laser or Lino output. Flyers, ads, cards, manuals (will also do technical edit/writing), etc. (Sorry - no scoring.) Transoniq, (503) 227-6848.

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.

Photocopies of out-of-print past issues of the Hacker can be obtained by calling Jack Loesch, 201-264-3512 after 6 pm EST.

Folks in the New York City area can get copies of unavailable back issues of the Hacker - call Jordan Scott, 212-995-0989.

FREE CLASSIFIEDS!

Well,—within limits. We're offering free classified advertising (up to 40 words) to all subscribers for your sampled sounds or patches. Additional words, or ads for other products or services, are 25 cents per word per issue (BOLD type: 45 cents per 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.

ESQ & SQ-80 Hackerpatch

By Sam Mims

Hackerpatch is intended to be a place where patch vendors can show their wares and musicians can share their goodies and impress their friends. Patches designated "ESQ-1" will also work on the SQ-80. The reverse is not always true. Once something's published here, it's free for all. Please don't submit patches that you know to be minor tweaks on 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—our resident patch analyst. If you send in a patch, please include your phone number. Requests for particular patches are also very welcome.

ESQ Patch: -FRETS

by Walter Cooper, Latter Sounds, Tallahassee, FL

I needed a bass patch for a particular application, but with nearly 3000 SQ-80 patches, I still didn't have the bass sound that I wanted. So I invited a couple of bass players over and listened to them, and the result is -FRETS; it works quite well.

The Hack

If there is a bit too much "owww" in this patch, you can get it closer to a fretted electric bass by turning down the depth of the ENV 3 modulator on the FILTER page; values around +15 work nicely. This left the patch lacking in volume, so I cranked the DCA 4 volume to 63, and still wished for more. You can get a tighter bass sound by switching the AM mode to ON, but this reduces the punch of the original sound. For percussive bass parts, you may want to tighten up the release time a bit by changing T4 of ENV 4 to 13 or so.

ESQ-1 PROG: -FRETS								BY: Walter Cooper		
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH		
OSC 1	-1	0	0	SAW	LFO1	+4	*OFF*	-		
OSC 2	-1	0	2	SAW	LFO1	+4	*OFF*	-		
OSC 3	-1	0	5	SAW	LFO1	+4	*OFF*	-		
	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH				
DCA 1	50	ON	VEL	+13	*OFF*	-				
DCA 2	50	ON	VEL	+13	*OFF*	-				
DCA 3	0	ON	ENV2	+63	VEL	+14				
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH			
FILTER	0	11	30	ENV3	+35	VEL	+3			
	FINAL VOL	PAN	PAN MOD	DEPTH						
DCA 4	58	8	LFO2	+47						
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD		
LFO 1	20	OFF	ON	TRI	0	1	0	WHEEL		
LFO 2	12	OFF	OFF	TRI	63	0	20	*OFF*		
LFO 3	-	-	-	-	-	-	-	-		
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	+63	0	0	OL	0	0	0	0	0	0
ENV 3	+63	+30	+1	41L	22	0	28	47	37	15
ENV 4	+63	+47	0	36L	63	0	41	63	19	9
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC		
MODES	OFF	OFF	OFF	0	OFF	OFF	ON	OFF		
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY			
	OFF	-	OFF	-	OFF	-	-			

SQ-80 Patch: 12STRG

by Kirk Slinkard, Lakewood, CO

Here is my entry in the 12-string guitar category. PICK 1 and DIGIT 2 are used to supply the basic acoustic guitar sound. GRIT 3 is tuned up an octave for the effect of the brighter six strings on a 12-string guitar. This oscillator also has a little detuning and LFO modulation to make the sound bigger. I think that this patch sounds most realistic in the lowest two octaves.

The Hack

I could not quite get this to sound like a real guitar, though it's a very interesting sound. I adjusted ENV 4 a bit (L2=+46, T2=24, T3=55) for a more natural plucked string imitation, but 12STRG still sounded like some exotic Middle Eastern instrument to me. So I immediately applied some filter resonance (RES=07) and made it into a sitar of sorts. Turning on the AM mode changed it into a tighter exotic stringed instrument. Play with a drone note in the bass, pick a weird scale to improvise a melody around, and you're in business.



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

SQ-80 PROG: 12STRG								BY: Kirk Slinkard		
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH		
OSC 1	+1	0	4	GRIT3	LFO1	+1	*OFF*	-		
OSC 2	0	0	0	DIGIT2	*OFF*	-	*OFF*	-		
OSC 3	0	0	0	PICK1	*OFF*	-	*OFF*	-		
	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH				
DCA 1	0	ON	ENV1	+55	KYBD2	-2				
DCA 2	0	ON	ENV1	+63	*OFF*	-				
DCA 3	63	ON	*OFF*	-	WHEEL	-63				
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH			
FILTER	79	0	0	ENV3	+63	*OFF*	-			
	FINAL VOL	PAN	PAN MOD	DEPTH						
DCA 4	58	8	LFO2	+63						
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD		
LFO 1	9	OFF	ON	TRI	26	0	0	*OFF*		
LFO 2	1	OFF	ON	TRI	0	0	0	PEDAL		
LFO 3	-	-	-	-	-	-	-	-		
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+63	+63	+63	OL	0	4	0	0	37	16
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	+63	+25	-63	63L	15	0	21	51	OR	21
ENV 4	+63	+38	+18	30L	63	0	45	59	22	26
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC		
MODES	OFF	OFF	OFF	0	OFF	ON	ON	OFF		
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY			
	OFF	-	OFF	-	OFF	-	OFF	-		

SD & VFX Hackerpatch

SD & VFX Prog: BANG THIS 2

By: Steve Munro, Guilderland Center, NY

NOTES: This is a collection of loud, raunchy, electronic lead solo voices set up to play monophonically. The mod wheel modulates the pitch in voices 2 and 3, and also varies the effects parameters.

THE HACK: These are definitely some rude lead sounds; they sound very industrial, and have no problem punching through a mix. I prefer to still have my lead patches polyphonic, though doing this to every voice here would eliminate the por-

tamento effect. The answer is to perhaps change some — but not all — of the voices. Experiment with what works best for your particular style. To make a voice polyphonic, go to the Pitch Mod page, and change the GLIDE parameter to NONE. (I know that is about as non-intuitive as can be.)

I also wanted a more dramatic effect on these sounds, to complement their aggressive nature. The factory settings of the DLY+ FLANGE+REV3 worked well for me.

— Sam Mims

WAVES	1	2	3	4	5	6
Wave	Kagong	Sinewave	Inharm-X	Kagong	Planet-X	Crunch-LP
Wave Class	TunedPerc	Waveform	Transwave	TunedPerc	Transwave	String
Delay	0	0	0	0	0	0
Start	0	-	99	0	0	0
	Vels-0	-	Mod=Env1	Vels-0	Mod=Env1	Vels-0
	Forward	-	Amt= -99	Forward	Amt= +99	Forward

MOD MIXER	1	2	3	4	5	6
SRC-1						
SRC-2						
SRC-2 Scale						
Shape						

PITCH	1	2	3	4	5	6
Octave	+1	0	0	0	0	0
Semitone	0	+07	0	0	0	0
Fine	0	0	+06	-03	+06	-05
Pitch Table	System	System	System	System	System	System

PITCH MODS	1	2	3	4	5	6
MODSRC	Off	Wheel	Wheel	Off	Off	Off
MODAMT	0	-74	-99	0	0	0
Glide	Legato	Legato	Legato	Legato	Mono	Legato
ENV1	0	0	0	0	0	0
LFO1	+04	+10	+10	+04	+10	+10

FILTER 1	1	2	3	4	5	6
Mode	LP/2	LP/2	LP/2	LP/2	LP/2	LP/2
Cutoff	127	127	127	127	127	127
KBD	0	0	+25	0	+25	0
MODSCR	Off	Off	Off	Off	Wheel	Off
MODAMT	0	0	0	0	-40	0
ENV2	0	0	0	0	0	0

FILTER 2	1	2	3	4	5	6
Mode	LP/2	HP/2	HP/2	LP/2	HP/2	HP/2
Cutoff	127	0	0	127	0	0
KBD	0	0	0	0	0	0
MODSCR	Off	Off	Off	Off	Wheel	Off
MODAMT	0	0	0	0	+40	0
ENV2	0	0	0	0	0	0

OUTPUT	1	2	3	4	5	6
VOL	80	99	99	75	99	80
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	0	0	0	0	0	0
KBD Scale	0	0	0	0	0	0
LO/HI Key	-	-	-	-	-	-
Dest Bus	FX2	FX1	FX1	FX2	FX1	FX1
Pan	50	50	20	50	38	50
MODSRC	Lfo	Lfo	Env1	Noise	Noise	Off
MODAMT	+10	-99	+99	+20	+30	0
Pre-Gain	On	Off	Off	On	Off	On
Voice Prior	Med	Med	Med	Med	Med	Med
Vel Thresh	0	0	0	0	0	0

LFO	1	2	3	4	5	6
Rate	32	30	30	32	30	30
MODSRC	Press	Press	Press	Press	Press	Press
MODAMT	+10	+10	+16	+10	+16	+10
Level	0	0	0	0	0	0
MODSRC	Press	Press	Press	Press	Press	Press
Delay	0	0	0	0	0	0
Waveshape	Triangle	Triangle	Triangle	Triangle	Triangle	Triangle
Restart	Off	Off	Off	Off	Off	Off
Noise SRC RT	0	0	0	0	0	0

SELECT VOICE

00	1	2	3	4	5	6
0*	1	2	3	4	5	6
*0	1	2	3	4	5	6
**	1	2	3	4	5	6

ENV1	1	2	3	4	5	6
Initial			0		0	
Peak			99		99	
Break 1			0		0	
Break 2			99		99	
Sustain			0		0	
Attack			50		58	
Decay 1			50		50	
Decay 2			50		50	
Decay 3			50		58	
Release			50		50	
KBD Track			0		0	
Vel Curve			Cvx-2		L-Rise	
Mode			Repeat		Repeat	
Vel-Level			0		0	
Vel-Attack			0		0	

ENV2	1	2	3	4	5	6
Initial						
Peak						
Break 1						
Break 2						
Sustain						
Attack						
Decay 1						
Decay 2						
Decay 3						
Release						
KBD Track						
Vel Curve						
Mode						
Vel-Level						
Vel-Attack						

ENV3	1	2	3	4	5	6
Initial	99	99	99	99	99	99
Peak	99	99	99	99	99	99
Break 1	99	99	99	99	99	99
Break 2	99	99	99	99	99	99
Sustain	99	99	99	99	99	99
Attack	20	20	20	20	20	20
Decay 1	20	20	20	20	20	20
Decay 2	20	20	20	20	20	20
Decay 3	20	20	20	20	20	20
Release	10	10	10	10	10	10
KBD Track	0	0	0	0	0	0
Vel Curve	Cvx-1	Cvx-1	Cvx-1	Cvx-1	Cvx-1	Cvx-1
Mode	Norm	Norm	Norm	Norm	Norm	Norm
Vel-Level	0	0	0	0	0	0
Vel-Attack	0	0	0	0	0	0

PGM CONTROL

Pitch Table	Off
Bend Range	02
Delay	1
Restrike	0
Glide Time	08

EFFECTS (1)

Effect	Delay+Rev2
Decay	50
FX1	25
FX2	55

EFFECTS (2)

Delay Time	222
Regen	+20
Mod	+99
Mod	+15
Mix	30

EFFECTS (3)

Modscr	Mod wheel
HF-Cut	Off

PERFORMANCE

Timbre	0
Release	0
Pressure	Key

Prog: OBOE

By: Jack Carder, Springfield, VT

Notes: Be sure to use in the correct range.

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

LFO	1	2	3
LFO Speed	33		
Noise Rate	0		
Level	28		
Delay	53		
MODSRC	Off		
Wave	Sine		
Restart	On		

AMP	1	2	3
Initial	82		
Peak	99		
Break	99		
Sustain	99		
Attack	03		
Decay 1	32		
Decay 2	55		
Release	16		
Vel-Level	13		
Vel-Attack	86		
Vel Curve	Convex		
Mode	Normal		
KBD Track	+98		

PITCH	1	2	3
Octave	+1		
Semitone	0		
Fine	0		
ENV1	0		
LFO	+01		
MODSRC	Vel		
MODAMT	00		
KBD Pch Track	On		
Glide	Off		
Glide Time	0		

FILTER	1	2	3
Filter 1	2Lo		
Filter 2	2HI		
FC1 Cutoff	064		
ENV 2	+23		
FC1 KBD	+19		
MODSRC	LFO		
MODAMT	+10		
FC2 Cutoff	0		
ENV2	+24		
FC2 KBD	+28		
FC1MOD-FC2	On		

OUTPUT	1	2	3
VOL	89		
Boost	Off		
MODSRC	LFO		
MODAMT	+05		
KBD Scale	0		
Key Range	AO AO		
Output Bus	FX2		
Priority	Med		
Pan	0		
Vel window	0		

ENV1	1	2	3
Initial	27		
Peak	00		
Break	43		
Sustain	00		
Attack	03		
Decay 1	47		
Decay 2	17		
Release	29		
Vel-Level	06		
Vel-Attack	66		
Vel Curve	Concave		
Mode	Normal		
KBD Track	0		

ENV2	1	2	3
Initial	99		
Peak	74		
Break	82		
Sustain	01		
Attack	01		
Decay 1	10		
Decay 2	99		
Release	22		
Vel-Level	86		
Vel-Attack	99		
Vel Curve	Quikrise		
Mode	Normal		
KBD Track	+70		

**Standard
Sound
Programming**

Effects Programming

(To save space, only those effects utilized are listed. A complete blank form was published in Issue #68.)

HALL REVERB	
FX-1	25
FX-2	50
Decay Time	25
Diffusion	44
Detune Rate	38
Detune Depth	12
HF Damping	53
HF Bandwidth	93
LF Decay	+07
MOD (Dest)	FX2-Mix
BY (MODSRC)	Pedal
MODAMT	00

The Hack: This is one of the best orchestral patches I've heard for the SQ. "Oboe" has a live, rounded timbre and is about as close as you're going to get to the real thing. In fact, it sounds more realistic than the full-sampled oboe I'm using for comparison. Though no changes are really necessary, here are some subtle ideas: As the author points out, "Oboe" should be played in range. (Does this guy know something of "real" arranging?) So you're not tempted to venture too far, change OCTAVE to +2, KEYBDSCALE to ZONE and KEYRANGE to A2 sharp and G5. Experiment with changing the overall LFO; set (LFO)LEVEL to 38 and LFO SPEED to 38. In Effects, adjust DETUNE RATE to 29 and DETUNE DEPTH to 35. If your music makes use of solo orchestral instruments, this patch is a must.



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.

SQ-1 & 2 Hackerpatches are published with the same constraints and understandings as the ESQ, SQ-80, and VFX patches. The hacking and mutilating part is being handled by Jeffrey Rhoads.

The Interface

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

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

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

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

[Ed. - Between sickness, holiday schedules and missed phone messages, Ensoniq's responses didn't make it into this issue. Fortunately, good ol' Clark has done his usual thorough job on most of the questions. Ensoniq assures us that any loose ends that require an Ensoniq-response will be answered along with next month's letters.]

Greetings,

I am using an EPS-16 Plus, OS 1.1, and have noticed that when it is in MULTI mode that it is impossible to select wavesamples via MIDI with an external controller keyboard. Interestingly it is still possible to select wavesamples from the EPS's own keyboard. To select wavesamples via MIDI the EPS has to be in OMNI mode. So, is this a bug? omission? feature? I suspect EPS module users would find this a pain as they would have to always switch from MULTI to OMNI mode when they are editing wavesamples while sequencing.

Thanks in advance

Scott Fisher

[scott@wapsy.uwa.oz] PH:(09) 380 3574

Department of Psychology
University of Western Australia
Nedlands, 6009. PERTH, W.A.

[CS - This isn't a bug - it's just the way the EPS-16 PLUS works. According to Bill McCutcheon at Ensoniq, allowing the user to remotely select wavesamples via MIDI while the EPS-16 PLUS is in multi-mode presents too many opportunities for confusion. The major difficulty is that when the EPS-16 PLUS is in multi-mode, the instrument being played via a MIDI controller is not necessarily the instrument that's selected on the front panel. This would make it real easy for the user to think he or she was editing a sound that wasn't actually the current instrument, in terms of MIDI input.

By the way, you can also remotely select wavesamples for editing when the EPS-16 PLUS is in POLY mode.]

Dear Hacker,

Here is a description of my SCSI setup as requested in the latest *Transoniq Hacker*.

Equipment:

EPS-16 PLUS: 4x memory expansion (Ensoniq), SCSI (Ensoniq).

EPS: 4x memory expansion (PS Systems), SCSI (Ensoniq), IMS "Dyaxis" SCSI terminator, 2.40 EPROMS, 2.49 OS.

Jasmine Direct Drive 100: 100MB, Purchased 12/88 for \$1100, Jasmine (now out of business?)

PowerDrive44: 44MB, Syquest 555 (removable) mechanism, Purchased 4/91 for \$500, Hard Drives International (800) 234-3475.

Configuration: The two SCSI drives are connected between the EPS and EPS16+. The EPS has an external ("Dyaxis") SCSI terminator. The 16+ has an internal SCSI terminator. Terminating resistor SIPs are removed from both SCSI drives. Shielded cables are used: 6ft 25/50, 3ft 25/50, 2ft 50/50.

Caveats: Since both EPS's are on the same SCSI bus and have the same unit number, they must not both access the drives at the same time, i.e., boot-ups, sound loading, etc. must be staggered. However, having them on the same SCSI bus makes them much more versatile and avoiding simultaneous sound loads, etc. is no problem.

I keep the EPS16+ OS and sounds/sequences/etc on the 44MB Syquest and the EPS OS and sounds/sequences/etc on the 100MB drive.

Both ENDS of the SCSI bus must be terminated. Since the EPS16+ has built-in termination, I added an external "Dyaxis" terminator to the EPS and removed terminators (3 SIP resistors) from the two drives. (Note: this required opening up the drives cases). If I need to split the two systems apart I can remove the cable from between the two drives and install an external SCSI terminator on each of the drives.

The EPS required version 2.49 OS and a firmware upgrade to operate with the new Syquest 555 mechanism (apparently Syquest changed their SCSI implementation slightly and this required a change in the EPS firmware). The guys at Ensoniq were very helpful and the EPROM upgrade was free.

This should work equally well with a 1 or 3 (or more) shared drives, however I have not tried more than two drives and I have not tried to store the two different OS's on the single drive.

The two drives must have unique SCSI ID's (I chose 4 and 5).

Brian Hill

CIS: 73247,1144, GENie: B.Hill2

[CS - Thanks for writing. The response we've gotten so far on this issue has been good. By the way, you cannot store two different Operating Systems on the same disk.]

The Interface,

First I must thank Clark Salisbury for a very informative article on the use of the SQ Transwaves. It put many new programming ideas in my head. Now, on to the question. I have heard numerous ESQ-1/SQ-80 patches which I would like to emulate on my SQ-R, but I have not yet been able to develop a completely satisfactory translation between the SQ-80 parameters and the SQ-R parameters. Thus, I end up with a sound almost, but not quite exactly, what I wanted. Would you please print such a conversion between SQ-80 and SQ-R parameters, or point me to where I could obtain this information?

Thank you very much,

Jay Bromley

Pasadena, CA

jaywb@tybalt.caltech.edu

[CS - As you've discovered, it is possible to roughly translate SQ-80 and ESQ patches for the SQ series instruments. Unfortunately, there is no straightforward "plug in the numbers" type of formula for doing so. Attempting to list a corresponding SQ setting for each ESQ/SQ-80 parameter would require a fairly intense amount of research and testing, and even then the waves and other parameters differ enough for each machine that any "by rote" approximation of patches would most likely produce the type of results you're already getting - close but not exact.]

To: Transoniq

This is in response to your query for people with experience with hard drives not listed in the *Transoniq Hacker* for the EPS to come forward and give all...

Here is what I totally lucked out with and you can too:

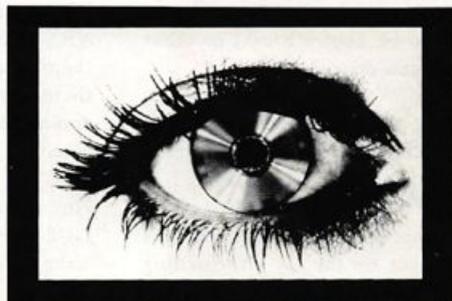
There is a company in San Francisco that specializes in selling overstock... I recently purchased an 80 MB hard drive from them. It's a

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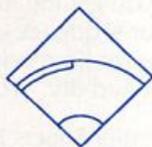
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SCSI with its own power supply and case and dial-selectable SCSI ID #. Here's the clincher. I paid \$395 for the entire thing. It actually was a MAC drive and it came with 20 MB of shareware software but I nuked it...

Anyway, the people who sold it to me say it was a Rodime mechanism but what model exactly, I don't know. All I know is that they had 20, 40, 80 and 120 MB versions for like \$195, \$295, \$395, and \$495. Each drive comes with 20MB Mac shareware, power cord, SCSI cable that hooks directly to your EPS and a 30 day warranty.

They are probably sold out by now, but they get deals like this in often and one should write to them to be kept a breast or other body part about new drives available.

I have been using this drive for 4 months now with NO problems. This included when I played LIVE and had everything loading into the EPS with a PS systems 4X + SCSI off an ATARI ST... This included doing hard disk directory changes on the fly and loading samples via program changes to the appropriate instruments.

The company: System Masters, Factory Liquidators, 1094 Revere Ave., Suite A13, San Francisco, CA 94124, phone: (415) 822-3779.

Peter Stone
GEnie: P.STONE

[CS - Nice tip, Peter. Thanks for writing.]

Dear Hacker,

Today I journeyed to my local music store to explore Ensoniq's latest - the SD-1. A VFX owner myself, I was amazed at some of the great ROM sounds on the SD-1. They seem far superior to those in my VFX, But once I started to tinker with them I noticed that they were created using the ROM samples that are in my outdated VFX. So my question is this - why doesn't Ensoniq publish some of the best SD-1 patches in the Hacker so we VFX and VFX-sd owners can benefit? Or perhaps put them in a book/cartridge for purchase? Is there any way I can get hold of them? Ensoniq must have them written down somewhere.

And if there are any VFX owners at or near UCLA who want to trade sounds you can write me at the address below.

In need of new sounds,
Scott Pease
403 Landfair #208
Los Angeles, CA 90024

[CS - Any patch on the SD-1 can be moved

directly into a VFX - via cartridge, through the use of editor/librarian programs, or via direct MIDI dump. Of course, SD-1 sounds using waves not found in the VFX may not end up being particularly useful (or even interesting), but it's no big deal to turn off any offending VFX voices in a patch, or to re-assign their waves.

So where do you get the sounds in the first place? One possibility might be your local dealer - always your first line of support for in these types of situations. For example, the disk of sounds included with the SD-1 contains, among other things, a backup of all the ROM sounds in the SD-1. It wouldn't be that hard to make a copy of this disk. However, I'm not fully clear on Ensoniq's policy in terms of making these sorts of copies. It seems clear that it would be a violation of their copyright were you to make duplicates of any after-market sounds intended for their machines (or any other machine, for that matter). I'm sure Ensoniq will have something to add to this discussion, though.]

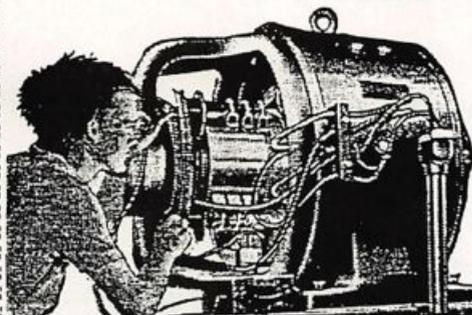
Dear TH,

I have the SQ-2 and I use a WX-7 wind controller. How do I change from using the controller to live on the keyboard?

Eugene Kight

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[CS - Insofar as the SQ-2 keyboard would typically be "live" and playable regardless of whether or not you were using an external controller, I'm not sure I'm understanding your question. But heck, that's seldom stopped me before.

One of the difficulties encountered by some users of the WX-7 is that it can be set to send breath control data as MIDI volume data. This is all well and good, except that when you stop blowing, the WX-7 sends a MIDI volume message of "0" to the slave device, effectively turning it off. You can get the volume reset back to full on by turning the SQ-2 off and then on again, but this may be a bit cumbersome in live performance. One alternative would be to connect an Ensoniq volume pedal (the model CVP-1) to the SQ-2. Then, if the WX-7 sets the SQ-2's volume to "0," you can quickly turn it back up by stepping on the volume pedal.

I hope I've understood your question. If not, perhaps you'd like to write again and supply a few more details.]

Dear TH,

I think your publication is great. I've looked forward each month to receiving the next issue. I now own my third Ensoniq synth. I started with the ESQ-1, then got the SQ-80 and now the updated VFX-sd. After a few problems upgrading my VFX-sd1 to VFX-sd2 I was relatively pleased with my new acoustic and electric piano sounds.

Then came my new dilemma. Do I upgrade again to the SD-1? After a visit to my "local" Ensoniq dealer in Hollywood (60 minutes away from my home in Miami), I was still not sure if I wanted to upgrade as I was still disappointed with the bass sounds. The acoustic piano and solo violin sounds were great.

I decided to go to the advertised "Seminar" on November 13 to get answers to some questions. Well, it was not a seminar. It was more like a two-hour commercial coupled with a poor comedy routine. We left before the commercial ended only to have heard my favorite sounds a few more times. My dilemma continued.

I finally decided to update and pay the \$700. After calling Ensoniq and setting my appointment to do the update I asked the rep what would happen to the mega piano wave I paid \$550 for. He put me on hold and came back to tell me my update would only cost \$150 because I already had the previous update.

My prayers were answered. I'm still a

believer. Thumbs up to Ensoniq - thumbs down to the seminar. Thanks again, Ensoniq!

Here are few questions left over from the seminar:

Is it feasible to build a synth that will play a sequence and load another one at the same time?

What the future of the 3.5" disk drive? Will it become a CD type medium in the future?

I have a looping problem on some of my sequences. There's a minor delay as the sequence repeats. Any reports of similar problems and what might the solution be?

Is it possible to combine the rotary speaker effect with the reverb effect?

Are there any SD-1 users in the Miami area who would be interested in joining a users group to exchange ideas, sequences and sounds? If so, call.

Sincerely,
Bob Henderson
Miami, FL
(305) 251-0255

[CS - As to the future of storage media, a number of new technologies have emerged that will continue to push storage capacities ever-higher. The most promising among these include optical-media drives (now in the \$1500-2000 price range), which currently can store 128 megabytes of data on a relatively inexpensive (\$60 or so) 3-1/2" disk, with 256 megabyte capability not far off.

Another intriguing technology is that of the emerging "Floptical" system, which can store 20 megabytes of data on 3-1/2" disks. When we'll begin to see any of these (or other) systems included as standard hardware on electronic instruments is anyone's guess, though.

In regard to your looping problem, the word from here is that we've had no recurring complaints about looping difficulties. Still, there are an awful lot of possible contexts in which a sequence might be looping. For example, if you're trying to play a lot of notes all quantized to the downbeat of a sequence, you might notice some subtle delays. This could probably be eliminated by spreading the notes out over the first couple of clock-beats or so.]

Dear TH,

With regard to the SPECIAL OFFER letter in the November issue I have the following information.

In August I bought an EPS-16 PLUS Turbo which included the SCSI port, so the next logical step was to add a hard drive. After checking prices at the local music stores and in your ads and figuring that as long as I stayed within your approved list, I began calling some of the ads in one of the Mac magazines. The first one I called Frog Systems of Boca Raton, FL. Not only did they offer Rodime drives, but the guy I talked to had knowledge of Ensoniq and their criteria for EPS hard drives. I ended up buying a 100 meg fixed drive from them for \$339 plus shipping. This price also included necessary cables. I have had NO PROBLEMS whatsoever! Of course, it's not "double shock-protected and rack-mountable," but seenin's as I "know the roadie" I have no qualms about that. I am living proof that, at least with regard to the 16 PLUS Turbo, my third party drive works perfectly.

Keep up the good work,
Ben Ash, Jr.
Birmingham, AL

Dear Transoniq Hacker,

Some questions and suggestions for the EPS-16 PLUS.

1. I'm gonna buy a 44Mb removable hard

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(1) Domestic Animals
(2) Wild Animals
(3) Cartoon FX
(4) Car FX One
(5) Car FX Two
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Fairlight II Soundtrax 2
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Fairlight III Brass 2
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Fairlight III Reeds
Fairlight III Strings 1
Fairlight III Strings 2
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Fairlight III Soundtrax 4
Fairlight III Soundtrax 5
Fairlight III Soundtrax 6
Fairlight III Soundtrax 7
Fairlight III Snare Drums
Fairlight II Sound FX
Prophet 5 Strings
Prophet 5 Brass and Bass
Prophet VS-1
Prophet VS-2
Prophet VS7R/2000
D-50 1
D-50 2
D-50 3
D-50 4

M1 —
(1) Cloud 9 & Christmas
(3) Lunapad & Barbarians
(4) Celestial and Stratos
(5) Ambrosia & Atlantis
(6) Galadriel & Gandalf
(8) Orchestras 1 and 2
(9) Orchestras 3 and 4
(10) Botticelli, Metal Hit, Windbell
DX-1 — DX Rhodes and Bass
Oberheim 1 — Xpander
Oberheim 2 — Matrix 6-1
Oberheim 3 — Matrix 6-2
Oberheim 4 — Matrix 12
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MiniMOOG - 2
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Super JX/MKS-70
Juno 60/106
Prophet 10 - 1
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Amp 2500
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Melotron 2 - Flute & Choir
Chamberlin
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MOOG Source & Taurus Pedals
Memory MOOG
PPG Wave - 1
PPG Wave - 2
PPG Wave - 3
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Vocal Ensemble 2
Vocal Ensemble 3
Vocal Ensemble 4
Vocal Ensemble 5
Voices & Vocoder
Rock & Roll Comp Set
Jazz Composition Set
New Wave Composition Set
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disk. Does anyone know if Syquest SQ555 or Megadrive 50SIII are compatible with the EPS-16 PLUS?

2. I read in the German "Keyboards" that using software version 2.5 the 16 PLUS would work with All SCSI hard disks>

3. In that same article there were some very nice tricks. This one, about the click-in-the-bass-at-the-end-of-the-sample was the best. Here's how you do it:

- A. Set ENV 3 release time to 30 or 40.
- B. Set FILTER 2 to Lowpass, CUTOFF to 0 and ENV2 AMT to 99.
- C. Set ENV 2 to FULL ON. No more clicking.

4. My disk drive doesn't work well for the first half hour (until it's warm?). Almost every time I put another disk in the drive it says "Disk not formatted." It won't even take the OS disk. Anything I can do about this?

5. About effects. I also think that pitch-shifting is a MUST, but other effects like gated reverb, exciter and parametric EQ are very welcome. In TH #70 you say as a reaction to George Finizio that you can create 4 or more simultaneous effects in theory but there are only three effects buses. I don't get that. The

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following could be some combinations of four effects on three effect busses.

(1) Reverb	(2) gated reverb	(3) dry
pitchshift(4x)-reverb	pitchshift(2x)-reverb	reverb
phaser-EQ-chor-reverb	chorus-reverb	reverb
excit-del-chor-reverb	delay-chorus-reverb	reverb
dist-EQ-chor-reverb	chorus-reverb	reverb
dist-EQ-del-chor-reverb	EQ-del-chorus-reverb	reverb

Thanks and keep on doing the good work,
Patrick Voes
Hoeselt, Belgium

[CS - Almost any drive that uses the Syquest mechanism (SQ555) should work just fine. I'm not sure what mechanism is used in the Megadrive - if it's a Syquest mechanism, you should have no problem. The other two mechanisms that are available, Ricoh and Bernoulli, remain untested at this point (according to Ensoniq), and while it's possible that either one will work, it's also possible that one or the other won't.

2. While software version 2.5 will work with a lot more hard drives than previous OS's, it is not guaranteed to work with all hard drives. Best advice is to stick with Ensoniq approved drives. The next best thing is to "try before you buy."



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Peavey DPM 1/2 Meg Sequencer Card	\$229.95
Peavey DPM 1 Meg Sequencer Memory	\$359.95
Kawai K1/r/m/11 DC-8 RAM Card	\$41.95

YAMAHA

C-1 Computer 2 Meg Memory Card	\$399.95
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3. Thanks for the tip.]

Dear TH,

Concerning hard drives: I've been using the Tech Data, Model 60e for three years with Ensoniq software with very good results. It makes life with the EPS very pleasurable.

Sincerely,
Merle Hilbrich
San Antonio, TX

TH,

All the usual and deserved kudos to you regarding your groovy and informative magazine. Keep on keeping on!

Until I read about the 96 PPQ clock resolution of the EPS-16 PLUS I never really gave much thought as to what 48 PPQ (parts per quarter) meant on my EPS. (Although I always thought that the EPS sequencer had a particularly "white" feel to it.) Little did I know that even unquantized, my tracks were being quantized to the nearest 48th per quarter note. Knowledge being the powerful thing that it is, I now want to know if it's possible to upgrade the EPS sequencer, via operating system, to 96 PPQ? I would like to have this feature if possible.

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In the last *Hacker* you agreed that not everyone needs a sequencer in every keyboard, but you can effortlessly add it for the price of three buttons (a nice option). Having acknowledged that, what are the possibilities of rewriting the operating system to give us back the original 256k of memory that's dedicated to sequence memory when a 4x is used?

Thanks for your time and for a product that I'm still satisfied with two years later!

Daniel Merrill
Portland, ME

TH,

Hard Drive Report: I have a Mac Plus, a CMS 40 meg hard drive, an EPS rack (for 2 1/2 years) and an EPS-16 PLUS (for 10 months). Awesome.

I don't use the hard drive for an EPS format, however I have extensive experience with Alchemy. I use the SCSI port (Ensoniq's) to talk to my Mac via the CMS hard drive.

I never had any problem with the 16 PLUS.

I struggled with my EPS module for a long time because the samples would crash periodically and display "Error 120 - reboot." The crashes happened when I would ask Alchemy to get a sound from the EPS-M via SCSI.

Through many reboots I noticed that the crash would only happen if I had the instrument selected on the front panel of the EPS-M. In other words Alchemy would get a sound from the sampler just fine as long as I didn't have the yellow instrument light on. This was also independent of whether I was transmitting MIDI on the base channel or the instrument channel. Who knows why.

Thanks for everything, Ensoniq. You guys have made my life fun and profitable.

Denis Hulett
Sebastopol, CA

[CS - I've had similar experiences with Alchemy. I've gotten into the habit of always leaving the EPS or EPS-16 PLUS in "Load Mode" with no instruments selected when doing transfers. This seems to help quite a bit.

Thanks for the info.]

Dear TH,

I am one of those EPS users who does a lot of sampling on my own. There were certain sounds, especially low tones, that the EPS

would tend to add noise to when sampled. A friend told me that the EPS-16 PLUS sampled better and did not add any noise.

I sampled with his 16 PLUS for several days and found that it was indeed an improvement over the EPS. But I also found that when I sampled certain low tones like acoustic bass, the 16 PLUS seemed to add a kind of a "click" to the sample whenever the key was released. I, naturally, tried extending the release envelope and 2nd release, but in order to get rid of the key-up click I had to give the note such a long release that it made the sample unusable. (I sampled at a 32k rate just to be safe.) Is this a characteristic of the 16 PLUS? I want to buy one if I can solve this problem!

Unhappy sampler
Toronto, Canada

[CS - If the "click" you're hearing is part of the sample itself, it can easily be removed by changing the sample end point until you find a zero crossing, or by doing a volume fade (COMMAND/AMP) on the very end of the sample.

If the click is due to envelopes resetting, try out tip #3 in Patrick Voes's letter above. The basic idea is to get envelope 2 to close the filter down before envelope 3 reaches the end of its cycle, so there are a number of variations on this theme.]

Dear TH,

I have a few more questions, comments and suggestions. I don't want to be accused of technological harassment but I understand the Ensoniq engineers get very unhappy when they don't have new projects to work on. I've heard they get nervous, break into hives and develop facial tics and twitches without new things to keep them busy. In order to offer some relief I have some more suggestions:

1. How about an onboard digital "strummer" similar to the Oberheim strummer on the next generation gear? That would seem to be one thing missing from all the current workstations - more realistic guitar strumming sounds.
2. How about an onboard digital graphic EQ?
3. I've heard that there's technology coming out of Japan that is going to make computer memory much cheaper. Do you think we dare imagine a sampler and/or synthesizer workstation that could record, recall and edit vocal tracks? I've heard the B.B. King demo for the EPS-16 PLUS. It seems things are already headed in that direction.
4. I've noticed that the velocity editing on the

VFX-sd and the SD-1 (OS 3.00) seem to round off the velocity to the next lowest multiple of four, i.e., 39 will change to 36, 13 to 12, etc. Can you fix this so that when you enter a velocity change it remains exactly what you entered?

5. I've noticed that the EPS-16 PLUS will save individual drum patterns system exclusive from the Alesis SR-16, but the SD-1 will not. Any way to fix it so that the SD-1 will also save individual drum patterns system exclusive? Another system exclusive feature I like a little better on the EPS-16 PLUS is that you can save system exclusive information received as many times as you want without reloading. This is not the case with the SD-1. My experience is that system exclusive information received by the SD-1 must be reloaded every time you save it to disk. Any way to change that?

6. There are some GREAT patches on the SQ-1 that I've yet to hear on the SD-1. In my last letter Clark Salisbury mentioned that the SD-1 could basically duplicate all the waveforms and parameter of the SQ-1 (and then some!) How about an SQ-1 series of patches for the SD-1? Like an SQD patch series.

7. Finally getting back to velocity editing, how about a quantizer that quantizes with a "human" feel. Instead of quantizing a sequence exactly, a "human quantizer" could perhaps be programmed to randomly quantize the notes to be just a tad off time-wise. It would sound more human and less robotic and save a lot of time editing.

I hope with these letters I don't sound like the guy who wants what you haven't got. I own an SD-1 and EPS-16 PLUS and I consider both of them to be great workstations. I can hardly wait for the next generation of Ensoniq Killer Keyboards!!

Live long and prosper,
George Finizio
Patient of the Shick Center for Keyboard Control
Room 209, Wall Strap #12

[CS - As to questions 1, 2, and 3 - sounds good to me. As far as the problem downloading sysex data from the Alesis SR-16, there's no reason it shouldn't work. I've had successful downloads from other Alesis products, so it seems like the SR-16 shouldn't present any particular difficulties. You might want to contact Ensoniq Customer Service at

215-647-3930 - perhaps they'll be able to shed some light on the problem.

As far as translating SQ patches for the VFX series or the SD-1, it's not particularly difficult, just time consuming. But if someone out there wanted to put together patch charts, who knows? We might be able to find a newsletter around here somewhere that might publish them.]

Comment from Clark:

Thanks again for all the responses to the hard drive query - and keep those cards and letters coming!

Even though I'm not eligible to win the fabulous drawing (rats), I'd like to add my 2 mega-bits worth, so here goes.

I'm currently using an Eltekon 44 meg. removable rack-mount drive and it has performed flawlessly. I've also used both 20 meg and 65 meg drives manufactured by CMS, and they've performed well too - CS.

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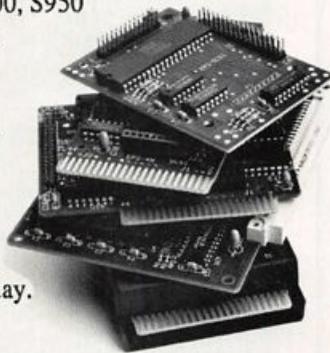
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