Transoniq Hacker

The Independent News Magazine for Ensoniq Users

KS–32 — Prelude to a Review

Clark Salisbury

Ensoniq's SQ series of synthesizers, the SQ-1, SQ-R, SQ-1+, SQ-2, SQ-32, SQ-R+ and so on seem to have proved quite popular — so it should come as no great surprise that Ensoniq is continuing to expand the line. Its most recent addition, dubbed the "KS–32," promises to become the flagship of the series.

The new KS–32 is based solidly on the voice architecture of the original SQ-1, originally reviewed in these pages in Issue 63. It does include all the latest ROM waves, including the excellent piano wave that made its debut in the SQ-1 PLUS, and all of the expansion waves that were first introduced in the SQ-2 (reviewed in Issue 75). And as with the new SQ-32, the KS–32 sports 32 voice polyphony. Stereo audio outputs, onboard multi-track sequencer and a card slot for storing sounds and sequences/presets also have also become standard for SQ instruments, and the KS–32 is no exception.

The big news is that the KS–32 sports a 76-note weighted action wooden keyboard. The keyboard responds both to velocity and channel pressure. In addition, the instrument offers a choice from among 12 velocity-response curves, as well as a couple of settings which allow you to specify all velocities at either 64 or 127, effectively turning the velocity response off altogether. Coupled with the choice of four different pressure response settings, Ensoniq is hoping to please all the people all the time — at least in terms of keyboard action.

And the action is excellent — crisp and well-weighted, without the mushiness when the key bottoms out that characterizes some pressure-sensitive keyboards with wooden actions. Coupled with the SQ's powerful 8-way MIDI controller functions (available through the sequencer/preset section), the KS–32 should prove a particularly enticing instrument for anyone looking for a sophisticated MIDI keyboard controller featuring weighted action.

Indeed, it is the working casual and church musician who is the primary target for this instrument. If you are looking for new electronic textures and outer-space sounds, you're likely to be a bit disappointed with the on-board factory sounds — these have been designed and selected primarily for their usefulness in terms of the bread-and-butter of most working musicians' lives. Included in the 180 on-board sounds are over 30 acoustic and electric pianos on board, over 20 electronic, drawbar, and pipe organs, and a very healthy complement of guitar, bass, string (solo and section), brass, reed,

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woodwind, orchestral, ethnic, drumkit, and percussion sounds. The newer expansion waves first introduced in the SQ-2 have been put to good use — many of the new sounds use these newer waves, lending the sound of the KS–32 a freshness that's most agreeable. Of course, the KS–32 is completely compatible with any existing SQ sounds or software, so there is already a tremendous library of sounds available for the product — including plenty of the more electronic and outer space textures, if that's what you're really looking for.

Other details include the addition of several new buttons which are designed to make the user interface a bit easier, particularly when it comes to setting up presets and sequences. For example, there is now a button dedicated to selecting sounds to place into a preset or sequence. And a very welcome addition to the operating system now allows you to use the up/down buttons to scroll through the on-board sounds when selecting a replacement sound for a sequence or preset track.

Take the weighted action, throw in the MIDI controller functions, sequencer, and all the ROM waves (particularly the newer expansion waves) the KS–32 strikes me as a very mature product that should find dedicated enthusiasts from many musical walks of life. There's just very little to not like about this instrument — my guess is that Ensoniq has another hit on their hands. ▬

Bio: Clark Salisbury has been actively involved in the composition, performance, and recording of electronic music for over 8 years. His favorite color is chrome.

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Hacker News

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Both the DP/4 and the KS–32 are going through their early introduction phases and we're starting to get some early reviews coming in. But, we'd also like to invite *new* owners to join our bevy of writers. That's how these things start to get coverage.

Third-Party News

Sam Mims/Syntaur Productions has moved from California to Texas. New address: 2315 Midlane St., #44, Houston, TX 77027-3818. Phone: 713-965-9041.

Eric Olsen has asked us to remind people who order his sounds to please specify which version of the VFX-sd/SD-1 that they're intended for.

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WAVeBOY Industries announces their second disk for the EPS-16 PLUS: *The Audio-In Effects Disk*. Suddenly any audio source can be sent to the powerful signal processor inside the 16 PLUS. This external input capability, previously unavailable from Ensoniq was pioneered on the *TIME-DICER*, an effect which was included in Version 1.1 of *WAVeBOY's Parallel Effects Disk*. Now, with this new release, the capability has been added to all 13 of the original factory algorithms. In addition to all the standard EPS effects, the new disk also contains several totally new algorithms, including Plate Reverb, Non-Linear Reverb, and a three-voice Pitch-Shifter. These can also be used with internal sounds or with live audio input. Polyphonic keyboard control allows the pitch-shifter to work as a vocal harmonizer. All the effects share a mic/line switch and an input level control. The *Audio-In Effects Disk* and the *Parallel Effects Disk* are $39.95 each. For more information contact: WAVeBOY Industries, P.O. Box 233, Paoli, PA 19301. Phone: (215) 251-9562.

The International Sampling Cooperative has announced its formation. The ISC is a non-profit organization to promote the trading of non-proprietary samples and to provide support for sampler users. All forms and formats of digital samples are welcome. The ISC is operated from MUSO-BBS for messages and information exchange. MUSO-BBS has also agreed to allow ISC to use its bulletin board to dispense and store samples. For more information on the ISC or MUSO-BBS, contact: MUSO Information Services, 20929-47 Ventura Blvd., Suite 293, Woodland Hills, CA 91364. Phone: 818-580-7792. ISC Specific information: 310-455-2653.

TRANSONIQ-NET
HELP WITH QUESTIONS

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

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

ALL ENSONIQ GEAR – Electric Factory (Ensoniq's Australia distributor). Business hours – Victoria. (03) 4805988.

SD-1 QUESTIONS – John Cox, 609-888-5519, 6 – 8 pm EST.

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.

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) 821-5054.

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 – 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 MIDILINE BBS at (613) 966-6823 24 hours.

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

SD-1, sound programming, sequencing, & MIDI – Eric Olsen, Pegasus Sounds, (616) 676-0863. Mon, Tues, Thurs, Fri: 4 pm to 9:30 pm Eastern Time. Sat: 12 to 10 pm. (*No calls on Wednesday please!*)

SQ-1 QUESTIONS – Pat Finnigan, 317-462-8446. 8:00 am to 10:00 pm EST.

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

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ESQ	3.5	SD-1/SD-1 32	4.10/4.10
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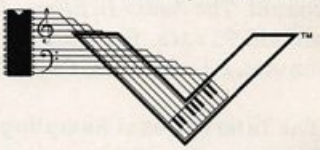

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HACKER BASEMENT TAPES

Daniel Mandel

The Tape-Demo Business-Card of Jim Snowbarger

Artist: Jim Snowbarger, 3046 280th Street, Marshalltown, IA 50158.

Equipment: EPS, Korg M3R, Roland Juno-106, Texture software sequencer, Roland MPU-401 MIDI interface, Alesis HR-16, Alesis Quadraverb, Yamaha SPX90, GC2020B, Roland VP-70, Fostex model 80 8-Track, Fostex model 20 2-track, Fostex model 450 mixer and Radio Shack's best dynamic microphone.

Jim sez:

"CUT 1: TALES FROM A THUNDER CLOUD.
This song features a sampled thunderstorm. The storm was mixed in via 8-track analog tape after programming. The rain is one instrument and uses two looped samples, one for each channel of a stereo recording. The thunder is a separate instrument with a long decay envelope. You can pick the color of the thunder by choosing the key you hit. The guitars in this selection are a multi-sampled Martin D35 guitar.

"CUT 2: SMS ADVERTISING JINGLE
This little cut was used to promote my business, Snowbarger Media Services. All keyboard parts are the EPS. The vocal lead was sampled to provide pitch correction. I recorded a one note sequence which involved holding the root key down for the duration of the lead vocal track. Then I merged the necessary pitch wheel actions into the sequence to compensate for minor vocal performance errors. Finally, the vocal was dubbed back to 8-Track tape in sync with the music by playing the one note sequence on the EPS."

This is an excellent demo tape.

Jim takes his demo tape one step farther than I usually see by speaking to you and introducing each cut. This is not such a shock because his business is recording and media services.

The tape begins with the crystal clear, seriously FM, mellow tones of Jim telling you that you are about to hear *Tales From A Thunder Cloud.* The song begins and ends with thunder and rain. It is an instrumental song, peaceful and flowing. The guitars are very believable and the mix is superb. There are a couple of flute leads that bend and sing — very expressive.

The advertising jingle, as you might expect, is quite short. It begins with a deep male announcer, *"Radio. The soundtrack of our lives."* This is followed by a second, compressed voice that

sounds as though it is coming from a radio and then a light pop song begins with a female vocal. All very slick and professional.

If I were going to nit-pick here I would suggest that Jim didn't put too much time into packaging his product! Other than that I would suggest that you contact Jim and listen to what he's done.

LA (Louisiana) Lawyer One Step Farther

Tape: *Demo*
Artist: Thorne D. Harris III, 326 South Broad Street, New Orleans, Louisiana 70119.

Equipment: ESQ-1, MT-32, Casio RZ-1 Drum Machine, ESQ-M, Midiverb II, Digitech DSP 128, and Korg DRV 2000. Guitars. Sequencers on IBM compatible with Voyetra's Sequencer Plus Mark III Program. Recorded on Fostex 80 8 Track.

Mr. Harris, or Thorne if I may be so bold, is this month's guinea pig and has quite an impressive professional background as a practicing attorney and an author. You may have read articles of his in *Home Studio & Recording, PC Magazine* or *Nibble*.

Thorne says, *"My rig is set up in my study at home and I do all of my recording personally. This does drive my wife crazy at times, but she is very good about it. She periodically lets me have a 'music day' on the weekend and she goes shopping. Most of these songs were written over 20 years ago when (like everyone else) I had a rock and roll band in high school."*

Thorne Harris's songs on this demo tape are all very well written, the chord progressions all of the pop/light rock genre.

I would recommend that Thorne go one step further with his recording. Once the music is recorded and the vocal track is on, sit back and listen to it. Did you capture the vocal the way you wanted it? Are you noticeably out of tune? Is this the best possible vocal you could have recorded? I know that many professional recording artists put a certain amount of weight on the feeling of the vocal rather than technical excellence alone. After all we are not recording a trained opera singer.

Another technique worth trying is to play back your tape on a different tape system than the one you recorded it on. You may be quite surprised how your song sounds on a friend's boom box or on your sister's Walkman. I happen to have a typical stereo setup along with all my MIDI gear, and I also listen to *Hacker Basement Tapes* on my Walkman. The point is that you should mix your songs to sound best for the lowest common denominator — a boom box.

The first song, *I Know Things*, was not the strongest and, therefore, would recommend that it should not be the first in a demo tape. I think that he should have given the vocal another go and if he had given this song the boom box test, the music is just far enough back that it sounds as though he's singing to a prerecorded tape. Placing the vocal in the mix can be tricky, but if the music were brought up louder, the vocal would sound as though it were part of the band. Instead it sounds as though it was tacked on afterward. As I listened to this several times I decided that the quality of the vocal sounded as though Thorne were being tickled throughout the song.

Going My Way, the second song, would have worked much better as the introductory song. The song has a great hook. It's a happy-go-lucky, walking-down-the-road song. Here again the music and each individual instrument could have been more obvious. There was a great sitar-guitar sound on the instrumental sections that sets this tune off nicely.

Strange Places is a very fun, carnival-esque pop tune. This was the best mix of the four songs, though the percussion could have been beefed up. Thorne really achieved a big "show tune" atmosphere with the chord progression and the big buzzing synth leads that play throughout.

(We Are) All We Have is the type of song where Thorne's vocal seems to find its best fit. Yet, having said that, I would have encouraged another final take on the vocal. Here again the mix of the music is a bit off, the percussion seeming too far off. The song itself is very pretty, but more work could have gone into some variations to keep the listener tied into the song. As it is, the repetition becomes monotonous.

These songs are all very good. Once again, I would take them one step farther and show off the song writing by making the instruments obvious and mixing the vocal into the band. Try playing it on different tape decks and ask a trusted friend for feedback. Most of us don't have engineers or producers to spur us on to better and better performances — we have to do it all ourselves!

I look forward to the next installment from our lawyer, Mr. Harris. That's it for file 4513! ▬

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.

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Samples from Bill Sethares

Bob Spencer

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Price: $36.

Greetings and a great big Howdy from the town made famous by Richard Petty, the world-famous race car driver — Level Cross! Besides working (and playing) with SoundProcess and Mirage stuff, I do all my sequencing and sampling work on an EPS w/ 4X expander. So, as all you Hackers know, I can never get enough samples. As if she read my thoughts, Jane called all the way from Oregon, knowing I needed new samples (along with some extra folding money for writing this article). Here I am, two weeks later, with 9 disks of imagination and real programming prowess in my stubby little hands.

Bill Sethares of Madison, Wisconsin has put some time and B, S, & T (Blood, Sweat, and Tears) into this collection. Although uneven and a little raw in places, there are some real standouts here. If you haven't seen his ad in the classifieds, check it out. Now, onto de tails.

The first disk is the **Bolivian Disk.** The Banduria is a 12-stringed instrument, cleanly sampled. All 4 patches are usable, with muted, pseudo-reverbed and double — stopped 4ths and 5ths as alternate patches. Zamponia is a sort of panpipe, again nicely sampled — here I'll say that just about every sound on every disk was clean and well sampled. Four very usable patches were again built in. Bill makes great use of all modulation capabilities in different ways, although sometimes I found myself wishing he wouldn't use the mod wheel as a sort of high-pass filter mod so much. I enjoyed using my volume pedal as something other than a volume pedal, usually for other neat things like pitch bend. Next we have your Wood Flute with various patches, including bend up, bend down, reverb, and quick decay. Onto your everyday sample of Sheeps Toes — yes, they use these for percussion down in Bolivia, according to Bill. Nice job with patches, looping and panning the sound. Down low on the keyboard this could scare your mother on a dark and stormy night. We're still on Disk One, folks! Gourd Rattle and Wooden Fish, or Guiro, round it out. Good percussion samples with nice patches.

Disk 2 — Indian Disk — No sitars or tablas here! This is neat, with such instruments as the Tiktiri 1 and 2, a nasal reed instrument. He has lots of good variations, with chorusing, bending up and down, 4ths and 5ths. Indian Vase is a resonant tuned percussive sound. Toy Gong is a little noisy, but the echoing on one patch is really nice. Oboe Reed is a percussive reed sound, very similar to Tiktiri, but here Bill throws in a different pitch table on one patch.

Disk 3 — Folk Disk — The Psaltry is first on this disk. Again, it's a little noisy, but usable. This is the biblical kind, and you can imagine David playing it for his King. He also has Psalt Synth, Psalt Bow, and Psalt Squeak, all possible candidates for world music compositions. Stringdrum is a possible combination of the Psaltry and Slit Drum. Kalimba is excellent, although not as bright as some I've heard. Here he has the keyboard pitches mapped just like a real kalimba — another example of B, S & T. That must have taken some time. Last is Slit Drum. Although not real punchy, this does sound very authentic. As another added bonus, nice patches.

Singing Auto Sperm? — Disk 4 — is a "musical instrument"(?) made of hub caps and metal springs. Bill uses this in various ways for the different sounds. Auto Sperm 1 — 6 are all variably interesting. Very neat use of the pedal, actually changing the tone, creating a transwave effect. The seventh sample on this disk is a Seal Ocarina. A little dirty sounding but I liked it! It's actually an Ocarina in the shape of a small seal.

Disk 5 — Prosaic Sounds — The Ratchet opens up the show — not the orchestral type but the one you use on your car. Next are the good old mouth sounds — Whistle, Cluck, and Cough. Not the cleanest, but great modulation and patches. The Stapler is not what I hear when I use a stapler; maybe it was sampled too close. Still useful for percussion, though. Rubber Band can be useful for that "almost a harp or classical guitar" sound that the producer wants on that ballad. Creaky Chair was a lot of fun as was Clown Whistle. I liked the XX patch muchly. Bird Whistle was not outstanding. Dinner Bell was pretty good, though the loop was not really necessary. The next to last sound, Plastic Frog, is something completely different. You've not heard anything quite like this. The last sound — there are 11 sounds on this disk, folks! — is Jim the Pig. Bill's friend Jim obviously devoted years of practice just for this sample.

Now on to the more esoteric disks, if that's possible. The Recycle Orchestras 1 through 4, which consists of all the sounds of the average junkyard, are not for everyone's tastes. I must say that the sounds are well sampled for the most part, though, and could have many uses in industrial music of any sort. Also, I can envision using a combination of these sounds for a Next Wave type of drum kit and orchestral percussion.

The Metal Tubes on **Recycle Orchestra #1** would be a good candidate for this. Scrape Glass is next, then Wine Glass. Neither are standouts. Balloon Fart sounds just like one. Bowed

Balloon is very interesting. Balloon Drum, sound #8 on R.O. #1, works well for percussive effects.

R. O. #2 has Panlids #1, 2, and 3 could possibly be used as cymbals (and I could possibly eat a bowling ball). Two Bricks, though, has a pretty neat sound, more harmonic than I could have thought possible. Brick Organ is pretty thin. Glass Break is not bad at all, the sound of glass breaking in a shower stall. Space Bar is a metal bar hung by strings. Very nice! Glass Synth is a little thin, but possibly usable for background pads in the lower octaves.

R. O. #3 starts out with Bell Scrape, again usable for pads. Spring Fall is not a contradiction, but a spring dropped over a tube and bounced. Not bad, either. Metal Rod and Rods are both well done. Clown Tube is a combination of Clown Whistle and a Blown Tube. For some reason, this sounds cleaner than either sample by itself. Scrape Spring is the sound of an aluminum tent pole across the serration of the spring. I like the way he uses the pedal on this, as I liked the way he used pressure to muffle the Clown Tube. Bill has a very clever way with modulation routings. Ball Bounce is not very realistic, but then I've never heard a door slam that was realistic. Knife Scrape, again, not so realistic, but it can work. Sound #9(!), Two Bottles, is on the mark. Can and Tab — Close. Plastibottle is the sound of a plastic milk jug caving in and being blown back out. Now if I could only figure out what to use it for — maybe that scene in the next Sci-fi movie where the gooey alien has the air let out of him. Plastisynth is the last sound here — again, what to use it for?

R. O. #4 — The Tincanophone, of course, starts this disk. Nicely sampled. La Croix Pop is a well — abused pop bottle. Glass Lid #1 and 2 are useful for percussive effects — down in the lower octaves they sound like orchestral bells. #2 has a softer attack. Metal Pan is clean. Alum Can is the coke can we all tried to sample when we first got our EPS, but cleaner. Alum Repeat is the coke can with a loop. Could have been left off of here. Alum Organ is a wild buzzsaw of an organ with reverb. Short Voice has no description, but sounds like oh, I dunno, could it be — Satan as a eunuch? Tearing is the flanged sound of paper tearing. Cup is a pretty nice percussive sound. Rustling, Sound #12, sounds like paper rustling, but the loop is not necessary and really obvious.

That wraps up the sounds. Bill did a job he can be proud of, and these were well tweaked for the patches. The only thing I would like to see would be for each disk to have its own bank and a sequence or two to show what could be done. All in all, though, if you're looking for really "out there" sounds, this would be a good investment. I've already found a use for the metal rods and glass lid sounds, and the creaking chair in a sequence with crickets chirping or birds singing can sure put you in the mood for summer in the country. ▬

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Pseudo Pitch Tables on the SQ-1

Mark Clifton

One of the major drawbacks that I considered with the SQ-1 before buying it was the absence of programmable pitch tables. If you've never used pitch tables before, they're extremely cool for creating your own bizarre tunings and are good exposure to the music of other cultures. I was just getting into experimental and world music when I purchased the SQ-1 and was devastated when I discovered the absence of user-programmable tunings. If you're desperate for some kind of pitch tables, there is a way to create pseudo pitch tables using the drum programming feature. But a little warning before we start: the process is very painful and is severely limited in many ways.

A user tuning table usually lets you choose a root key and assign a tuning for that key using a pitch increment of some kind, usually in cents. The SQ-1 drum maps work similarly in the fact that you can individually assign a sound to each key with its own separate tuning value. But there are some problems. Unlike a dedicated tuning table which allows you to assign any sound you want to that particular tuning with full programming parameters, the drum programming feature is designed for just that — drum sounds.

Major problem #1: You don't have all of the luxurious programming parameters that you get with normal sound programming. No sir, you get no LFO modulation at all, none of the fancy routings, virtually non-existant filter programming and only a simple AMP envelope with two stages, gate and release. This means that the sound you program will have to be excruciatingly bare-bones.

Major problem #2: A drum map will only hold 17 sounds mapped over the whole keyboard. Unless you only need 17 notes chromatically in your song, this just won't do. The only solution to this is to create as many scales as you need to cover the range of the keyboard, assemble them into a preset and zone them so that they play consecutively all the way up the keys as far as you need. This would mean using up multiple RAM memory locations and a whole preset, which means you can't use it in a sequence with any other instruments. But, like I said, this is a method for the desperate.

Major problem #3: The drum tunings aren't precise. They jump in increments of a couple of cents instead of the fine one-cent tuning allowed in normal sound programming. This means you have to round the value of the tuning amount to the nearest increment. Luckily, the increments are small enough that the difference is barely noticeable.

Now that all of the bad stuff is out of the way, I'll get down to the programming itself. Take all 17 oscillators, turn the pitch tracking off and assign each one to a different key in chromatically consecutive order. This way you should have 17 oscillators covering an octave and a half and all sounding exactly the same. From this you can transpose each key by octaves, semitones and cents from a root key of C. After this, if you choose, you can assemble the scales into a preset as I described earlier.

Alternate tunings can be used for many things that they normally aren't associated with. They can bring a new subtlety to your music and expose you to a diverse range of musical forms. If you are desperate, then this method should come in handy. Hack on! ▬

Bio: Mark Clifton is some smart-alec kid who thinks he can get away with this kind of stuff. He's currently producing demos for struggling garage bands and also has a collection of sounds for sale.

The Beat Goes On

Tony Thomas

For: SD-1/VFX-SD. Also available for the EPSs and the SQ-80.
Product: Background Rhythm Patterns Disk with manual.
From: New Sound Music, P O Box 37363 Oak Park, MI 48237, phone: (313) 355-3643.
Price: $49.95.

Have you ever had a great song idea but lost it because you got caught up in the mechanics of sequencing? It is hard to remain focused on a song idea when you always end up worrying about the quantization default on the sequencer or the decay segment of the envelope of your string sound.

As a result, many songwriters wind up writing on a piano or even away from an instrument entirely. Some sing or scat their ideas into a tape recorder. Others use one of those popular portable keyboards with auto-accompaniment sections to construct their songs. Portable boxes like the old Korg Super Section and the new Yamaha QY-10 have similar features.

With their one note chords and cheesy sounds (although they are getting better), those little keyboards make great composi-

tional tools since they have ready-made patterns in a variety of styles that you can simply string together to construct your song. That way, you can focus on your idea and leave the arrangement details and production aspects until after the song is completed.

New Sound Music has created a disk full of patterns that you can load into your SD-1 and use the same way you would one of those portable keyboard auto-accompaniment sections or songwriting boxes. Dubbed "Background Rhythm Patterns™," this disk contains almost two hundred rhythm patterns in a variety of styles including: Rock, Ballads, R & B, Jazz, Latin, Funk, Country, Blues, Gospel, New Age and more. They all use simple arrangements and the drums are mapped according to the Roland standard. Another file contains a variety of song intros, endings and breaks which can be pasted into your compositions. A booklet is included that contains a complete list of sequences and their chord progressions.

The sequences themselves are of varying quality. Some are musical cliches while others are quite tasty. You can tell, however, that this program has been ported to several instruments, since very little attention was paid to the patches used or the level of each individual sound in the mix. The drums are mixed too far to the front and it sounds as if the same kit is used throughout the disk. This lack of attention to detail detracts from the "easy to use" concept of the product and means you'll have to spend a fair amount of time tweaking sounds and levels to make things sound right.

With that criticism aside, this disk may prove to be helpful to the budding songwriter with limited keyboard chops. It will also make it easier to write songs in various idioms without having to study records to find out how such songs are constructed. Finally, it could prove to be a valuable teaching and practicing tool, since you can both see and hear how songs of different musical genres are constructed. To the busy songwriter or music student, this disk could be a real time saver. ▬

Bio: Tony Thomas is a veteran journalist who has contributed to several national magazines including Mix, Electronic Musician, Music Computers and Software, AV/Video *and* REP. *He is also an established recording engineer, producer, composer and keyboard player.*

System Exclusive Storage Tricks for the SQ-80

Brian Rost

One of the real pleasures in using a disk based keyboard like the SQ-80 is the ability to store all the data for your entire MIDI setup in one place for easy recall. This sys-ex storage feature is available on all disk-based Ensoniq keyboards, although Mirage owners will have to look to a third-party OS like Midicaster as the original factory OS doesn't support sys-ex storage.

One limitation of the sys-ex storage utility is that it cannot request sys-ex dumps from your equipment. For most MIDI gear this isn't a problem, but there are early MIDI units like the Casio CZ-101 that can only perform a dump when requested over MIDI. There are also a few more modern units that cannot initiate sys-ex dumps, the Roland MT-32 being a good example. However, there is still a way to store sys-ex data from such devices to your Ensoniq's disk drive. It does require some outside assistance, however, in the form of a computer or some other device that can communicate with the device you want to store data for (some early MIDI keyboards allowed sending sys-ex to another synth of the same type; the ESQ-1 allows this, for example).

For the rest of this article, let's assume we are using a computer and an SQ-80 together with some other synth, whose patches we wish to store on SQ-80 disks. For other Ensoniq keyboards, the connections will be the same but you will have to refer to your manual for the sys-ex storage procedure. Hook up MIDI OUT of the computer to MIDI IN of the SQ-80, then connect MIDI THRU of the SQ-80 to MIDI IN of the other synth and finally wire the MIDI OUT of the other synth back to the MIDI IN of the computer.

Enter the STORAGE page on the SQ-80 and select DISK, SAVE, SAVE NEW FILE, SYS-EX and START, in that order. When prompted with WAITING, go to the computer and initiate a patch bank transfer to the other synth. When the transfer is complete, hit SAVE on the SQ-80 and write the bank out to disk. Then repeat the process until you have recorded the patches you wanted (you can store up to ten banks on an SQ-80 disk). To verify that everything worked okay, repatch the MIDI OUT of the SQ-80 to the MIDI IN of the other synth and try dumping the patches out. It should work like a charm!

Why does this work? Well, the way that the SQ-80 (and I assume other Ensoniq keyboards) record sys-ex is that they monitor all MIDI channels looking for messages with sys-ex headers. They record these into the sequencer memory until either memory is filled (in which case you receive an error

message) or you choose to save the memory to disk. When dumping sys-ex out, the process acts in reverse, and the messages go out as they were received (on the same MIDI channels, in fact). We merely connected the computer to the other synth using the SQ-80 as a THRU box, then "eavesdropped" on the patch bank dump the computer sent out.

This procedure obviously has one not so small catch — you have to have access to a computer or some other device that can initiate the sys-ex transfers. If you already have a computer and an editor/librarian program for your other synth(s) and are wondering why you might want to store patches and other sys-ex data for them on your Ensoniq keyboard's disk, I think you will find it much faster to load your other synths from the Ensoniq board than the computer because you needn't take the time to boot the computer, start the program, etc. Certainly for live use, where you may want to leave the computer at home — loading from the keyboard's disk is a real plus.

So if you've given up on some of your gear because you couldn't configure it via sys-ex, this procedure can help you breath new life into those boxes. ▬

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.

Split Brain Soup

Writing Music w/Computers

Michael D. Mortilla

Popular neurology tells us that we use different parts of our brain for different functions. Many believe in the right-half/left-half theory and technologies which analyze brain wave activity and temperature changes in that most sacred organ (the brain, that is...) seem to support this idea.

So what has this got to do with music, you ask? Well, throughout history, musicians and composers (along with many other artistic types) have been viewed as, shall we say, "deficient" in some of the organizational aspects of their lives. Presumably, this is due to increased use of that specialized area of the brain devoted to artistic pursuits. Unfortunately, for the artists who are used to the old way of thinking, the use of a technical tool like a computer can prove to be a daunting task, to say the least!

In my own case, I started out as a drummer in the third grade because I found things like saxophones and pianos far too complicated to operate. All I needed as a drummer was two fists (and later, as a rock drummer, two feet). Eventually, I drifted to piano in my late teens, and became highly proficient at it by my late 20s. But when I wanted to "talk" to my piano, I simply sat down and moved my fingers. No command shells, interfaces, or media storage devices except, maybe, a tape recorder or pencil and paper. Creating was essentially a very simple process. Almost mindless at times! But the use of a keyboard as a music making device led to a branch of my career which has since dominated much of my professional time, personal resources, and at times, my sanity.

My first step into "computerized music" was the purchase of an SQ-80 synth from you-know-who. It's had its problems, but is working well after four years. The sequencer and voice editing were simple enough and it had those all-too-familiar black and white things all over it, so it, and I, were sold. What it essentially did was to replace my four track tape machine and instead of using sounds I could bang out of a real drum or piano, I had a pallet of thousands of sounds from orchestral to whatever could be dreamed up in the voice architecture. What could be better? A wide pallet of sounds in a familiar environment. Not only that, but I could play eight different sounds at once. Even if the sounds weren't true to their acoustic predecessors, there was plenty of room for new sounds and I was off to a new career as an electronic musician (good name for a magazine!).

Then the bad news hit! I could only play eight notes at once. Mother of bummers, try telling that to a 47 note arpeggio. Well, call it greed, I know, I'm guilty, but I had to have more notes. The real trouble began when I bought ...the Mirage...

It was a rack-mounted sampler, so I needed a MIDI cable and disks with sounds on them. I could record my own samples with a microphone and I even got an "alternate" operating system for it. Things were getting a little complex, but nothing I couldn't handle. I also needed a mixer and in short order, a reverb.

That arrangement was fine until I was asked to score some films. I knew I really needed more notes now because the producer asked for orchestral sounds, so I wrote to Ensoniq. I spoke to Tony McAnany who graciously arranged for the loan of an EPS in exchange for screen credits. They have received screen credits on all subsequent films, as well, mostly because of the unwavering support from Ensoniq Corporation in times of desperation on my part. Anyway, all this film music had to be done via video with SMPTE code and I needed a MIDI-SMPTE synchronizer with very fine tempo mapping and the ability to send a SYSEX dump. Then I needed a MIDI patch bay, lots of MIDI cables and 3.5" disks. Then there are the operating systems! One for each unit! The onboard sequencers were a Godsend, and actually worked fairly well for the first six of the twelve films in the project. But the system was

stressed, as was the operator! There were frequent crashes of all the equipment. The synchronizer would crash the EPS, the Mirage would crash from wall voltage, and the SQ-80 went through a main board, keyboard, ROM update and connector problems. I became a professional problem solver except the problems weren't getting solved. The system was down for weeks at a time, with the producer being very patient. But, we were losing money now because the release of the films had to be in time for the Charlie Chaplin Centennial if the market was to be tapped. It was sink or swim!

So one hot and desperate day in August, I took the plunge and bought a computer. The simplest and least expensive one I could find with the features I needed. Namely, a way to control all this "stuff" that had taken over my living room. Then I needed programs (not all of which worked very well). I needed lots more disks, and by this time my wife asked for a little attention so we needed a printer for her work (and mine). Soon afterward, a few hard drives, additional tone modules, more signal processors, a second VCR, pro cassette and 1/2" reel machines would follow. Here it is, two years after the release of the films, and the system is still growing! A 16 channel mixer with an interface for an additional 16 channels, or more. A MIDI expander to go to 64 channels. The latest, greatest synth, the next great sampler. A custom cabinet to hold it all. A voltage regulator to protect it all. Covers, sounds, repairs, fax machine, switch boxes, DATs, CDs, editor/librarians. A blown monitor here, a 2400 baud modem there, here a wheel there a button everywhere a mouse-mouse! Oh my God, it's like a farm. E-I-E-I-Owe!

Listen to this! Have I lost my mind??? Does this sound like the kind of story you'd expect to hear from a composer about some music he wrote? I'd expect to hear this kind of talk in Detroit, at a technical convention or in the back room where they make all this stuff. When I had to form a company to collect performance income from the films, the name was a simple choice, *"MIDI-Life Crisis."* Never has a more meaningful title come into my head!

Like it or not, I had to split my brain and deal with it. And I know I'm not alone. There are thousands of artists and others in many fields who are struggling to come to grips with their computers. But what I have only recently come to realize is that we cannot allow these machines to dominate us. And in the area of artistic creation, we cannot allow them to supersede our creative process. The result may be a lack of attention to detail and that leads to sloppy art. And in most cases, sloppy art is bad art. In the movie *"Burden of Dreams,"* it was said that "Art is the articulation of dreams." The key word here is articulate. The more articulate, the more convincing. The more convincing, the more demand. The more demand, the more success. It is not a simple equation. These super machines, which are really quite primitive in the larger world of computers, provide just enough buffer between our work and ourselves that it's easy to lose sight of the finished product. We let the machine guide our imagination and we start taking short cuts. Here a loop, there a loop, everywhere a short cut. The result is a more mechanized music. Perhaps more "perfect" in its execution, but less human in its expression. A music of machines.

I remember as a child, and occasionally as an adult, watching the calliope at the local amusement center. Baroque and Victorian from stem to stern. Standing and seated wooden gentlemen about two feet high playing violins, drums, and horns. All animated, including the conductor, the brain of the outfit, the "computer." I'd sit and listen for a few moments and wander off to try my luck pitching soft balls into a rimmed surface or to swirl wildly strapped to a steel cylinder. But I also wandered because the music was too mechanical and lacked variety. It was always the same, time after time. Years would pass and every day these little painted men would come alive and play as accompaniment in perfect synchronization with the carousel nearby. It would be easy for a "computerized" musician to become like these little people, and in fact, much music on our planet has become highly mechanized. I'm not talking about the redundancy of Rap (Disco had the same malaise and I suspect Rap will meet a similar end), but I have been to "concerts" of music by friends who simply walked up to their tape machines and turned them on. Other times, the computer was left to its own devices. We sat there and listened to what the machine had to say, but we had very little to say to each other afterwards. There was no message, no dream. Just pure articulation. Boring! I would rather listen to someone practicing scales on an out-of-tune piano.

I am very fortunate to have chosen the field of dance accompaniment as part of my career. I never lose touch with the piano or my technique, the music changes every day, there is the satisfaction of cooperating, performing, learning and growing with other human beings. I am doubly fortunate to be deeply involved in writing for the theatre. Again, there is the magic of collaboration, the excitement of failure, the frantic race to opening night, the training of performers and the learning from their, and your own, mistakes.

The simple act of playing a piano, a drum, a guitar or singing really brings it all back home. The years of practice, the hours of listening, the experimentation with styles, tempi, people! I guess that's it. Art is about people. People listening, people watching, drawing, dancing, singing. And it is important to remember that computers don't make art, people make art.

Ahhhh! That feels better. Now I feel like a composer talking about his work. I'd better get out of this word processor. I've got some sequences to edit. ▬

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A Colorful Collection for the EPS

Bryce Inman

For: EPSs.
Product: EPS/EPS-M Sound Library SLT-7.
Price: $70.
From: Ensoniq Corp., 155 Great Valley Parkway, Malvern, PA 19355, (215) 647-3930 or contact your local Ensoniq dealer.

A while ago I went to my local Ensoniq dealer in search of new sounds for my EPS. I played around with some the new public domain sounds and a couple of Ensoniq's *Signature Series* sets. The salesman asked me what kind of sounds I was looking for and I told him that I was mainly looking for fun, synthesized sounds — layers, the unusual, etc. He suggested I try Ensoniq's *Sound Library Volume 7*. I was a bit hesitant. When you buy a large collection of sounds you usually end up paying a lot of money to get a few great sounds mixed with several sounds of limited usefulness (and, perhaps, mediocre quality). However, it didn't take me long to find out that this collection of sounds was quite different.

Although I dislike the term, New Age is probably the clearest label I can use to describe this set. Here is a sampling, heh-heh, of what these disks contain.

Most of the sounds in this collection are layered. VOICEBELL 2 is a standard bell and voice layer, but most sounds have a lot more going on. MIST and ASIA both combine a swirling bell tree on top of a warm synth pad. KRYSTAL mixes a hollow synth sound with a bell that sounds like it's being run through a digital delay and SNOW QUEEN is a crystal clear bell which arppegiates in fifths over a rich pad.

The other synthesizer-type sounds are complex and rich in texture. SYMSTRINGS mixes the thick bowing of analog strings with synthesized strings and who knows what else. SATURN is a fat, Tomita-like sound with filters sweeping like a banshee! One of my favorites is AGELESS — a huge, ethereal sound that seems to permeate the room with a combination of textures that fill the harmonic spectrum.

Some of the sounds that are the most fun are those that almost sound like an acoustic instrument but have a little something added that gives them a surreal quality. FRENCHEESE CAFE takes your basic accordion and adds sparkling bell-like overtones. My favorite sound in this whole collection is THE TOMB. It has the chiffy sound of a cathedral organ fattened with a lot of harsh harmonics that make this sound cut like a knife.

There are also several vocal sounds here. Like the other sounds in this collection, these are not your standard vocal pads. VOCOOZE, ANGELIC and VOICES 1 take vocal samples and enhance them with lush synths and creative equalization.

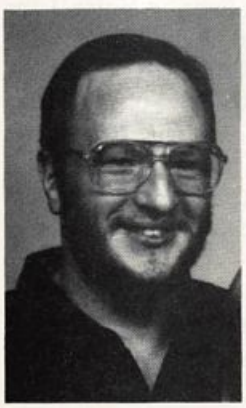
Bells are in abundance in this set. SHADE BELL, MYSTERIES and TOASTED (to name a few) are bright, klanky bells that shimmer with excitement.

There are two disks in this collection that different from the rest of the set. The first contains the sounds RECORDER, HARP 1, REED (basically a bassoon sound) and CELTIC CHOIR which sound pretty much like their acoustic counterparts.

The last disk is titled EPS BREAD AND BUTTER. It contains 30 standard synth sounds (keyboards, basses, FM and analog synths) all of which are designed to conserve memory. Most of these sounds take up only 30 to 60 blocks. These are perfect for those times when you're running out of memory but still need to add another sound or two. The sounds are all clean and very pleasing considering the amount of memory that they use. However, due to the nature of these samples, it's no surprise that they pale in comparison to the other sounds in this collection.

I only have one criticism of this collection: A lot of the sounds play back in intervals of a fourth or a fifth. This wasn't accomplished using the EPS's layers — the sounds were sampled that way. Perhaps there are some instances where this might be useful for saving voices or for playing certain passages quickly, but what if I don't want to play that interval? There is simply no way to disable it. I find this rather limiting and annoying. This means that I am unable to use some of my favorite sounds when I'd like to because they just won't work when they're locked into a certain interval.

In spite of that one drawback, I love this collection. Great care was taken in the preparation of every sound contained here. Almost without exception, the samples are clean with seamless loops. If I were try to put together a group of sounds like this, it would take countless hours and thousands of dollars worth of equipment. With that in mind, I consider $70 a small price to pay for a collection of sounds that truly shows off the true sonic power of my EPS. ■



Bio: Bryce Inman is a free-lance music editor and arranger for Word, Inc. in Irving, TX. Although he has decided to make Texas his permanent home, he refuses to say "y'all" or "fixin'."

Waveform Mutilation 101 for SQs

Part V: Two Unexpected Delays

Jack Stephen Tolin

Ever since the beginning of sound synthesis, people have wanted to integrate as much as they possibly could with the basic architecture on which most synthesizers are based. I am, of course, referring to the fundamental oscillator-amplifier-filter concept (including those which are actually oscillator-filter-amplifier). The most significant advancement, initially, was the introduction of the envelope and the low-frequency oscillator. Inevitably, the idea of utilizing a digital effects processor from within the system itself was introduced and became quite successful — so successful that it is presently considered a staple of synthesizers in general.

Although the focus of this month's installment does not really have much to do with utilization of the effects processor per se, it was in fact inspired by an effect from such a device. Specifically, it was the digital "delay." And although I don't plan to offer a realistic alternative for those who want such an algorithm, I have found a sound effect algorithm that may be used in some interesting and creative ways. One important note: even though I used an SQ-1+ to produce this, the technique can be used on any synthesizer or sampler that can layer voices. And, as always, I would like to welcome anyone who comes up with an interesting and/or creative variation to send their patch to the *Hacker*.

And now, let's begin.

First, enter "Example 1: Delay" on the opposite page. This is both the first template for the "delay" effect as well as my interesting example kept simple. Notice how the cymbal hits hard and progresses from left to right. This is, of course, entirely optional. To change the first aspect, go to the Wave bank, Screen 1, and select "All" for Select Voice. Then go to the Start Index feature and increase the value to taste. To change the second aspect, go to the Wave bank, Screen 1, and select "ONE." After indicating Voice 1 for editing, go to the Output bank and change the Pan value to +98 (that is, reverse the polarity). Follow the same procedure for Voice 2, changing the value to -98. For the 24-bit effect I used a deep, simple reverb. The overall effect is one of distance and depth. You may want to experiment with a phaser, flanger or Leslie for other kinds of effects. But just keep in mind that anything without reverb won't sound as deep.

After you have saved this example, go into Edit mode once again and make the following changes for the respective voices:

All — Filter: Env2 = +00, Env2 = +00
Output: Mod = Env2
Modamt = +99

Voice 1 —
ENV2: Initial = 00, Peak = 99, Break = 99, Sustain = 00

Voice 2 —
ENV2: Initial = 00, Peak = 15, Break = 00, Sustain = 15

Notice how the cymbal hits softer than Example 1 and progresses from left to right to center. I have not found a way to alleviate the softness of this particular example. If you would like to alter the pan polarity follow the instructions for example 1. It is important to note that the volume *seems* to always sound higher in the channel following the initial attack. This may be an important consideration when combining the sound with a larger sonic context.

The first example is a pseudo-stereo delay in that each voice alternates sounding off. The difference is that (1) only the first hit of each voice sounds hard — that is, after the initial of the waveform is passed on a single key-down, only the loop will be heard thereafter. And (2), the pitch of each voice is being constantly modulated by Noise at a value of 7 in opposite directions — thus creating a bit of stereo chorusing. The most evident problem with difference #2 is that the initial difference in pitch will be noticeable from time to time. To eliminate this, change the value of 7 to 0. If you have a grievance with difference #1, you're on your own.

Have fun with the many different waveforms you can mutilate with these delay sound effects. You've paid a few bucks for your board, shouldn't you enjoy messing with the sounds to the fullest of its and your capabilities? ▬

Bio: Jack Tolin is currently a Psychology major at Eastern Nazarene College in Quincy, Mass. and wants to open his own recording studio someday. It is said that, many a time, you can hear very loud and strange noises coming out of his dorm room.

SQ-1 & 2 Prog: Example 1: Delay

By: Jack Stephen Tolin

WAVE	1	2	3
Select Voice	On	On	Off
Wave Class	Drumwave	Drumwave	
Wave	RideCym	Ridecym	
Delay Time	000	180	
Wave Direction	Forward	Forward	
Start Index	00	00	
MODSCR	Off	Off	
MODAMT	-	-	
Restrk Decay	00	00	

PITCH	1	2	3
Octave	+0	+0	
Semitone	+00	+00	
Fine	+00	+00	
ENV1	+00	+00	
LFO	+00	+00	
MODSCR	Noise	Noise	
MODAMT	+07	-07	
KBD Ptch Track	On	On	
Glide	Off	Off	
Glide Time	00	00	

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

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

FILTER	1	2	3
Filter 1	2LoPass	2LoPass	
Filter 2	2HiPass	2HiPass	
FC1 Cutoff	127	127	
ENV 2	-99	-99	
FC1 KBD	+00	+00	
MODSCR	Off	Off	
MODAMT	-	-	
FC2 Cutoff	000	000	
ENV2	+99	+99	
FC2 KBD	+00	+00	
FC1MOD-FC2	Off	Off	

ENV2	1	2	3
Initial	00	00	
Peak	99	99	
Break	00	00	
Sustain	00	00	
Attack	15	15	
Decay 1	00	00	
Decay 2	15	15	
Release	00	00	
Vel-Level	00	00	
Vel-Attack	00	00	
Vel Curve	-	-	
Mode	Repeat	Repeat	
KBD Track	+00	+00	

AMP	1	2	3
Initial	99	99	
Peak	99	99	
Break	99	99	
Sustain	00	00	
Attack	00	00	
Decay 1	00	00	
Decay 2	65	65	
Release	00	00	
Vel-Level	53	53	
Vel-Attack	53	53	
Vel Curve	Linear	Linear	
Mode	Normal	Normal	
KBD Track	+00	+00	

OUTPUT	1	2	3
VOL	99	99	
Boost	On	On	
MODSRC	Off	Off	
MODAMT	-	-	
KBD Scale	+00	+00	
Key Range	A0-C8	A0-C8	
Output Bus	FX1	FX1	
Priority	Medium	Medium	
Pan	-98	+98	
Vel window	000	000	

Keeping Track of Sample Numbers

William Pont

If you are like me, a number-crunching techno-yup, you probably get annoyed when you buy a much lauded commercial sound disk after a glowing review from one of the Hacker's resident reviewers and at hacking time you discover that the *Turtle'S Cowabunga Piano* is really a bungled turd.

Sure enough, it contains eight layers with 12 samples in each (I love counting samples) and as you inspect layer 1 you find that in between WS 3 and WS 4 lurks WS 66. Grrr!! Of course to make matters worse, the programmer didn't name their samples either...

"Hey man, what ya playin'?"
"Dunno dude, how 'bout an unnamed wavesample?"
"Say what, man...?"

Studiotalk. Not meant for mortal souls.

So off to basics. Get those numbers in order. It all starts at sampling time. If you didn't sample the sound yourself find out which layer contains the wave data. This is usually layer 1 but there could be others too. Press EDIT. Underline LYR=1. Hit the right arrow to move the cursor under WS=XX and press C2 on the keyboard. Hopefully this is your first sample, so the display shows WS=1. Don't worry if it isn't. Press COMMAND- WAVE. If this is the first time you have done this in the current session, the EPS politely inquires if you want to: CREATE NEW WAVESAMPLE? We do not. Scroll until you get WAVESAMPLE INFORMATION. Press ENTER/YES. The key at which you sampled is shown; eg C2. This is the rootkey. Scroll through this info page until it says: Sample rate = XX kHz. If you get this message you know you have the original wave data. Otherwise this subpage would say: COPY OF LYR X — WS XX. If this is indeed the message you got then you know where the actual data is located.

If you did sample the sounds yourself and have many samples in one layer, chances are good that after completion of your layer you'll find that the sequence of sample numbers is dis-

turbed. This sequence can be found only in the EDIT page. Underline WS=XX and press up or down arrow. Observe the numbers: 1, 2, 3, 4, 5, 12, 6, 13, etc. (This is Number-crunching-techno-yups territory so any "real" musicians can bail out here if they have the urge to do so.)

How did those higher numbers end up in the low locations? This is THE most often asked question I get. So here goes. At 4 cents a word I might redeem the phone bill for this question alone...

If you press either the up or down arrow while in the edit page with WS underlined you will see the sample numbers go by and eventually the word -ALL-.

ALL is a sample pointer, that is, the sample before ALL is the last sample edited. Suppose now that we go on our merry way to create Donatello's piano and after 13 samples we backtrack to see what keys sample number five occupies. Using the arrow keys you select WS=5 and press KBD range. (You can also select it by playing the keys on the keyboard.) The display says something like LO=C4 HI=F4. Great! Let's also check sample 9 and 13... They look fine too... Now we know again. What we don't realize, however, is that we have to first reset the sample pointer to wave sample 5 and then to 9 and 13.

Look at the edit page and use arrow keys to see the sample order, it will show: 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 5, 9, 13 and ALL.

Humphh... What's worse is the fact that when a layer is copied, the EPS awards the lowest sample numbers in the new layer to the last samples referenced in the base layer.

Layer 2 yields: 17, 18, 19, 20, 14, 21, 22, 23, 15, 24, 25, 26, and 16, followed again by ALL.

For the masochistic amongst the number fanatics, layers 3 has samples: 30, 31, 32, 33, 27, 34, 35, 36, 28, 37, 38, 39, and 29.

As you can see by now, after a few layers you get a thoroughly messed-up wave table. To solve this problem the following steps might help.

Select layer 1. Underline WS=XX and play C2 on the keyboard. In all probability you will get WS=2 here which means that A) You have created a Grand Piano whose first and last octaves are outside the range of the EPS keyboard and B) You will have to manually set the range of those "external" samples. Using the Up or Down arrow key select wavesample 1. Press KBD range Twice. Briefly the Hi — Lo parameters show. Select sample two and repeat. Continue with all samples until completed. Make very sure that you do not touch the keyboard while you see the key range parameters. This exercise has ordered the wavesamples in numerical order. The word — ALL — will appear between the highest and lowest numbers.

Now create a new instrument. Copy your doctored layer to it. Check the new layer to see if all samples are there in the same sequential order.

If not, delete the new instrument, repeat the KBD range exercise in the old instrument, and copy the layer to a new instrument again. With large sounds like this it's imperative that we don't goof too often, people...

Now that everything is in order, copy the layer as often as required. Now comes the really nasty bit. With the exception of layer one, you will have to copy the wave parameters of each wavesample from the old to the new instrument. If you have all 8 layers dedicated to the turtle piano you're in for plenty of wave parm copying. 104 — 13 (layer 1) = 91 times.

We're not done yet! When we copied layer 1 umpteen times, we also copied its pitch. As you all know, pitch rarely is the same in new layers so you'll have to copy the pitch page from the old to the new instrument. This is done manually; simply underline LYR= X in the old instrument, select Pitch and see FINE = XX, then port it over to your new instrument. The last thing to remember is loops. Sometimes a wavesample contains a bi-directional loop. If you inadvertently copy wave parameters from a sample with a forward loop only, your destination sample's loop is now also forward. If you find that a previously perfect sample suddenly sounds like the devil-ugly, this is most probably the reason.

When you've done all this Librarian type of work you'll end up having exactly the same sound as before but at least wavesample #68 is REALLY 68. With a bit of luck you might also save 1 or 2 blocks of memory. ▬

Bio: William Pont runs PHOENIX AUDIO which specializes in sound re-synthesis. Also a Co-founder of the South African user's group EMMA (Ensoniq Musicians and MIDI Association.) which distributes and maintains all Ensoniq gear in Southern Africa. Current project: African Sounds. Anyone interested can reach him at 0112711 (11) 792-5996. Remember the time difference: 9 hours at the West coast and 6 hours at the East Coast. You may also write to: Phoenix Audio, PO Box 68950, Bryanston, 2021 Rep. of South Africa. Or PO Box 534, Moorpark, CA 93021.

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TRANSONIQ HACKER
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EPS-16+ Hackerpatch

D-50 Chiffpad

Tom Shear

Well, you finally laid down the money and bought your very own EPS-16+. You've probably gone without sleep for about three days now so you can play with your new toy and all those great 16-bit sounds, right? But, sooner or later, as neat as all those factory disks are, you get a little bored with them and start craving new sounds. Congratulations: you've become a sound junkie. So you start leafing through your *Hacker* and looking at those ads. Sure would be nice to have that "Best of the D-50" disk, but you just laid down a lot of money for your new friend, the phone bill's due and there's some guy named Vinny outside your door wondering why you haven't made your car payment this month. The bottom line is: you want cool new sounds, but you're broke.

Well don't despair, my friend, because you already have these cool new sounds in your possession and they're free. Huh? What I'm saying is that those factory disks aren't just good for playing as is, you can use them as source material for brand new, completely different sounds. All it takes is a little time and a lot of creativity.

For this project, you'll need your EPS-16+ (duh) and factory disks ED-002 and ED-009. More specifically, you'll need to boot up the Percussion sound from ED-009 and the OB-8 sound from ED-002. Once you've done this, we need to create a new blank instrument template to make our work a little easier. To do this, select COMMAND – INSTRUMENT and CREATE NEW INSTRUMENT. Now hit COMMAND – LAYER and CREATE NEW LAYER (do this twice so you have two layers). Now we are ready for surgery!

First select the Percussion sound and press the EDIT button so that the display reads: PERCUSSIO LYR=1 WS=1. Now use the right arrow to highlight the WS=1 part of the display. Play the D# above middle C. Your display should now read WS=38. Once you have selected wavesample 38 (LOBELL), press COMMAND – WAVE and scroll until you find the COPY WAVESAMPLE and hit enter. Select LAYER 1 of your new, unnamed instrument as the destination. Hit EDIT and your display should read UNNAMED I LYR=1 WS=1. Press EDIT – PITCH. Change the ROOT KEY to A4+ and use the left arrow key to get to the WS RNG page. Select A0 for the LO key and C8 for the HI key. Hit EDIT again and play a few notes. You'll probably notice that when you play this sample out of the range it was meant to be played in, you get some pretty different sounds. But, we don't have time for this right now, we have cool sounds to create!

Now, select the OB-8 sound and, using the technique we just used to copy the LOBELL WS, copy the OB-8 A1-A3 WS to LAYER 2 of our new, unnamed instrument. Next go to the EDIT – PITCH page and set the ROOT KEY to A3. Now we need to make some adjustments to the volume balance between these two layers. Hit EDIT and select LYR=1 WS=1. Press EDIT – AMP and set WS VOLUME to 99 and PAN to 0. Hit edit again and select LAYER 2 for editing. Again, go to the EDIT – AMP page and boost the WS VOLUME to 99. In order for the balance to be truly correct and for the sound to sound its best, we need to do some filtering of LAYER 2. Punch up EDIT – FILTER, use the right arrow key to scroll to the CUTOFF page, and change the CUTOFF to F1=43 and F2=51. Ah, that sounds much better. Now for the finishing touches!

Staying in LAYER 2, press EDIT – ENV 3 and use the up arrow until you get to the WIND PITCH setting. Now that we have our Chiffpad, we should fatten it up a little by hitting EFFECT SELECT button (located right next to the SAMPLE button) and selecting ROM 06 CHORUS+REVRB. This'll flesh the sound out a little more. Make sure to press COMMAND – EFFECTS and do the COPY CURRENT EFFECT command with DIRECTION=COPY TO INST, with that instrument of course, being our new unnamed sound. Punch in COMMAND – INST and select SAVE INSTRUMENT, name it (I called mine D-50 CHIFPAD), and save it!

And there you have it! A D-50 out of a bell and an old Oberheim synth! It sounds pretty darn good and best of all, it's free! Obviously, this is just one example of using the factory sound as sources for new synth sounds. I hope this will encourage you to experiment with this technique and to come up with new sounds of your own. Try transposing sounds out of their normal range. Try using attack transients from one instrument and grafting them on to other instruments. Try crazy stuff, too. I got a great sci-fi movie soundtrack type sound by putting a synth loop on a timbale and cutting off the attack portion. The great thing about this is, once you start making your own samples, you can combine them with these pieces of factory sounds and have still more possibilities! Wow! This is great! So now that I've given all you sound junkies your daily fix, it's up to you. Get creative and be sure to say yo to Vinny for me. ▬

Bio: Tom Shear uses his EPS-16+ and SQ-80 to write industrial music and to annoy anyone within hearing distance. In-between he attends classes at Syracuse University — if the urge hits him.

The Peak of the Dance/Rap Heap — And More

Anthony Ferrara

Product: ESS-17 Signature Series, five disks and manual.
For: EPS/EPS-16 PLUS
From: Ensoniq Corp., 155 Great Valley Parkway, Malvern, PA 19355, (215) 647-3930 or from your local Ensoniq dealer.
Price: $39.95

We live in the Age of Information. This affects contemporary musicians in the sense that new technology (in this instance in the form of new, high-quality samples) is available with amazing rapidity, due in no small part to the huge number of third-party designers advertised in magazines such as this. In my own case, after having worked intensely with the VFX-SD for over a year, I decided to make the switch to a sampler, which was something of a trade-off in terms of complexity and convenience. I chose to make the 16-PLUS my new base of operations, due to the open-ended nature of a sampling keyboard. The ability to create my own samples and mapping, along with the tremendous array of samples already available for the 16-PLUS (both by Ensoniq and third-party sources), was a deciding factor in my choice of instruments.

The *Jason Miles Signature Set* is one example of reasonably-priced, quality samples. It features an excellent 31-page manual, written by none other than Clark Salisbury. (At this time, an excellent manual is also available for the original disks which came with your 16-PLUS. Call Ensoniq Customer Service for details.)

Here's the lowdown, disk by disk:

Disk One contains Multi-Banks One and Two which save instruments from all five disks as banks, requiring you to load sounds from the entire set in order to play the two demo sequences, "K-I-S SONG" and "BIG SONG-SF." They are programmed by Jason himself (apparently with some help by Scott Frankfurt), and do a tremendous job of showcasing the samples in a dance-pop context. A special bonus is the addition of vocal samples by R & B/experimental-pop diva Nona Hendrix, identified in the manual as a friend of Jason's. JM RHODES is a high-quality, 1155 block version of the classic Rhodes electric piano, with reverb and chorus. The mod wheel controls chorus depth, while the patch selects are devoted pretty much to stereo imaging. JM VOX PAD consists of a digital synth-sounding voice ensemble, weighing in at a slim 376 blocks. The ** patch is especially striking.

Disk Two contains four samples. VOCAL DRUMS, 532 blocks, is a set of grunts, groans, and whoops that most would identify with rap, similar to RAP TOOLS from ED-008. Great fidelity and variety in the vocal multi-samples, with especially good patch selects. Employing the mod wheel results in a lowering of the pitch, as well as a deepening of the Room Reverb algorithm. JM BASS 1, 71 blocks, is a punchy, dance-oriented synth bass, with, as usual in this set, good implementation of the patch selects. The mod wheel adds vibrato. JM GUITARS is an ingenious distorted guitar sample, with slide-offs from F-4 down. From G-4 up is a sustained tone with distortion, which evolves into a hammer-on with feedback and an abrupt cut-off. At 420 blocks, it makes great use of the patch selects, with moderate hogging of memory for this type of multi-sample. Really neat for hits and at the end of a phrase. JM ANA SYNTH is a 535 block, high-quality rendering of a classic-sounding analog synth, with processing built into the sample. Patch selects provide reverb, delay, chorusing, and octave harmonization.

Disk Three contains JM STRINGS, JM BASS 2, JM BASS 3, and NONA YEAH. I liked the JM STRINGS sample, in a direct comparison, possibly even better than those found on Essential Sound Disk ED-013, which I thought were excellent to begin with. At 1065 blocks, this sample is memory-intensive, but these are just about the best strings that I have heard for the 16-PLUS, bar none! JM BASS 2 (150 blocks) is a low-end instrument with a fairly quick decay rate, sounding more like an electric bass than JM BASS 3 (149 blocks), which sounds like an analog synth sample. Both are equally useful in the right context. NONA YEAH, at 198 blocks, is another story, in that it is probably appropriate only in limited situations. Consisting of a single legato, polysyllabic wavesample of Nona's voice, it is very well utilized in the accompanying demo sequences.

Disk Four features two sample instruments: JM DRUMS and NONA VOX MAP, weighing in at 1319 and 224 blocks, respectively. JM DRUMS is a really eclectic, dance-oriented set, featuring drum and percussion samples from a variety of sources, formatted for use within the Ensoniq standard drum map.

NONA VOX MAP contains rhythmic, percussion-like vocal samples, with the mod wheel increasing the depth of the digital delay. Once again, this would seem to be a great multisample for Club MTV type work, but I could also envision these vocal snippets in something of a much more experimental nature. Great fidelity.

Disk Five is the last on our guided tour, and consists of four samples. The first, JM CLAV (541 blocks), is a very usable electric piano/analog synth-type sound, similar to the classic PPG synth. Mod wheel adds vibrato. Great for a 1970's funky electric piano application, ala Stevie Wonder. JM DIGI SYNTH is a contemporary, multi-layered synth patch, which swells after the original attack. At a fairly conservative 398

blocks (for such a complex, layered sample), it is very similar to, and is perhaps directly sampled from, an Ensoniq VFX. Patch selects give different pads, as well as variations on the digital delay and release time. JM BASS 4 (73 blocks) is yet another variation on the analog synth-bass used expressly within a dance/rap context, this time with a very short decay period, which results in a sound similar to a punchy, muted electric bass. The last sample in our set, NONA UUHS, weighs in at 524 blocks, and consists of a single, looped vocal sample. Very beautiful and airy. The mod wheel is assigned to provide high-pass filtering, which enables you to "thin out" the sample. This one would be useful layered with another, or several, more incisive instruments.

My final observations on this set are the following: good documentation, excellent sonic quality, usable samples, plus cover art from illustrator Peter Max (remember him from the '60s?). At this price, you can't beat it with a stick. The only question is in the area of stylistic orientation. While the overall slant would obviously seem to be toward dance and rap applications, there are more than enough interesting samples here that would be great for less commercial uses. Even an iconoclast (such as myself) could buy this set and use most of the sounds, with no fear of sounding like Luther Vandross or Whitney Houston, two of the people that Jason has recorded with, and presumably, provided sound design for. Thumbs up, it's a winner! ▬

Bio: Anthony Ferrara teaches guitar, music theory, and music technology courses at Temple University, the Community College of Philadelphia, and Montgomery County Community College. He still dreams of a ten record deal with a major label so that he can one day live in Malibu and drive his Ferrari Testarossa along the Pacific Coast Highway.

ESQ & SQ-80 Hackerpatch

Sam Mims

SQ-80 Patch: BKGRND

by Craig Roth, Skokie, IL

This is a soft background sound, based on vocals, but it could pass as background strings. OSC 1 is a GRIT2 wave which, with a low cutoff frequency, was surprisingly the smoothest waveform I found! The low Q and KEYBD values on the FILTER page make the sound soft and unobtrusive. ENV 1 controls the rate of the swell on OSC 1 and 3. OSC 2 starts immediately so quick notes can be heard. The mod wheel controls a filter opening effect. Key pressure makes a note stand out by increasing its volume and the intensity of LFO 1. If you can spare the oscillators, this sounds good layered with piano or string sounds.

SQ-80 PROG: BKGRND — **BY: Craig Roth**

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	1	GRIT 2	*OFF*	-	*OFF*	-
OSC 2	0	0	0	VOICE1	LFO1	+1	*OFF*	-
OSC 3	0	0	4	VOICE1	*OFF*	-	*OFF*	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV1	+49	PRESS	+28
DCA 2	50	ON	*OFF*	-	PRESS	+28
DCA 3	28	ON	ENV1	+32	PRESS	+28

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	13	12	28	ENV3	+19	WHEEL	+29

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	*OFF*	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	20	ON	ON	TRI	0	20	11	PRESS
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+27	+59	+63	0L	0	0	38	40	63	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-30	0	0	0L	0	0	26	0	63	0
ENV 4	+63	+63	+63	0L	0	0	32	32	32R	0

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	OFF	OFF	OFF	0	OFF	OFF	OFF	OFF

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

The Hack

Very nice! I only wanted to make two changes to this one. First, I loved using the mod wheel so much that it never gave my left hand back to the keys, so I set the filter's MOD 2 to PEDAL instead of WHEEL, thus letting my foot do the filter work. Secondly, I wanted to add some stereo motion when the filter effect kicked in, so I set up LFO 2 as follows: FREQ=12, WAV=TRI, MOD=WHEEL or PEDAL (whichever is used on the filter), all others OFF or 00. Then I applied LFO 2 as the pan modulator on the DCA 4 page, with a depth of +63.

If you want a breathier quality for this sound, substitute VOCAL 3 for the waveforms of OSC 2 and 3. For a much more synthy flavor, keep Craig's VOICE 1 waves, but set the filter resonance at about 26.

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.

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.

The Sound of Keith Emerson

Jim Grote

Attention all ELP fans, ELP is back together. Yes, that's right, the great ELP is once again alive. They have just released a new album titled, *"Black Moon"* and are planning a huge tour. When ELP first formed, back in 1970, Keith Emerson became a pioneer in the use of synthesizers. He combined the wonderful new sound of the Moog synthesizer with virtuoso keyboard playing on the piano and Hammond organ. His first synthesizer was one of the original Moog systems built by the original Bob Moog. It was a giant modular system using actual patch cords to connect the modules together (i.e. connecting the oscillators to the filters, etc). This was all mounted in a hefty 4' by 4' cabinet totalling over 500 pounds.

With this monster, he quickly created his trademark Moog lead sound which is prominent on Tarkus, Trilogy, and Brain Salad Surgery. His patch setup was usually based on three sawtooth waveforms running through an enveloped filter with some slight resonance. He would add vibrato to give his performance feeling and expressiveness. Also, he would always have his foot on a portamento (glide) pedal so he could vary the amount of glide while playing. A variation on this patch setup is on their first album on the song *"Lucky Man."* Here he uses three square waves instead of saw waves.

The following SD-1/VFX-SD patch, Tarkus, recreates Keith's main solo sound on the Moog. In trying to create the Moog sound on the VFX-SD, the first thing I realized was that the multi-sampled sawtooth wave in the VFX ROM does not sound much like a Moog analog saw wave. It's kind of dull and sterile. To liven up the sound a bit, I bend the pitch of each oscillator way up using an envelope on REPEAT mode. To compensate for this, I retune each oscillator with the PITCH PAGE controls (OCT, SEMI, and FINE). This changes the character of the saw wave, most significantly by brightening it. By cranking up the pitch of the sampled wave, I'm introducing a little bit of aliasing, which adds a bit of high frequency noise. To my ears, this actually thickens and enhances the sound. If you listen to just one modified wave, it sounds thin and noisy, but after layering three slightly detuned waves, the overall sound is brighter yet warmer, more like an analog synth.

For performance, the MOD wheel and Pressure add vibrato and the TIMBRE slider brightens the sound. The left patch button adds a fifth and the right adds a fourth and a fifth. You can easily make this patch polyphonic by going to each wave's PITCH MOD page and setting the GLIDE parameter to NONE. You can also try different waveforms (i.e., square waves) on some or all of the oscillators.

Keith Emerson also had a fairly distinct Hammond C-3 sound. He used a C-3 which is very similar to the B-3. He would typically have the first three stops all the way out, and the rest completely off. The percussion selector would be set on the third harmonic. A third part of the sound is the fact that the electrical key contacts would be dirty, adding a little spit to the attack of each note. He would then run the C-3 through an amp driving a Leslie rotating speaker cabinet. He almost always kept the Leslie speed all the way down, rarely going for the cheesy high-speed swirling sound.

After getting the basic organ tone with the first two oscillators, I spent most of my time developing the attack, which is the most distinctive part of the Hammond sound. To do this, I use two SINE waves to create the percussion attack feature, and the NOISE wave to simulate the dirty contact key click. One thing I figured out based on how the real organ works, is to add a subtle delay to the two "tone" oscillators, 1 and 2. Like the real thing, the first sound heard is the key click, immediately followed by the sound of the tone wheels. This effect is most noticeable with staccato playing. Finally, I send everything through the DIRTY-ROTO+DELAY effect, which beautifully simulates an overdriven Leslie cabinet.

Well, there you have the two sounds that Keith Emerson made history with. He combined his distinctive Hammond C-3 sound with his trademark screaming Moog sound to create a totally unique musical form. With this array of sound, ELP combined the music styles of classical, jazz, and rock to write their music. I hope you enjoy these sounds and can pretend you're Keith Emerson for a day. ▬

Bio: Jim Grote offers a disk of 60 of his original VFX-SD sounds — see the classifieds. He's been programming and playing synthesizers for years and is co-founder of a band called Basement Slime. Last year he received a B.S. in Electrical Engineering from the University of Cincinnati.

BACK ISSUES

Back issues are $2.00 each. (Overseas: $3 each.) Issues 1–9, 11, 13–23, 27, 29, 30, 35–38, and 67–71 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 (which also applies to the SDs) got started in Number 48. The SQs got going in Number 63. Permission has been given to photocopy issues that we no longer have available – check the classifieds for people offering them. A free back issue index is available which contains the tables of content for all issues since Number 43.

SD & VFX patch

SD & VFX Prog: TARKUS

By: Jim Grote

Notes: MOD and PRESSURE add vibrato
(* 0) adds a fifth, (0 *) adds a fifth and a fourth, (0 0) thinner sound

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

WAVES

	1	2	3	4	5	6
Wave	Saw	Saw	Saw	Saw	Saw	Saw
Wave Class	Wave	Wave	Wave	Wave	Wave	Wave
Delay	0	0	0	0	0	0
Start	-	-	-	-	-	-

MOD MIXER

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

PITCH

	1	2	3	4	5	6
Octave	0	0	-1	-1	0	0
Semitone	-10	0	-4	-3	-4	-6
Fine	-1	+8	+27	+52	-34	-14
Pitch Table	Sys	Sys	Sys	Sys	Sys	Sys

PITCH MODS

	1	2	3	4	5	6
MODSRC	Env2	Off	Off	Off	Off	Off
MODAMT	+60	0	0	0	0	0
Glide	Legato	Legato	Legato	Legato	Legato	Legato
ENV1	+72	0	+99	+90	+71	+70
LFO1	+13	+13	+13	+13	+13	+13

FILTER 1

	1	2	3	4	5	6
Mode	LP/2	LP/2	LP/2	LP/2	LP/2	LP/2
Cutoff	94	127	93	98	124	124
KBD	+7	+4	0	0	0	0
MODSRC	Timbre	Timbre	Timbre	Timbre	Timbre	Timbre
MODAMT	+99	+99	+99	+99	+99	+99
ENV2	0	0	0	0	0	0

FILTER 2

	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	0	0	0	0
MODSRC	Timbre	Timbre	Timbre	Timbre	Timbre	Timbre
MODAMT	+99	+99	+99	+99	+99	+99
ENV2	0	0	0	0	0	0

OUTPUT

	1	2	3	4	5	6
VOL	84	84	84	84	84	84
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	FX1	FX1	FX1	FX1	FX1	FX1
Pan	50	50	50	50	50	50
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	0	0	0	0	0	0
Pre-Gain	Off	Off	Off	Off	Off	Off
Voice Prior	Med	Med	Med	Med	Med	Med
Vel Thresh	0	0	0	0	0	0

LFO

	1	2	3	4	5	6
Rate	37	37	37	37	37	37
MODSRC	WL+PR	WL+PR	WL+PR	WL+PR	WL+PR	WL+PR
MODAMT	+6	+6	+6	+6	+4	+4
Level	1	1	2	1	1	1
MODSRC	WL+PR	WL+PR	WL+PR	WL+PR	WL+PR	WL+PR
Delay	0	0	0	0	0	0
Waveshape	Sine	Sine	Sine	Sine	Sine	Sine
Restart	On	On	On	On	On	On
Noise SRC RT	0	0	0	0	0	0

ENV1

	1	2	3	4	5	6
Initial	15	-	99	94	99	99
Peak	0	-	99	99	99	99
Break 1	0	-	99	99	99	99
Break 2	0	-	99	99	99	99
Sustain	0	-	0	0	0	0
Attack	11	-	99	5	99	99
Decay 1	0	-	99	99	99	99
Decay 2	0	-	99	99	99	99
Decay 3	0	-	99	99	99	99
Release	0	-	99	99	99	99
KBD Track	0	-	0	0	0	0
Vel Curve	Q-Rise	-	CV2	CV2	CV2	CV2
Mode	Norm	-	Repeat	Repeat	Repeat	Repeat
Vel-Level	0	-	0	0	0	0
Vel-Attack	6	-	0	0	0	0

ENV2

	1	2	3	4	5	6
Initial	99					
Peak	99					
Break 1	99					
Break 2	99					
Sustain	99					
Attack	99					
Decay 1	99					
Decay 2	99					
Decay 3	99					
Release	99					
KBD Track	0					
Vel Curve	CV2					
Mode	Repeat					
Vel-Level	0					
Vel-Attack	0					

ENV3

	1	2	3	4	5	6
Initial	99	50	50	50	50	50
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	0	5	2	2	2	2
Decay 1	0	0	0	0	0	0
Decay 2	0	0	0	0	0	0
Decay 3	0	0	0	0	0	0
Release	10	15	15	15	15	15
KBD Track	0	0	0	0	0	0
Vel Curve	CV1	CV1	CV1	CV1	CV1	CV1
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	12
Delay	X4
Restrike	20
Glide Time	5

EFFECTS (1)

Effect	Concert Reverb
Decay Time	45
FX1	45
FX2	25

EFFECTS (2)

Diffusion	58
Pre-Delay	82
Early Refl Level	37
Time	42

EFFECTS (3)

FX2 Mode	Normal Stereo Snd
LF Decay	0
Reverb HF Damp	35

PERFORMANCE

Timbre	0
Release	0

Pressure: Key

SD & VFX patch

SD & VFX Prog: Hammond C3

By: Jim Grote

Notes: Modwheel switches Leslie speed. Timbre controls percussion attack.

WAVES	1	2	3	4	5	6
Wave	Org-V.4	Org-V.4	Sine-W	Sine-W	Sine-W	Noise-LP
Wave Class	Wave	Wave	Wave	Wave	Wave	Inharm
Delay	007	008	008	006	000	000
Start	-	-	-	-	-	-

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

PITCH	1	2	3	4	5	6
Octave	0	0	0	+1	+1	-2
Semitone	0	0	0	0	+7	0
Fine	-1	+2	0	+2	-1	+6
Pitch Table	Sys	Sys	Sys	Sys	Sys	Sys

PITCH MODS	1	2	3	4	5	6
MODSRC	Off	Off	Off	Off	Off	
MODAMT	0	0	0	0	0	
Glide	None	None	None	None	None	None
ENV1	0	0	0	0	0	0
LFO1	0	+1	+2	+4	0	-1

FILTER 1	1	2	3	4	5	6
Mode	LP/3	LP/3	LP/3	LP/3	LP/3	LP/3
Cutoff	0	0	0	68	68	0
KBD	+81	+81	+81	+81	+81	0
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	0	0	0	0	0	0
ENV2	+90	+99	+99	+41	+41	+99

FILTER 2	1	2	3	4	5	6
Mode	LP/1	LP/1	HP/1	LP/1	LP/1	LP/1
Cutoff	78	127	57	77	77	0
KBD	+64	+64	0	+66	+66	0
MODSRC	Timbre	Timbre	Off	Timbre	Timbre	Off
MODAMT	-35	-35	0	-37	-37	0
ENV2	+48	+48	0	+46	+46	+59

OUTPUT	1	2	3	4	5	6
VOL	87	99	85	79	92	85
MODSRC	Off	Off	Off	Timbre	Timbre	Timbre
MODAMT	0	0	0	-46	-43	-10
KBD Scale	+21	-11	0	0	0	+10
LO/HI Key	A0/B7	A0/B7	A0/B7	A0/B7	A0/B7	A0/B7
Dest Bus	FX1	FX1	FX2	FX1	FX1	FX1
Pan	62	50	50	50	50	50
MODSRC	LFO	LFO	LFO	LFO	LFO	LFO
MODAMT	-24	+32	-12	-28	-30	-13
Pre-Gain	Off	Off	Off	Off	Off	Off
Voice Prior	Med	Med	Med	Med	Med	Med
Vel Thresh	0	0	0	0	0	0

LFO	1	2	3	4	5	6
Rate	15	15	24	28	27	28
MODSRC	Wheel	Wheel	Off	Off	Off	Off
MODAMT	+20	+20	0	0	0	0
Level	31	28	0	8	8	2
MODSRC	Wheel	Wheel	Off	Off	Off	Off
Delay	23	11	0	0	0	0
Waveshape	Tri	Tri	Tri	Tri	Tri	Tri
Restart	Off	Off	Off	Off	Off	Off
Noise SRC RT	0	0	0	0	0	0

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

ENV2	1	2	3	4	5	6
Initial	98	98	98	1	1	98
Peak	98	98	98	39	39	0
Break 1	80	80	80	0	0	0
Break 2	80	80	80	0	0	0
Sustain	80	80	80	0	0	0
Attack	2	2	2	2	2	3
Decay 1	0	0	3	3	1	0
Decay 2	41	41	41	41	41	0
Decay 3	41	41	41	41	41	0
Release	1	2	7	17	17	0
KBD Track	0	+96	+98	0	0	0
Vel Curve	Q-Rise	Q-Rise	Q-Rise	Q-Rise	Q-Rise	Q-Rise
Mode	Normal	Normal	Normal	Normal	Normal	Normal
Vel-Level	0	0	0	0	0	0
Vel-Attack	0	0	0	0	0	0

ENV3	1	2	3	4	5	6
Initial	98	98	98	98	98	98
Peak	98	95	95	4	2	1
Break 1	98	98	98	0	0	0
Break 2	98	98	98	0	0	0
Sustain	98	98	98	0	0	0
Attack	19	19	19	40	40	17
Decay 1	21	21	21	21	21	0
Decay 2	21	21	21	21	21	0
Decay 3	21	21	21	21	21	0
Release	3	0	41	0	0	0
KBD Track	0	0	0	0	0	+16
Vel Curve	CV1	CV1	CV1	CV1	CV1	Q-Rise
Mode	Normal	Normal	Normal	Normal	Normal	Normal
Vel-Level	0	0	0	0	0	26
Vel-Attack	0	0	0	0	0	0

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

EFFECTS (2)	
Hi-Rotor slow	9
Hi-Rotor fast	61
Overdrive	47
MODSRC	Modwheel
Mode	Switch

Pressure: Chan

EFFECTS (1)	
Effect	Dirty-roto + delay
Delay	120
FX1	4
FX2	30

EFFECTS (3)	
Lag	20
Repeats	+19
Amount	-12
Lo-roto Vol	40

PERFORMANCE	
Timbre	0
Release	0

Prog: MARTIAN KRYBX

By: Mark Clifton, Woodbridge, Va.

Notes: In Bryce Inman's review of the Keith Thomas samples (Issue #65), the question of what a Martian Krybx sounds like was raised. Well, here's my version of a Martian Krybx. It's a combination of a sitar-ish sound, a percussion instrument, and a flute — all modulated in weird ways for the ultimate spaced-out ensemble. The modwheel offers a "patch select" function by offering a variation of a krybx and the modpedal adds reverb.

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	Waveform	Breath	Breath
Wave	Clav Var	VocalOohs	Woodflute
Delay Time	000	000	000
Wave Direction	-	Fwd	Fwd
Start Index	-	00	00
MODSCR	-	Off	Off
MODAMT	-	-	-
Restrk Decay	20	20	20

PITCH	1	2	3
Octave	+0	-1	+1
Semitone	00	00	00
Fine	+02	-07	+30
ENV1	00	+99	+30
LFO	+99	00	+04
MODSCR	Wheel	Off	Off
MODAMT	+62	-	-
KBD Ptch Track	On	On	On
Glide	Off	Off	Off
Glide Time	00	00	00

ENV1	1	2	3
Initial	-	99	50
Peak	-	90	49
Break	-	00	44
Sustain	-	00	00
Attack	-	00	05
Decay 1	-	00	10
Decay 2	-	00	00
Release	-	00	00
Vel-Level	-	00	99
Vel-Attack	-	13	72
Vel Curve	-	Lin	Quick
Mode	-	Norm	Norm
KBD Track	-	00	00

LFO	1	2	3
LFO Speed	30	29	34
Noise Rate	00	00	00
Level	30	14	70
Delay	72	00	72
MODSRC	Off	Wheel	Off
Wave	Sine	Tri	Pos/Sine
Restart	On	Off	On

FILTER	1	2	3
Filter 1	2Lo	2Lo	2Lo
Filter 2	2Hi	2Hi	2Hi
FC1 Cutoff	127	127	127
ENV 2	+20	00	00
FC1 KBD	00	00	-22
MODSCR	LFO	Off	Off
MODAMT	+35	-	-
FC2 Cutoff	080	000	060
ENV2	-20	00	00
FC2 KBD	00	00	+99
FC1MOD-FC2	On	On	On

ENV2	1	2	3
Initial	00		
Peak	99		
Break	69		
Sustain	00		
Attack	00		
Decay 1	82		
Decay 2	15		
Release	00		
Vel-Level	13		
Vel-Attack	00		
Vel Curve	Conv		
Mode	Norm		
KBD Track	00		

AMP	1	2	3
Initial	99	99	90
Peak	99	99	99
Break	40	00	90
Sustain	00	00	00
Attack	00	26	40
Decay 1	45	40	41
Decay 2	40	00	77
Release	15	15	30
Vel-Level	26	19	13
Vel-Attack	19	13	00
Vel Curve	Quick	Lin	Quick
Mode	Norm	Norm	Norm
KBD Track	+14	00	00

OUTPUT	1	2	3
VOL	90	99	90
Boost	Off	Off	Off
MODSRC	Off	Off	Wheel
MODAMT	-	-	+20
KBD Scale	00	00	00
Key Range	C2-C7	C2-C7	C2-C7
Output Bus	FX1	FX1	FX1
Priority	Med	Med	Med
Pan	00	-56	+56
Vel window	000	000	000

Standard Sound Programming

Effects Programming

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

CHORUS AND REVERB	
FX-1	44
FX-2	15
Decay time	40
HF Damping	00
Chorus Rate	20
Chorus Depth	04
Chorus Center	50
Feedback	+06
Chorus Level	19
MOD (Dest)	FX1-Mix
BY (MODSRC)	Modpedal
MODAMT	+30

The Hack: Mark's "Martian Krybx" is certainly spaced-out, but also quite unique. It uses waveforms that are so opposite to one-another in character that they actually seem to work in combination. But "Martian Krybx" may work not because it's inter-planetary but rather because it's a night in Chinese Hell — courtesy of an edgy Voice 1 and a jumpy flute in Voice 3. A correction in voice balance can be made: in the Output Section of Voice 1, set Vol to 60.

A change in Voice 1's LFO will help clarify it. In the LFO Section, use Level = 15. You can change Voice 1's "tuning" (modwheel up) by making changes in the ModAmt in that voice's Pitch Section. Try ModAmt = 57. Also, you can re-set the amount by which the flute "jumps" by using Env 1 in Voice 3's Pitch Section: say, Env 1 = -48.

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.

Classifieds

EQUIPMENT

EPS-16+ Turbo, brand new, warranty, 3 megs memory, SCSI, instant flash memory, dazzling digital effects, tons of extra sounds. $2495. (510) 828-5208.

EPS with 2x expander, 50 disk library. ESQ-1 with 20,000 note expander. Both come with CVP pedals, stands, hard cases. Yamaha RX-7 drum machine. $1295, $795, $195, respectively. (616) 948-8398.

Expander chips for VFX-sd. Returned from Ensoniq after further upgrade to SD-1 was installed. I'd trade these chips for two blank carts. In case of a tie, I'd choose carts loaded with your best patches. Please write: Ken Jacobs, McCune Sound, 2200 Army St., San Francisco, CA (415) 641-1111.

Kurzweil 1000 SX Module. Upgraded with HX block and Version 5 software. 6 Meg of orchestral strings, brass, woodwinds & more. Good condition. Original List: $2000. Sell for $700. (708) 427-1615.

SAMPLES

Professional 16-bit samples for the EPS-16 Plus. Series 1: Analog Classics. Series 2: Legendary Digital. Series 3: Studio Drums. Series 4: Experimental Industrial. Each 5-disk series: $35 + $5 shipping. Make cheque or money order payable to: Dennis Cooke, 128 Greendale Cres., Kitchener, Ontario, Canada N2A 2R6.

Prosonus Sound CDs: Violins solo/section/FX, Celli solo/section/FX, Horn/Tuba + FX. $45 each (includes postage). (310) 392-8373.

Want to trade samples for the EPS-16+? Give Jay a call at 203-652-2174, 9-5 pm, Eastern. Also, Connecticut-based EPS sample obsessives note that there is a free local users group for this great ax. Call for more details.

ECCENTRIC SAMPLES (Mirage and EPS). Ethnic, Ancient Greek, Medieval instruments; Partch creations; Industrial Percussion & more. Mirage demo tape: $3. EPS demo tapes (Vol. II or Vol. III): $6 each. U.S. funds only. Demo tapes include disk list. For lists alone, send SASE to: NIGHTWIND Sound, 170 Mar Monte Ave., La Selva, CA 95076.

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.

SoundProcess/Mirage Library for sale. 6 disks, all with the SoundProcess Run-time OS, for $80 including postage, or $15 each plus $1 postage. Specify Lush, X, DeMiTy, Addy, Turbo, or Keyboard. Each disk has approx 110 sounds on it. Bob Spencer, 703 Weatherby Ln., Greensboro, NC 27406.

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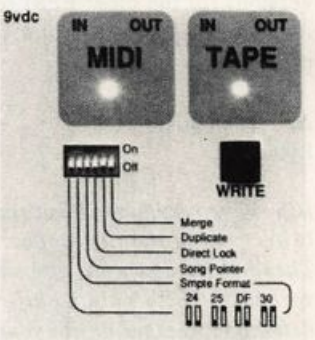

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U.S. Mail - The Interface, Transoniq Hacker, 1402 SW Upland Dr., Portland, OR 97221
Electronic mail - GEnie Network: TRANSONIQ, CompuServe: 73260,3353, PAN: TRANSONIQ, Internet (via CS): 73260.3353@compuserve.com.
This is probably one of the most open 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.

Dear Hacker,

I am the proud owner of a **VFX**, although lately the VFX-sd's popularity has left me feeling somewhat out in the cold. Are there any upgrades available that would give me access to *any* of the VFX-sd's capabilities (new samples, built-in sequencer, disk drive, etc.)?

P.S. Great magazine!

Sincerely,
Don Adams
Cincinnati, Ohio

[CS – Unfortunately, there is no upgrade path for the Original Recipe VFX.]

Dear Hackeroonies (and Hackerettes),

My older **EPS (4x)** would be great if I could up the sound. Is there, will there be, is it possible, that some type of upgrade will happen? I love the EPS but don't want to drop a large chunk of $ to enhance the s/n ratio. I've been told that the newer versions (of the older EPS) sound better. Any and all suggestions will be appreciated.

Al Trautman
Lydia, La.

[CS – The very first EPSs produced had a lower output than subsequent versions. These units could be upgraded via the so-called "EPS gain modification." To determine whether or not your unit would benefit from this mod, contact Ensoniq Customer Service at 215-647-3930, and have your unit's serial number handy.]

Hey there Hackerites,

Just a quick letter to apologize to anyone that called my number on Transoniq-Net with desperate questions and open ears only to hear, "Uh, he's not here. He's in Texas." From the end of February to the end of May I was serving God, country and state (not necessarily in that order) by attending a school at Sheppard Air Force Bass, Texas, for my Air Guard unit (105th MAG, "The Hudson Valley Haulers"). Lots o' fun and just so educational! I've completed my sentence, uh..., my tour of duty and I'm back to answering all those happy **SQ-80/ESQ-1** questions that may arise. Still at 607-533-7878, so dial away!

A letter or so back I told you guys about a really great bunch of salesmen/musicians from my local area. (Central N.Y.) Well, two of those cool dudes (Lonnie and The Steverino) have moved on and opened their own store in Cortland, N.Y. It's called "The Ultimate Music Store" and they're well stocked when it comes to good ol' Ensoniq equipment. They're doing really well and making lots of bucks and probably will go on to have a planet-wide chain of stores and be big, wealthy music robber baron dudes. Do you think they could have made me a partner? Nooooo! (Oh well, maybe this shameless plug will get me a big discount the next time I actually buy something instead of just drool on the carpet.)

Hey there, Malvern. I have a **VFX-sd II** with the mega piano upgrade. I did not personally purchase the upgrade, but when I purchased the VFX used, the dealer price did reflect the fact that it did have the upgrade. I would like to upgrade to SD-1 status but the $700+ price tag is a bit out of my league. I understand your policy about the SD-1 upgrade only costing $250 if the owner can prove they bought the mega upgrade, but it seems as though we "used" owners are getting jammed in a tough spot. I can understand a VFX owner paying $750 because of the cost of the Mega pianos and the SD-1 – but it seems just a little bit much for owners with the Mega pianos already installed. Not bitching, just asking, because I'm sure you'd get more of us to upgrade if the price were lower. Work on it if you can!

P.S. Are there any fellow military types out there who have ANY patches (of the cloth type!) available to donate to a fellow Hacker's collection (namely mine!)? I only recently started collecting and with my transfer to the Air Guard any normal supply lines have dried up. Please send any patches to: Rob Romano, 481 Peruville Rd., Groton, NY 13073. Thanks! We now return you to your regularly subscribed magazine.

Long Live the Hacker!
Rob Romano
In Employment Limbo

[TH – Gee, pretty soon people will be trying to sell their used cars in the Hacker...]

[Ensoniq – We developed the special pricing for upgrading a unit a second time out of fairness to persons who had already spent $699.00 to upgrade their original unit and wanted to upgrade again. Since the original VFX-SD listed at $2695.00 and the Mega-Piano Version II listed at $2745.00, we only charged $50 retail more. Of course we cannot control what price you actually paid on the used market. The price for the upgrade is based on the cost of a complete new mainboard, which is the most significant cost part of any of our product designs. Considering that you would be getting better quality output circuitry, an increase from 21 to 32 note polyphony, a variety of new 16-bit waveforms (including an improved piano), an additional ROM bank of programs (60 new programs, and 20 new Performance Presets), and a complete diagnostic overhaul of your keyboard we feel that the asking price is fair, and that you are getting a great value.]

Dear Hacker,

Since 1984, I have funded a non-profit service to help the elderly and handicapped. We could really use some sequences to use at fund raisers. Please be a sponsor for a good cause.

Harry Saina
The Elderly-Disabled Non-Profit, Inc.
1213 Pine Lane,
Chester, PA 19013

Dear TH,

I'm sure we'll be hearing a lot about the **DP/4** in the coming months. It's great having four dedicated processors and eight

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simultaneous modulation sources available. However, I would like to suggest an enhancement in controller handling for the Pitch Shifter algorithms.

Like many performers. I use Pitch Shifting in performance as a real time effect to harmonize and transpose audio signals. I like to control the amount of pitch shift using my **EPS-16 PLUS** (as a master MIDI keyboard.) My Yamaha FX and SPX series effects units let me "play tunes" with the keyboard, since their Pitch Shift programs have a "Root Key" parameter. By setting this to C4 I can transpose the signal up a half step by C#4, up a fifth by playing G4 and so on.

Alas, this technique is impossible with the DP/4 since the MIDI Note Number controller is treated like any continuous controller, ie., the available pitch shift range (an octave in either direction), is extended over the full controller range (from note 0 to 127). Thus a MIDI note interval of a fourth only produces a pitch shift of a half step.

Perhaps Ensoniq could offer a Root Key parameter in a future DP/4 OS version. It would make the pitch shift effects much more useful for live work as you would be able to play tunes and harmonize using a MIDI keyboard.

As an alternative how about a MIDI pitch mapping utility for the EPS-16 PLUS? That way I could redefine the MIDI note numbers sent for each key thus circumventing this limitation of the DP/4. It seems to me that a keyboard mapping utility could be implemented in software and offered as part of an OS upgrade – maybe the forthcoming version 1.3.

I encourage all the Ensoniq diehards to check out the DP/4. It's a complex but powerful instrument and combines the high quality effects we know from the EPS-16 PLUS and other Ensoniq keyboards with a number of new effects such as phaser sample and hold, multi-tap reverb and vocoding.

Keep up the good work at the Hacker!

Best wishes,
Michael Schell
Brooklyn, NY

[Ensoniq – Thanks for your suggestions. We'll certainly keep them in mind for future use.]

Dear TH/Ensoniq,

I have been a faithful Ensoniq user for several years now. I currently own an **EPS-16 PLUS** and an EPS classic (both fully expanded). This gives me about 4 Meg of memory. I have a critical problem with this....I need more memory!!!! How many more 16 PLUSes can I afford to buy to acquire more memory? Obviously buying more hardware is not the cost or space effective solution. How about a little EXPANDABLE RAM for your samplers, Ensoniq? How about using SIMMS or some other similar inexpensive memory expansion? In the June issue of TH there was a letter in the Interface section from Jared Stewart who asked about RAM upgradeable with SIMMS for Ensoniq users. My ears perked up. Did anyone else's? Unfortunately, neither TH nor Ensoniq even responded to the question. (Of course, with SIMMS, for example, you do not have to pay very much.)

There are a great number of us Ensoniq users who have spent a lot of time and money on an EPS (or two) and have built up respectable libraries over the years. Must we trash these years of work and start all over with a memory expandable AKAI S1000? Or sell my two EPS samplers and invest a little more money and get a K2000, being then able to expand my memory up to 64 Meg? Not everyone needs 64 Meg, but you've got to make your samplers expandable so that your faithful customers can remain faithful and have the option of expanding their samplers!

If I am the only one in the world who is in need of more memory, then disregard me as a lunatic, a lone voice in the wilderness who probably should have purchased a more expensive, expandable sampler from some foreign country in the first place. But, if there is anyone else out there who has ever thought that a little more memory would be helpful why don't you make your voice heard. Send a letter to TH, to be printed in the Interface. Just say, "More sampler memory please, Ensoniq," or words to that effect. Hopefully you can be briefer and more to the point than I have been.

I fear that Ensoniq will only be motivated

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to act quickly on this issue if they see evidence that there is a market for memory out there in consumer-land. so cast your vote, speak up by sending a letter or postcard to TH. You may find that your lone voice is actually part of an overwhelming (and no longer silent) majority.

Please surprise me with some good news, Ensoniq. I want to remain a faithful customer.

Faithful Ensoniq Customer,
Lewiston, NY

[CS – I agree that where memory is concerned, the more the merrier. Still, I've found that by rolling up ones sleeves and doing a bit of surgery on instruments one wishes to use, an awful lot can be crammed into an expanded EPS-16+ – especially if it includes a Flashbank. If you haven't done so already, you may want to scan some TH back issues in search of articles on the EPS and memory management – you should be able to find some pretty good tips on how to squeeze the most out of your machine.]

[Ensoniq – We certainly are not turning a "deaf ear" to our customer's requests for more memory in our samplers. It's just that we have said time and time again that the original EPS and EPS-16 PLUS cannot accommodate more memory, because the oscillator chip cannot "see" more memory and the power supplies cannot handle the load. So each month when we are asked again we must answer with the same information, and once in a while we assume that the rest of the Hacker audience already realizes these facts. Rest assured that we have heard your request(s) and will take them into account for future designs. We have never marketed or promised that these models could accommodate more memory, so it should be clear when you purchase them that they cannot be expanded beyond their current capabilities (EPS = 2 Meg, EPS-16 PLUS = 3 Meg w/Flashbank memory). Thanks for your input, but a letter writing campaign to the Hacker *cannot change these facts.]*

To Ensoniq Design Engineers or Transoniq:

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[Jim Aikin, *Keyboard*, Oct. '91]

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The Ensoniq EPS and 16+ are great samplers, the key features being Polypressure, patch select buttons, load and play, re-sample with effects for about $2400 street price...wow!

C-Lab software is now at the top for the Atari computer – Imagine using SCSI or SMIDI with C-Lab controlling the EPS with a hard drive. Now we need C-Lab to support Windows to display and edit the samples (time versus pitch, noise gate masking any area of sound). Get the picture? If you have not guessed it by now – a hard drive recording system...this is where the future of audio recording is headed.

Let's kick Cubase (Audio) in the ying yang.

Sincerely yours,
William A Dean III
Dayton, OH

[Ensoniq – Thanks for your comments, and we will pass on your request to C-LAB in Germany.]

Dear Hackers/Ensoniq,

I noticed in the June issue that Avalon Sample Editor was not mentioned by Ensoniq as a viable **EPS/Atari** product, referring to Ensoniq's reply to the letter from Neil Leonard.

I am solidly invested in Steinberg's Sequencer Cubase (and love it) as well as their excellent Synthworks Editor/Librarian programs and would like to also use Avalon in order to stay consistent with their MROS Multitasking platform.

Avalon is reportedly very hot especially with the DMA to SCSI controller which speeds sample transfer time up considerably.

Is there a problem with Avalon and the EPS-16 PLUS or was this an oversight?

Also, my Proteus Synthworks has enabled me (a very amateur sound designer) to become an overnight sound programming genius – well, a heck of a lot better anyway. Hackers take note, Steinberg has recently introduced an SQ series Synthworks. I'm salivating heavily.

Thanks for your reply,
Orion Engar
Dorion Research Corp.
Sardis, BC Canada

[Ensoniq – We didn't mean to slight Steinberg's Avalon in our last response, we just have never actually seen or worked with that software. If you need more information about it contact their US distributor, Steinberg/Jones 17700 Raymer Street, Suite 1001, Northridge CA 91325 (818) 993-4091.]

Dear Hackers,

You might want to say something to your readers about demanding your chips back if you get an **SD-1** upgrade. Since the SD-1 upgrade includes the capabilities of the first upgrade expander chips you may

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be paying for them twice – hang onto them! I kind of startled the Ensoniq customer service rep when I asked for mine back. I think I was the first to request them, but I was pleased with their response.

On a different topic... How do you fast forward (previewing) and fast reverse (reviewing) on the sequencer in mid-play?

Thanks,
Ken Jacobs
San Francisco, Calif.

[CS – There are no "preview" or "review" controls on the SD-1 per se. To move quickly forward through a sequence, simply speed up the playback tempo. To hear sequences in reverse, you need to be going the correct speed and direction during the occurrence of a space-time warp. A simpler solution might be to use the extensive auto-location features to locate to areas of the sequence that you wish to listen to.]

[Ensoniq – Since the SD-1 32 Voice already includes the SQX-70 sequence expander it is fine with us if you remove them before sending your unit in for an upgrade.]

Hacker:

Let's call this the Bernoulli connection.

This is to answer some of the questions that came up when I mentioned in an earlier letter that I knew someone who was able to format and connect a Bernoulli drive to his **EPS.**

To set it straight, my friend Robby Robinson has an EPS with a Bernoulli. I have a Syquest 44 Meg removable connected to my EPS-16+. Robby told me about the Bernoulli before I bought my EPS and how great it was. But when he told me I couldn't format it from my EPS, I changed my mind and bought the Syquest.

Anyway, the guy who got the Bernoulli up and running on Robby's EPS gave me permission to have his name and number printed in the Hacker so Bernoulli owners can get in contact with him. You'll probably get his recorder, but keep trying: Art Sajeki, Market Dynamics, Ogden, Utah. Phone: 1-801-393-3456 (business).

If anyone out there has or buys a Bernoulli, you had better buy extra cartridges in case they get too fragmented because you probably won't be able to format new ones. (Although, Art did say that *some* EPSs will allow you to format from the keyboard.)

Now, question time: Has anyone been mixing and merging wavesamples? It's unreal. I took my tiny strings, mixed it with a bell I had sampled and then I used the four choruses from my WaveBoy. It sounds so good. All I want to do now is mix wavesamples.

Also, to you people who have the original EPS: You can sample sounds from the EPS-16+ with the WAVeBOY effects and it will use only one layer and pan both ways. But, of course, you can't change the buss after you sample because the old EPS doesn't have busses. (But I've found that the key pressure is better on the original EPS – on my 16+ I almost have to bend the keyboard to get the pressure to work properly.) You do use the keyboard to sample, don't you?

I try new keyboards that come out all the time. Everything made today has drawbacks, but the EPS-16+ has more pluses than about 80% of the market.

Don Suite,
Salt Lake City, Utah
(801) 484-2113

[CS – Thanks for the Bernoulli tip, Don.]

[Ensoniq – We do not recommend the use of Bernoulli drives with the EPS. They do not respond correctly to the SCSI command set that we use and are unlikely to give you reliable performance. There are plenty of SCSI compatible drives that will work without taking a risk with a basically incompatible technology.]

[TH – But, if you've already got a Bernoulli just gathering dust and are aware of the risks involved...]

Dear Hacker,

The memory limitations of 2 megabytes make the **EPS-16 PLUS** difficult to use with 44 kHz multisampled libraries. All eight instruments cannot be utilized. I submit these questions to the engineers who designed the 16 PLUS. With all its great features the EPS 16 PLUS's rather limited

memory cripples its use.

Can the 16 PLUS support expansion RAM addresses beyond that assigned to the Flashram? Are there enough address lines on the expansion connector? Can the power supply handle the increased current requirements? Would the current system ROM (I assume soldered in) and a future OS be able to access the added memory?

There is enough room within the rack-mount for an expansion board above the SCSI board using MacIntosh compatible SIMMS. DIP switches could tell the OS how much memory exists. It would be a total killer if the 16 PLUS had the hidden ability to access up to 32 megabytes of RAM like other samplers on the market!

Frank Enfante
Lodi, CAL

[Ensoniq – See our answer to "Faithful Ensoniq Customer" above.]

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

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