

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

ASR-10: The First Stereo Sample

Barry Carson

"...if there were any argument for mono, we could get rid of half the speakers in our lives!"

— Dave Smith

Dave Smith, founder of Sequential Circuits and designer of the Prophet line of samplers and synthesizers hit the nail on the head. We are a two-eared race of music lovers, and the latest bit of good news in our lives is the Ensoniq ASR-10. By now, most people have heard about the ASR's sleek good looks, its solid metal casing and powerhouse digital effects, but the big news is that this instrument actually samples in stereo. Being a bit of a cynic, my first job in checking out this new instrument was to do a quick and dirty stereo sampling job. My second job was to report my findings in these pages.

Knowing a good thing when they have it, Ensoniq made few changes from the EPS to the ASR in the actual steps one goes through to sample (or do just about anything). What this means is that if you've ever sampled with the EPS or 16+, you can jump into this machine and almost immediately get some great results. The first difference is that the ASR has two inputs (of course). The big news is that these inputs can go through the digital effects of the ASR before the sound is sampled. What this means is that a mono sound can go through a stereo effect and the whole thing can be sampled in stereo,

creating a stereo sample. A true stereo sound can also go through the stereo effects to create even a bigger stereo sound. To make this all even more outrageous, a stereo sound can be sampled going through a stereo effect, the resulting stereo sample can then be played back through another stereo effect. Powerful stuff, eh?

On the simpler side, mono or stereo sounds can be sampled dry. I considered this a bit of an acid test. I knew a huge stereo sample of an enormous choir bathed in massive stereo reverb would sound great. What about a dry simple stereo sample of a plucked instrument, would it make a difference?

For this test I used an Appalachian Dulcimer played into two microphones. I placed these microphones one on each side of the dulcimer, near the sound holes. I kept the mics as close as possible to minimize sampling the ambience of the room (after all that is what those amazing effects are for). Sampling is just like on the EPS except the ASR counts off the time of your sample for you. When a stereo sample is completed, it is deposited in two layers for you (layers 1 & 2 for example), one being the right channel, the other being the left. These layers are linked together so they can be edited as a pair. In other words, when you adjust the filter settings for layer 1, you adjust the filter settings for layer 2 at the same time. A powerful feature is the option of turn-

In this issue

Articles:

- ASR-10: The First Stereo Sample
Barry Carson cover
- A Cure For Multitrack Transfer Trauma
Robby Berman 5
- Programming the DP/4
Dennie Edwards 9
- Waveform Mutilation for SQs & KSs
Jack Stephen Tolin 13
- An SQ-R Primer for ESQ-1/SQ-80 Owners
Part III
Brian Rost 18
- Keyboard Scrabble — ESQs & SQ-80s
Walter Cooper 20
- EPS & ASR Percussion Tips
Tom Shear 21

Reviews:

- Basement Tapes: Jim Newton
Daniel Mandel 4
- Syntaur Samples for EPSs & ASRs
Anthony Ferrara 7
- Ensoniq's ESS-13 & 15 for EPSs & ASRs
Pat Finnigan 15

Regular Stuff:

- Random Notes 3
- Current O.S. 3
- Hard Drives List 2
- Ensoniq's Customer Service Q & A
Dennie Edwards 8
- Classifieds 23
- Hackerpatches
Sam Mims & Jeffrey Rhoads 24
- The Interface 26
- Hacker Booteeq 31

ing the stereo link off for editing. This would let you get in and edit each half of the stereo sample independently.

These stereo samples can be mapped across the keyboard or stacked just like mono samples in the EPS.

The results of this session were really amazing. Playing back the samples and switching my amp from stereo to mono made it plainly clear that stereo sampling is an incredibly powerful tool in the accurate reproduction of acoustic instrument sounds. Trying to articulate the subtle differences between the sound of a stereo sample and that of a mono sample taxes my limited vocabulary. Words like vibrant and alive pop into my mind but they really can't express what I'm hearing. My suggestion, get your hands on an ASR 10 and do some stereo sampling. When you think of the words that can describe what it sounds like, let me know. ■



Bio.: Barry Carson started sampling years ago in the early days of the Mirage. He has also sampled for the EPS, EPS-16+, Prophet and Roland samplers. When he puts his mind to it, he can even remember how to count in hexadecimal.

Tested and Approved Hard Drives for the EPSs

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

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

Drives Reported to Work by Readers

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

Jasmine Direct Drive 100	Quantum 100M, 210M
PowerDrive44	Seagate 80M
Syquest 555 (removable)	Tech Data Model 60e

UNAUTHORIZED BREAK-IN

New WAVEBOY disk exposes direct audio input to EPS-16 PLUS Effects

Send any signal through the EPS effects processor, with the new **WAVEBOY Audio-In Effects Disk**. Guitar, mic, or line level audio. Works with all 13 factory algorithms. Disk also includes Plate Reverb, Non-linear Reverb, and 3-voice Pitch-shifter that can process external audio and internal sounds. Just \$39.95

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"A Genius-at-work kind of product... I can't imagine any EPS-16 PLUS owner who wouldn't want to have this disk..."
—Craig Anderton, TH review, April, '92

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Front Panel

RND (🎵🎵)

Hacker News

Things get awfully quiet this time of year. Happy belated holidays! (This is being written in mid-December — we always forget to mention it in mid-November.)

Last month Clark told an Interfacer that he'd put together a VFX wind patch for him. Well, due to interplanetary commitments of a nature way too complicated to go into here, Clark didn't quite make it. However, we did recall (finally) that Jim Grote wrote an excellent article on creating wind patches for the VFX in Issue #76 (still available). It even included a bassoon patch. Check it out.

Jack Tolin tells us that the patch included in his Waveform Mutilation article in Issue #89 should have a Voice 3 Wave Direction of *Backward* (instead of *Forward*).

Also, the makers of *Disk Wizard* (reviewed in Issue #89) have moved to: Lot 169, Stevens St., Munclaring, Western Australia 6073.

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 – Philip Magnotta, 401-467-4357, 4 – 10 pm EST.

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

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

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

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

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

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

CHANGE OF ADDRESS

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

Current Ensoniq O.S. (Disk/EPROM)

EPS	2.49/2.40	SQ-R	1.02
EPS-M	2.49/2.41	SQ-R 32	2.03
EPS-16 PLUS	1.3/1.00F	SQ-R PLUS	1.15
MASOS	2.0	SQ-2	1.2
MIRAGE	3.2	SQ-2 32	2.03
ESQ	3.5	SD-1	4.10/4.10
ESQ-M	1.2	SD-1 32	4.10/4.10
SQ-80	1.8	DP/4	1.11
VFX	2.30	KS-32	3.00
VFX-SD	2.1/2.00	ASR-10	1.05/1.00
SQ-1	1.11	KMX-8	2.00
SQ-1 32	2.03	KMX-16	1.50
SQ-1 PLUS	1.1		

BACK ISSUES

Back issues are \$2.00 each. (Overseas: \$3 each.) Issues 1–30, 35–38, 67–72, and 83 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 got going with Number 35 (and also applies to the **ASR-10**). **VFX** coverage (which also applies to the **SDs**) got started in Number 48. The **SQs** got going in Number 63. (**SQ** articles also apply to the **KS-32**.) **DP/4** coverage started in #88 (much of which also applies to the **ASR-10**). 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.

Peeling Back the Layers

Tape: "*boen marg*" (the left handed path).

Artist: Jim Newton.

Contact info: 170 Mar Monte, La Selva, CA 95076, \$8 for the tape.

Equipment: Mirage, Prophet 600, DX21, ESQ-1, Matrix 6R, Drumulator and RX15, mixed on a portastudio.

I was really impressed by the songs on this tape. I'll let you in on a little reviewer psychosis. Often I am afraid that I will pop in the next tape to review and be thrown into an angst-ridden search for how to say something nice when I'd rather say nothing at all. (Or at least nothing at all nice!)

What Jim has done on this tape can be summed up by the idea of an introduction. A lot of modern popular songs put a lot of energy and talent into preparing introductions, crafting them with care and patience to grab the audience and pull them into the song. In fact you may have heard that in writing (words) and in song writing — publishers and recruiters pay careful attention to introductions and endings. The assumption is that carrying the song or the story and maintaining a style are much easier. The difficult part is the get the attention of the listener and then to conclude in such a way as to satisfy or gratify the audience. This is what Jim has done. He has sustained that initial interest throughout his songs.

The tape can be largely characterized by its exotic palette of sounds. Samples of Tibetan percussion are salted throughout this piece. Only the first song on the second side, *THE NEXT MESSAGE*, stepped out of this boundary by using the drum machines as the backbone to the song. Jim could have left this one out of the collection in order to create a more thematic and consistent sound. Jim says, "*Okay — think of Tibetans. On acid. Bad acid. But to Tibetans bad acid is revealing.*"

I would say this accurately describes the mood of Jim's tape. Even without the use of mind altering chemicals, these songs wander around trying to get to the unknown portions of your psyche and pull them out into the daylight. One could say that Jim's music is evocative of movie sound tracks. But if so, I think it would be more accurate to say that Jim's music is evocative of large epic drama movie sound tracks. Not just any movie, but that one that really left you feeling haunted.

Jim really works his synths. His rhythms are evolving and wonderful pools for his other instruments to swim in. There is potential and drama even in the quiet passages.

Jim theorizes, "Like I'm onto the ethnic world scene... I'm a timbre junkie. So when world music gets bastardized (god forbid) by the majors — then what's left? What will be the next BIG THING? Us! Some Eskimo with a portastudio in his igloo. Some Chinese woman in Fuzhou. Some Maori tribesman with a guitar in New Zealand. Some fella in Bath, Maine. Get the picture? We'll all be listening to each other without regard to skin color, religious practices, or financial status. So, you heard it here first."

The only real technical problem I had was that the vocal samples that were used throughout tended to be murky and undefined. I don't know what the source was, but possibly more time could have been spent on the EQ or setting the samples up after the recording. It's given that the intent and feeling produced by them was very well placed and worth it.

The cover to *boen marg* can not go without mention. It is a beautiful picture of what is apparently a Tibetan rug or painting of a face. An extremely inviting package.

Tape: *Javelin Rising*.

Artist: Jim Newton.

Contact info: 170 Mar Monte, La Selva, CA 95076, \$8 for the tape.

Equipment: ESQ-1, Mirage, EPS, Prophet, Moog, DX21, RX15.

Jim's second tape is great. The overall sound is an improvement from his first.

The cassette cover continues in the standard he has set on his first tape. The inner flap tells us: *JAVELIN RISING* — Recorded August 1988 — March 1989 except *NIGHTWATCH* (October 1989) at NightWind Sound, La Selva, CA. *IN SAHARA'S DUSK* recorded January 1987 at Smallroom Studio, Capitola, CA. Vaughn Visnius appears courtesy VOX Studio. Cover Artwork: Visnius.

Jim says, "*The influence here is from another part of the globe...*" and this time it is West Africa.

This tape seems more peaceful than *boen marg*. Jim excels at creating an environment with his sounds. He goes beyond placing the instruments in a given room with reverb. The stereo placement, effects and choices of instruments are all part of the craft that create the mood. Jim has a way of creating a sound's shadow. But a shadow is a dynamic thing. As the sun changes its direction in a long slow arc across the sky, so does the length and character of the shadow change.

Jim uses a couple of repetitive sequences that would otherwise have turned me off. Yet, he manages to weave other threads and colors in and out in order to hold my interest and distract me.

The following is some titles and equipment/instruments used, to give you a feel for what Jim's tape is like:

THE PEOPLE (ABANTU)

Mirage: West African lute, oud, trumpet ESQ-1: brass, percussion Prophet: little drone

SEDOND WIND

Mirage: African drums and shakers, guitars and Klung
ESQ-1: percussion, m'bira
DX21: marimba

IN SAHARA'S DUSK (STONES EXPLODE)

Mirage: voices, drums, guitars, talking drums, calabash rattle
Obie: Percussion sequence
RX15: accents
Prophet: small sounds sequence
ESQ-1: melodic and percussion accents

VOICES MADE OF EARTH

Mirage: percussion (loops + accents) voices, berimbau, mark tree, bowed psaltry
ESQ-1: melody bass, accents Obie
Prophet: bass drones

It's a little bit like taking Instruments of the World 101. This is good stuff. Very listenable. Looking forward to your next release wherever it may be...! ■

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.

A Cure for Multitrack Transfer Trauma

Robby Berman

There are several inarguable reasons to transfer your treasured SQ-80 sequences over to your VFXsd/SD-1:

1. You have to sell your SQ-80 to finance your sd/SD.
2. You're outta tracks and you need more.
3. You want to centralize the brains of your outfit.
4. You want to avail yourself of the sd/SD's superior editing capabilities.

If you've invested blood, sweat and years, as I have, getting a sizable slew of songs elaborately sequenced on the SQ-80, converting them to sd/SD sequences can be quite a project, even when taking advantage of the sd/SD's facility for multitrack recording over MIDI. The basic procedure is laid out in the instructions furnished by Ensoniq. There's a bit more involved than the manual lets on, though. I thought I'd share some things I've learned, to make your experience with multitrack transferring easier, frankly, than mine's been.

The SQ-80 receiving template

I've often found that even though I'm transferring my sequences over to the sd/SD, I still want to use the sounds in my SQ-80. Sometimes I just want to be able to easily check

out my transfers before finding new sounds on the sd/SD (or some module or other) to replace the old ones. I've found it helpful to set up a receiving template on the SQ-80 that I use to access its sounds from the sd/SD sequencer once everything's been sent across.

First, you have to decide on a group of MIDI channels that you're willing to permanently assign to the SQ-80. It's good practice in any case to assign the various instruments, modules, drum machines, etc. in your rig their own MIDI channels that you'll consistently use. And if you use the same MIDI channels to transfer your sequences over to the sd/SD from the SQ-80, life will be even simpler.

Let's say that in your studio MIDI channels 1 — 8 are the ones you want to use. To create the receiving sequence, press the SQ-80 Mix/MIDI button and set tracks 1 through 8 to MIDI and channels 1 through 8. Don't worry about program numbers or volume settings — those will be sent from the sd/SD when you select the sequence over there. Once you've created your SQ-80 receiving seq, you're likely to find it's the only one you'll ever need (I've been using the same one for years now).

Before playing back your transferred sequence, press the MIDI button on the SQ-80 and set it to read "MODE= MULTI." Also, do make sure that any tracks on the sd/SD that are meant to play SQ-80 sounds are set to send on the appropriate MIDI channels (1 to 8 in our example).

Multiple Note-ons In the Source Sequence

Here's a problem that stopped my transferring cold until I finally figured it out. After transferring a particular sequence over to the sd/SD, things sounded fine until one track would fall out of sync, and then eventually the rest would go completely nuts. I consulted an authorized technician and Ensoniq, to no avail. When I turned my attention to the source sequence, and remembered that it had taken a number of attempts to get one of the passages on one of the tracks right, I was able to locate the problem.

You know how, when recording on the SQ-80, you can start playing over a prior take in the middle of a sequence and the SQ-80 will switch automatically into record with your first keydown? It turns out that the first notes that you're trying to replace are not always erased cleanly, sometimes resulting in a whole bunch of simultaneous and redundant notes. You may not hear them on the SQ-80 (I sure didn't), but when you try to play them over to the sd/SD as part of multitrack transfer, look out.

If you're having problems maintaining, shall we say, rhythmic integrity in your transfers, the first thing to do is to figure out which track is the troublemaker. Make as many copies of your blank receiving sequence on the sd/SD as there are tracks in the SQ-80 sequence you wish to transfer. Now mute track one on the SQ-80 and transfer the rest of your tracks to one of your sd/SD templates. Play the transferred sequence on the sd/SD. If everything now sounds okay, that means that the first SQ-80 track is the source of your problems. If not, repeat the procedure, muting a different SQ-80 track each time until you've got a successful transfer. Whichever track is muted at that golden moment is your bad boy. Transfer that track over all by its lonesome (switch the sd/SD back to RECORD SOURCE=BOTH or MIDI on the middle Seq Control page). The sd/SD will be able to handle the multiple note-ons when that track is all it has to handle, and you can then examine the track using the event editor and remove the offending stowaway events.

Transferring Tracks with Polykey Pressure

The sd/SD will not successfully receive polyphonic key pressure during a multitrack transfer. Any tracks employing polykey must be sent over individually after all the others. This is just something that hasn't been able to solved as of this writing.

Pressure Settings

Here's a weird one. You may find that tracks you've set up to receive a particular type of aftertouch will have been mysteriously reset to some other kind when you check your tracks after the transfer's occurred.

This is what's happening. Say you've set up sd/SD track one to receive on MIDI channel one. You've set the pressure setting to CHANNEL (after pressing the performance button labeled "Patch Select" twice), since the SQ-80 track used the ROM sound KEYGTR (program number 017), recorded with channel aftertouch. When you played the SQ-80 sequence, program change 017 was sent out to your sd/SD track. Program number 017 in the VFXsd is DRAWBARS-1 (if you have the factory internals loaded), and in the SD-1 it's INSPIRED, neither of which employ aftertouch. *Voilà*, track one's setting changed to NONE, blocking the transfer of your aftertouch data. Grrrr.

The easiest way around this is to define your sd/SD tracks in the manner of your choosing, set the proper pressure settings for each track, and then disable the SQ-80's ability to send any further program changes to undo your good work. This is accomplished by pressing the MIDI button on the SQ-80 and setting that page to read "ENABLE=KEYS+CONTROLS."

Track Volume

Okay, you've got your tracks transferred over and they check out. Wouldn't it be nice to be able to easily recreate your mix settings? It is, with a pocket calculator. Simply multiply your SQ-80 volume setting for each track by 1.5714285 (99 divided by 63). Round the result off to the nearest full number and dial it in on the corresponding sd/SD track. You'll be all mixed up in no time.

Hopefully, the above pointers will help keep your eyeballs from rolling back in your head as you transfer your sequences from the SQ-80 to the VFXsd or SD-1 in your life. Maybe you've been languishing in some multiple note-on nightmare of your own. Well, step back into the daylight. And, by all means, "Stop/continue." ■



Bio.: Robby Berman lives in southern Illinois, surrounded by five cats. His latest furlined recording is his double album, "Rings and Rings."

Syntaur Productions' Sample Disks For EPSs & ASR-10s

Anthony Ferrara

For: EPSs and ASR-10.

Product: EPS 001-002-003 Musical Instrument Sample Disks.

Price: \$9.95 each.

From: Syntaur Productions, 2315 Mid Lane #44, Houston, Texas 77027,
phone: (713) 965-9041.

EPS 001-002-003 is a set of three disks which feature samples from both current and classic sound sources as well as the wizardry of Sam Mims. *Hacker* readers should be familiar with Sam from his monthly *Hackerpatch* column and occasional feature articles. His soundsets for the ESQ-1/SQ-80, along with various sound effects disks for the EPS-16 PLUS/EPS, are known to you guys as well. Sam called me recently from his current tour in Malaysia where he was supporting an Asian pop-star, mentioning that he's planning more disks, with a set of drum samples originally sourced at a recording session in Florida.

The enclosed documentation for this disk set states: "Each disk contains at least 1540 blocks of sample data." Further details about the three disks are not really included, as there is no booklet describing the sampling processes, patch selects, etc. After having reviewed some of the Ensoniq EPS-16 PLUS/EPS *Signature Sets*, I've come to take such information for granted. Sam's approach seems to focus his energies on the highest quality sampling and formatting possible, without worrying about such frills as a manual or demo sequences. Here are my impressions, manual notwithstanding:

Disk One (EPS-001) contains five samples from the Kawai K4 synth, which despite its budget price, is known for some great sounds. K4 BELL PADS (345 blocks) is pretty self-descriptive and VFX-ish. K4 BUCCHUS somehow reminds me of the taped string sample (in this case, with a human voice layered in) found on the original Mellotron, favored by such '70s progressive rockers as Yes, King Crimson, and Genesis. Very impressive, especially when considering the relatively light weight of only 358 blocks. K4 PLANET PAD (322 blocks) is a light, atmospheric variation on K4 BUCCHUS with interesting swells and mutes on the patch selects.

K4 VOICES is a male vocal pad which consists of three samples, which would nicely complement the female samples found on the ED-004 (ANNA-VOXES) and ED-12 (CHOIR GIRLS) disks included with the EPS-16 PLUS. K4 DIGA-LOG, is quite useful at 175 blocks, with breathy bottle sounds and percussive attacks. Sam feels that these samples sound "bigger" than the original K4 because the EPS-16+'s

great synthesis ability allowed him to manipulate the samples to have more presence than the K4.

Disk Two (EPS-002) contains Minimoog Bass 1 (94 blocks) and Minimoog Sweeps (1451), with the sample source being obvious. Minimoog Bass 1 is similar to Ensoniq's HOT MOOG, although Sam's version has a bit more of a heavy and punchy edge to it. Excellent choice for a prog-rock or dance bass line. Sam chose to stick with the flavor of the original Moog by preserving the legato mono-mode, as the envelopes in this sample will not re-trigger when played with legato articulation. Minimoog Sweeps consists of a single waveshape, with the classic Moog white noise (minus the pitch) taking over above C5. Interestingly enough, the Minimoog itself was monophonic, while Sam's version is polyphonic, which certainly adds something in the way of practicality to the limitations of the original. This was Sam's intention. The patch selects are absolutely wild, ranging from fast stereo pans to a reverse of the attack-decay-sustain-release envelope of the 00 patch.

Disk Three (EPS-003) rounds out this set with three samples from one of the newer E-mu instruments, the PRO/CUSSION drum module, which actually draws its material from the Emulator III library of 16-bit samples. E-mu Clavarimba (110 blocks) is a single, perfectly useful, crystal-clear marimba sample. E-mu Rap Kit, at 557 blocks, is one of the most interesting rap sets that I have heard. E-mu Rap Stuff (912 blocks) is more of the same, along with the obligatory needle scratches on the turntable. The usual grunts and deep groans often found on a Rap-oriented disk of this type are conspicuously absent.

So who of you folks might best use these disks? Probably they would be most useful for dance and rap applications, as well as (particularly with the Moog and K-4 disks) prog-rock. I can envision the E-mu Clavarimba sounding right at home in a contemporary jazz or academic idiom.

This stuff is good.

One important observation would be that extremely high-quality disks of this sort are going to run you about \$10 each, well worth it. Each disk, by the way, can be ordered separately. A booklet, info about the source instruments, as well as some discussion of the sampling techniques used would have greatly enhanced this set. I can't help thinking how helpful it would have been to have had a few demo sequences to show how Sam envisioned using the material. Maybe next time. I

readily admit that this is certainly not essential to hardcore Hackers who are probably more interested in auditioning sounds within the framework of their own sequences.

These observations do not detract at all from the otherwise flawless sonic quality of these sample disks. A final bit of good news is the fact that these disks are completely compatible with the new ASR-10. If EPS 001-002-003 are a good indication of the outstanding quality that we can expect from Syntaur Productions, I would suggest that you order these (and future) disks from Sam with total confidence. ■



Bio: Anthony dreams of a ten record deal with a major label, a beach front house in Malibu, and a Ferrari Testarossa. He presently settles for a black Ford Probe, and an independent release on his own label, which was reviewed in the July '92 Hacker. Although a long-time resident of Philadelphia, he still refuses to say "yousee."

Listening In On Customer Service

Dennie Edwards

Hello again from Malvern, PA. This is Dennie Edwards, Customer Service Rep for the Northwest Region, and it's time again to share the most frequently asked questions by customers on our customer service line — (215-647-3930).

The following question applies to all EPS, EPS-16 PLUS, ASR-10 samplers. The answer outlines a quick and dirty approach to the process of making samples smaller. For more in-depth information and explanation, please refer to the Edit/Wave and Command/Wave sections in your owner's manual. Next month Tony Ferrara will look at synchronizing Ensoniq workstations to the popular Tascam 644/688 cassette home Midistudios.

Q. How do I make samples smaller?

A. Step 1: Look at the frequency response of the sound source that you are going to sample. If the sound source has a fuller frequency response like a cymbal or similar instrument, then a sample rate of 44.1 kHz should be used to sample the instrument into the digital domain. If the sound has a response of 15 kHz — drums, guitars, pads, most voices, etc. — then use a sample rate of 29.76 kHz.

Step 2: After you get a good clean sample and normalize the gain, convert the sample rate and truncate to optimize memory allocation. Both of the commands can be found on the Command/Wave page of the EPS, EPS-16 PLUS, and the ASR-10. Truncating data is simply re-allocating memory not needed for the sample back to the dynamic RAM of the machine. Let's look at an example. If your sample parameters are as follows — Sample Start=(02), Loop Start=(37), Loop End=(63), and Sample End=(63) — then you can truncate the sample and re-allocate the memory used before the Sample Start=(02) and after the Sample End=(63). Notice that the coarse adjustment numbers (in parentheses), will change to

match the percentages of the length of the newly edited samples. Sample Start will now = (0) and Sample End will now = (99). After the sample has been truncated, it is ready for the final step.

Step 3: Now convert the sample rate. For this example, let's assume that the sound was sampled at 44.1 kHz. The sample rate can be found by pressing Command, Wave, scroll using the left and right arrows to the Sample Info page, and then pressing Enter/Yes. Next, press the Edit button, underline LYR=?, choose the appropriate layer, underline ws=?, and then play the root key of the sample. We have just selected the wave sample to edit.

Step 4: Press Command, Wave, and scroll until you find Convert Sample Rate. Press the Enter button. The current sample rate should appear. Select the sample rate to convert to, selecting a lower rate. Try a number around 29.76 kHz. Press Enter and use the Audition Page. If you can't tell the difference between the new and old, save the old data. The machine will ask if you'd like to "redo conversion." After answering Yes, you can now try another conversion with an even lower sample rate. This process should be repeated until there is an audible difference between the original sample and the new edited version. Next, simply redo the conversion with the lowest rate that produces the most desirable sound and save this edit. ■

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Programming the DP/4

Dennie Edwards

One of the most important ingredients in musical production is signal processing. Signal processing takes ordinary sounds and brings them to life. It can bring clarity and separation to the ear. Signal processing creates a picture to the ear and mind similar to the way visual arts bring paintings to the eye and mind. So with this in mind, let's learn how to paint with a new and innovative paint brush...the DP/4.

A major key to unlocking the power of the DP/4 is to understand exactly what it is. It may appear to be as simple as a little box that stands only two rack spaces tall, but we can't judge a book by its cover and neither can we look at the DP/4 and call it just another effects processor. First, we will review just what is inside the DP/4.

The heart of the DP/4 contains four 24-bit Ensoniq Signal Processor (ESP) chips. These ESPs are connected with a digital patchbay and are mixed with a digital mixer. Because of its unique construction, the DP/4 may be considered the most flexible effects product ever invented. With the ability to patch effects in series, parallel, and with feedback loops never before possible in conventional units, the DP/4 delivers audio quality that rivals products costing hundreds of dollars more.

We'll begin with the types of presets and examine the most powerful of all presets, the configuration, or config preset. Depending on the number of inputs, there are many different presets to choose from. There are two hundred ROM and two hundred RAM presets.

The first preset is the one-unit preset. Simply put, it is used when one wants to use one effect unit at a time and several independent sources. A one-unit preset consists of an algorithm and all of its specific parameters. An algorithm defines what type of effect(s) will be loaded into each ESP chip.

The second type of unit preset is called the two-unit preset. These include more complex effects that require two processors or two processors used in series, parallel, or feedback loops. Also, there can be multiple input sources, both stereo and mono.

The third type of preset is that of the four-unit preset. This preset is a snapshot of all four units at a time. This preset is used with a one-source input, whether it is mono or stereo. Using this type of preset can give the user some of the most wonderful sounds available. Imagine the possibilities of using four 24-bit ESPs for one source!

The most powerful of all presets is the config preset which is the main topic of our discussion here. Also, included in the following are some helpful short cuts and tips on general use of the DP/4. Understanding the DP/4 config preset will unlock the power of the DP/4.

What is a config preset?

Config presets let you save all input source configurations, effects algorithms, signal routing, and mixing of all four units. There are 100 config presets in the DP/4 (50 ROM and 50 RAM). Presets 50-99 are the ROM and 00-49 are the RAM.

Before we get started, we must prepare the DP/4 for our advanced use. System parameter number 59 is "Show 100 config presets=(yes/no)." Let's throw caution to the wind and set this to Yes. We now can select all 100 config presets! First, press System/MIDI, then using the right arrow, scroll to parameter number 59. Next, turn the data knob, the large silver round thing, and change the parameter to Yes. Now we will select some presets.

To select a config preset, first press Config, then use the data knob to scroll fast through the 100 presets. Next, press the Select button. We have just selected a config preset. As long as the LED above the config button is lit, we can select config presets. Let's go a bit further. Now press the unit A button. Notice that the display for unit A shows the preset effect and the algorithm that is used to create that preset. The presets that we will have access to by turning the data knob, will be determined by the input configuration loaded by the selected config preset. When a one-source config is selected, four-unit presets can be selected. If the source config is a two-source config, then we can pick two-unit presets, and lastly, if there are four independent sources, a single unit preset can be chosen for each unit.

Before we talk about editing a config preset parameters, let's edit single unit parameters first. Select config preset 00, "MonInVocalSetup." (Press Config, use the data knob, then press Select to confirm.) Next, press the unit A button. Cmp should be capitalized in the display. Each of the four abbreviations for the effects that are found in the bottom row of the display corresponds to each of the four units A, B, C, and D. The currently selected unit will have its effect abbreviation capitalized. Go ahead and try pressing each of the unit buttons and see how it works. With the A unit selected, press the edit button. Parameter 00 should appear. If not, use the left arrow to scroll till the LED display says 00. The display

now reads "A: EQ-Compressor, and Mix=99, Volume=86." Here, we can select a new algorithm by using the data knob. After we stop on a new algorithm, the unit will pause and load the algorithm that we selected. Now we can use the left and right arrow buttons to select parameters and the data knob to enter values.

If we want to save our edits, simply push the Write button. Now use the data knob to select the location to save the new preset. If we want to save our edits as a config preset, press config before the Write button. Remember that we can only save presets to RAM locations 00-49. Next, press the Write button again and use the left and right arrows to select which character position, and the data knob to select which character for that position.

Here's a neat shortcut. If we press the unit buttons, a different character group will be selected. For example; A will select the capital letters, B will select the lower case letters, C will select the numbers, and D will select miscellaneous symbols.

There are many other shortcuts in the DP/4 that can help make things a little quicker. For instance, when selecting system parameters, you can scroll through them very quickly by pressing and holding an arrow button in the desired direction and using the data knob to quickly scroll near the desired location. Then we can go one parameter at a time using the conventional way. Also, we can press the unit buttons to move ahead seven parameters at a time. These are also parameter groups that correspond to the particular unit pressed. Try it and see. Bypassing a unit is as easy as double clicking the unit button until the red LED is lit. To bypass all units, double click on the config button.

Another shortcut is to swap the parameters between two units without having to enter them in one by one. In the Edit mode, press the Write button. Press and hold the first unit to swap, then press the second unit. The display should say, "Hit <WRITE> to Swap Units x & y."

What if we do not like our edits? As with all Ensoniq products, there is an edit buffer. Press the Edit button to get back to the original preset. There are also ways of recalling factory

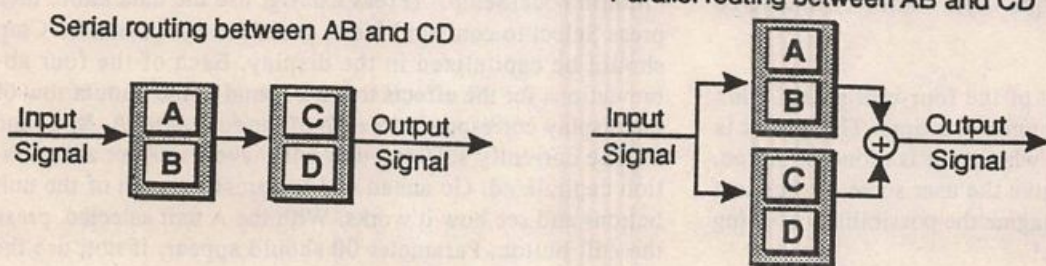
presets. Press and hold the System button and press the B button to initialize the RAM presets. Pressing the right arrow button will re-initialize the system and also recall the factory presets. Pressing and holding the system button while pressing the A unit button will act as a panic button and reset the DP/4. The wake-up message will appear and the DP/4 will be fresh without erasing a single parameter. What if we like the first 50 presets of a given type (one, two, four, or config) and do not want to write over those? Simply press system, then select parameter number 62 and change the "Use Alternate ROM Presets=No" to "yes." Presets 0-49 are now in locations 50-99. Very flexible. After toying with these features it is now time to get our hands dirty and do some config preset editing.

Editing a preset is very much like editing any of the other presets. First, select a config preset to edit. Press config, then use the data knob to select preset number 00, "MonoInVocal-Setup," then press the select button. Next press the edit button. Make sure that you are at parameter number 00, "1 Source Config." Remember, the left and right arrows select which parameter and the data knob changes the value. If we move the data knob we will select one of the config types. When we stop moving the data knob, the display will flash, "Updating Config." To continue editing the config parameters, press the right arrow button. Let's look at the specific parameters.

Parameter 00 is the Input Source Config. Config preset 00's source config is the 1 Source Config. The display Shows, "1 Source Config" on the top line, and "12> ABCD" on the bottom line. This means that inputs 1 and 2 will feed units A, B, C, and D. Use the data knob and select each of the different settings, 2 Source, 3 Source, and 4 Source. There will be different pages here depending on the input source configuration. The owner's manual has more information on those input config dependent parameters.

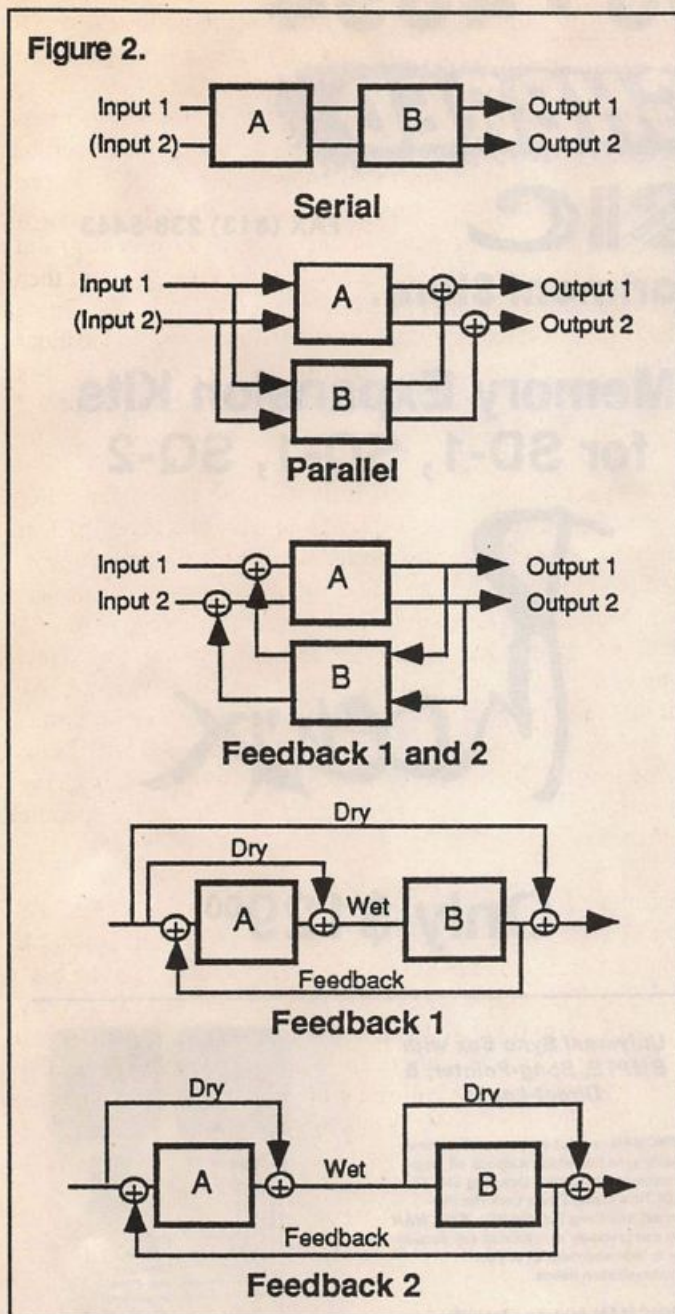
Reset the Source config to the "1 source config." Next, press the right arrow button. This parameter, "AB-CD routing," determines the signal path between the unit group AB section and the unit group CD section. There are two possibilities, series and parallel. (See Figure 1.) Now we will look at the signal routing between A and B, and between C and D. These

Figure 1.



are parameters 02 and 03. There are four possible routings. The difference between Feedback 1 and Feedback 2 is in the way the dry signal is mixed with the wet signal as shown below. Also, parameters 04 and 05 are dependent on parameters 02 and 03. (See Figure 2.)

Figure 2.



Parameter 06 in the 1 source config is the AB input select. If the display shows (12) this means that the input will be in stereo using inputs 1 and 2. Therefore, the (1) means a mono input using input 1.

The next of the basic config parameters are parameters number 07 (unit A), 08 (unit B), 09 (unit C), and 10 (unit D). These parameters determine what the bypass function (double clicking on the unit button until the red LED is lit) does to the output of each unit. If it is set to (b) bypass, it is like setting the Mix to 00, and if the parameter is set to (k) kill, it is like setting the Volume to 00. Depending on the input source, the config parameters can differ slightly. On page 3-6 of the

DP/4 owner's manual are 18 of the possible 36 ABCD Routings. As we can see, the possibilities are almost unimaginable. Go ahead and experiment — remember we can get all of the factory presets back.

The above parameters are the most important ones in setting up the config parameters. Remember that editing a single unit is very similar. Just press the unit button, A, B, C, or D, then press the edit button. Also, a config preset remembers all parameters for the units. In future articles we will discuss more about editing individual units.

Other important parameters are found in the System/MIDI pages. These parameters control the entire system. First, we will again mention System parameter number 59. The default setting is "no" for software versions before 1.00. To unlock the full potential of the DP/4 it should be set to "yes." Another one is System parameter 56, "Set all 1 Unit Pset mixes to wet= yes/no." This is a great parameter! If you're using the DP/4 with a mixing console for live applications, this parameter is very handy. The mix output of all units will be wet. This is really great when using units in parallel and have a one source input. The same principle can also apply to multiple input configs. We can then use the Aux returns or separate channels on the mixing board to control the sound system effects mix. Bypassing a unit when set to kill will not cause an increase in volume and the mix levels on the board will not have to be adjusted.

The last parameter we will discuss is that of system parameter 63, "Ensoniq * DP/4 OS version x.xx." This may not seem important, but can be useful when referring questions to the local dealer or even in speaking with the Ensoniq Customer Service Department (215-647-3930). Very few people know how to find this information in their computerized musical equipment, whether it's a keyboard, computer software, or effects processors.

The DP/4 is a very flexible product. It is important, however, to not get tangled up in its flexibility. The best advice is to take it slow. Try to learn a little every day or so. The manual is intended as a road map or a guide book. It will not tell us where to stop on the road to a successful music project — that is entirely up to you. The DP/4 will only help you get there sounding much better. ■

Bio: Dennie Edwards is the Customer Service Representative at Ensoniq for the Midwest Region. While living in the Philadelphia area, he uncovered the secret of the Quakercaster electric guitar.



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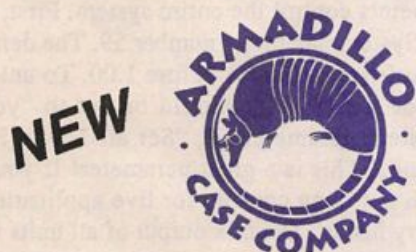
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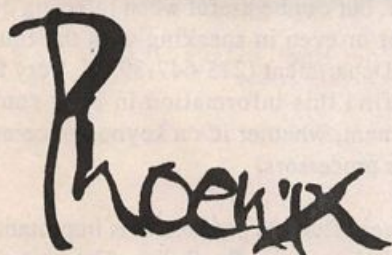
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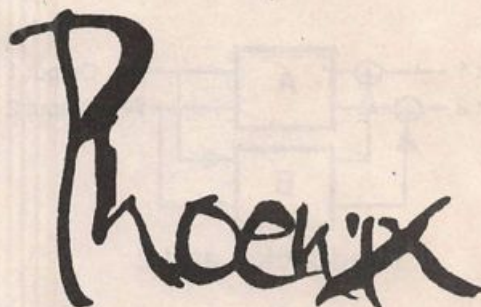
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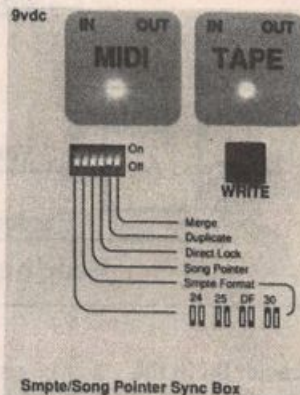
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Waveform Mutilation 101 for SQs and KSs

Part 9: Catching the Expansion Waves

Jack Stephen Tolin

Ever since the beginning of sound synthesis, people have wanted to be able to have access to as many different waveforms as possible. It would follow that, even though modulation possibilities may be quite numerous, the more waveforms you have to work from, the more possibilities there are for variety of end-sounds. And the more end-sounds you have access to, the more options of musical creativity lie in potential.

This brings us to April, 1992. Ensoniq announces an update for SQ-1 owners which would bring them to SQ-1+ 32 Voice status. This means that one may obtain 11 more voices, a megabyte of 16-bit expansion waveforms plus a megabyte of 16-bit piano waveforms for those who had not previously upgraded to SQ-1+ status, as well as 80 new programs utilizing the new waveforms — for only \$499. In the words of an Ensoniq rep, it was like purchasing another synthesizer. About a month later, Ensoniq sent out postcards notifying SQ-1 owners that all was ready for them to send in their units for making the upgrade. All they had to do was call Ensoniq with the serial number and write down the authorization number they were given. After that, it's simply a matter of sending the thing in with the authorization number on both sides of the box. Simple?

The expansion waves, in their proper order, include the following:

Viola Sect	Shakuhachi	Syn Rimshot
Solo Violin	Timpani	Vocal Aah
Nylon Guitar	Vibes	Vocal Unh
Harp	Agogo Bell-2	Vocal Uhh
Shamisen	Shekere	Vocal Teh
Elec Piano 1	Taiko	Dance Kick
Elec Piano 2	Taiko Rm	Enka Kick
Perc Organ	Whistle	Long Rap Kick
Mute Trumpet	Shaker	Dance Snare
Soprano Sax	Conga Slap	Hiphop Kick1
Accordion	Triangle	Hiphop Kick2
Fretless Bass	Castanets	Hiphop Snare
Slap Bass	Hyoshigi	Full Pipeorg
Synth Bass-3	Synth Kiss	
Choir	Syn Cowbell	

"But," you may well say, "how do they sound?" This is, of course, what it all comes down to anyway. So, for those of you have made the upgrade, I've decided to do something a little different with this month's installment of WM 101. I am offering a Hackerpatch for those old ROM sounds that have

refused to become outdated. The catch is that we shall look (or listen) to these sounds from the standpoint of using the expansion waves. If nothing else, it should give you a feel for some of the new waveforms, offer you some new sonic contexts, as well as some new and usable sounds by giving life to old sounds.

So let's begin.

Select "ROM 62 Phaser Bass."

Step 1. Press the Sound Edit button.

Step 2. Hit the Wave bank button.

Step 3. Now hit the screen 0 button. This is the first screen for each bank.

The screen should read:

```
SelectVOICE:ONE
ON      OFF  OFF
```

Step 4. Make sure "ON" is selected

Step 5. Hit the screen 1 button.

The screen should read:

```
Wave=BASS WAVE
PLUCKED BASS
```

Step 6. The upper line is wave class. Make sure this is selected.

Step 7. Press the ^/Yes button until you arrive at the final wave class.

Step 8. Select the lower line. This is wave. The screen will read:

```
Wave=EXPANSION
VIOLA SECT
```

Step 9. Press the ^/Yes button 13 times. The wave appearing should be "SYNTH BASS-3." Now try it out. Instant multi-purpose bass. Simple? Make sure to save anything you wish to keep.

Now, select "ROM 58 Dyno Lead." Follow Steps 1-3 as specified in the above example. The screen should indicate all voices to be "ON."

Step 4. Make the upper line read, "SelectVOICE:ALL."

Follow Step 5. The screen should (or might) read:

```
WAVE=WAVEFORM
DIGITAL PNO GRIT
```

Follow Steps 6-8.

Step 9. Press the ^/Yes button 6 times. The wave appearing should be "ELEC PIANO 2." Press screen 0 again and change "ALL" to "ONE." Then hit screen 1 again and press the No/v button. The waveform appearing should be "ELEC PIANO 1." Now, go back to screen 0 (getting dizzy yet?) and change "ONE" to "ALL." Hit the Pitch bank and screen 0 buttons. The screen should read:

Oct=+1 Semi=+00
Fine=+05

Select "Oct." Press the No/v button — screen should show the Oct value to be +0. And here, avid readers, is an updated version of a hip (electronic) electric piano.

Now, select "ROM 19 New Horizon." Follow Steps 1-3 as above. Voices 1 and 2 are ON. Select voice 2. Change the wave on screen 2 "VIOLA SECT" of the EXPANSION waves. Hit the Amp bank and screen 0 buttons. The bottom line should read, "Time=42 71 79 46." Change time one (attack time) to 10. Go back to the Wave bank and select Voice 1. Then go to screen 2. Change the Wave class to "EXPANSION" and select the wave ("VIOLA SECT"). Hit the ^/Yes button 17 times. The screen should read "VIBES" for the wave. Next, go to the Filter bank, screen 0. The screen should read:

Filter1=3LoPass
Filter2=1HiPass

Change Filter2 to equal 1LoPass (without changing Filter1). Now we have a "Newer Horizon" to shoot for.

For some quickies, utilize the steps you used from above and change the waveforms (and assorted addendum) to the following:

"ROM 07 L.A. BRASS"; Voice 1: VIOLA SECT
Voice 2: SHAKUHACHI
ALL (Output bnk, scrn 3):Pan=+00
Effect: CHORUS & REVERB

If you've ever wanted a somewhat different type of string sound that has a unique, unorthodox timbre movement to it, this may be what you are looking for. Bordering on the Oriental, the attack of the Shakuhachi waveform is present, quickly mutating into a more descriptively definitive string sound provided by the Viola Sect.

"ROM 25 Harpsichord"; Voice 1: SHAMIZEN
Voice 2: HYOSHIGI
Voice 3: CASTANETS

Her is some sort of Oriental instrument with a nice "castanetic" percussive hit on key-up. As a playing technique, try using fourths (or just the black keys) and hit following keys just as you release the preceding keys. This sound works well

with world music types.

"ROM 27 Heavenly"; Voices 1 & 3: CHOIR

Although this change of waveform may seem like a minor one, this new patch (remember that word?) works very effectively in inspiring one to get excited in a tingly mellow sort of way. Try playing a root C minor chord (C-Eb-G) followed by a second inversion Eb minor chord (Bb-Eb-Gb) without resolving (or use root bass notes to accompany.) If this doesn't inspire you...

"ROM 28 Out Vox"; Voice 1: VOCAL TEH
Voice 2: TAIKO RM
Voice 3: SYNTH KISS

I think this is an excellent strange-percussion-effect sound. I like how each voice scatters across the channels. My applause to the original programmer for some great work! CAS-TANETS also works quite well for Voices 1 or 2.

"ROM 45 Burnin' Sax"; Voice 1: PERC ORGAN
Voice 2: FRETLESS BASS

Here is a nice setup for just about any of the expansion waves. Use Voice 2 for waves like SOPRANO SAX, SOLO VIOLIN, NYLON GUITAR, MUTE TRUMPET, as well as other long acoustic waves. Of course, you may desire to turn off Voice 1 or choose another attack wave a la Cross Wave Synthesis.

With such an easy way to edit sounds, it is even easier to add to one's arsenal an astonishing array of variety and creative potential — simply try different waveforms. Changing the waves is the most simple way of altering a sound. Consider light, if you will. A difference of wave is all there is to distinguish between red and green. Quite a difference I'd say!

Well, that's all for this installment. Keep those waveforms mutilated! ■



Bio: Jack is currently a psychology major at Eastern Nazarene College in Quincy, Mass. and performs at Boston area churches with his musical group, "Clay in Hand."

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Well, it's time to throw some more samples in the stew this month; it's been a little bland lately. We're gonna try some genuine Ensoniq nybbles and see what the secret ingredient is that makes their samples so superior. Let's give a critical listen to some disks that arrived at my door recently, the long-awaited ESS-15 Joey DeFrancesco B-3 samples. . .

First things first: I'm VERY critical of B-3 samples. I dragged a B-3 and Leslie around for 14 years, hot-rodded Leslies with JBL components and Crown DC300As, modded B-3 preamps and installed impedance-matching stuff so you could run your B-3 through a Dual Showman w/JBL D130F's and 075 rings to get the Brian Auger Sound. For the Jon Lord (Deep Purple) sound you just wired a patch cord from one of the "G-G" terminals and a ground and just plugged straight into an old powered Altec 1210A (the portable version of an old A7-500 "Voice of the Theatre" cabinet). I actually made a Leslie that was louder than our guitar player's Marshall; not very pretty, mind you, and weighing 230+ pounds, but the organ would SPEAK. It is in this mindset that Ensoniq approached this sampling session, so I spent hours comparing these disks to my old mastodon.

Disk ES-048: Solo Jazz B-3: 1534 blocks

This is the definitive Jimmy Smith B-3 sound, first 3 drawbars all the way out (16', 5 1/3', 8"), percussion full on, fast decay, third harmonic, vibrato set to C-3 (chorus vibrato). The sample is actually looped to give the effect of the Leslie being set to slow speed (chorus). This is as perfect a sample of the B-3 as I've ever heard, and here's why: B-3's are mechanical, inductive beasts, (Hammond was originally a clock manufacturer), and with two motors whirring so close to the matching transformers on the drawbars, a fair amount of 60-Hz hum is present in the signal. It's a characteristic of Hammond organs, and this disk is the only one I've ever heard that captures that quality. Even the new Suzuki/Hammond XB-thing doesn't have it. Patch 00 is that exact sound, Patch 0* pans bass left and treble right, *0 softens the percus-

sion a little, and ** autopans signal left to right, sorta like having two Leslies.

Chorus vibrato was way too fast at E5-F5 due to stretching that particular sample a little too far, so I adjusted key range of the next sample down over E5 and F5, and it's perfect. The key click was a little out front (we used to light smoke bombs in B-3's to dirty up the contacts to get more key click in the late '60s), but that's deliberate, as the docs note the organ was sampled both acoustically (with mics on the Leslie rotors) and a direct send off the organ preamp. I edited the filter settings to taste.

WOW! Till now my Malvern hero sample was the original Upright Bass from the Mirage library; it just got displaced. This disk, with a little tweaking, sounds just as good on my original EPS Classic as it does on the '16+. Turn off the hall reverb on the '16+ and the sound is indistinguishable from the EPS Classic. Scotty Frankfurt nailed this one. A B-3 mirror...

Disk ES-049: Split Jazz B3: 1571 blocks

Very similar to Solo Jazz B-3, except from middle C (C4) down, the sound is percussionless (you don't want that "bonk" on your bass line anyway) and sounds as if the 5th (drawbar #3) is pushed in to about 4 (on the drawbar's 1-8 scale). With Patch 00 mod wheel controls Leslie speed. Other patches seem to select reverb instead of the rotary speaker effect. The bass seems a little buzzy, but it's in the sample, not the loop. Again, editing the filter settings produced what I was looking for. That appears to be a common trait in Ensoniq samples: they overstate (oversample?) the sonic character of instruments, knowing that it's easier to tweak stuff out of a wave than into it. Smart ...

This disk isn't as transportable from the '16+ to the Classic since the Leslie is an effect algorithm, but tweaking wave levels and layers produced credible B-3 results.

Disk ES-050: JD Organs 1-4: 69-374 blocks

This disk is for EPSs with a memory shortage and/or sequencing purposes where 1571 blocks is just too much precious memory to surrender. JD Organ 1 is a good representative of a Leslie with the HF driver ready to explode. Not

as angry as the "Mad Organ" from a U-20, but just as hellish bent. Patch selects add an octave above, some stereo effects, and the required rotary speaker effect. 371 blocks of whirling dervish...

JD Organ 2 is lighter, more of a Hammond pad that doesn't take up as much space in your mix. The accent here is not as much 5 1/3" (drawbar 2) and not as thick and heavy as the meat and potatoes B-3. It sits well in the stereo spread and leads the mix instead of taking it over. Patch selects add an octave above or below with the obligatory mod wheel speed control. 363 blocks of understated organ pad. . .

JD Organ 3 is quite slick. At 69 blocks, unexpanded EPS owners will use this instrument to death. This is your standard, smoky lounge B-3 with percussion, 2nd drawbar, and upper octave under patch select control. Very trick. Good all-around representative B-3 in an unbelievably small block count. I've done B-3 samples in 19 blocks, but they take 2-3 detuned layers to sound decent, and reduce overall polyphony in the process. This instrument has all the options under the patch buttons, and sounds crisp and very clean. All the right stuff in 69 blocks; this'll be a very popular selection among mondo sequencing instruments.

JD Organ 4 is your classic "As The Stomach Turns," soap opera Hammond. Ultra whitebread samples of even-ordered harmonics (16', 8', 4', 2', and 1' drawbar registration) with the fast Leslie built into the sample. Unless you play baseball stadiums or hockey arenas you probably won't use this one very much. Patch buttons select brighter harmonics (drawbars), and loads and behaves much the same way on an EPS Classic. Lawrence Welk might come back for this one...

And finally, "B-3 On-Off." Someone needs therapy in Malvern. Just to complete this collection, they sampled the "Start" motor of a B-3 winding its tone wheels up to speed. 530 blocks of a sound familiar to only those who grew up on a Hammond organ, sampled to DAT in digital splendor. Patch buttons select pitched variations (s-s-sampler abuse) and reverse the start motor sample to simulate shutting the B-3 off. A little editing is necessary since the B-3 winds down faster than it starts up, and it's much quieter coasting down-speed when switched off, but I'm gonna get critical of this Prozac-inspired sample? NOT! Cheeky stuff from some pretty deranged sampling minds...

As always, the documentation is the best there is, with the familiar tongue-in-cheek humor indicative of Ensoniq docs. Talk about thorough; on the 1500+ block instruments (ES-048 and 049) EVERY note was sampled four or more times. Turbosynth was used for the smaller JD organ samples on the ES-050 disk. Patch selects are well thought out and provide major variations of the selected instrument. Did I mention user-friendly? Bank loads are supported for demo purposes, something you don't see many third party vendors supporting (hello!). The demo sequences are pure DeFrancesco,

the open 4th thing in the left hand with the blinding right hand solo barrage. I'm surprised Ensoniq didn't include some Grady Tate drum samples and Wes Montgomery guitar licks. The Verve/Blue Note Signature Series?

I spent years experimenting with B-3's and Leslies getting a setup that would not only give me the classic Young Rascal's Felix Cavaliere B-3 sound, but the tortured scream of burning WEM drivers in Keith Emerson's upper-rotor-only Leslie half-stacks. While nothing sounds like a 122 and a 20 watt Jensen driver giving up the ghost, the DeFrancesco package is the most accurate representation of the venerable B-3 you're gonna find anywhere. From the "fingered" percussion in Hammondspeak (the "Legato" layer in Ensoniqspeak) to the lower rotor rotating in the opposite direction of the upper horn in a model 122 Leslie, these disks represent the best B-3 samples I've ever heard. Joey DeFrancesco's sequences are a real bonus; technique is better than half the art of playing a B', so slow those sequences down and pick up on what he's saying here. A bargain at any price, a steal at \$40. Knockout sound, knockout chops...

I'm off with these disks to sequence Jimmy Smith's "The Sermon" ... ■

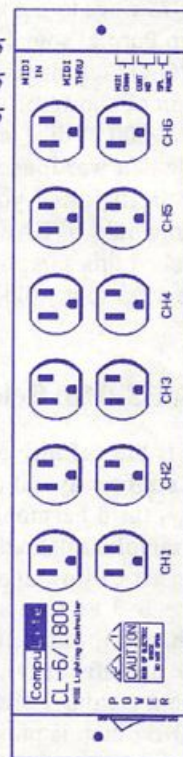
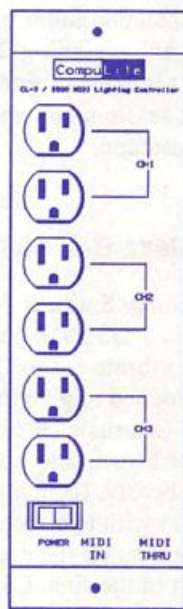
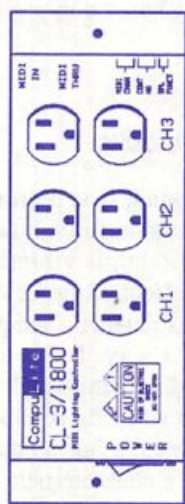
Bio.: Pat Finnigan is a service tech turned musician who writes secret messages in sequences on his EPS.

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An SQ-R Primer For ESQ-1/SQ-80 Owners

Part III of III

Brian Rost

This series of articles is aimed at getting ESQ-1 and SQ-80 owners up to speed on integrating an SQ-R module into their setup. It is broken into three parts. In Part I, we looked at fundamental differences between the ESQ-1 and SQ-R architectures. In Part II, we examined how to use the SQ-R Smart Transmit feature to add powerful controller capabilities to the ESQ-1 in live performance. Now, in the final part, we will explore using the SQ-R in a multi-track sequencing environment and wrap it up with a discussion on using the SQ-80 disk drive to store SQ-R patch and preset data.

Sequencing

So far we have looked at real-time applications of the SQ-R. Much of what we have seen already about programming the tracks still applies when the SQ-R is in MULTI mode, driven from the ESQ-1 sequencer. The main thing to remember is that when in MULTI mode, the SQ-R will still do retransmission, but the rechannelization function used in OMNI and POLY modes is not available. Thus, if a given track is on MIDI channel 3, for instance, it only responds to information on that channel.

In MULTI mode, the base channel of the SQ-R is used mostly for selecting presets. The channel chosen as the base channel should not be used for any of the tracks within the preset. Program changes on the individual tracks will be made both when a new preset is selected and when a program change message is received by any of the eight tracks. The track volumes are now under control of the ESQ-1 sequencer MIX/MIDI Page, but for consistency it is best to set all SQ-R tracks to a volume of 99. It's unlikely all eight SQ-R tracks need be used, since there are only eight ESQ-1 sequencer tracks. There is no reason to assign tracks for ESQ-1 sounds in MULTI mode.

One bug of the SQ-R when sequencing with the ESQ-1 is that when the ESQ-1 sends out the program and volume change messages at the head of each sequence, the SQ-R will not recognize the volume message on the currently selected track. In fact, that track will go to whatever volume is programmed into the MIX bank. If further volume changes are then sent (for instance, by manually changing the volume setting on the MIX/MIDI page) the SQ-R will respond. All non-selected tracks respond to all the volume messages fine. Since selecting a new preset always causes track one to be selected, one way to avoid problems is to always have track one of the SQ-R preset turned OFF. This leaves only seven tracks (which will be sufficient in most cases). The bug shows up only when the volume message comes immediately after the program change message. If we drive the SQ-R from a computer-based sequencer where such messages can be arbitrarily separated in time, the problem disappears.

Before starting to play a sequence, we will want to select a preset on the SQ-R. To do this, we must be in Select Preset mode, either by pressing the front panel button or sending patch change 123 to the SQ-R on the base channel. For this purpose, set up a sequence template on the ESQ-1 that has but one track enabled. Set this track to the SQ-R base channel, set the Status to MIDI and set the program number to 123. Every time you turn on the SQ-R, merely selecting this template on the ESQ-1 will put us into Select Preset mode.

As mentioned earlier, since the SQ-R has a maximum of 340 patch locations, sending patch changes in the range of 124 to 128 to the SQ-R tracks will select one of the four banks, INT, ROM, CARD A or CARD B. Setting up an ESQ-1 sequence template which sends the appropriate program change on the desired tracks will take care of bank selection easily enough. If we want to place this template at the beginning of a song, it must have some data in the sequence. A good way to do this is to record a single note into one track, then delete that note using the step editor. In addition, saving this sequence at maximum tempo will minimize the delay between pressing PLAY and actually hearing the music begin. However, once a bank has been selected for an SQ-R track, that bank will be used for the entire song, unless we make special preparations. This is because the only place program changes may be sent is at boundaries between sequences. If we attempt to insert a "blank" sequence in a song to force a bank change, the ESQ-1 will actually skip over that step within a song.

The only ways around this are ugly indeed: either we insert a very brief sequence into the song (causing a pause in the music) or we store patches in locations such that patches to be used in succession are in identically numbered locations in different banks. Because of this, it is best to earmark tracks in a song to use only patches from one bank. One exception is that a patch change in the range of 81-100 will select the factory drum kits stored in the ROM bank regardless of which bank is enabled on the track.

Another SQ-R feature that is difficult to use from the ESQ-1 sequencer is using program change 124 to signal an SQ-R track to take whatever effect is programmed into the next patch to be selected and apply this to all patches in the preset. The problem here is identical to what we saw in selecting patch banks, namely sending two patch changes back-to-back from the ESQ-1 sequencer is essentially impossible when in the middle of a song.

One last thing to be aware of is that when a new preset is selected, the audio output of the SQ-R will glitch if any notes are still sounding. This is due to the effects processor. For this reason, it's a good idea to try to stick with one preset through-

out a song. If you have to change presets mid song, you may want to set the SQ-R Voice Muting parameter in the System menu to ON. While this means held notes are cut off rather than sustained, it does eliminate the glitching.

Other than these things to worry about, sequencing with the SQ-R is smooth sailing. Presets are set up as we did for the Smart Transmit examples (although setting of key ranges is seldom needed). Setting the Pressure parameter for each track is important if using an SQ-80, since the SQ-80 can record key pressure into one sequencer track and channel pressure (or no pressure at all) into another. If channel pressure is sent to an SQ-R track which is set to key pressure, there will be no pressure response. The setting of the sustain pedal response is of similar importance.

Since the patches and volume on each track can be freely changed by the sequencer, it is convenient to think of presets as merely setting up an effect, selecting patch banks and assigning MIDI channels (in effect reversing the roles of the Smart Transmit case where the SQ-R preset controls settings for both the SQ-R and the ESQ-1).

Storing Data On SQ-80 Diskettes

ESQ-1 owners may wish to skip this section, but SQ-80 owners will want to stick around as we see how we can use the disk to archive SQ-R patch and preset data.

Unlike the SQ-80, the SQ-R is always able to transmit sys-ex, while reception is controlled within the System menu. Once reception is enabled, cycling power will not disable it. The SQ-80 must have sys-ex reenabled after each powerup. Don't forget that making sys-ex transfers wipes the sequencer memory. Always take care to save sequence data to disk first!

We will start with a dump from the SQ-R to the SQ-80 disk. On the SQ-80, go into the DISK menu, select SAVE and SYS-EX. Go to the SQ-R, press System and scroll to the page where it says "Press ENTER to store sounds," then press Enter. You will be prompted to select Storage Type, use the YES/NO buttons to select MIDI SYS-EX. Press Enter again and we are prompted "Operation=SAVE." Use the YES/NO buttons to select which bank we wish to save, the current sound (SOUND TO MIDI), or the internal RAM bank (INT TO MIDI). We cannot save the ROM bank or either card bank unless we copy it to the INT bank first. Go back to the SQ-80 and select START, at which point we will be informed that the SQ-80 is waiting for data. Return to the SQ-R and press Enter. The display will indicate the transfer is being made. Go back to the SQ-80, and select SAVE to store to disk. It's that simple! Storing presets is similar.

Transmitting the data back is even easier since it can be done totally from the SQ-80. Go into the DISK menu and select LOAD and SYS-EX. From the disk directory displayed, choose the file you wish to send to the SQ-R. Once the data is read

from the disk, select SEND and the transfer will begin. The SQ-R will accept the dump as long as the base channel is the same as when the data was originally dumped to disk. An incorrect base channel setting is one of the two most common problems in transferring sys-ex (the other is forgetting to enable the SQ-80 to transmit and receive sys-ex after turning it on).

The SQ-80 can handle sys-ex dumps up to 65,535 bytes (64k bytes) in size. It is possible to store any of the four dump types (single sound, single preset, all sounds, all presets) to disk since each is under 64k bytes in size. It is also possible to intermix the following combinations in a single sysex file: single sound plus single preset, single sound plus all presets or all sounds plus single preset. What cannot be saved in a single sysex file is both all sounds and all presets.

One oddity of dumping presets is that in order to maintain compatibility with the SQ-1 and SQ-2, the SQ-R memory has room for a small amount of sequence data. In fact, this is where the factory demo sequence is stored. If you reinitialize the SQ-R the factory demo is wiped from memory and the size of the ALL PRESETS dump is smaller! Anyway, here are the measurements I made of the different dump sizes:

Single patch: 415 bytes
Single preset: 458 bytes
All patches: 32,647 bytes
All presets: 35,980 bytes
All presets plus factory demo sequence: 64,028 bytes

We can see that an "all patches plus all presets" dump exceeds the 64k-byte limit of the SQ-80. We can also see that the SQ-R demo sequence player has room for about 28k bytes of sequence data. Whether or not that can be used through some arcane means (after all, the factory was able to load it!) is a topic for another article, eh?

The order of transferring presets and sequences isn't really important. Just don't try storing two dumps of the same type on one sysex file! When the second is transmitted back to the SQ-R, it will write over the first. Up to ten sys-ex files can be stored on a disk. Remember to give the disk files unique names to make it easy to locate them later. Since the files are stored as they were transmitted from the SQ-R, it's possible to dump them out of the SQ-80 to another disk filer (like a computer running a bulk dump utility) or to an SQ-1 or SQ-2 synth.

Well, that's it! I hope these articles have helped clear up some grey areas for those of you who have been grappling with the SQ-R. ■

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.

Keyboard Scrabble

New Life for ESQ-1s and SQ-80s

Walter Cooper

It's the nineties but the ESQs and SQ-80s were developed in the eighties. What does one do? Charles Fischer makes some good suggestions in the October '92 *Hacker* for keeping these keyboards fresh. I like my SQ-80 and have no plans of parting with it. It holds a unique place in my arsenal, which brings me to the essence of this article — keyboard scrabble.

Most of us have played, at one time or another, scrabble. You know, the board game where someone manages to spell a word and someone else capitalizes by creating a new word from a portion of your entry. So what does that have to do with these boards you ask. Lots. Taking this approach we can keep our precious machines fresh and alive. Keyboard scrabble is simply taking the best sounds of other keyboards and programming those sounds to work on your keyboard. Now mind you, this is not for everyone. It's just another option and there's nothing really new here. Kirk Slinkard's article in Issue #83 offered ways to convert SD-1/VFX default envelopes for the ESQ/SQ-80s. And sound companies sample the latest synths to keep your sampler current. Of course, programming a synth is a little trickier than loading samples but it is an option for those game enough to try.

Case In Point

Jack Tolin's "Guitar Strength" is an excellent guitar patch for SQ-1s and KS-32s. Wouldn't it be nice to have this sound screaming from your SD-1. Keyboard scrabble. Most of these parameters plug straight into the SD-1 but there is one major obstacle. Jack used the compression/distortion/reverb algorithm in his patch — which is really "Guitar Strength"'s strength. No such critter on the SD-1. So I substituted low-pass filter/distortion/chorus/reverb and made some adjustments in the mod mixer section.

Off to rehearsal I go. My partner has a SY22. During rehearsal we discuss song #3. He needs a better lead guitar in a passage. I've just finished diddling Guitar Strength so I lay some on him. He shakes his head in despair. "If I could only get that sound on my SY22." Keyboard scrabble. Dissecting Guitar Strength reveals three voices are used to create this sound. My partner carefully programs his synth to match each voice. Pretty good — not identical but it's the best lead guitar he has for his SY22. Remember we started with an SQ-1 sound, converted it for an SD-1 and ended up with an SY22.

Included here is the patch "Lead Synth" for the ESQ-1 and the SQ-80. Lead Synth was scrabbled from a Yamaha DX27, a pre-'85 synth. Yeah, it's older than the ESQ but I like this

sound. The mod wheel adds vibrato and the CV pedal alters the timbre. I fattened up the sound making it more brassy than the organishness of the original 27's patch. I also added some '90s type bell rings. Charles Fischer suggests running your ESQ/SQ-80 through an effects processor and I agree. It helps a lot. But if you don't have an FX box, try this. Raise T4 to about 34 on ENV4's page for the ESQs and 30R for the SQ-80s.

What it comes down to is this — if the sound exists on some not too-dissimilar sounding board, it's programmable and may yield a 30-point scrabble word. The trick is to be able to identify when it's worth your programming efforts to attempt it and when it's not. Try it — even if your score is not too high at first you'll learn stuff and you may come up with some killer sounds. ■

ESQ-1/SQ-80 PROG: LD SYN

BY: Walter Cooper, Latter Sound

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	2	00	05	SYNTH3	OFF	-	LFO2	01
OSC 2	0	00	00	SAW	LFO2	04	LFO2	01
OSC 3	0	00	04	SAW	LFO2	02	LFO2	01

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	00	ON	ENV1	55	KBD2	-2
DCA 2	00	ON	ENV1	63	OFF	-
DCA 3	63	ON	OFF	-	PEDAL	-63

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	079	00	00	ENV3	63	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	08	LFO2	06

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	OFF	OFF	-	-	-	-	OFF
LFO 2	24	OFF	ON	TRI	00	00	00	WHEEL
LFO 3	-	OFF	OFF	-	-	-	-	OFF

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	63	63	00L	00	04	00	00	37	16
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	63	25	-63	63L	15	00	21	51	00R	21
ENV 4	63	38	18	30L	63	00	45	59	22	26

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	OFF	OFF	OFF	04	OFF	ON	ON	OFF

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

Bio: Walter Cooper is minister of music at his local church, district minister of music for twelve churches, a music teacher and owns Latter Sound Productions, which markets sounds for Ensoniq products.

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Alls Fair	G+L Bass	Clock Bells	Freeflight
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EPS-16+ (& ASR-10) Percussion Tips

Tom Shear

A year ago I bought a second-hand rackmount Mirage from my friendly hometown music dealer, "Downtown Dave," and rushed home to try and figure the beast out. Hence, a sampling addict was born. I've always been especially fond of using sampled drum sounds from different sources and using them to bring my rhythm tracks to a higher level. Now that I'm the owner of an EPS-16+, it's dead easy to come up with great, realistic sounding drum tracks, and with the manipulation capabilities available to me, I've discovered some other, more unusual tricks to make my sounds stand out from the rest. So, this time out, I'm going to share some more tricks you can use with your drum sounds and tracks to make them stand out.

Add Some Delay

For such a simple effect, digital delay can add much to any type of track. While it's often used on synth sounds and vocals, it seems that beyond a little slapback echo, it's rarely used with drums. I've found that one of the best ways to come up with a fresh sound is to find something that is almost never

done by anyone else and do it. In other words, if it's something that people generally avoid doing, mess around with it a while, and try to shape into something musically useful; you may come up with the next big trend throughout the recording industry!

For those of you with the EPS-16+, boot up your OS and load your favorite drum sound, although I'd suggest for this example, you use the TR-808 since this is sort of a dancey effect we'll be using now. Press the EFFECTS SELECT button and scroll to the DUAL DELAYS. As it defaults, this delay is ideal for beats around the range of 120 BPM, but you have some flexibility. Go to your sequencer and program a simple beat around 124 BPM with the kick playing on the 1, 2, 3, and 4 of each measure, and the snare playing only on 2 and 4. You should notice that the delays create the illusion of "grace" notes to your beat and have made even this simple, cliched beat sound fresh and exciting.

Now, obviously, you should experiment with other rhythms

and listen to how the delays can liven them up when they're in time with the music. You can come up with some incredibly complex rhythms this way and yet it's so easy to do. It seems hard to believe that more people don't use this trick. When you wish to use this effect in a piece of a different tempo, you're going to have to delve into reprogramming the delay times on the effect, but that's beyond the scope of this article right now. Maybe someone could draw up a nice chart of BPMs and their corresponding delay times? Of course, you don't have to have delays on all the drum sounds in your kit, you can use the effects routing on the AMP page so that some sounds are dry and only the kick, snare, or hi hats are delayed. This is actually probably a pretty good idea because it's real easy to clutter things up with all those echoes bouncing around in there.

And Speaking of Delays...

You've all tried the neat "preverb" effect described in section 6-17 in the EPS-16+ manual, haven't you? Well, guess what? Doing the same thing with delays sounds pretty cool too. Try it out!

Son of Backwards

And you've probably tried turning individual drums sounds around backwards (and if not, some of the factory disks make use of this as a patch select), but why stop there? Set up a backwards layer and a forwards layer and set up a patch select that'll play both layers at once. On some shorter sounds, this doesn't sound all that unusual, but on other sounds, you can get some pretty weird effects that might just be what your drum track needs to stand out. Try setting the PAN of the backwards layer to -99 and the PAN of the forward layer to +99 for some interesting stereo movement in the sound.

And Speaking of Panning...

We've all heard a hundred times how much the panning of individual wavesamples can add to a drum set, and it certainly does make your song sound a lot more professional. When I'm setting up the position of my percussion sounds in the stereo field, I try to visualize that I'm sitting in front of a drum set. Then I go through to each individual wavesample and place them in relation to my mental picture of the drum set, i.e., the kick is right in the center, the snare is a little to the left, the hi hats are further left, my toms go from left to right, one crash is slightly to the right, etc.

Subtlety is the key here. Try to avoid using either of the extremes in the field for more realistic effects. Of course, there's no reason you have to do it this way, but if it works in the real world, chances are it'll work on your sampled drums, too.

The "What In Tarnation Is That?" Trick

In electronic music today, the sounds you use are at least as important as the music they're playing (sometimes a little too much so...), so it's important to throw a surprise in the lis-

teners' direction every now and then. One way to keep them interested is to add unusual percussion to your basic drum track. Now I don't mean the rare Zambian Chicken Gong or anything like that. I mean, use something that isn't a drum by any stretch of the imagination and turn it into one. For example, I recently purchased a CD of sound effects to sample from for this very purpose. On it were the obligatory "breaking dishes" sounds. By sampling one of them and trimming off all but the impact part of the sound and doing a little pitch transposition, I was able to shape it into a great electronic snare sound, not unlike the one in Fine Young Cannibal's "She Drives Me Crazy." That ticking clock sound became a great hi hat. And the knife sharpening sound made a great metallic percussion sound.

And Speaking of Transposition...

Changing the pitch of drum and percussion samples is perhaps the easiest way to get a wide variety of new sounds from what you already have. When you transpose down, an a-go-go becomes an anvil and a snare becomes an explosion. By transposing up, you can turn your John Bonham Snare-From-The-Nether-Regions sample into a punchy drum machine sound. The bonus here is, that the sound quality of sounds that are transposed up is better, too. In fact, if you have access to a variable speed tape recorder, you should try slowing the sound you want to sample way down when you sample it, and then use your pitch page to transpose it back to its original pitch. Yes, it uses up more memory, but if you're going for quality, this is the way to go. My favorite example of the transposition trick was done by Depeche Mode on their instrumental "Kaleid," which readers can find as the B-side to their "Policy Of Truth" single. In this song, there's an unusual percussion line that sounds like a combination between a cowbell and a percussive bull-roarer. Then, one day whilst sampling a sound off a CD, I discovered how they did it. The sound was simply a sample of the world famous Tibetan monks chanting played an octave above the original pitch in a rhythmic fashion. Try it out yourself, it's a pretty cool sound, and if you haven't ever heard the amazing vocal feats these monks perform, you owe it to yourself to try and find a CD or cassette of it. It'll blow your mind, guaranteed.

So there's just a few little tips to get you thinking. With the flexibility of the EPS-16+, the possibilities are virtually limitless. You'd be surprised at how easy it is to coax great rhythms and drum sounds out of this beast if you just experiment a while. And hey, when you come up with a cool cymbal sound by transposing the sound of a tomato up 500 octaves, let us hear about it! ■



Bio: Tom Shear is not only the president of Hair Club for Men, he's a client.

Classifieds

EQUIPMENT

EPS 2X Expander \$70. Yamaha SPX-90 FX processor \$450. ART SGE Super-Effector \$400. All in VGC w/manuals. (716) 828-1309.

Craig Anderton is having a mail-order "garage sale." MIDI gear, signal processors, drum machines, recording equipment, electronic components, etc. Send self-addressed, stamped envelope for complete listing to: PO Box 966, Ukiah, CA 95482.

SAMPLES

BIG MIRAGE SAMPLE BLOWOUT! The famous MINOTAUR 8-disk set of Medieval and Renaissance instruments is available for only \$80.00! Lutes, viols, harps, bells, krum-horns, much more! Get 'em while they last! Minotaur Studios, 52 State St., Canton, NY 13617.

MIRAGE SAMPLES. 57 new samples for \$30. Most are unusual. 5 disks, \$6 each (US funds). Demo \$3. SASE for free listing. Treehouse Sound, PO Box 18563, Boulder, CO 80308-8563.

New 16-bit samples from Tom Shear! Now available: Minimoog Collection - 3 disks, 27 sounds, all with patch selects. Oberheim Collection - 3 disks, 26 sounds. Each 3-disk set only \$15. Professional quality at PD prices. Write for sound list (include SASE): Tom Shear, 255 Small Rd., Syracuse, NY 13210.

Trade sounds by mail. I have over 1.6 million blocks (800 MB) library. Great PD and homemade! Craig Duncan, PO Box 83164, Los Angeles, CA 90083. Phone: 310-645-4181.

EPS Samples: Disks of Bolivian and Indian instruments, invented instruments, prosaic sounds, and the Recycle Orchestra. 9 Disks, 77 sounds, 308 patch selects: only \$36. Bill Sethares, 622 N. Henry St., Madison, WI 53703. You haven't heard these before!

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.

ECCENTRIC SAMPLES (Mirage and EPS). Ethnic, Ancient Greek, Medieval instruments; Patch 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.

SUPERB EPS-16 PLUS SAMPLES of E-mu Procussion, Minimoog, K-4, and more, from the *Hacker's* Sam Mims, \$9.95 per disk. Post-production quality sound effects samples for EPS-16 Plus, all from digital source recordings, \$5.95 per disk, \$5.45 each for six or more. Mirage Disk 1, samples from Minimoog, DX-7, and VFX, for \$7.95. Send SASE for free listing to: Syntaur Productions, 2315 Mid Lane #44, Houston, TX 77027, or call (713) 965-9041.

PATCHES/SOUNDS

NEW SD-1 sounds from Eric Olsen! Volume 3 and Volume 4 are now available. Killer organs, shimmering EP's, punchin' basses, and wavesequences!! \$25.00 each. Send check or money order to: Pegasus Sounds, 6050 Ada-way Ct., Grand Rapids, MI 49546. Phone: (616) 676-0863. (Updated VFX-sd or SD-1 only.)

I have a bank of 60 sounds to trade. VFX-sd disk. James Samp, 90 N Bell St., Fond Du Lac, WI 54935.

Wanted: VFX/SD-1 and SQ-80 sounds for trade. Also interested in sounds for Matrix 6, TX81Z, and Wavestation. (708) 427-1615.

I'm a new *Hacker* subscriber in desperate need of a good acoustic/grand piano patch for a VFX. I'm hoping someone has developed a patch that is better than the "Classic Piano" available with the VFX. If so, please call me at (302) 368-7324. Leave phone number, I'll call you back. Thanks.

VFX, VFXsd, SD-1 OWNERS. Volume 1: 62 PD sounds, 20 presets, \$12.50 disks. Latter Sound Productions, 1341 Westheaven Ct., Tallahassee, FL 32310-8629. Phone: (904) 575-5561.

60 VFX-sd patches created by Jim Grote. Wide variety of sounds with complete documentation. Call for free Information Packet, or send \$30 for VFX-sd disk to: Jim Grote, 3721 Frances Ave., Cincinnati, OH 45211. Phone: (513) 661-8885.

NEW SQ-80 SOUNDS from the *Hacker's* Sam Mims! Soundset 4 takes full advantage of the SQ-80's unique waveforms, and brings "hidden waveforms" to the SQ-80 for the first time. Also available for the ESQ and SQ-80 are Soundsets 1, 2, and 3. Forty patches per set, each with 22-page booklet of programming notes and performance tips, for \$17.95. Send SASE for free literature. Syntaur Productions, 2315 Mid Lane #44, Houston, TX 77027, or call (713) 965-9041.

SOFTWARE

The Complete Synthesizer and Sampler Database Program. BLUEBOOK is the comprehensive informational database covering MIDI and pre-MIDI synthesizers and samplers for the past 20 years. Excellent for checking out used gear or the latest manufacturer's release. Specify Mac or IBM formats. FREE updates! Send check/money order for \$21.95 payable to Summit Computer Services, 129 E. Colorado Blvd. Suite 400-T, Monrovia, CA 91016.

Oview/VFX for IBM. Synth programmer. New in box - unused. Cost \$140, price \$110 obo + shipping. PO Box 1582, Ft. Bragg, CA 95437. Phone: 707-964-6704.

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

OUT-OF-PRINT BACK ISSUES

M.U.G. will provide Out-of-Print issues for cost of materials and postage. M.U.G. Hotline: 212-465-3430 or write: G-4 Productions, PO Box 615TH, Yonkers, NY 10703. Attn: TH Back Issues. Phone: (212) 465-3430.

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

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

FREE CLASSIFIEDS!

Well—within limits. We're offering free classified advertising (up to 40 words) to all subscribers for your sampled sounds or patches. Additional words, or ads for other products or services, are 25 cents per word per issue (**BOLD** type: 45 cents per word). Unless renewed, freebie ads are removed after 2 issues. While you're welcome to resell copyrighted sounds and programs that you no longer have any use for, ads for *copies* of copyrighted material will not be accepted. Sorry — we can't take ad dictation over the phone!

Prog: JET SOUND

By: Jack Carder

Notes: None

WAVE	1	2	3
Select Voice	On	Off	Off
Wave Class	Inharmonic-	-	-
Wave	NoiseLoop-	-	-
Delay Time	0	-	-
Wave Direction	-	-	-
Start Index	-	-	-
MODSCR	-	-	-
MODAMT	-	-	-
Restrk Decay	02	-	-

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

ENV1	1	2	3
Initial	00	-	-
Peak	99	-	-
Break	99	-	-
Sustain	99	-	-
Attack	41	-	-
Decay 1	00	-	-
Decay 2	00	-	-
Release	00	-	-
Vel-Level	00	-	-
Vel-Attack	00	-	-
Vel Curve	Linear	-	-
Mode	Normal	-	-
KBD Track	00	-	-

LFO	1	2	3
LFO Speed	37	-	-
Noise Rate	00	-	-
Level	09	-	-
Delay	46	-	-
MODSRC	Wheel	-	-
Wave	Tri	-	-
Restart	On	-	-

FILTER	1	2	3
Filter 1	2Lo	-	-
Filter 2	2Hi	-	-
FC1 Cutoff	054	-	-
ENV 2	+13	-	-
FC1 KBD	+54	-	-
MODSCR	Timbre	-	-
MODAMT	-30	-	-
FC2 Cutoff	044	-	-
ENV2	+21	-	-
FC2 KBD	+99	-	-
FC1MOD-FC2	Off	-	-

ENV2	1	2	3
Initial	77	-	-
Peak	99	-	-
Break	71	-	-
Sustain	62	-	-
Attack	23	-	-
Decay 1	45	-	-
Decay 2	77	-	-
Release	32	-	-
Vel-Level	13	-	-
Vel-Attack	40	-	-
Vel Curve	Linear	-	-
Mode	Normal	-	-
KBD Track	0	-	-

AMP	1	2	3
Initial	97	-	-
Peak	99	-	-
Break	89	-	-
Sustain	75	-	-
Attack	06	-	-
Decay 1	50	-	-
Decay 2	45	-	-
Release	26	-	-
Vel-Level	13	-	-
Vel-Attack	06	-	-
Vel Curve	Quik	-	-
Mode	Normal	-	-
KBD Track	0	-	-

OUTPUT	1	2	3
VOL	91	-	-
Boost	On	-	-
MODSRC	LFO	-	-
MODAMT	0	-	-
KBD Scale	0	-	-
Key Range	-	-	-
Output Bus	FX1	-	-
Priority	Med	-	-
Pan	0	-	-
Vel window	0	-	-

EFFECTS —
CHORUS AND REVERB

FX-1	15	Chorus Center	50
FX-2	15	Feedback	0
Decay time	31	Chorus Level	53
HF Damping	40	MOD (Dest)	FX1-Mix
Chorus Rate	20	BY (MODSRC)	Pedal
Chorus Depth	20	MODAMT	0

The Hack: Okay, okay, with a bit of work we'd have a passable "Jet Sound" here, but with with even a bit more work we've got a nice "Thunderous Spring Shower." Follow the bouncing Noise Loop: In the Pitch Section make good the LFO by setting LFO=+35, MODSRC=LFO, and MODAMT=+13. Go to the LFO Section and change LFO SPEED to 22, LEVEL to 50 and DELAY to 13. In the Filter Section adjust ENVELOPE2 to +33. Enable the Wheel by setting MODSRC to WHEEL. Let the MODAMT be about +15. Then change FC2 CUTOFF to 024 (just a little less of an edge) and ENVELOPE2 to +21. Finally, in the Amp Section, DECAY1 should now be 45 and DECAY2=33. Now, push the Mod Wheel up about half way. Create the rain by striking C6. Let the envelope follow completely through! Bring in the

thunder by striking a C2-C3 octave. Yeah, this patch is out of season but it may sound *really* good after the snow starts falling.

Jeffrey Rhoads



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

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

Pending Hacker-Requests: VFX/SD-1 – A piano patch better than the standard "Classic Piano."
 SQ-1 & 2/KS-32 – A "Harmon" muted trumpet sound, like "Miles Davis" sound.
 ESQ/SQ-80 – Patch sheets for the Heaven patches that were released to public domain.

SD & VFX Hackerpatch

Sam Mims

SD & VFX Prog: Pipe Organ

By: Kirk Slinkard, Lakewood, CO

NOTES:



THE HACK: My comments are about the same as Kirk's: I mostly played a bunch of musical notes. This is a great patch, with some nice bottom end rumble, some wailing pipes, and a beautiful cathedral reverb effect. It was a challenge to find anything to hack! My only real suggestion is to change the ** patch select. The woodwind sound alone didn't do much for me. I like the idea, though, of having a sparse sound to contrast the

big 00 patch select. My favorite choice was the pipe organ sound of Voice 6; the organ of Voice 3 is also nice, especially in the lower register. Adjust the Decay parameter on the first Effects page if you need to change the "size" of your cathedral, and let the pipes sing!

- Sam Mims

Sam Mims is currently touring with Malaysian vocalist Zainal Abidin. He lives in Houston, where he runs Syntaur Productions, a music production company that also markets sounds for Ensoniq keyboards.

WAVES	1	2	3	4	5	6
Wave	Vocal-X	Woodwind	Organ-V.1	Organ-V.1	Woodwind	PipeOrgan
Wave Class	Transwave	Waveform	Waveform	Waveform	Waveform	Waveform
Delay	000	000	000	000	000	000
Start	99					
MODSRC	Off					
MODAMT	-					

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	+3	+2	+0	+0	+0
Semitone	+00	+00	+00	+00	+00	+00
Fine	-05	+05	+00	+03	+04	-02
Pitch Table	System	System	System	System	System	System

PITCH MODS	1	2	3	4	5	6
MODSRC						
MODAMT						
Glide						
ENV1						
LFO1						

FILTER 1	1	2	3	4	5	6
Mode	LP/2	LP/2	LP/2	LP/2	LP/2	LP/2
Cutoff	127	98	95	127	108	95
KBD	+00	+00	+20	+00	+00	+20
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	-	-	-	-	-	-
ENV2	+00	+00	+00	+00	+00	+00

FILTER 2	1	2	3	4	5	6
Mode	LP/2	LP/2	LP/2	LP/2	LP/2	LP/2
Cutoff	96	98	95	127	117	95
KBD	+00	+00	+20	+00	+00	+20
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	-	-	-	-	-	-
ENV2	+00	+00	+00	+00	+00	+00

OUTPUT	1	2	3	4	5	6
VOL	99	68	65	99	78	78
MODSRC	Keybd	Off	Off	Keybd	Off	Off
MODAMT	+08	-	-	+08	-	-
KBD Scale	10	+00	-30	+00	+00	+00
LO/HI Key	C2-C7	-	C2-C7	-	-	-
Dest Bus	FX1	FX1	FX1	FX1	FX1	FX1
Pan	99	00	00	99	00	00
MODSRC	Off	Off	Off	Off	Off	Off
MODAMT	-	-	-	-	-	-
Pre-Gain	Off	Off	Off	Off	Off	Off
Voice Prior	Med	Med	Med	Med	Med	Med
Vel Thresh	000	000	000	000	000	000

LFO	1	2	3	4	5	6
Rate						
MODSRC						
MODAMT						
Level						
MODSRC						
Delay						
Waveshape						
Restart						
Noise SRC RT						

SELECT VOICE

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

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

ENV3	1	2	3	4	5	6
Initial	50	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	07	01	03	04	06	02
Decay 1	00	00	00	00	00	00
Decay 2	00	00	00	00	00	00
Decay 3	00	00	00	00	00	00
Release	25	11	13	31	19	13
KBD Track	+00	+00	+00	+00	+00	+00
Vel Curve	-	-	-	-	-	-
Mode	Norm	Norm	Norm	Norm	Norm	Norm
Vel-Level	00	00	00	00	00	00
Vel-Attack	00	00	00	00	00	00

PGM CONTROL

Pitch Table	Off
Bend Range	**
Delay	X1
Restrike	00
Glide Time	00

EFFECTS (1)

Effect	Chorus + Reverb.1
Decay	80
FX1	36
FX2	00

EFFECTS (2)

Rate	17
Depth	33
Delay	43
Mod	+00
Mod	+00
Mix	36

EFFECTS (3)

Waveshape	Sine
MODSRC	Off
HF-Cut	Off

PERFORMANCE

Timbre	00
Release	+00
Pressure	None

The Interface

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

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

Electronic mail - GENie Network: TRANSONIQ, CompuServe: 73260,3353, 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 Friends at the Hacker,

Having spent a bit of time putting the ASR-10 through its paces, I've come across an anomaly which causes me a bit of concern. Since I have a '16+ and I used to have an EPS, I have a pretty big library of samples made on those instruments. I've discovered that the ASR-10 will only load about half of the disks I've tried with it. It will usually display a "disk not formatted" message, but will sometimes display the files but not be able to load them. This doesn't seem to happen with Ensoniq disks, only the disks that I have made. I will sometimes make, format and copy my disks on an Atari 1040ST, which may be part of the problem, but it will also reject disks formatted on the '16+. All the disks I have are compatible with all the EPS and '16+ samplers they've come in contact with. This has never been a problem before. I am concerned about getting rid of my '16+ and finding a disk I need at some later date to be incompatible.

I also tried to find a way to dump a '16+ sample into the ASR over MIDI. I'm sure such a thing is possible, but I can't find out how to do it in either manual. Any information on how to do this?

Thanks again for a great magazine and a great source of information.

Barry Carson
Minotaur Studios
Canton, NY

[CS - While there is no way to directly dump samples via MIDI from the EPS-16+ to the ASR-10 (or vice-versa) you can dump samples via MIDI (or SCSI - much quicker) into a number of computer-based sample-editing programs such as Alchemy or Sound Designer. As far as the problem of loading EPS-16+ samples on the ASR-10, that's a new one on me - you might want to contact Ensoniq Customer Service and let them have a crack at it. In the meantime, try loading the samples in question into the EPS-16+, then re-saving them onto disks that have been formatted on the ASR-10.]

[Ensoniq - This sounds like a possible drive alignment problem. Please contact Ensoniq Customer Service so we can better help you.]

[TH - If it is a alignment problem, make sure you've got some other way of reading your disks lined up BEFORE anyone "fixes" your alignment or you might have trouble reading them on your present system.]

Dear TH,

Was it only us or were other readers confused/lost by the article, "Keeping RAM Files In Order"? We hope Mr. Cherniawsky could contact us and help make sense out of his article. We invent the products and we don't recognize how it relates to anything we've ever made.

Sincerely,
Ensoniq Customer Service

[CS - It took me a couple of read-throughs (RTs) to figure out that Mr. Cherniawsky's article was meant to illustrate a way to keep synthesizer files organized by replacing unwanted sounds (UWSs) with sounds to use for performing (programmed sounds, in his terminology) or sequencing. I agree it was a bit confusing (IAIWABC).]

[John Cherniawsky replies - I will respond by saying two things:

1. I was inspired to write the article, "Keeping RAM Files in Order," by working with my SQ-R.

2. I will offer a brief analogy, because retracing the steps laid out in the article would be too tedious to be believed. The analogy: Imagine you have a bookshelf filled end to end with books. The books fall into three categories - those you have read, those you would like to read, and those you would not like to read. If you can sort out these books and keep them separate, you may have better luck understanding my original article.]

Dear Hacker readers,

I own an SQ-R Plus that has been giving me headaches since May, '92 and I need help/advice from anyone who might have had the same problem - noisy outputs. Turn the unit on and it is quiet as a mouse. Send it a MIDI note-on and the noise floor go up approximately 15 - 20 db (according to my tech) and stays there until you either shut the unit off or send it a program change at which point it is again quiet as a mouse.

Ensoniq has told me that this is normal and a result of the ESP chip being activated when it receives the first note-on. I am using the SQ-R Plus at levels consistent with my other gear, not at or near maximum. The bottom line is that I am unable to use this unit in the studio and it is very noticeable in live situations as well.

I would like to correspond with anyone having the same or similar problem with an SQ-R Plus as this will help in my dealings with Ensoniq.

Sincerely,
Tim Hayden
3843 Priest Lake Dr
Nashville, TN 37217
(615) 361-7229

[CS - Personally, I have had very little problem with noise on the SQ-R Plus. Though it's not as quiet as the SD-1 or ASR-10, it is well within acceptable noise levels for my purposes (digital recording).]

You may be aware of this already, but I think it bears mentioning anyway. You'll find that you can minimize noise on most synths and samplers if you keep the instrument volumes up at a healthy level and adjust the volume at your mixer or amplifier to achieve appropriate listening or recording levels. In other words, if you have a track on the SQ-R Plus whose individual volume is set fairly low, and/or you have the SQ-R Plus master volume set fairly low, you're bound to get some noise.]

[Ensoniq - This is a situation we have been

talking to Mr. Hayden about directly, and all we can add at this point is that the noise that he describes we (and most of our customers/dealers) find less intrusive and within the acceptable limits of music making. The best way to minimize signal-to-noise problems on any of our products is to be sure to keep the master volume set to full and to adjust the track volumes as desired.]

Dear TH:

Here's a quandary for the legal experts out there. I have been creating drum loops on the EPS-16 Plus using a variety of legally purchased '16 Plus and EPS "Classic" instruments as source material. I hope to develop a series of drum loop instruments and market them. I might be inclined to copyright the sounds, but I'm not sure whether it would be legal or prudent. Queries:

1. What laws govern how I can use another company's copyrighted sounds to create sounds of my own?
2. Are there local and federal laws that come into play for national distribution?
3. What's the trend in distributing drum loops? Should they be copyrighted and then sold with a license for unlimited use? Should they not be copyrighted at all?
4. If I incorporate in the loops sounds I created on my Roland D-50, do I have to worry about any laws protecting Roland for sounds created using *their* synthesis architecture?
5. If a sampled drum kit instrument were derived from a drum machine in the first place (like the TR-808 kit that comes with the 16 Plus), wouldn't the copyright issue be moot?

Or has Roland sold some rights to Ensoniq to sample and sell the instrument?

Does Ensoniq have the right to "copyright" the instrument?

Does this copyright cover the underlying sound or the recording of the sound?

It seems a lot of companies offer samples of specific synthesizers. There are also a lot of drum loop CDs out there. Any idea

how these companies deal with using another company's sounds? I would find it difficult to believe that all those companies offering drum loops actually create the underlying sounds.

I know I've thrown a lot at you, but I think I've covered most of the issues relative to copyrighting samples. Guess I just need a primer on sample copyright law!

Thanks,
Gary A Rees
Chicago, IL

[TH - We're passing this on to Tom McCaffrey since he wrote an excellent article on copyrights for us in Issue #69.]

[Tom McCaffrey responds - Well, this is an interesting twist. If I understand correctly, you're using EPS samples in a musical performance (an individual drum loop composition), which you'd then like to record and sample for inclusion in an EPS instrument. The copyright issues here are all covered under the federal copyright laws as maintained by the Copyright Office of the Library of Congress. I'm not aware of any related local laws, but check with an attorney in your area. What makes this interesting is that in this case, the laws for sample copyrights, synthesizer patch copyrights, and sound recordings all come into play.

Here's the crux of the issue: The Library of Congress permits copyright registration of a musical composition, but not of a single sound. They also permit registration of the data values that make up a particular synthesizer patch, but not the sound that is produced by the patch. Thus, a sound coming from your Roland D-50 cannot be copyrighted, although its patch data can be. Using your example, Ensoniq did not need permission from Roland to sample a TR-808; likewise, you shouldn't need to worry about sampling sounds from your D-50 or using them in your musical compositions. If this were the case, I suppose Roland would own an interest in just about every TV soundtrack and CD that's come out since 1986!

A drum loop is a musical composition, albeit a short one. It is possible for you to write a score for your loops and it is likely you will record them onto tape before sampling them. If you want to copyright your loops, it would be a good idea to both

score them out and record them to tape. You can then submit your scores and your recordings as a "sound recording" using the Copyright Office Form SR. You can include multiple loops under one form. Once you have created your EPS instrument files, you can also copyright these by submitting a Copyright Form PA. You'll have to include your EPS disk along with data sheets listing all patch parameters included in each instrument.

The other side of the coin is that if the source material you are using was previously copyrighted (for example, if it was sampled from your Kid N' Play record), then sampling a portion of their composition generally equals infringement. Under certain conditions, a "sampling license" can be obtained from the copyright owner, which allows another artist to include such samples in their recordings.

A rule of thumb is that if the sample in question is of an individual sound you're probably safe, but if it is a portion of some composition, you're probably not. The bottom line is to use care and judgement



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whenever you don't know the source of a sample. If you have any questions, you can contact the Copyright Office in Washington, DC.]

Dear TH,

I have the EPS Classic (4x) and an Atari 1040 STE (4 Megs). Do you have a list of software for this particular configuration? Any info will definitely be appreciated.

Al Trautman
Lydia, LA

[CS - Not being much of an Atari user, I'm afraid I can't be a great deal of help. But if anyone out there markets software for this configuration, drop me a line and maybe I'll give you a free plug in these pages! (You have to promise not to tell my editor, though.)]

[Ensoniq - What type of software are you looking for? Without more information this is very hard to answer, but we'll try.

Sequencing - EMAGIC makes a fine program, Notator, that we're fond of (a shameless plug, we know).

Sample editing - Interval Music makes Genwave, which works with your setup.

Parameter editing - there was a program out of Australia called EZE, by Gelva Software, but we're not sure if they are still in existence.]

[TH - As far as we know, Gelva Software has dropped out of sight. The best places we've found for discussion and ads for this type of software are the Atari magazines rather than the music magazines. Check with your Atari dealer - and be sure to ask about European magazines - that's where most of the action is for Atari.]

Dear Interface,

I use my EPS in conjunction with my Atari ST computer and Cubase 2.01 sequencer program. It's an amazing keyboard because I'm never limited to a small

library of sounds. Below I've listed some problems that I've incurred with the EPS that for the life of me I can't figure out. I hope you guys have some answers.

1. From time to time, when the sequencer is running, the keyboard will hang and an error message saying ERROR 018 REBOOT will be displayed on the EPS.

2. I invested in the Maartist SCSI card for my EPS and purchased an Apple Macintosh hard disk. The internal drive is a Rodime. I connected the hard disk to the EPS with a 50-pin Centronic to 25-pin RS232 cable. The unit works perfectly. Unfortunately, I've got an annoying high pitched whine over my audio output whenever I turn on the hard disk. I tried to disconnect the cooling fan in the hard disk, thinking it was causing some kind of interference, but the problem still exists.

3. I was at my local music shop checking out some new EPS samples when someone showed me those amazing patch select buttons on the left side of the keyboard. Wow, I couldn't believe all the extra sounds I got



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by pressing these buttons. My problem is how can I get the sequencer to do this while playing a song?

Sincerely,
Loreto Manni CET
Toronto, Ontario
Canada

[CS - 1) The error code number you describe doesn't necessarily say anything specific about what the difficulty might be, and I think I'd have to actually see how you work before I'd have a shot at diagnosing your problem. You might try giving Ensoniq Customer Service a call - they can be pretty swift when it comes to tracking down this sort of thing.

2) I have heard that some people have had success with eliminating this type of noise by lifting the ground on the hard drive. I cannot recommend doing this, though, as it may pose a safety hazard.

3) Patch select data can be recorded into a sequence in a couple of ways. The easiest is simply to activate the patch select you want to use once the sequence is in record mode - you can do this while you're recording a track, or you can overdub the patch select information with the sequence in ADD or LOOPED mode. You could even overdub the patch select information onto another track, and then merge it with the original track.

If you're using an EPS-16 Plus, you can also insert patch select data in event edit mode. Scroll to the point in the sequence where you want the patch select to occur, then scroll once to the left to move to the EVENT TYPE page, set the event type to PS PATCH-SL, and hit ENTER. The EPS-16 Plus will ask if you want to INSERT or DELETE an event - make sure that INSERT is selected (underlined), and hit ENTER. This will insert a patch select command into the sequence at the current location. You'll also need to specify which patch select you want. Scroll once to the right to move back into the event list - you should find your patch select event - it will show up as PS=XXX. For the 00 patch (no patch buttons pressed), set this to PS=0; for the 0X patch (the right patch button pressed), set this to PS=32; for the X0 patch (the left patch button pressed), set this to PS=64; and for the XX patch (both patch buttons pressed), set this to PS=127.]

Dear TH,

I have a couple of questions for the people at Ensoniq:

1. Have you forgotten about your original customers? Instead of all these fancy new samplers, how about a new OS for the Mirage with 16-bit stereo sampling for us?

2. Could you please publish all the specs on any musical equipment you now have under development? It would be very special of you to do that for me.

3. Just kidding! I love this kind of letter so much, I wanted to write one myself.

AFA
Sam Pler
New York, NY

[CS - Clark Salisbury is on sabbatical to Las Vegas. This column will resume in two years.]

[Ensoniq - Oh, you're just kidding - and we were just ready to do it, too!]

[TH - Yeah, right.]

TH:

I read the Hacker religiously and it seems I'm in the same boat as many of your subscribers - I am an EPS-16+ owner. However, my concern and questions may be slightly different.

First, I don't understand how Ensoniq can manufacture the ASR-10 (which appears to be a dream come true) with the same memory capacity as an EPS-16+ equipped with 2X memory expander, more effect algorithms, more polyphony and stereo sampling capability, for so minimal an increase in price. Has Ensoniq removed or altered any features on the ASR-10 to keep costs down?

Also, upon learning that the ASR-10 works with all existing EPS disks, I ran to the local music store to check out the 15 essential disks that come with the '16+. I found that some patch select buttons and mod wheel assignments did not work. Most noticeably, the mod wheel on MIAMI BRASS, which is usually assigned

to volume for smooth brass swells, had no effect on the sound at any position. Can this be easily corrected?

I'd like to thank the Hacker for the many inspiring and helpful articles and also Ensoniq for providing "The Technology That Performs." I look forward to using my KS-32 - as soon as it is no longer on back-order!

Sincerely,
Bob Giovannetti
Alpha, NJ

[CS - I checked out the MIAMI BRASS sound on the ASR-10, and it worked just fine. I don't know what might have been the problem with the one you checked out, but Ensoniq assures me that all EPS and EPS-16 Plus sounds should work on the ASR-10, no problem.]

[Ensoniq - No, we haven't removed or altered features to reach the price point of the ASR-10.

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We are also very sensitive to giving you the most value for your money, so we don't add up all the individual features, place a value on each one and then roll up the costs. With that approach, the ASR-10 might be worth \$5,000. In fact, it probably is, but we think you'll be happier (and more people will buy it) if we keep the price reasonable.]

Dear Hackerites,

Maybe I am missing something but I have been disappointed and wondering since I attended an Ensoniq clinic in the San Diego area. The Ensoniq rep said that my desire for a 76-key SDI or EPS-16+ (now ASR-10) was unusual and very few people wanted or needed a 76-key board. Is this true? My friends seem to clamoring for one.

I told the rep that I wanted a *top line* board with 76 keys because my wife plays music that demands it. She often plays piano duets with acoustic pianists and 61 keys does not cut it. The rep's only suggestion was to buy an SQ-2 or KS-32 (which I do not care for) and use it along with some other module. But I told him that was exactly what I was trying to avoid – having to drag my studio gear with me to church for a couple of numbers. If I wanted to do that I could try to pack my M8000, EPS-M, VFX, 1000PX, mixer, Quad-raverb, computer and BBE-422A in my car. I could send the family on the bus, I guess.

As well, I told him it is hard to trade downward from a VFX to an SQ-2. The easiest solution for my dilemma is to make a 76-key SD-1 or ASR-10. But if the rep is right that is just a dream the Japanese can fulfill. What do *Hacker* readers think? Are 61 keys enough for you?

Sincerely,

Keith Barnes, Ensoniq devotee
La Mesa, CA

[CS – As longtime readers of this newsletter can attest, if enough of you are vocal about what you want, Ensoniq is likely to build it – they really do listen. So if a 76-note version of any of Ensoniq's high-end instruments appeals to you, now's the time to say so.]

Dear Hacker,

I've been having a couple of strange and interesting things happen to my Notator/EPS-16+ system. The first has happened in odd instances since I hooked the two together. Every now and then, my EPS will not sound the notes being generated by the Notator sequencer. I can point at the notes on the screen and I will hear them and I can play the keyboard itself, but when I push play or cont (both by keyboard commands and mouse pointing) nothing is heard. The screen still highlights the notes I should be hearing and the sequencer clock spins, but no sound. This happens in the general screen and the edit (notation) screen. Is this a bug in the EPS? What is the scoop?

Now for the one that is driving me up the wall. Sometimes when using Notator (a program that I have had no trouble with minus the above problem) it will trash all the notes on the screen and put them wherever it wants to. I usually get a warning sign that everything is about to blow up when I push "E" to take me out of the edit screen and back to the main page and up pops a dialog box that says "EXITING EDIT MODE OK?" When I see that I know I better save what I have. The problems sometimes occur after I quantize a track (in the track parameters) or part of a track. This is exactly where it happened last time. I made a backup copy of Notator and it too gives me this headache. Have you ever heard of this? It is driving me crazy and made me look like a fool when I tried to show how great this system is compared to Finale. Please help me regain my respect in this town.

Sincerely,
Paul Bissell, Percussion Instructor
La Tech University

[CS – If I were you, Paul, I'd give Ensoniq Customer Service a call. They've got some

real Notator whizes back there – it's a good bet they'll be able to help you out. Personally, I do all my computing on a Macintosh, so I have my own set of problems to worry about. Good luck!]

[Ensoniq – Your letter raises an important point – we cannot hope to provide customer service for EMAGIC software in this column. There are too many issues involved to give you timely and informed help. That's why we have a staff of Customer Service representatives available on the phone. Please call us at (215) 647-3930 to allow us to help you.]

Dear Sir,

One thing I would like to draw to your attention for the Interface is that in the UK, RAM cards for the SQ range are priced at around £80-00 (\$45 US). RAM made by Kawai for their K4 work will in an SQ. Just format them as normal. The cost is around £35-00 (\$20 US).

Best regards,
Andrew Brimming
Bristol, England

[CS – How much is that with shipping?]

Dear Hacker,

This is written to Ensoniq, but your readers will be interested in the response. I have a later keyboard model *Mirage*, Mono DSK-8 with the elastomeric front panel keypad, S/N 703342. I am interested in rack mounting the innards of it as it is no longer needed as a master keyboard (I have an EPS-16+). I have operated it before without the keyboard being plugged in. Obviously, warranty is of no concern. I have experience in electronics to the point I feel comfortable doing this. My question is, what advice can Ensoniq provide for me to do this? For instance, proximities of the power supply to the disk drive? Tips on mounting the front panel? Terminating the keyboard connector? Mounting the Pitchbend and Mod Wheels? Anything you can think of?

Thanks in Advance,
Leigh Smith
Email: leigh@psychok.DIALix.oz.au
Perth, Western Australia

[CS - Kids, don't try this one at home.]

[Ensoniq - While we realize that your warranty is of little concern to you, we can't recommend gutting it as you write. There is too much risk involved in this type of project for us to support it. What makes better sense is selling your Mirage and getting a DMS-8, which solves your prob-

lems with no risk.]

[TH - But, on the other hand, if you're just looking for something to dig into and risk is your middle name - go for it. Try to do it in small steps. I'd watch for good air circulation and be careful with proper grounding. The mod wheels and panels and stuff call for mechanical futzing and

are handled by "another department." Just pull the keyboard connector off and see what happens. More than likely it can just be left open. If it shuts down, then you'll have to fool it into thinking there's a keyboard out there... Of course, if it never regains consciousness, you have my sincere apology.]

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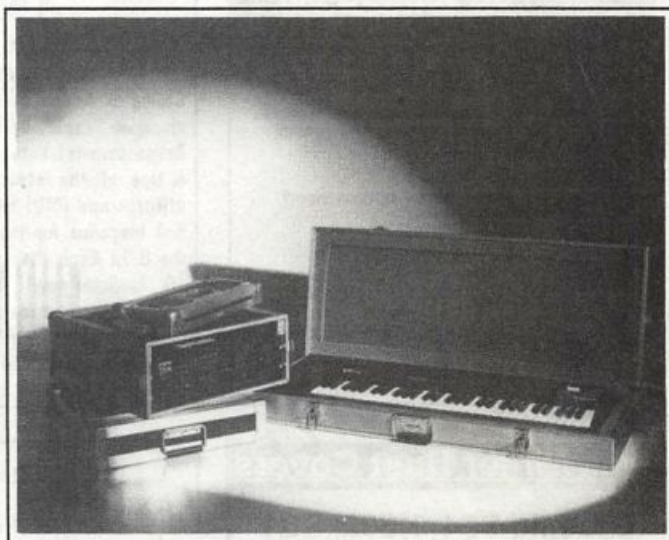
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