TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

The Ultimate Bitchin' EPS Drum Set

Craig Anderton

I never did trust machines—and when it comes to playing live, I trust them even less. More microprocessors means more options for trouble; what's more, MIDI provides the flexibility and power needed for things to go wrong in stunningly creative and original ways. So when it was time to get Transmitter, my on-again, off-again rock band back into action, I decided that less was more.

Transmitter is a guitarist (me), Chapman Stick bass player (who plays through an ART SGE), and Ensoniq EPS. The EPS sequences my DOD GSP-5 to call up various signal processing patches, plays drums, and provides very sparing back up (e.g. background power chords when playing a solo). I had been using the HR-16 as a drum machine tone module sequenced by the EPS, but decided that stuffing a great-sounding drum kit into an EPS instrument would mean one less MIDI cable, one less outboard power supply, and one less Plastic Thing That's Easy to Crush.

However, I don't like to do a lot of disk swapping, which means getting the maximum number of sequences on disk and using instruments that take up the smallest number of blocks—and therein lies the tale of getting the Ultimate Bitchin' Drum Set not just into an EPS, but into less than 400 blocks (my arbitrary limit). Some of the following techniques are a lot easier to use if you have Alchemy or a similar sample editor, but most are possible using just the EPS's internal options. Ready? Let's get into the tips, some of which optimize sound and some of which optimize memory.

The Drum Sounds

I wanted raw, rock-oriented sounds, so I started with samples from Ensoniq's SLT-8 Drum Disk and the John Robinson Signature Series Disk (Volume 2—a really superb collection). The kick was a composite kick derived from mixing together three different kicks from the SLT-8—one with a real good high end, one with a great low-end thud, and the third with a nice ambient "tail." The toms were also composite sounds formed from the dark, ambient toms on the Robinson ambient drums disk and the clean, more jazzy toms from Contemporary Kit 1 on SLT-8. Mixing sounds together was a real revelation for me; it's a great way to build a massive-sounding drum kit.

To determine which combination of drums worked best, I assigned each kick (or tom) to the same note but on different layers, then turned different layers on and off to test the various combinations. The "winners" were transferred into Alchemy, scaled to 33% to 50% of their original levels (so that mixing them together wouldn't cause the overall signal to exceed the available headroom), and mixed.

The snare was from Robinson's disk. Since I still haven't heard any hi-hats I like better than the HR-16's, I sampled the unit itself, along with the HR-16 crash cymbal and tambourine. None of these was a composite sound, although I'm thinking of mixing the Robinson snare with the snare from Mini-drums 2 on the Nile Rogers Signature Series disk to give the former even more snap.

Digital Compression

I like a bit of the punch you get from compressing drums, but doing it in Alchemy sounds better than sampling with a compressor. For example, Figure 1 shows a stock tom sample. Using Alchemy, I selected individual half-cycles and scaled them to the maximum available levels, creating the tom waveform in Figure 2. It doesn't just look louder, it is louder! However, you can take this too far; usually you need only boost the first 50 ms or so to get a nice bit of additional punch.

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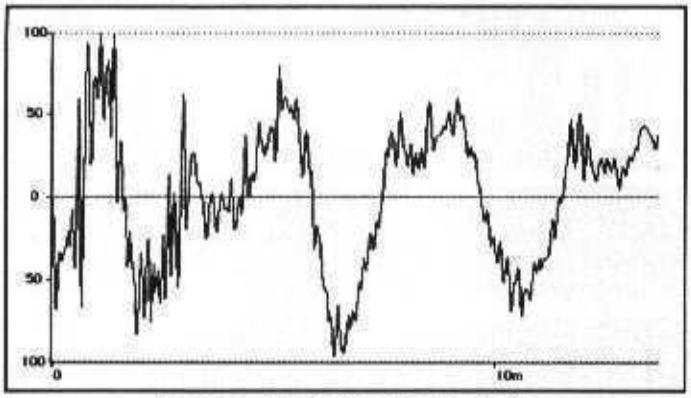

Figure 1. Unprocessed tom sound.

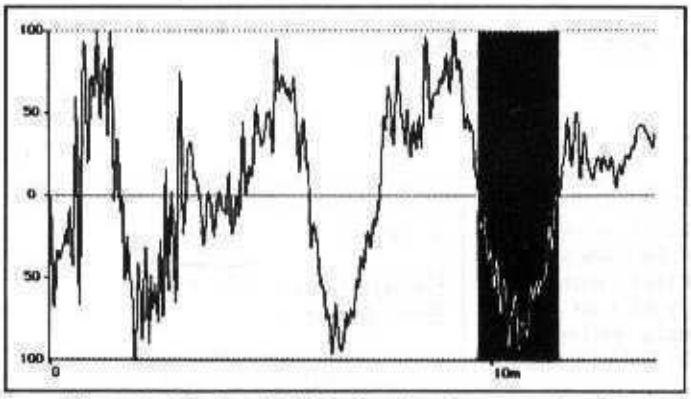

Figure 2. Scaling individual cycles for greater level.

Tom Looping

Looping saves memory, but it's not easy to loop most drum sounds. Toms are an exception, since they settle down to fairly stable waveforms, which can be looped and then enveloped to create an artificial decay. Figure 3 shows some tom loop points; the section past the loop was erased later to save memory.

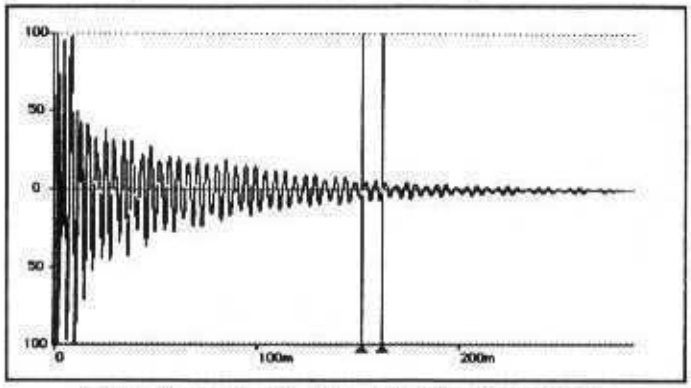

Figure 3. Looping the tom sound to save memory.

The amplitude decay envelope should remain at its maximum level until the loop occurs. Then, the decay should kick in so that it fades out the looped portion. A typical setting on one tom was Hardvel = 99 99 00 00 00 with Times set to 23 26 00 00 00. To find the optimum times settings, set the second time parameter to zero. Set the first time parameter to some high value and lower it until you can no longer hear the loop, then adjust the second time parameter for the best decay characteristics. This will have to be changed if you pitch-shift the drum, therefore changing its length.

Four Toms for the Price of One

To save more memory, copy one tom sample to create the other tom sounds and use the Pitch parameter to tune them differently. Unfortunately, this doesn't provide enough variations between the toms; one way to add some variety is to introduce a slight amount of envelope-controlled pitch bend, using different settings for each drum. As a starting point, set Env 1 Amount in the Pitch menu to +2.6, and the Env 1 settings as follows: Hardvel = 99 00 00 00 00, Softvel 50 00 00 00 00, and Times = 23 00 00 00 00. Set Soft Vel Curve to On. A shorter decay time seems to work better on higher-pitched toms, and longer decay times on lower-pitched toms.

Other Envelope Subtleties

If you're driving the EPS drums from a drum machine or sequencer the note duration may not last long enough to play through the entire envelope duration. To solve this, set the envelope's Envelope Mode parameter to Cycle; triggering the drum will cause the envelope to go through its complete cycle.

For the amplitude envelopes, I didn't relish the idea of setting up soft and hard velocity curves for each one, yet a good dynamic response is important. Under the Edit Amp menu, select Vel 2 for Volume Mod, and set a value of 80 or so. This gives a nice dynamic range without having to create soft response envelopes.

Miscellaneous Nifty Tips

Many drum samples assume you have unlimited memory and include a lengthy ambient "tail." Fading this out early will save memory, but you can shorten the overall time and get a trendy gated reverb sound by lowering the sample end parameter until you've cut off the desired amount of ambient signal. The EPS is usually sentient enough to cut off on a zero crossing so you don't get a click, but if you do get a click, use the Fade Out option (in the Command Amp menu) to fade out the last 50 ms or so.

Converting the sample rate to a lower value (in the Command Wave menu) is a well-known way to conserve memory, but you'll find that cymbals really need as a high a sample rate as possible. Toms and kicks can often get by with 20 kHz sample rates; snares are going to need at least 30 kHz.

For an even greater sense of dynamics than can be conveyed by amplitude changes, add some velocity-controlled filtering as well. Using a 1-pole LP filter seems to work best, so call up Edit Filter and select Mode F1=3/LP F2=1/LP. Now adjust the F2 settings as follows: Cutoff F2=66, Env 2 Amt and Kbdamt=0, and F2 Mod=Vel 2 * +65. At low velocity settings, the sound is a little duller and at high velocity, a little brighter. This should be subtle, but even subtle settings have a strong psycho-acoustic impact.

For a more realistic high-hat sound, put the high-hats on a separate layer with that layer's Layer Glidemode set to Mono (in the Edit Layer menu). This will allow a new high-hat note to cut off a sustaining hi-hat sound, providing that the sustaining note is still being held down when the new note is struck. I've run into situations where a key up triggers a different sound, but overall this works well.

Finally, if you're not concerned about using up voices, simply copying a drum layer to another layer and playing them both simultaneously will beef up the sound a great deal. Also, setting the number of voices to 12 (found in the Command System menu) gives more level and punch.

Marching to the Beat of a Different Drummer

It took about 15 hours to put together a drum kit consisting of kick, snare, four toms, two cymbals, tambourine, three high-hat sounds, and some copies of samples set for special effects (strange tunings, reverse decay, etc.). I'm real happy with the sound of my customized and Alchemized EPS drum kit. I'm even happier that it means one less piece of gear to take out live! ▬

Front Panel

RND (♪♫♪)

News from Ensoniq

Ensoniq Introduces SQ-R Rack-Mount Synthesizer

Ensoniq Corp has introduced a rack-mount version of their successful SQ-1 Personal Music Studio keyboard, called the SQ-R. This single-space rack unit combines the same synthesis, drums and effects from the SQ-1 without the sequencer section to create the perfect sound complement to any system.

Sound – The SQ-R can hold up to 340 sounds in memory—100 in ROM (including 20 drum kits), another 80 in RAM and 160 on each optional ROM or RAM card. It is an advanced wavetable synthesizer with over 1100 wave possibilities, drawn from the 121 onboard wave selections. These waves include multi-sampled acoustic instruments, timbre-shifted variations, sustained synthesizer waveforms, Ensoniq's unique Transwaves™ and a whole complement of drum and percussion sounds. All of the sampled waves can be played backwards as well as forwards and have modulatable start points.

The voice architecture of the SQ-R includes 21 oscillators, two multi-mode filters, 3 five-stage envelopes, one LFO and 15 modulation sources per voice. A voice can use up to 3 oscillators which can be layered, key split or velocity split/crossfaded. The output of the SQ-R is state-of-the-art, with 16-bit D/A conversion and 96dB dynamic range.

Effects – The SQ-R uses a 24-bit custom signal processing chip to provide 13 high quality stereo multi-effects with dynamic control over many of the parameters. Effects possible include reverb, chorus, phaser, flanging, distortion, roto-speaker and many combinations. Voices can be routed through 2 stereo busses to the effects processor for maximum flexibility, or be left dry (unprocessed).

Performance – Up to 8 sounds can be combined with a custom effects set-up and this whole combination is called a Preset. Parameters that can be adjusted in this combination mode include volume, pan, key zone, timbre, transpose, release time, sustain on/off and a host of MIDI-related functions.

The SQ-R holds 80 of these user-programmable Presets in RAM. This is also the mode for MIDI multi-timbral reception, allowing the SQ-R to receive on up to 8 MIDI channels with *smart* dynamic voice allocation. The SQ-R responds to OMNI, POLY, MULTI and MIDI MONO modes and can be set to respond to both channel and polyphonic pressure.

Smart Transmit ™ – An important innovation in the SQ-R is Ensoniq's *Smart Transmit* function, which enables the SQ-R to add many MIDI master controller features to any keyboard that is hooked into it. Basically the SQ-R processes incoming MIDI information, adding the parameters of the Preset and retransmits that information to external MIDI devices that are connected to it. Any synth that gets connected to the SQ-R becomes an 8-zone master controller .

Misc. – The SQ-R has a 32 character (2 x 16) LCD display, stereo outputs, MIDI IN/OUT/THRU and a headphone jack which is located on the front panel. For more information contact: Ensoniq Corp, 155 Great Valley Parkway, Malvern, PA 19355, or call 1-800-553-5151.

Suggested Retail Price: $1195.00, **Availability:** July 1990

Hacker News

Keel Productions is moving across Canada, so if you call the number in their old ads you won't get anyone. Mail, however, should be forwarded. Hopefully, by next month we should have their new address and phone number.

* * *

There's starting to be a fair number of SQ-1s out there by now and we're *hungry* for articles! If you've got an SQ-1, this is your chance to break into the rarified strata of Hacker-writerdum.

TRANSONIQ-NET

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ALL ENSONIQ GEAR - Ensoniq Customer Service. 9:30AM to 6:30PM EST Monday to Friday. 215-647-3930.

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

VFX QUESTIONS - Sam Mims, Syntaur Productions. 818-769-4395. (CA). 10 AM to 11 PM PST.

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

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

EPS QUESTIONS - Garth Hjelte. Rubber Chicken Software. Pacific Time (WA). Call anytime. If message, 24-hour callback. (206) 242-9220.

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

ESQ-1 QUESTIONS - Jim Johnson, (503) 684-0942. 8 a.m. to 5 p.m. Pacific Time (OR).

MIRAGE 24-HOUR HOTLINE - M.U.G. 212-465-3430.

ESQ-1 QUESTIONS - International, Brendon Sidebottom, (03) 689-5731 Australia. No calls between 4 a.m. and 10 a.m. Australian ES Time.

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

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.

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M1-9 – Orchestras 3 and 4
M1-10 – Bottlebell, Metal Hit, & Windbell
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46.) Lead Synths
47.) Synth Brass
48.) Pads and Strings
49.) Percussive

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52.) Brass and Percussive

"Real" Sounds

53.) Alto Sax
54.) Fender Rhodes
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56.) Funk Guitar w/Gestures
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DX7II

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59.) Basses and Effects
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61.) Plucked Sounds

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Where No Synthesizer Has Gone Before

Kirk Slinkard

Perhaps the title is a bit presumptuous, but, as it implies, this article is about sound effects from the classic *Star Trek* television series. Back in the sixties when it was in production, you couldn't just go down to your local music store and buy a computerized, polyphonic synthesizer to create science fiction sound effects like you can today. The synthesizers of that time were big expensive modular jobs that were hard to come by and were just beginning to be commercially available. By today's standards, those synthesis techniques were pretty primitive. Samplers were basically either mellotrons or tape recorders and razor blades. Earlier, in the fifties, Louis and Bebe Barron did the music and sound effects for *"Forbidden Planet"* with several individual custom-made circuits. The *Star Trek* sound effects creators used a combination of some of these techniques. For example, the sound of the Enterprise doors is a recording of an air gun played backwards.

One of my inspirations for doing these sound effects is a compact disc I got of the original *Star Trek* sound effects, produced by Neil Norman. Another inspiration is Jim Johnson, who, as can be seen in photos as recently as Issue #53, has *Star Trek* classic sideburns. [*Editor's note: Rest easy, readers—Jim's sideburns are intact.*]

"BKGRND" (background) is a transporter room background noise that is made by simply adding together three sine waves so that they produce beat frequencies that give a tremolo effect.

"VUSCRN" (viewscreen) is two sine waves with a little dynamic LFO modulation to give one of the Enterprise bridge sounds. Try playing this one once every two seconds.

"WHISTL" (boatswain's whistle). I believe this was originally a recording of the real thing. Here it's just two unison envelope-modulated sine waves with a little noise added for realism.

"RDALRT" (red alert klaxon) originally came from I don't know where. This one gets brighter as you go down the keyboard because of the formant waves. An LFO sawtooth wave modulates the pitch while an LFO square wave of the same frequency modulates the volume in an on-off manner.

I only did four effects because they fit nicely on one page that way. I find *Star Trek* sound effects easy and fun to synthesize for the most part, so maybe this article will turn out to be "Part One." ▬

Mod you later,
Captain Kirk

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SQ-80 PROG: BKGRND

BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	9	0	SINE	KBD2	-63	KBD2	-1
OSC 2	-1	9	24	SINE	KBD2	-63	KBD2	-1
OSC 3	-1	9	23	SINE	KBD2	-63	KBD2	-1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	55	ON	OFF	-	OFF	-
DCA 2	55	ON	OFF	-	OFF	-
DCA 3	42	ON	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	55	0	0	OFF	-	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	KBD2	+63

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	-	-	-	-	-	-	-
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+63	+63	0	0	10	0	0	20	0

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

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

SQ-80 PROG: VUSCRN

BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	+3	0	0	SINE	KBD2	-63	LFO1	-08
OSC 2	+3	0	0	SINE	KBD2	-63	LFO1	-04
OSC 3	-	-	-	-	-	-	-	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	30	ON	LFO1	-50	ENV4	+35
DCA 2	30	ON	LFO1	-50	ENV4	+35
DCA 3	-	OFF	-	-	-	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	90	0	0	OFF	-	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	45	8	OFF	0

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	22	ON	OFF	TRI	0	0	0	ENV1
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	0	+63	+63	0	0	16	17	63	63	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+37	+37	0	0	0	20	29	31	0

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

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

SQ-80 PROG: WHISTL

BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	+2	7	0	SINE	KBD2	-63	ENV1	+63
OSC 2	+0	0	0	NOISE2	KBD2	-63	LFO1	+63
OSC 3	+2	7	0	SINE	KBD2	-63	ENV1	+63

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	03	ON	OFF	-	OFF	-
DCA 3	63	ON	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	82	31	0	OFF	-	OFF	-

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

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	-	-	-	-	-	-	-
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	0	+9	+9	0	0	15	16	31	17	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+63	+63	0	0	10	29	29	12	0

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

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

SQ-80 PROG: RDALRT

BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	+1	5	0	FORMT3	LFO2	+44	KBD2	-63
OSC 2	+1	5	0	FORMT4	LFO2	+44	KBD2	-63
OSC 3	+1	5	0	FORMT5	LFO2	+44	KBD2	-63

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	LFO1	+63	LFO1	+63
DCA 2	0	ON	LFO1	+63	LFO1	+63
DCA 3	0	ON	LFO1	+63	LFO1	+63

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	72	20	0	OFF	-	OFF	-

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

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	8	ON	OFF	SQR	63	0	0	OFF
LFO 2	8	ON	OFF	SAW	63	0	0	OFF
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+63	+63	0	0	0	0	0	0	0

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

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

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Erick Hailstone

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This month, I'm doing an overview of the Ensoniq VFX VPC-101. Because cartridge VPC-100 is included with each VFX and VFX-SD, most of you are familiar enough with it. However, the optional cartridges (such as the VPC-101) require you to dig into your wallet...

VPC-101 contains a variety of sounds including solo, acoustic, electric, etc. It is weighted toward more synthesized sounds including thick pads, special effects, and analog synths. This collection of sounds would be helpful for New Age composers or creating moods and textures in film scoring. Many of the sounds take advantage of the VFX TRANSWAVEs to create ever changing harmonics.

One such sound is named ZIRCONIUM. ZIRCONIUM is a warm analog synth using a sawtooth wave. What makes it unique and special are the sweeping metallic harmonics that are derived from the INHARM-X waveform. Many variations of this sound program can be created by replacing the INHARM-X voice with any of the other TRANSWAVES. The voice is already set up to sweep the waveforms. You may chose to raise the pitch up or down an octave. The analog character of this sound program is created by using a sawtooth wave. You can replace the sawtooth wave with almost any nonpercussive wave to create many more variations. Again, raising the pitch up or down an octave may be desirable.

SAMPLE+HOLD is one of the most unique sound programs. The bottom half of the keyboard is a bass sound. When attacked hard enough a new voice appears which jumps octaves in a constant rhythmic fashion. This sets up a one fingered vamp in the lower half of the keyboard which you can solo over using the sound in the right half.

RAINYDAY caught my attention because it reminded me so much of an M1 sound I had tried to duplicate. The main voice sounds like a mellow church organ. What interested me most were the background sounds. One voice uses the waveform WOODBLOCK, while another voice uses the waveform TEMPL-BLK. Both are programmed so that while the pitch is dropping they repeat rapidly. It sounds like you're running your fingernail over the longest comb in the world. The combination of the three voices is a very pleasing, relaxing sound. Many variations can be found by changing the WOODBLOCK and TEMPL-BLK waveforms to any of the other percussive or metallic waves. The pitch motion is being controlled by ENV1. Changing the LEVEL parameters of the envelope will determine how high or low the pitch will travel. Changing the TIMES parameters will determine the length of time it takes to travel from pitch to pitch. Play around with these parameters and you'll find some interesting variations, some might even be useful.

WAY-FAT, FAT-BRASS, and SAW-O-LIFE cover the traditional Oberheim, Prophet5 analog synths. INSPIRED is a particularly nice electric piano with high ringing harmonics. WUZ-PIANO has a reedy quality similar to the old Wurlitzer electric piano. Great for old Ray Charles covers. FANFARE is the perfect brass sound for the next Presidential inauguration you play for - or visiting royalty. CATHEDRAL-1 will keep you prepared for any funerals or weddings you may encounter.

These are just a few of the interesting sounds in this collection. Again, the sounds lean toward the thick textural side of life. If you're expecting all the sounds of the orchestra, this is definitely the wrong batch for you. However, if you're looking for thick sounds with lots of subtle (and not so subtle) harmonic motion you'll find your share here. ▬

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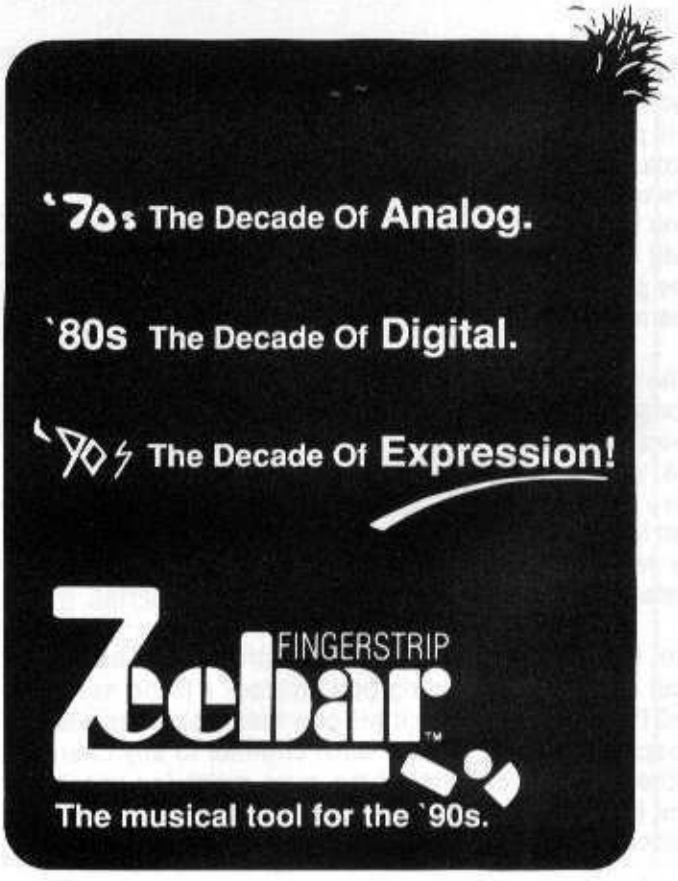

Pseudo-Automated Mixing on the ESQ-1 and SQ-80

Brian Rost

When the ESQ-1 was released four years ago, it set a new standard in on-board sequencers. But time moves on and while the ESQ sequencer is still quite a useful tool, it lacks a few niceties that other machines have added since then. One feature of the sequencers in the EPS, VFX-SD and SQ-1 (not to mention most computer-based sequencers) that the ESQ lacks is a way to control volume levels of tracks within a sequence for automated mixdowns.

Actually, the ESQ sequencer allows quite a bit of volume control in the sequencer but it is limited to sequence boundaries. That is, within a given song, you can adjust the mix level every time you move from one sequence to another, but within a particular sequence, there is no mechanism to adjust volume dynamically. There is a way to control volume of a track on the ESQ in real time, either when recording the track or playing it back, by using the CVP-1 pedal, with the pedal setting on the MAIN page set to VOL (this presupposes you don't often use the pedal as a modulator). The problem is how can we get this CV pedal information overdubbed onto a track.

The ODUB mode is really a pinch-in/punch-out feature. When in ODUB, pressing any key or the sequencer pedal will put you into REC Mode. This, of course, erases the data already on present on the track, which is not what we want to do. You can record new data on another track and then use the MERGE feature, but if all you want to add in is CV pedal data, you can't monitor the effect of the pedal, since the pedal data is not being recorded into the track you want to control.

The solution to this is simple and the only gear you need (beside the CVP-1, of course) is a MIDI cable. You will also need one empty sequencer track, preferably track #8. We are going to take advantage of an interesting feature of the sequencer software. Go to the MIDI page and set MODE to MULTI. In this mode each track will respond to MIDI data arriving at the IN port on the channel selected for that track on the MIDI/MIX page.

So, let's jump into the sequencer and, for an example, call up a nice sustaining pad on track #1 and assign it BOTH status. This way it will play local voices as well as respond to MIDI. Set the MIDI channel to any channel other than the channel of the main synth (go check on the MIDI page to see what that is) and, for our example, pick channel #1. Now, once you have the pad recorded, go select channel #8. If you had #1 selected previously, track #8 will take on all the attributes of track #1, so that the only change we will make is to assign it MIDI status. Now patch a MIDI cable between MIDI OUT and IN on the back of the synth.

OK, with track #8 selected, go to the mix subpage of MIDI/MIX and start rocking the CVP-1 back and forth. You should see the volume levels change on both tracks and, if not, double check your setup. Let's do a fadeout first. Set the CVP-1 so that the mix level is set to the starting level of the final mix. For our example, set it to 63 (full on). Now, get into ODUB mode and using the footswitch, kick into REC mode just prior to where the fade should begin. The simply pull back on the CVP-1. Sound OK? If not, repeat until you're happy with it. Once it sounds like what you want, merge track #8 into track #1, remove the MIDI cable, set track #1 to LOCAL and you now have a nice fade recorded into that track. To clear track #8 out, all you need to do is go into EDIT TRACK and remove the controllers. This leaves the track defined but empty. Or, if you're not going to modify any other tracks, you may want to simply erase the track.

You may be wondering why this works. Get out your manual and you'll see that while in MULTI mode, if more than one track is set to the same MIDI channel, only the lowest number track will respond to that channel. In our setup, we had a pad on track #1 and CV pedal on track #8, both set to MIDI channel #1. By patching MIDI OUT to IN, the CV data on track #8 was sent out on MIDI channel #1 (since we assigned that track to MIDI), and track #1 will receive it on the same MIDI channel (since we assigned it BOTH). Actually, track #1 also gets extra notes-on from its own sequence data being looped back over MIDI! As a result, while dubbing in the CV data you will sometimes hear weird voice stealing or doubling sounds. Don't worry, you're not actually recording on track #1, so the final sequence won't have those problems.

Well, you ask, what if the track we want to adjust is not local to the ESQ? In that case, both the original track and the new track for CV data should be set to MIDI. In this case, you won't need to loop MIDI OUT to IN.

Fade-ins and swells in either direction are also possible. Some tips here. For fade-ins at the top of a sequence, a good way to avoid a glitch at the first beat is to add an empty bar to the head of the sequence and in the middle

of this empty bar, go from ODUB to REC and rock the CVP-1 from full on to full off so that the volume entering the new bar 2 (old bar 1) is zero. The when you're done, delete the empty bar 1 and you'll have a glitchless transition into the sequence. If you find that adjusting volume from the CVP-1 isn't your cup of tea, it's simple to wire up a 10K pot to a cable, plug this into the CV pedal jack and now you have a knob "fader" for making dynamic mix adjustments. Also, try to always use track #8 for recording the CV data. Since you have to use a track numbered higher than the one you want to control volume on, why not pick the highest numbered track for that purpose? Also, it's a good idea to save the sequence to disk or tape, or at least copy it over to another sequence location before starting to make volume adjustments so you won't accidently lose any note data. Actually that makes sense for *any* serious editing you plan on doing!

One thing that you may find interesting is that if you are viewing the mix subpage on playback, you'll see the mix level update itself every bar on the display! Unfortunately, you can't get to the mix subpage while recording, so while it's simple to set the starting level for a swell or fade, the end level will have to be done by ear.

This same technique can also be used for overdubbing controllers other than the CV pedal, like pitch bend, mod wheel, sustain pedal, etc. If you have a hot take marred by a pitch bend goof, you can remove all controllers from the track, then overdub a corrected pitch bend easily. The only controller you can't overdub this way is aftertouch because it requires triggering a key event. You can also do cool things like have synchronized pitch bends on different instruments. By recording a track with pitch bend data and merging it to multiple tracks, each track will have an identical pitch bend.

I'm sure you'll find a number of uses for this overdubbing technique. Overdubbing controllers is a very powerful tool that can add to the expressiveness of your sequences. Now, let's go play!

Bio: Brian Rost is the bassist for the Hubcaps—a Boston-based R & B band. In his spare time he designs computer systems. ▬

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Memory-Efficient Samples from Severe Sounds

Bryce Inman

For: EPS.
Product: Severe Sounds disks 1-5.
Price: $10 per disk.
From: Severe Sounds, P.O. Box 14250, Austin, TX 78761, 1-512-388-3808.

For professional and amateur musicians alike, workstations such as the EPS have opened a whole new universe. With a sampler, a musician has the potential for an almost unlimited palette of sounds from which to choose. And the on-board sequencer offers an equally unlimited method of putting those sounds together.

As extensive as these freedoms may be, there are a couple of restrictions with which a musician must contend: the amount of memory available and the time required to load samples into memory. These restrictions pose something of a problem when performing live (as opposed to performing dead) and when sequencing.

In an effort to address these restrictions, Severe Sounds has developed a set of 5 disks which contain samples that were designed to be memory-efficient. Here's a quick look at what these disks contain.

Piano and Organ #901 – This disk contains 7 electric pianos, 7 organs and 1 acoustic piano (and a partridge in a pear tree). Most of the electric pianos fall into the Fender Rhodes-DX Rhodes category. There's also a good assortment of cathedral and rock organs here—even an good old Farfiza. The acoustic piano is okay considering the small amount of memory it uses. (I've heard some pianos which use a lot more memory that don't sound much better.)

Brass and Wind #902 – The sounds on this disk, although very nice, tend to be more synthesized than realistic. There are 9 brass samples—some of which are nice and fat. In addition there are 2 flutes, 1 sax (a bit weak) and a harmonica (sort of).

Bass #903 – You'll find a whopping 21 basses on this disk. Most of these are great. The electric basses and acoustic bass are fairly realistic. There's also quite a wide variety of synthesized basses—enough to fit quite a number of musical styles.

Synths #904 – The 19 synths on this disk are pretty much what I consider the basics. The sounds include lead synths, pads, a clav, some new age stuff and so on. Many of these sounds are reminiscent of the ESQ and the Moog. As might be expected, the more interesting sounds tend to require more memory—so what else is new? In addition, there are some extremely small (3 or 4 blocks) basic waves: a triangle wave, a sine wave, a sawtooth wave and a square wave.

Percussion #905 – This disk contains 12 separate drum kits each of which contains a bass drum, a snare and a hi-hat or some type of metallic or percussive sound. In addition there are 6 separate toms which can be added to any of the kits quite easily. The samples found here provide a variety of processed and unprocessed drums for a number of rock, jazz, techno and pop situations.

The 3 sounds in each kit are each assigned to their own individual layer so that moving samples between instruments requires just one simple "copy layer" command. This makes it very easy to mix and match samples for those who wish to customize their drum kits.

In My Opinion...

So, what do I think of this collection? I think Severe Sounds has done an excellent job of fulfilling their intended goal: providing good quality, memory-efficient samples at a reasonable price. And, when they say "memory-efficient" they ain't kiddin'. Most of the instruments are less than 100 blocks, with the majority falling in the 20 to 80 block range! Fast loading? Many of these sounds are loaded almost before the disk can begin whirring. You can load an entire 8 instrument bank of these sounds faster than you can say, "There's no such thing as a bug-free operating system."

If you buy these disks, don't expect to be blown away—you probably won't find many killer sounds here. There are a few loops which could be better and several samples which suffer from too much digital noise, but I've found these problems in just about every set of sounds I've heard.

The sounds in this set of disk have some obvious limitations due to the memory-conserving techniques used. However, you shouldn't discount them for that reason alone. These sounds are proof that you don't always need large amounts of memory to get great sounds. For example, the Bell Piano—which weighs in at a trifling 8 blocks(!)—is a mere "blip" with the loop turned off; turn the loop back on and you have a beautiful, bright, crisp DX Rhodes. Perhaps the most noticeable trade-off is the fact that some of the sounds don't transpose well across the entire keyboard since they're not multi-sampled.

Something else that I consider a bit of a weakness is the lack of patch variations. I would assume that variations were not included since memory conservation was the main goal and extra layers and copies of wavesamples can take up a little more memory. It might be a nice touch, however, to include some variations; these could be deleted quite easily by the customers if they didn't need them. Just a thought.

Something that really impressed me about this company is their eagerness to please their customers. A case in point is their upgrade policy (something I've never heard of from a

sample vendor before). Speaking with Chris Davis, the man behind Severe Sounds, I learned that they actually do listen to customer suggestions and, as a result, they revise their disks occasionally to improve their products. When they make these changes, they offer an upgrade to their customers for just $2 (which includes shipping and handling in the U.S.). Now, that's service!

Another thing I like is the fact that these disks can be purchased separately. This means you only pay for the sounds you want. Personally, I'd like to see more of this from other vendors.

So, if you're performing live and you're looking for a solution to long, embarrassing loading times, or if you're facing a memory shortage because your song can't exist without that 3800 block sample of your toilet flushing, these are the disks for you. For just $10 a disk, you can supplement your library with some nice sounding, memory-efficient samples. ▬

What Sound Through Yonder Speaker Breaks?

Michael D. Mortilla

For: SQ-80 (ESQ compilation disk available).
Product: Romeo Sounds (28 to 40 sounds per disk).
Price: $20 per disk.
From: R & D Sight and Sound, 7 Elm St., Middlebury, VT 05753 (802) 388-7570 (Noon to Midnight).

There's a lot to be said for the new sounds known as Romeo. Unfortunately, most of it isn't good. In all there are four disks currently available (the fifth being a selected compilation of patches specifically for the ESQ-1). Along with your sounds, you get a Performance Booklet which describes the patches in detail. The 13 pages provide information about the use of controllers, how to tweak parameters, etc.

Now on to the sounds. **WEST COAST** is the name of the first disk we'll look at. The sounds in this bank are generally the "spacey" variety of brass, piano and effects such as wind chimes and voice. Many times the filter is opened up by the MOD wheel and this is referred to as "space mode." There is also a "hand savers for dance charts" called THROB where the LFO will repeat a note for you (it's also a voice saver!), and good use of panning is made throughout the bank. The only two problems in this bank are two completely blank voice locations (more about that later) and the female vocal patches called CHICKS. Not only did that term fade from the vernacular about 25 years ago, it is considered by many (this writer included) to be demeaning. Coincidently, I found the CHICK patch to be a rehash of the old AHHHS. CHICK2 was a somewhat more pleasing breathy flute sound. There were no demo sequences with this bank.

Our next disk, **HORNS & STRINGS**, does come with two unmusical demo sequences, but that's understandable as the bank is fairly unmusical in most settings. The brass, overall, sound like a poorly rehearsed high school marching band at a cold Saturday morning football game with their mouthpieces frozen to their lips. Thin, anemic sounds and the strings don't fare much better. The only real use for this bank is if you wanted to simulate the above situations ala PDQ Bach. Another drawback to this bank is the fact that you only get 28 sounds! Again, this is justifiable: if my programming sessions went this rough, I would have stopped before I got to 28!

Moving right along, the **PIANOS & ORGANS** disk has 31 sounds. There are a couple of organ sounds with potential, but none of the patches are ready to plug in and go in a pro setting. The piano sounds are unconvincing and the organs suffer from clipping and buzzing noises. At a cost of 20 bucks, you might just be better off buying some blank disks and programming your own sounds.

The **SOUND EFFECTS** disk has 38 sounds in all and some of the sounds work. Notably, ENTRY1 (a jet landing), EUROPE (police siren), FLY (Musca domestica), WHSTL3 (wolf whistle), BOMBRS (bomber engines), SLIDE (as in whistle), WANG (a knife thrown into wood), STMHRN (a train whistle), and JUHARP described as a "Juice Harp." Let's get picky again: The term is Jew's Harp. Presumably, they have changed the name not to offend anyone but, to quote the Oxford Dictionary of Music "The Origin of the name is unknown and seems to be unconnected with Jewry. The name 'Jew's Trump' was recorded in 1545."

No doubt some of you will say I'm being overly harsh in this review, but let me inform you that these sounds are being touted by Romeo as "100% useful," "the finest sounds available," "the Cream of the Crop," and "Quality Programming for Professional Use." If you claim to be that good and put your stuff up for sale, you open yourself up to criticism. I use lots of sounds on the SQ-80 every day (most of which I program myself) and I know what goes into that work. If I don't create convincing sounds, the film producer, theatre director or choreographer I'm working for will let me know in very short order. I must be highly critical of every sound I program and use and I can be no less critical of the sounds I buy. If you are a professional, you probably feel the same way and want to know before the sounds arrive, hence, this review.

To try and tie this whole thing together, I'd say that Romeo Sounds has some of the slickest documentation and slimmest programming I've seen in one package. You might be satisfied with the West Coast disk, marginally pleased with the sound effects and probably hate the rest. Romeo, Romeo, wherefore art thou Romeo? Not in my scores.

Bio: Michael Mortilla composes for film, theatre and dance and owns MIDI-Life Crisis Publishing (BMI). His music is performed worldwide. He is currently the Senior Musician/Resident Composer for U of CA, Santa Barbara. ▬

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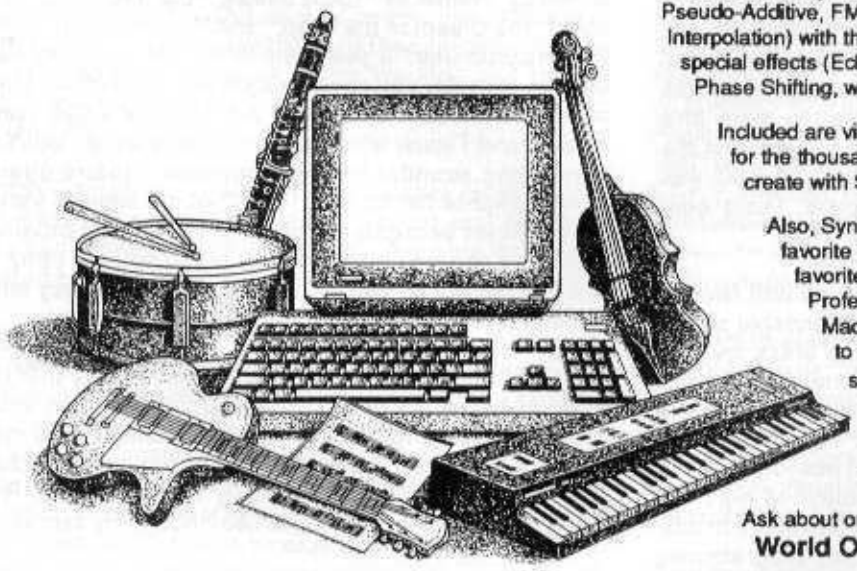

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Tame Your MIDI Monster with Your Mirage

Tim Martin, SoftHeadWare

How would you like to be able to change programs on ALL of your MIDI synths to different program numbers AND send volume info on all channels AND reset all controllers AND reconfigure your MIDI patcher AND start your drum machine... instantly, with one button press on your Mirage?

Following in the tradition of my previous TH articles, I'm going to lay bare some arcane knowledge AND sell a little snake oil. As usual, a little background is in order.

Step Right Up!

MIDIcaster's "MIDI Data Recorder" is similar in many ways to the "SysEx Recorder" facility found on the EPS. However, along with having the ability to record even non-SysEx data (allowing you to take a "MIDI Snapshot" of your entire setup) and a "Transmit Direct From Disk" feature, MIDIcaster includes the "MIDI Macro Key Utility."

This Utility can be used to send "Dump Requests" to devices that need a MIDI message sent to them in order to initiate a MIDI data dump. This is only one of many things that the Macro Keys can be used for. We'll explore a few examples and, hopefully, they will give you some ideas for applications in your MIDI environment.

What a Concept!

A MIDIcaster MIDI Macro can be 1 to 128 bytes in length and there can be as many as 8 of them active at a time. The Mirage's dinky little 2 digit LED display makes it kind of difficult to design a "Line Editor" to conveniently edit a 128 byte line. This fact led to some tradeoffs:

- Most people can count to 16 so the 128 byte line was broken into 8 segments, each 16 bytes in length. The "Line Editor" works on one of the 8 segments at a time.

- You can "Cursor" left and right in the current segment using the <PARAM> key as left and the <VALUE> key as right. The <OFF> and <ON> keys are still used to change the value of the current byte displayed.

- The decimal point is used to indicate cursor movement. The first byte has the decimal on the left, the second byte has it on the right, the third on the left and so on (odd-left, even- right). This enables you to tell when you are at the extreme ends of the current line and also lets you see cursor movement when there are adjacent bytes with the same value. You must mentally keep track of where you are in the current 16 byte line.

The structure of the data area set aside for Macros can be thought of as a 16x8 byte matrix. Each "xx" in the following illustration stands for one byte of data:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<2> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<3> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<4> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<5> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<6> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<7> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<8> - xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
```

When Macro key <1> is pressed, transmission starts with the first byte of the first 16 byte segment and continues until the value "FF" is encountered (MIDI Spec 1.0 defines "FF" as "System Reset" but MIDIcaster uses this "FF" value internally as the "End Of File" marker and will not allow you to transmit it). If you didn't put a value "FF" anywhere in the matrix, transmission will continue up to the end of Macro #8.

If Macro key <2> is pressed, transmission will start with the first byte of the second 16 byte segment (or byte #17 of the 128 byte matrix) and continue until the value "FF" is encountered. If Macro key <3> is pressed, it starts with the first byte of the third 16 byte segment (or byte #33) and so on...

This allows for flexible Macro lengths and relatively convenient editing. Now, on to defining our Macro Keys.

The Joy of Hex

As was mentioned earlier, the Macros can contain almost any kind of MIDI messages, so really there is almost no limit to what they can be used for. Here are a few examples:

For Program Changes:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - C0 00 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<2> - C0 01 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<3> - C0 02 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<4> - C0 03 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<5> - C0 04 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<6> - C0 05 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<7> - C0 06 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<8> - C0 07 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
```

(the xx's mean "don't care")

The Keys are now:

Macro <1> - First Program on Channel #1
Macro <2> - Second Program on Channel #1
Macro <3> - Third Program on Channel #1
Macro <4> - Fourth Program on Channel #1
Macro <5> - Fifth Program on Channel #1
Macro <6> - Sixth Program on Channel #1
Macro <7> - Seventh Program on Channel #1
Macro <8> - Eighth Program on Channel #1

For Multi-Channel/ Multi-Synth Program Changes:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - C0 00 C1 00 C2 00 C3 00 C4 00 C5 00 C6 00 C7 00
<2> - C8 00 C9 00 CA 00 CB 00 CC 00 CD 00 CE 00 CF 00
<3> - FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<4> - C0 01 C1 01 C2 01 C3 01 C4 01 C5 01 C6 01 C7 01
<5> - C8 01 C9 01 CA 01 CB 01 CC 01 CD 01 CE 01 CF 01
<6> - FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<7> - C0 0F C1 05 C2 14 C3 35 C4 62 C5 7F C6 00 C7 58
<8> - C8 27 C9 34 CA 11 CB 53 CC 01 CD 02 CE 55 CF 40
```

Macro <1> - First Program on all Channels
Macro <2> - First Program on Channels #9 thru #16
Macro <3> - nothing
Macro <4> - Second Program on all Channels
Macro <5> - Second Program on Channels #9 thru #16
Macro <6> - nothing
Macro <7> - Different Programs on all Channels
Macro <8> - Different Programs on Channels #9 thru #16

Notice that there is no "FF" character after Macro #8 to stop transmission. That's OK because there is one "built in" that always exists, just past the end of Macro #8.

For Resetting Controllers:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - E0 00 40 E1 00 40 E2 00 40 E3 00 40 E4 00 40 E5
<2> - 00 40 E6 00 40 E7 00 40 E8 00 40 E9 00 40 EA 00
<3> - 40 EB 00 40 EC 00 40 ED 00 40 EE 00 40 EF 00 40
<4> - B0 01 00 B1 01 00 B2 01 00 B3 01 00 B4 01 00 B5
<5> - 01 00 B6 01 00 B7 01 00 B8 01 00 B9 01 00 BA 01
<6> - 00 BB 01 00 BC 01 00 BD 01 00 BE 01 00 BF 01 00
<7> - FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<8> - FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
```

Macro <1> - Reset Pitch Bend and Mod Wheel on all Channels
Macro <2> - don't use
Macro <3> - don't use
Macro <4> - Reset Mod Wheel on all Channels
Macro <5> - don't use
Macro <6> - don't use
Macro <7> - nothing
Macro <8> - nothing

These examples perform on all 16 MIDI Channels, but chances are you don't use all 16. If you only use a few, then you can scale down these definitions to operate only on the channels in use and have more functions available per Macro set. Notice that a number of the keys are pretty much wasted by having to be used as "End Of File" characters to stop Macro transmission. Some of this will be alleviated when you trim back the definitions to operate on only a few channels.

For Sequencer or Drum Machine control:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - FA FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<2> - FB FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<3> - FC FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<4> - F3 00 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<5> - F3 01 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<6> - F3 02 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<7> - F3 03 FF xx xx xx xx xx xx xx xx xx xx xx xx xx
<8> - F2 00 00 FF xx xx xx xx xx xx xx xx xx xx xx xx
```

Macro <1> - Start
Macro <2> - Stop
Macro <3> - Continue
Macro <4> - Select First Song
Macro <5> - Select Second Song
Macro <6> - Select Third Song
Macro <7> - Select Fourth Song
Macro <8> - Point to Beginning of Song

When you save a Macro set to disk, the current position of the "cursor" is also saved. This means that if you position the "cursor" at byte #2, press <CANCEL> twice and then save the current "Sequence" (actually it's a Macro Key set), the next time you load in this "Sequence" you can press <SAMPLE UPPER>, <LOAD UPPER>, then <4> and use the <OFF> and <ON> keys to select the appropriate Song Number, <CANCEL> and then <4> to select the Song. Press <CANCEL> once more to take you back to OS 3.2.

For "Step Forward" Clock Pulses:

```
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
<1> - F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 00 00 00 00
<2> - F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 00 00 00 00
<3> - F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 00 00 00 00
<4> - F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 F8 FF xx xx xx
<5> - F8 F8 F8 F8 F8 F8 FF xx xx xx xx xx xx xx xx xx
<6> - F8 F8 F8 FF xx xx xx xx xx xx xx xx xx xx xx xx
<7> - F8 FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx
<8> - FF xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx
```

Macro <1> - Advance by 48 Clocks (half note)
Macro <2> - Advance by 36 Clocks (dotted quarter note)
Macro <3> - Advance by 24 Clocks (quarter note)
Macro <4> - Advance by 12 Clocks (eighth note)

Macro <5> - Advance by 6 Clocks (sixteenth note)
Macro <6> - Advance by 3 Clocks (thirty-second note)
Macro <7> - Advance by 1 Clock
Macro <8> - nothing

Notice the 00's in Macros 1, 2 and 3? They are used as "dummy" bytes and shouldn't do anything except take up space, but remember that these 00's are transmitted and there is a possibility that some MIDI devices may confuse these as "data" bytes for the last received "Channel Status" message. Depending on the application, this may or may not be a problem.

One more thing to be aware of is that Parameter [77] (MIDI Packet Delay) affects the rate at which Macro Keys are transmitted. It causes transmission to pause before each MIDI Status byte. In the example above, varying the value of [77] will result in a change of "Tempo." With it set to "FF," there will be a pause of 1 second between each Clock Pulse making the 24 pulse quarter note take about 24 seconds. V E R Y S L O W ! With [77] set to "00" the same 24 pulses will take about 8 milliseconds. Very fast!

But I Want More!

Since the Macro Keys can be saved to disk just like Sequences, there can be up to 8 sets of Macros on a Mirage disk. This means that up to 64 different Macros can be accessed without changing Mirage disks.

Consider these suggestions as the tip of the iceberg. If you have a copy of the MIDI Specification and MIDIcaster, you have total MIDI access! If you come up with any applications that you consider unique, get a hold of me and I'll try to make the Mirage/MIDIcaster community aware of them.

Tim Martin wrote "MIDIcaster" for the Mirage and "MIDITERM," a Generic Patch Librarian/Midi Data Recorder for the Commodore 64. "Hobbies, what's that mean?" ▬

BACK ISSUES

Back issues are $2.50 each. 5 – 20: $2.00 ea. 21 & up: $1.75 ea. (Overseas: $3 each.) Issues 1-9, 11, 13-23, 27, 29, 30, 36, and 38 are no longer available. Subscriptions will be extended an equal number of issues for any issues ordered that are not available at the time we receive your order. ESQ-1 coverage started with Issue Number 13. SQ-80 coverage started with Number 29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage started with Number 30. (But didn't really get going till Number 35.) VFX coverage got started in Number 48. The original VFX patch sheet was published in Issue #55. Permission has been given to photocopy issues that we no longer have available—check the classifieds for people offering them.

Q: If you own a Mirage, what's the cheapest way to get a system exclusive data librarian, a 20,000 note sequence player, a disk copier and formatter, a synthesizer, and an improved operating system?

A:

Midicaster is an amazing new alternative to your current Mirage, Mirage DSM, or Mirage DSK operating system. With Midicaster, you can save sysex data (synth sounds, sequencer dumps, drum machine data, etc.) directly to Mirage diskettes. And you can load it back into those same Midi devices without disturbing the sounds loaded into your Mrage! That's right - unlike with other operating systems, there's no need to re-load your Mirage after data transfers when you use Midicaster.

Midicaster also now includes a 20,000 note sequencer download function that allows you to record 16 channel MIDI sequences from your master sequencer directly into the Mirage, making the Mirage a portable "jukebox" type of sequence player. And the new "wave draw" function can teach your Mirage a couple of new tricks - namely, how to be a synthesizer.

Midicaster noticably speeds up a number of normal Mirage functions, so you'll be saving time as well as money. Formatting diskettes with Midicaster is a breeze, and Midicaster is still one of the finest utilities available for backing up your important sound and operating system disks. As a matter of fact, Midicaster now includes so many new features that we have'nt got the space to tell you about all of them here. But we can tell you the price - $49.95 (by the way, we include a money-back guarantee). And it's easy enough to find out more. Simply ask us. We're the Midi Connection.

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Maximizing VFX MULTI Mode

Steve Munro

Ever wished for more than 12 tracks in MULTI Mode? Actually, you can have as many as 48 instruments on those 12 tracks without using program changes (you ARE limited to 21 oscillators.). How? By re-writing sound programs utilizing unused oscillators and accessing those sounds via the patch select buttons.

Suppose you have used up all 12 tracks of the Multi in the current song you are sequencing, but wish to add more tracks without using program changes. Most sound programs use only 2 or 3 oscillators at one time, with the patch select buttons providing you with different combinations of the six oscillators available for each sound program. In most cases, there are unused oscillators (either unused in the original program, or patch select variations you will not use in this application) that are available to you. Let's say that one of your MULTI sounds is a favorite keyboard patch which you will not use the patch selects on: you like the sound of "00" and will not use the patch select variations. Go back into SOUNDS mode and select this keyboard patch. Push SELECT VOICE. All six oscillators are now displayed. You notice that this sound only used 2 oscillators, leaving four for your use. You wish to add a string section to your MULTI, and now you can.

Go to a string sound you like, select it, and again push SELECT VOICE. See which oscillators are playing (the ones not in brackets). Now use the COPY function and copy all voice parameters for those string oscillators to the available, unused oscillators in your keyboard patch. Be sure these new voices are muted for your keyboard sound, but play when one of the patch select buttons is pushed. Use the WRITE button to now save the new program to memory, then load this new sound to MULTI. You must also enable controller #70 (patch select buttons) on your receiving module. You can now access both the keyboard sound and the string sound using the patch select buttons.

Since you have four possible patch select variations per program and twelve tracks in MULTI, it is possible to have 48 instruments playing in MULTI (but not at the same time). There are some limitations: in the example above, you can have either the keyboard sound OR the string sound play, but not both at once (unless you program one of your patch select variations to play the oscillators of both sounds, in which case both instruments would necessarily have to track the same notes). And, of course, you are limited to 21 oscillators playing at the same time.

Another trick is to use one of the multiple effects algorithms for your MULTI effects and route the same sound through both FX buses. For example, load FLANGER + REVERB.2 into MULTI. Now go back to SOUNDS mode and select that favorite keyboard patch again. Push SELECT VOICE and we are back to the oscillator page. You already know that only two oscillators are being used. Select the first oscillator and go to the OUTPUT page and set the destination bus to FX2, if it is not already set so. Repeat for the second oscillator. Now copy both of these oscillators to available, unused locations in the same program and route these copies through FX1. Again, mute the copies for your keyboard sound, and un-mute them for one of the patch selects which will also mute the original keyboard oscillators. This sounds more complicated than it really is, but I'm sure you get the idea. Save the new program to memory and load it to MULTI. Now, using the patch select buttons, you can play your original keyboard sound or the same sound sent through the flanger. You've just added another track to your Multi.

Remember that on the MULTI Patch Select page, this track must be set to LIVE or HOLD to access your patch select variations. Also, on the MULTI Effects page, the destination bus must be set to VOICE. If set to FX1 or FX2, your program assignments will be over-ridden and all voices will be routed to the same bus.

These techniques won't work with all sound programs, but experimentation can be fun and sometimes yields unexpected results. You'll also be amazed at how quickly the procedures described can be accomplished with the COPY button. So forget limitations. Go into MULTI Mode and think possibilities!

Bio: Steve Munro manages a motel in the Albany, New York area. His first keyboard was a Vox Jaguar Organ he played in several rock bands in the late '60s while in high school. ▬

Tested and Approved Hard Drives for the EPS

MANUFACTURER	MODEL
Rodime	45plus, 60plus, 100plus, 140plus
CMS	43SD, 20SD, 30SC, SDU30
Microtek	Nova40
Eltekon	OVD-20, 30, 40, 50, 60, 80, 90, 120
General Computer	Hyperdrive FX/20
Mass Micro	Mass 30e
Supra Drive	MacPlus 20

Classifieds

USER GROUPS

I'm interested in joining or forming an EPS users group in the L.A. area. Contact: Jim Norman, Audio Images, 20847 Sherman Way, Suite 202, Canoga Park, CA 90290. Ph.: (818) 703-7934, Compuserve: 71321,2614; GEnie: J. Norman7.

MAC/EPS USER GROUP FORMING. If you are interested in trading EPS samples, send me your sound list. If you have a Mac and an EPS w/SCSI, I REALLY would like to hear from you. Jeff (408) 946-6743.

I'd be interested to talk to anyone in Perth, Western Australia who owns an EPS or Mirage (I couldn't bring myself to part with mine) who wants to swap/trade ideas/sounds or just talk about the Mirage/EPS or ESQ-1. Phone: 380-3574.

Looking for VFX owners to establish Users' Group. Anyone interested in exchanging patches by mail please send name, address, phone number and patch list to: Bradley Kaufman, 11-26 Saddle River Road, Fair Lawn, NJ 07410. (201) 796-0300.

The Hacker is compiling a list of Ensoniq user groups. If your group would like to be included, please send us your group name, address, contact, phone number, instruments covered, and any additional info you feel is pertinent.

SAMPLES

MIRAGE LIVES! Top quality samples for the Mirage! The best of Proteus, M1, D50, DX7, Emu II, Kurzweil, XR10, TR909... Also digitally transferred sounds from Akai S900 and S1000! For more info, call or write: Mikkel Eriksen, Korsgt 17, N-7030 Trondheim, Norway, Phone: 47 7 512973.

Proteus and U220 sounds digitally mastered on compact disk (CD). 600 samples total, covering 98 individual sounds. Limited quantities available. $14.95 + $2 s/h. CA res. add 6.25% sales tax. Digitelesis, 8667 Via Mallorca, #76, La Jolla, CA 92037.

"Lush," "X," "DeMity," "Addy," and "Turbo" disks from my Soundprocess library for your Mirage. Closeout prices! Only $20 each plus $1.00 postage, or all five for $79 plus $2.00 postage. Also would like to trade EPS samples I have made for yours - public domain only. Anybody out there want to trade EPS sequences, original or otherwise? Bob Spencer, 703 Weatherby Ln., Greensboro, NC 27406.

Quality EPS orchestral samples. MUMS (McGill University Master Samples CD). Also M1, D50, Kurzweil, crazy original samples. For demo disk, cassette and catalog $17 (US). Free shipping. In Canada, $19 (Can.). K. B. Thomas, PO Box 174, Stratford, ONT, N5A 6T1 Canada.

Trade EPS sounds by mail. I have a large 700,000 Block library, many killer PD & homemade samples. Send your list. Craig Duncan, PO Box 83211, Los Angeles, CA 90083. Home: 213-645-4181, Work: 213-828-4911.

DIGITAL DREAMS proudly presents VOLUME 1. 32 new programs for **SOUNDPROCESS**. Quality Pianos, FM Pianos, Hybrid Keyboards, Strings, Horns, Soft Washes, Breathy Textures and more. $16.95 + $2.00 s/h to Bruce Wallbillich, 162 Beech St., Covington, LA 70433. DEMO DISK with one program from VOLUME 1 only $3.00.

Mirage samples: created with input sampling filter - yielding 50 kHz. Also custom services. 400 sounds. Listings: $1.00. Demo tape: $6.00 (includes listings). Mr. Wavesample, 162 Maple Place, Keyport, NJ 07735. 201-264-3512. Make checks payable to Jack C. Loesch.

EQUIPMENT

'89 STUDIOMASTER Series 5, 16 x 24 console. Phantom Pwr. 5 aux. Expandable to 32 ch. NEW condition. Original carton and manuals included. $1950. Pete, 206-853-2844.

SQ-80 with case. Many patches and accessories. One year old, used only in home. Perfect condition. Moving, must sell. $950 and I will pay shipping. (407) 969-0722.

Atari 1040ST and SC1224 color monitor. Excellent condition. Also, large collection of software and STart Magazine with disks! All for $750. Lee, (607) 844-9797.

HOT SUMMER SPECIAL MAARTIST EPS-4X + 5 FREE disc $300. TX16W, S1000/S950, FZ1, FREE samples, MC/VISA. Wildwood Sounds, 4726 Pebble Creek, Pensacola, FL 32506. 904-944-6012, Tony, after 6 pm.

SQ-80 synth, all sounds in the known universe, latest software plus no-clack keyboard update. $1000 obo. (719) 471-7193.

Yamaha RX17 Drum Machine. Hardly used. Like new! Has MIDI IN/OUT, cassette jack, Pattern editor and Great Drum Sounds! Get all this for only $125.00! Vincent, (305) 970-0667 days, (305) 987-8538 eves or message.

2X memory ME-1 for EPS. $100. Tim O'Connor, (614) 424-3841 days, (614) 885-4595 after 6 (EDT).

IBM-AT compatible for sale. 1 Meg RAM, 20 Meg HD, 5.25" 1.2 Meg floppy, 3.5" 1.44 Meg floppy, VGA monitor, MPU-401 compatible MIDI card, 101 kybd, Ballade sequencer and MT32 editor, and Roland MT32. Complete music workstation except for MIDI controller! Only $2950 or best offer. Bob Spencer, 703 Weatherby Ln., Greensboro, NC 27406.

EPS 2X Memory Expander - New condition. $95 or trade for EPS samples. Fournier Enterprises, 301 W Jersey St., Elizabeth, NJ 07202.

SQ-80 w/10,000 patches + 1 RAM: $950. 40 Meg SCSI drive: $350. Simmons MIDI 8 channel stereo mixer: $275. Mac MIDI interfaces: 2in/6out: $60, 1in/1out: $40. EPS 2X expander: $70. MXR Phase 100: $80. Jeff, 408-946-6743.

Mirage keyboard with disks, dustcover, and IBM VES: $575, obo. Mint condition. Phone: 609-346-0943.

EXPANDERS: 4X EPS, $389.00. **VFXSD**, $279. **AKAI; ROLAND, KORG. PC MIDI** CARD, $99. **44MB removable SCSI drive, $995. RAM CARTRIDGES: VFX, $99.95; ESQ/SQ80, $39.95 & $69.95; K1, $49.95; KORG; YAMAHA.** FREE shipping. **SOUND LOGIC**, 1125 Eleventh Street, Ramona, CA 92065. (619) 789-6558 (Info); (800) 753-6558 (Orders).

WANTED

Does any fellow Hacker out there have an IVM board or Megabank board (with of without the Mirage) for sale? Joseph, 602-866-3880.

Digidesign or Alchemy wavesample editor for the Mac. w/docs. Jeff, (408) 946-6743.

SOFTWARE

(E)SQ-80 TRACK SHEETS Comprehensive, intuitive, includes FX/SMPTE. Legal size, 6-part duplicating masters with indexes, on heavy stock. $6.00 Legal binder $14.00. **Fostex MTC-1/Atari/ Creator/Notator** sync software, $10.00. Trey Yancy, 919 E 48 1/2 St., Austin, TX 78751.

EPS-Sense: IBM-PC Sound Editing System for the EPS/EPS-M reviewed in Issue #50 of TH. $50.00 + $5.00 s/h. Jeffrey Richter/Donna Murray, 3502 Village Bridge Apts., Lindenwold, NJ 08021. Phone: 609-346-0943.

Mac MasterTracks Pro 3.4 with original docs and disc: $150. Beaverton Digital ESQ/SQ-80 editor/ librarian with random patch generator: $55. MasterTracks Pro Vers. 1.0: $40. Jeff, 408-946-6743.

PATCHES/SOUNDS

VFX original CESIUM SOUND Volumes 1, 2 and 3 on IBM disk. Easy SYS-EX dump. All 3 for $68.00. Vincent , 305-970-0667 days or 305-987-8538 eves/message.

VFX-SD best and most useful sounds for modern Top 40 and soundtracks. 60 program banks $30 each. Pegasus Productions, tel (718) 436-1299, fax (212) 385-6052,. 1014 45th St., #3-C, Brooklyn, NY 11219.

120 HOT NEW VFX(SD) SOUNDS + 100 **FREE** Drum Patterns only $50 disc. RAM $89. 100 drum patterns for EPS, VFX-SD, HR-16, $12. **2000 Digital Samples** on 2 Maxell cassettes, Proteus, T1/M1, D50, VFX-SD, OMP3, Moog, K1/K5. $25. MC/VISA. Free shipping. Wildwood Sounds, 4726 Pebble Creek, Pensacola, FL 32506. 904-944-6012, Tony, after 6 pm.

NEW WAVEFORMS for the ESQ-1! Soundset 3, programmed by Sam Mims, brings a host of new waves - and 40 amazing new sounds - to the ESQ-1 using operating system 3.5 (not compatible with ESQ-Ms, SQ-80s, or earlier operating systems). Many D-50-type ambient sounds, all outlined in accompanying 22-page booklet. Available on data cassette or Mirage-format disk for $17.95, or on 80-voice EEPROM (40 voices blank) for $59.95. Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602. Phone: 818-769-4395.

DOCUMENTATION

The EPS Users Guide, 4th printing now ready. Companion for Ensoniq's own manuals. Price: $20 US. Please add shipping & handling: $2 US, $6 Canada, $15 Europe, $18 Australia, etc. Send check or MO to Gary Dinsmore, 6509 20th St. East, #1, Fife, WA 98424. 206-922-7585 for COD details.

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Hackerpatch

By Sam Mims

HACKERPATCH is intended to be a place where patch vendors can show their wares and musicians can share their goodies and impress their friends. Patches designated "ESQ-1" will also work on the SQ-80. The reverse is not always true. Once something's published here, it's free for all. Please don't submit patches that you know to be minor tweaks on copyrighted commercial patches unless you have permission from the copyright owner. All submitted patches are subject to consideration for mutilation and comments by Sam Mims—our resident patch analyst. If you send in a patch, *PLEASE* include your phone number. Requests for particular patches are also very welcome.

ESQ Patch: ORG-2R

by Rich Nazarenus, Newberry Springs, CA

This is an organ patch I have been using in church. I think it started with Ensoniq's ICYORG or something like that. Most pipe organ patches I've heard have either tended to lack bass foundation or else are rather muddy—at least to my taste.

ORG-2R is a standard Principal and Flute stop combination. I use two versions of it: one where the mod wheel controls the filter (shown), the other where the mod wheel controls vibrato. I have a CV pedal but find it awkward to use with any accuracy while playing standing up (which is what I usually do at church). Someone who wants filter and vibrato control could assign PEDAL as the modulator of LFO 1. Envelope 2 provides a chiff; when I don't want it, I can set MOD #1 on the OSC pages to OFF.

My sending this in was inspired by Kirk Slinkard's article on "Pipe Organs" in Issue #54.

The Hack

This is a dead ringer for a good church organ, and the mod wheel control of brightness is an excellent touch. My only criticism is that with the mod wheel up full, the attack detuning from ENV 2 seemed just a bit unnatural, so I decreased the MOD #1 DEPTHs of Oscillators 2 and 3.

The Ensoniq CV pedal is a bit "touchy." It's hard, for instance, to set it at some mid point, then lift your foot without changing that setting. I recently tried out Roland's "Expression Pedal" (basically the same thing) and liked it much better. It seems more solid, and definitely feels smoother.

ESQ Patch: GRAND9

by Bill Seath, Minneapolis, MN

Here is my verion of a grand piano. Note that even when you substitute different waveforms, it still sounds like a piano. I spent days looking for that perfect piano patch, and this is my favorite of over 15 variations. The LFOs scale down the Pedal parameter * * * *

The Hack

Using the CV pedal and all three LFOs to achieve an out-of-tune chorus effect is a clever touch. If you don't have a CV pedal, you can forego the mod wheel brightening, and use the wheel to get this detuning. Simply turn MOD #2 of the FILTER OFF, and change the MOD of LFO 1 to WHEEL.

This piano was a bit too bright in the top octaves for my taste, so I turned down the KEYBD parameter on the FILTER page to 27. In addition, I thought the high notes took a teeny bit too long to decay, so I tweaked TK of ENV 4 up to 46. These are very subtle changes. The ESQ is no Kurzweil 250, but Bill's patch brings another nice piano to this board.

SQ-80 Patch: CV WAH

by Walter Cooper, Tallahassee, FL

CV WAH is really a voice from the internal SQ-80 bank called KEYGTR. To save time, call up KEYGTR, go to the FILTER page, and make the appropriate changes. I needed a wah-wah guitar reminiscent of the '70s for a soundtrack and CV WAH filled the bill. Pressing the pedal forward gives a keyboard-type sound. Moving the CV pedal back gives a guitar-type sound. Moving the pedal while playing creates the wah-wah effect.

The Hack

In Hackerpatch, we generally refrain from using patches that are so close to factory patches. But though Walter only changed a few parameters, the result is a fairly different sound—and one that is very useful. As always, swapping WHEEL and PEDAL modulators is a handy trick, if you don't have a CV pedal.

The patch is tuned a bit sharp overall, so you might want to subtract 4 from all three FINE settings. (For OSC 3, you'll need to set OCT=-2, SEMI=11, FINE=31.) The panning effect of LFO 2 is all but unnoticeable; to enhance it, I increased the PAN MOD DEPTH to +63 (DCA 4 page), then set DELAY=06 on the LFO 2 page. This adds a bit of a "shimmer" to OSC 3; if you don't want this, turn MOD #2 DEPTH down to +01 or 00.

SQ-80 Patch: BLLST3

by Daniel Romeo, R & D Sight and Sound

This is an "L/A Synthesis" type of bell/string hybrid from the new RomeoSounds collection for the SQ-80 (ESQ-1) by R & D Sight and Sound.

The Hack

This is the type of patch where I love to crank the filter resonance up full (to 31) and set the cutoff frequency to where the sound takes on a digital sheen. Try setting FREQ to 69 or so, but play around here, as this is very subjective. For a harsher bell sound, turn AM (MODES page) ON.

The mod wheel is not used here; you may find it handy to have it fade out either the bell (DCA 2) or the string sound (DCAs 1 and 3) by setting MOD #2 to WHEEL with DEPTH=-63. And it's a cinch to use this patch on an ESQ-1—just ignore X's, L's, and R's in the envelopes.

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

ESQ-1 PROG: ORG-2R

BY: RICH NAZARENUS

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	1	EPNO2	ENV2	+2	OFF	-
OSC 2	-1	0	0	ORGAN	ENV2	+8	OFF	-
OSC 3	-2	11	31	ORGAN	ENV2	+8	LFO1	+1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	56	ON	ENV3	+15	KYBD	-15
DCA 2	56	ON	ENV3	+15	KYBD	-15
DCA 3	56	ON	OFF	-	KYBD	-15

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	10	0	43	WHEEL	+30	VEL	+4

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	6	KYBD	+22

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	6	OFF	OFF	TRI	3	0	0	OFF
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	+63	+2	0	63	23	11	1	0	0	9
ENV 3	+63	+56	+63	8	0	3	31	57	26	9
ENV 4	+63	+56	+63	22	0	3	51	57	34	9

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

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

ESQ-1 PROG: GRAND9

BY: BILL SEATH

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	PIANO	OFF	-	ENV1	+8
OSC 2	-1	0	1	PIANO	LFO3	+2	ENV1	+6
OSC 3	-1	0	0	PIANO	LFO3	-2	ENV1	+4

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	56	ON	OFF	-	OFF	-
DCA 2	56	ON	OFF	-	OFF	-
DCA 3	46	ON	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	51	0	30	ENV3	+63	WHEEL	+12

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	KYBD2	+27

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	0	ON	OFF	SQR	0	0	0	PEDAL
LFO 2	0	ON	OFF	SQR	0	0	0	LFO1
LFO 3	0	ON	ON	SQR	0	0	0	LFO2

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+2	0	-1	63	46	7	7	5	4	20
ENV 2	+63	+1	0	30	0	0	13	63	0	0
ENV 3	+20	0	-38	0	0	0	12	63	16	63
ENV 4	+63	+42	+3	45	42	2	35	63	17	44

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

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

SQ-80 PROG: CV WAH

BY: WALTER COOPER

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	4	SAW	LFO1	+2	OFF	-
OSC 2	+1	0	5	PICK1	OFF	-	OFF	-
OSC 3	-1	0	3	DIGI71	LFO1	+2	LFO2	+2

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	63	ON	OFF	-	OFF	-
DCA 3	47	ON	VELX	+22	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	36	22	32	PEDAL	-31	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	LFO2	+8

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	22	OFF	ON	TRI	0	0	63	WHEEL
LFO 2	19	OFF	OFF	TRI	0	0	50	PRESS
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+38	0	47L	0	0	34	43	16R	0

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

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

SQ-80 PROG: BLLST3

BY: DANIEL ROMEO

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	1	SAW	LFO1	+2	LFO2	+1
OSC 2	+1	0	0	PRIME	LFO3	+2	OFF	-
OSC 3	0	0	4	SAW	LFO2	+2	LFO1	+1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV2	+56	KYBD	-15
DCA 2	15	ON	ENV1	+63	KYBD	-15
DCA 3	0	ON	ENV2	+56	KYBD	-15

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	78	24	12	OFF	-	VEL	+8

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	KYBD2	+28

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	23	OFF	ON	TRI	11	0	0	OFF
LFO 2	24	OFF	ON	TRI	16	0	0	OFF
LFO 3	7	OFF	ON	TRI	6	0	0	OFF

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+63	+50	0	26L	0	0	6	48	56	9
ENV 2	+46	+55	+62	0X	0	0	3	10	56	9
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+48	0	20L	0	0	17	48	33R	0

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

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

VFX Hackerpatch

VFX Prog: BRASS GAS

By: Bradley Kaufman, Fair Lawn, NJ

NOTES: Here is a simulation of a live brass ensemble. Realism is enhanced by NOISE modulation of voices 3, 4, and 5 in the PITCH MODS section. LFOs modulate the pitch of saxophones, and the pitch and filter frequency of trumpets at different rates. Poly Key pressure makes each note distinct as in a live brass section. The mod wheel and timbre control mix the volumes of sax/trumpets, affect the LFO rates, and more. Velocity opens the sax filter. Combine BRASS GAS with the VFX ROM sound BE-BOP BASS as a performance preset, split with the bass on the bottom part of the keyboard (change BRASS GAS timbre level to 99), for the ultimate swing sound!

The Hack: Here is a fun combination of sounds. It takes a bit of time to get familiar with what patch select/timbre combination solos which instrument, but it's nice to have the versatility. I prefered to make one of the patch selects play all five voices. The clarinet (voice 3) vibrato was not convincing to me; I sped it up (LFO RATE=30) and turned the LEVEL down to 15. I also sped the trumpet (voice 5) LFO RATE up to 27. By "scooping" into an occasional chord with the mod wheel, you can really get the swing feel of a big band. – Sam Mims

SELECT VOICE

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

WAVES	1	2	3	4	5	6
Wave	Sax V.1	Sax	Clarin	Trump var	Trump	
Wave Class	Brass	Brass	Wavfrm	Brass	Brass	
Delay	005	005	0	0	0	
Start	03	03		0	0	
Vel Mod	00	00		0	0	
	For	For		For	For	

MOD MIXER	1	2	3	4	5	6
SRC-1				Off	Off	
SRC-2				Wheel	Wheel	
SRC-2 Scale				0.8	0.8	
Shape				Quant 16	Quant 16	

PITCH	1	2	3	4	5	6
Octave	-1	-1	-2	-1	-1	
Semitone	00	00	0	0	0	
Fine	-02	-02	-4	0	0	
Pitch Table	Sys	Sys	Sys	Sys	Sys	

PITCH MODS	1	2	3	4	5	6
MODSRC	Off	Off	Noise	Noise	Noise	
MODAMT			+03	+03	+03	
Glide	None	None	None	None	None	
ENV1	0	0	+76	0	0	
LFO1	+04	+04	+01	+01	+01	

FILTER 1	1	2	3	4	5	6
Mode	LP2	LP2	LP2	LP2	LP2	
Cutoff	030	030	076	070	070	
KBD	0	0	0	-20	0	
MODSCR	Off	Off	LFO	LFO	LFO	
MODAMT	-	-	-12	-10	-10	
ENV2	+60	+60	00	0	0	

FILTER 2	1	2	3	4	5	6
Mode	HP2	HP2	HP2	HP2	HP2	
Cutoff	0	0	0	0	0	
KBD	0		0	0	0	
MODSCR	Off		-	-	-	
MODAMT	-		0	0	0	
ENV2	0		0	0	0	

OUTPUT	1	2	3	4	5	6
VOL	90	90	72	99	99	
MODSRC	Wheel	Wheel	-	Timb	Timb	
MODAMT	-50	-50	0	99	99	
KBD Scale	0	0	0	+07	+07	
LO/HI Key	-	-	-	C2-C7	C2-C7	
Dest Bus	FX1	FX1	FX1	FX1	FX1	
Pan	50	50	50	49	49	
MODSRC	Off	Off	-	-	-	
MODAMT	-	-	0	0	0	
Pre-Gain	Off	Off	Off	Off	Off	
Voice Prior	Med	Med	Med	Med	Med	
Vel Thresh	0	1	0	0	0	

LFO	1	2	3	4	5	6
Rate	34	34	20	20	20	
MODSRC	Off	Off	WL+PR	WL+PR	WL+PR	
MODAMT	-	-	+40	+40	+40	
Level	0	0	50	50	50	
MODSRC	WL+PR	WL+PR	Press	Press	Press	
Delay	0	0	20	20	20	
Waveshape	Sin/Tri	Sin/Tri	Tri	Tri	Tri	
Restart	Off	Off	On	On	On	
Noise SRC RT	0	0	44	44	44	

ENV1	1	2	3	4	5	6
Initial			99			
Peak			99			
Break 1			99			
Break 2			99			
Sustain			0			
Attack			99			
Decay 1			99			
Decay 2			99			
Decay 3			99			
Release			99			
KBD Track			00			
Vel Curve			CV-1			
Mode			Nor			
Vel-Level			00			
Vel-Attack			00			

ENV2	1	2	3	4	5	6
Initial	99	99	0	99	99	
Peak	99	99	0	70	70	
Break 1	60	60	0	76	76	
Break 2	83	83	0	70	70	
Sustain	99	99	0	79	79	
Attack	0	0	0	54	54	
Decay 1	41	41	0	46	46	
Decay 2	40	40	0	54	54	
Decay 3	53	53	0	19	19	
Release	31	31	0	00	00	
KBD Track	0	0	0	0	0	
Vel Curve	CV-3	CV-3	CV-1	CV-1	CV-1	
Mode	Nor	Nor	Nor	Fin	Fin	
Vel-Level	82	82	0	25	25	
Vel-Attack	0	0	0	00	00	

ENV3	1	2	3	4	5	6
Initial	99	99	57	99	99	
Peak	99	99	99	99	99	
Break 1	99	99	95	99	99	
Break 2	99	99	99	99	99	
Sustain	99	99	96	99	99	
Attack	0	0	03	0	0	
Decay 1	37	37	20	37	37	
Decay 2	30	30	12	30	30	
Decay 3	52	52	12	52	52	
Release	19*	19*	14*	25*	21*	
KBD Track	0	0	0	0	0	
Vel Curve	CC-2	CC-2	CV-2	CV-2	CV-2	
Mode	Nor	Nor	Nor	Nor	Nor	
Vel-Level	0	0	0	0	0	
Vel-Attack	0	0	0	0	0	

PGM CONTROL

Pitch Table	Off
Bend Range	**
Delay	X4
Restrike	00
Glide Time	00

EFFECTS (1)

Effect	Chorus Rvb1
Decay	78
FX1	26
FX2	00

EFFECTS (2)

Rate	Dep	Del
17	29	081
Mod	Mod	Mix
0	-19	22

EFFECTS (3)

Wvshp	Sin
Modscr	Press
Rvb	Off
HF cut	Off

PERFORMANCE

Timbre	00 (99)
Release	00

Pressure **Key**

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, or PAN: TRANSONIQ.
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).

Dear T.H.

Is it possible to send sample dump information to the **EPS** via Genpatch (Hybrid Arts) sample dump? I've asked several people who tell me that it's possible, but can't figure out how to do it. Help!

Jim Norman
[71321,2614]
Topanga, CA

[Ensoniq – The EPS does not support MIDI Sample Dump, so it will not work with the Genpatch program. Since Genpatch does allow you to write some Sys Ex code you might think that you could set up communications, but it is a difficult task best left to dedicated software. We do know that Digidesign's Sound Designer Universal and Interval Music's Genwave programs work on the Atari ST (as does Gelva's EZE) so you do have programs available that will read sample dump info and convert it to send to the EPS and vice versa.]

Dear TH,

Do you suppose that Ensoniq would release the format for the **VFX-SD** diskette. I would like to be able to read the diskette with a PC and have already made some progress.

Thanks,
Jack Hines
[72321,357]

[CS – This information is not is not currently available from Ensoniq, but I am informed that the VFX-SD disk format is identical to that of the EPS. I'd suggest getting hold of a copy of TH #45 (March, 1989). In it you will find an excellent article by Alan K. Smith (Ensoniq Project Engineer) titled "EPS DOS/SCSI Miscellaneous Ramblings." Hopefully, you'll find the info you need there.]

Dear Transoniq Hacker,

Why doesn't Ensoniq implement All Notes Off on any of its synths? They ought to be ashamed of themselves!

Warren Sirota
[76545,1527]
Oakland, CA

[CS – The main reason for not implementing the "All Notes Off" command, according to Ensoniq, was to maintain compatibility with a number of non-multitimbral products which "illegally" used the "All Notes Off" command in place of standard "Key Up" types of messages. Since the "All Notes Off" message is a mode message which is not restricted to any specific MIDI channel, a multi-timbral instrument receiving this message from a mono-timbral instrument in place of standard "Key Up" messages would be forced to shut off all sustaining notes, regardless of whether or not those notes were on the particular MIDI channel intended for the message or not. The feeling at Ensoniq has been that the potential problems for users generated by using the "ll Notes Off" command far outweighed those engendered by not using it. This, of course, creates problems for those of you using Ensoniq products with external sequencers which send the "All Notes Off" message in place of the more correct "Key Up" messages when sequence playback is stopped. C'est la vie.

Since the majority of new products from various manufacturers are implementing the "All Notes Off" messages in a more strictly legal fashion, Ensoniq is re-considering inclusion of "All Notes Off" in future products – as well as possibly updating some older models.]

*[Ensoniq – We're sure that you will all be pleased to know that the new **SQ-R** (see News from Ensoniq in the Front Panel) can be set to respond to "ll Notes Off." We stand by our earlier claim that too many manufacturers were using "ll Notes Off" in place of key up events, but there is no doubt that it isn't happening any more. We intend to implement it in all future products.]*

Dear Readers, Writers, Reviewers, Advertisers and Editor:

I have subscribed to the Hacker for the past three years and have read every issue cover to cover. In case you haven't noticed, TH is the only magazine of its kind. Look at the other equipment specific publications for Yamaha, Roland, Peavey or any other company. It is pure and simple propaganda! Announcements of "new & improved" products to suck your wallet, articles about "the company's" wonderful new CEO, etc. And just take a look at the letters to the editor. Never a bad word or product problem to be found. On the "free press" side (*Keyboard, Electronic Musician, Start,* etc.) you do read scathing reviews and hear of equipment problems from time to time, but again, look at the Letters to the Editor page. The June, '90 issue of *Keyboard* devoted a full 2 out of 142 pages to readers comments (that's 2.84%). In June *EM* gave 2 out of 116 pages for a whopping 1.72%. By comparison, in June, '90 TH devoted 9 of 32 pages to the letters section. That is 28.1%! Wake up you boneheads who complain that TH is suppressing your 9000th letter. Why not try writing in to those other publications and see how far you get. Do you think they would risk losing advertising bucks on your little voice?

On the matter of reviews, some of us have lost sight of the fact that KBD, EM, etc., have staff writers on payroll, in buildings devoted to their publications replete with switchboard operators, offices, art departments and lawyers. Call KBD and they answer "Miller Freeman, what publication are you calling about?" When "they" review, the stuff is in the office and several people can try it out. Now look at the Hacker. The writers and reviewers are largely recruited from the readership! So while you may not get writers who do only that for a living, what you do get is the perspective of someone who makes part, if not all, of their living with the equipment, programs and sounds in question. Call the Hacker and usually Eric or Jane will answer. All this is run from the same place they call home!

One final note: as stated before, there is no other publication quite like the Hacker, but there will be. Several performing artists in my city are banding together to create a publication devoted to the arts. The format will be just like the Hacker. We will publish uncensored letters about performances, have artists review other artists, and allow the readers to submit articles on related subjects. A return to a truly free press!

Mike Mortilla
Santa Barbara, CA

[CS – Thanks for the kind words and good luck with your new publication!]

Dear Hackers and VFXperts:

I should have written long ago, but I've been busy having the time of my life programming and playing the **VFX** + O.S. 2.0 update. Being a novice to synthesis has not prevented me from concocting a sizable, varied collection of 33 great sounds. For fear of electronic disaster playing havoc with my EEPROMs, I have slowly transferred my original sounds to the VFX patch sheets.

Like Dr. Pepper, the VFX is a wonderful product which is probably destined to be appreciated by few and understood by even fewer. While commercially available sounds have generally been a source of new programming ideas, LESS THAN 10% of any collection has been truly stunning (or of practical value)! Furthermore, most collections are produced by 1 or 2 programmers, and the patches begin to sound alike after awhile.

This letter is directed at the heavy-duty amateur programmer who is looking for a new source of sounds which cost less than $80 a pop and are programmed with Tender Loving Care by us – the "end users" (ouch).

If you have 1 or 2 (or more) ORIGINAL sounds to trade, send me a copy of your program ON PATCH SHEET FORMAT and specify what type of programs you're interested in. I think your investment of time will be amply returned.

Brad Kaufman
521 Lyncrest Ave
Fairlawn, NJ 07410

Dear Hacker,

This is in response to an attack on you and on Clark Salisbury regarding the Sound Source Unlimited scandal. Oh, what a scandal!! What an outrage!! How dare they!! After arriving home at 3am (from work, of course) I breezed through the Hacker. When I got to page 30 my blood began to boil.

This is a case of a spoiled child picking up his marbles and going home. As a product reviewer for the musical/electronic market, I have come upon total trash and things of greatness. When products are trash, I become opinionated, but stay unbiased, because this product shouldn't be on the market. When products are great I praise the creators in hopes of inspiring others to achieve the same standards. I state the facts as I see them. When creating sounds for instruments there is no black and white. It is often a case of a reviewer's opinions. There is, however, the matter of remaining unbiased. I believe Clark achieved this and have no questions about his integrity. As far as qualifications, like Clark, I have also worked in music stores. But, I now run CineTunes, a professional 24-track MIDI studio and have my music used by Television Networks and ad agencies, so I too know a thing or two about sound and instruments. The point is Mr. Bitetti, I happen to agree with Clark's review and support him totally, as a reviewer and as a professional musician.

To bring up another point regarding your company's SAMPLES for the EPS. After all the hype surrounding your samples, I purchased some of your M1 sounds for the EPS and quite frankly, they were very disappointing. The sounds overall were clean and the loops were good but the programming was lousy. The patch selects were simple and not exciting whatsoever. There was little use of filtering, layering crossfades, velocity programming etc. Anyone can use a MAC to sample and layer but it takes real finesse to make GREAT use of these samples. Compare the Tenor Sax from Ensoniq with the M1 Sax from SSU and there is a world of difference. Your Foster Piano didn't even have layers in octaves slightly detuned to give a real concert sound. This is basic. I suggest you buy some EPS instruments from Maestro Sounds. They have gone the extra mile to make music exciting.

Finally, regarding your world-wide dealer network, congratulations, you have a great marketing team. You don't, however, have truly great sounds – they are just ok. Great marketing doesn't make great products. I applaud the Hacker for not batting an eyelash with your childish threats. You can fool some of the people some of the time... and ya can't fool us hackers. If you can't stand the review, get outta the business!!

Sincerely,
Robert Feiner
CineTunes Pres.
Yonkers, NY

SATUREN SOUNDS
4283 HILLTOP PLACE
BETHLEHEM, PA 18017
PHONE (215) 974-9385

ESQ-1 AND SQ-80 OWNERS

Do you play solo gigs? With a group? Sure, there are lots of cartridges on the market. If your experience has been like mine, you need lifelike sounds, separately, but also in splits and split-layers at your fingertips so you can play piano, reeds, or brasses with bass, or winds; or brasses with piano, or piano (acoustic or synthetic) layered with strings and split with bass. How close are your sounds to the real thing?

I developed these sounds, some in collaboration with Chris Kanieski, because I needed them when I performed, composed, and recorded. I've used these sounds on gigs, improved them and reworked them over a three-year period before releasing them. We have used them at Moravian College, where I direct the jazz program and teach theory and acoustics courses. Because this cartridge is an **E²PROM**, you can just put the cartridge in and play; or you can customize these sounds to your taste, rearrange them, or even replace them. Instruments are placed stereophonically according to their usual position in the orchestra. For example, high strings on the left and low strings on the right.

To receive your cartridge, please send a check for $55.00 plus $3.00 for postage and handling (in Pennsylvania, include sales tax for a total of $61.48) payable to David Saturen. A demo cassette tape is available for $5.00 including postage and handling ($5.30 in Penn.).

I am also supplying Voice Crystal 1 and Voice Crystal 2, 3 1/2" disks for SQ-80 at $20.00 plus $3.00 each for postage and handling ($24.38 total in Penn.).

Enjoy your new sounds!

ESQ-1 and SQ-80 are registered trademarks of Ensoniq Corp.

[CS – Thanks for the support. Ironically, SSU's response to my review seems to have generated more negativity among Hacker readers than the review itself did. Check out Paul D. Wykes' letter below.

By the way, the July issue of Electronic Musician *has some very favorable things to say about the SSU VFX collection. Readers interested in another viewpoint might find it worth checking out.]*

Letter to the Editor:

The following are my comments regarding the EPS SCSI system. I have not seen many comments regarding SCSI in the Hacker, but I have had a great deal of trouble with my EPS SCSI system (trying to connect a Mac), and therefore I want to enlighten anyone out there that may have similar problems.

Ensoniq says they are going to release a new version of the operating system to address SCSI related problems "in about a month" (Deja vu!!). This may serve to make some of the following issues less important in the future. This included an ROM upgrade (gulp) that includes, (dare I say it?), another trip to my friendly authorized repair station. (In all fairness to Ensoniq, their repair network and policies are better than Alesis, for instance.)

Ensoniq told me of the Quantum Pro Series and some removable cartridge drives having problems and so forth, but were unable to describe in detail problems with Seagate drives (which I own, but do not use much) and what pin number for parity to disable (once again the Hacker is the best source of information, since this was reported in a previous issue). Sorry Ensoniq, but it is the truth. Don't your tech-support guys read the Hacker?!

The first thing to remember is that termination is all important and where a long cable is put in the SCSI chain is very important. The second thing to know is that you better not mix different brands of EPS SCSI interfaces. I had a PS Systems' 4x and an Ensoniq SCSI and what a nightmare! (But that is PS Systems' fault, not Ensoniq's.) I would try everything, and that system never did work correctly if configured with a Mac.

Once I had that corrected, I had to reconfigure the location of my hardware, since the EPS is ultra-picky about where the terminators go, how long the cables are, etc.

This is the rub: if using two hard drives (one for the EPS) and a Mac, you must have two terminators on the SCSI bus. Hopefully external terminators, so that they may be placed anywhere you desire, rather than right in the drive itself. You will probably want to locate the drives of the Mac more than 12" from the port on the back of the EPS. A long SCSI cable (6') must go from the Mac to the Mac's SCSI drive. Use a SCSI extension for this, (female on one end, male on the other), and connect a 12" 50-to-25 pin cable to the Mac. In between these two cables goes a 50-pin terminator. Then the interconnecting drives should be connected with 12-18" cables all the way back to the EPS. The second terminator goes on the first drive on the chain

closest to the EPS. And remember, the EPS looks for the lowest SCSI device number to boot from, so this drive is best set to 1 or 2.

This is the best solution I have found so far (that does not include a $75.00 25-pin terminator that Ensoniq recommends). No other configuration that I have found worked, except to use ALL short cables, which is usually not realistic.

Thank you,
Jeff Papineau
San Jose, CA

[CS – Thanks for sharing your ideas, Jeff. It probably bears repeating that Ensoniq does not guarantee successful SCSI operation with EPS expander cartridges made by manufacturers other than Ensoniq.]

[Ensoniq – We'd like to add that we have recently appointed Customer Service Representative Dave McMahan to handle all SCSI questions to help consolidate the information and serve our users more effectively. Since most of our customers' set-ups are different it requires a great deal of qualifying and trouble-shooting (SCSI is still less of a "standard" than MIDI!) but we hope that all that we have learned over time and this appointment will help.]

Dear Hacker:

1. I noticed that I was having difficulty playing expressive leads on my **VFX**. Then I figured out why. The pitch bend wheel on the VFX takes much more force to move than the one on my other (Yamaha) keyboard. I really think this adversely affects my playing.

Is there any way to "loosen up" the pitch bend wheel of my VFX to make it easier to move?

2. I would like to know the difference between version 2.0 and 2.1 VFX software. My version 2.0 sometimes falsely indicates a low battery upon power-up. Has this been fixed in version 2.1? What else may have changed?

3. I want to let VFX users know that the VFX version 2.0 does not work with the DX7II FD E! Midi Data Recorder 2 mode. The E! takes "breaks" while downloading the ~65K VFX information, and I think the VFX times out, assuming something is wrong. If this is the case, I think the VFX time-out should be increased. Let's face it, if something is wrong with my MIDI hardware, like I'm going to fix the problem in half a second? It's too late for me; it cost me the price of an Alesis Data Disk, but I wanted to warn other people it doesn't work. Perhaps the E! is just unreasonably slow. Can you explain?

Sincerely,
Kyle Jarger
Chelmsford, MA

[CS – 1) There is no easy way to "loosen up" the feel of your pitch bend wheel. And since the VFX reads the position of the wheel on power-up for calibration purposes, it's probably a good idea the the wheel stay pretty firmly centered when not in use.

2) As you have surmised, one of the problems addressed in OS 2.1 has to do with the "Low Battery" message – an upgrade to 2.1 will probably solve your problem. It is possible, however, that your battery actually is low. To check, first re-initialize your VFX (after saving any programs or sequences you might want to keep). You may then access the analog tests page by pressing the "Compare" button while holding down the "Presets" button. The battery should be reading above '125' to be considered within tolerance.

Other enhancements included in OS 2.1 are:

A minor change in the way the track transpose parameter works; a 'double-click' shortcut to help locate the current sound; the addition of a 'maximum velocity' parameter to make the VFX more suitable as a controller for instruments that do not use the full range of MIDI velocities (notably the DX-7 and its cousins); the addition of a 'MIDI Loop' parameter which solves the problem of the VFX plunging to zero volume when a MIDI loop exists between it and an external sequencer; and a fix for a sustain pedal problem that would occasionally occur on tracks 9-12.]

[Ensoniq – 3) Since communication is only one-way, the problem is not a time out. The E! software does not appear to be fast enough to keep up with the data stream from the VFX and will therefore miss data and get out of sync.]

Dear Hacker:

Three cheers for standing by Clark Salisbury against Sound Source Unlimited's uncalled-for withdrawal of advertising from the Hacker. Not only are Sound Source's actions childish but they are also unbusinesslike. Presumably Sound Source Unlimited was advertising in the Hacker in order to expose their products to their target audience – Ensoniq keyboard players. This advertising would then generate enough sales to more than pay for the ad. By withdrawing ads from the Hacker, Sound Source is cutting off its nose to spite its face since it will lose many potential customers. I'm surprised that a company like Sound Source has so little confidence in the quality of its own products that it cannot accept a little constructive criticism.

It is important for any magazine readers to believe that product reviews are objective and are presented without any bias or outside pressure. By supporting Clark Salisbury, the Hacker has maintained its integrity. Keep up the good work.

Sincerely,
Paul D. Wykes
Spencer, MA

[CS – And thank you for your support.]

Dear Hacker,

I have had an ESQ-1 for a little over 2 years. I'm thinking of selling it (along with my Yamaha RX7) and saving up for a **VFX-SD**. Before I do this, I have a couple questions about the VFX-SD:

1) Many of the new synthesizers coming out have a way to import new waveforms into the keyboard. I think this is a great way to stop an instrument from becoming obsolete. Is there ANY way to do this on the VFX-SD?

2) Since I'm going to sell my RX7 as well, in order to come up with the cash, what about the VFX-SD's drum sounds? Can they take the place of a drum machine? What are the possibilities of creating new drum sounds and new drum kits?

I have looked at other products (not Ensoniq) that look pretty good (Yamaha SY55, Peavy DPM 3, etc.). However, if I can, I would like to stay with Ensoniq because of their support and I just love the Hacker. You guys have helped me out a lot with my ESQ-1, so I hope I'll be renewing my subscription soon. One more quick question: Are you guys (Ensoniq) planning to make any other products in the future other than synthesizers and samplers?

Keep it up guys,
Aric Jacover
Evanston, IL

[CS – 1) There is no way in the known universe to import new wave data into the VFX or VFX-SD.

2) My feeling is that yes, you can use the VFX-SD drum sounds in place of your RX-7 sounds. In my opinion, the VFX-SD samples are far superior to those of the Yamaha machine in terms of overall sound quality and

SEVERE SOUNDS

For the

EPS

Bigger isn't always better. We know how frustrating it is to have those vacant instrument spots, but not enough free system blocks to load anything into them. That's why we've optimized our samples for memory efficiency. Even if you have a 4x expander, you know it's possible to have only one or two sounds eating up most of your memory. More than four out of five of our instruments weigh in below 100 blocks, with a few as small as 3 blocks! Even with some disks featuring as many as 20 instruments, each disk is only $10.00. Call or write for info, or send $4.00 (s&h included in U.S.) for demo cassette.

Severe Sounds
P.O. Box 14250
Austin, TX 78761
(512) 388-3808

EPS is a registered trademark of Ensoniq Corp.

character of the samples themselves – and, of course, you can tune them, process them, and layer them in ways that are simply not possible with the Yamaha machine. On the down side, the VFX-SD includes no rim, shaker or claps samples – if you need these sounds, you will have to synthesize them (or look for third party versions of them). Again, my feeling is that reasonable facsimiles of these sounds can be synthesized in the VFX. One other drawback that you should be aware of – the assignment of drum sounds to keys on the keyboard (and therefore to specific MIDI note numbers) is not very flexible. If you are planning on using the VFX-SD with drum sequences that you have already done, you will probably find that you'll need to re-map the drum note numbers of those sequences before you can successfully use them with VFX-SD drum kits. This difficulty has been addressed in the SQ-1, however. Its drum samples are completely re-assignable (within some limitations). And it has claps, rim, and shaker sounds.]

[Ensoniq – Well, we do make the Sound Selector high resolution listening instrument (had to take the chance to plug!) and we will certainly keep an open mind about other types of products. What would you like us to make (dare we ask)?]

Hi,

I have a **VFX-SD** and think it's great! – And I have a few questions.

1. Does Ensoniq have a videotape to help learn the VFX-SD quickly? If not, why not? I've read the manual and it's not always clear. I also don't have the time I'd like to devote to the keyboard, so I'm constantly having to go back to the manual.

2. I'd like to get a good, overdriven guitar sound from my VFX-SD. Any ideas?

3. Last, does Ensoniq contact customers via a mailing list whenever operating systems/updates become available?

Thanks a lot!
Jay Anderson
Elburn, IL

[CS – 2) The obvious approach to overdriven guitar sounds is to use one of the distortion (i.e. "DIST+CHORUS+REVB") effects built into the VFX to process a basic guitar-type patch. The choice of which of the waves to use for this patch, however, may be a bit less obvious. One might think that one of the guitar waves might be a good choice for this application, but I've had much better luck using one of the transwaves as the source wave for these kinds of sounds. Any of the transwaves can yield interesting results, particularly if you remember to experiment with different wave start points and filter settings. And for a little added interest, try modulating the transwave – perhaps with an envelope or key pressure – to get some harmonic movement within the sound itself.

3) Ensoniq does not contact customers directly regarding the status of updates for their products. Technically, this is the responsibility of the dealer from whom you originally purchased your product. And the Hacker can do a pretty good job of keeping you abreast, as well.]

[Ensoniq – 1) We don't have an instructional video for the VFX-SD, although we did make a short video on the VFX that your dealer might be willing to lend you. We don't have any plans for an SD video at this time, but we are working on an SD audio instruction tape, a kind of overall "starter" kit to get the most out of the instrument. Audio allows you to keep focused on your keyboard while an instructor "whispers in your ear," a highly effective type of instruction. It will be available in the fall. We have heard about various dealers making their own tapes (Adam Smith from Texas comes to mind) so perhaps some others will read this letter and come to your rescue.

3) There are some specific instances when we might contact our warranty base with update news, but we generally rely on our dealer network and the various publications to announce new operating systems and the like. We get a good return on warranty cards, but we still only get around 30% so it is not the most effective way of reaching you. Next time you buy, remember this and be sure to return that warranty card so we can use the list more effectively.]

Dear TH:

I have read every issue of TH cover to cover from December, 88 and look forward to each issue. The feeling is almost like receiving a new synthesizer through the mail each month. One bummer, though, since I live in Australia is that it takes about a month so my fix of TH is about a month or more out of date by the time I get it. I notice you send the magazines through some mailing house in England; this seems to introduce some of the delay. I remember a while back my envelope had a US postmark on it and I got it 2 weeks into the month it was due; could it be true? Mailing direct? It was like an auto-ensemble-crossfade loop for my soul, however, my loop developed a nasty "click" when the next issue came its usual 1.2 months late. Anyhow I have developed enough questions for me to justify a letter to the Interface.

1. I have an **EPS**. I notice besides the OS 2.4, my display tells me I have ROM version 1.2. In the Advanced Applications Guide I see mention of a ROM 2.0. What is the latest ROM version? What can it do that my 1.2 can't? If it is worth upgrading, do I simply upgrade like I get the ROM in the ESQ-1 upgraded? Also, why don't you show the latest ROM version with the RAM version in that little grey box that has all this type of info each month in the TH?

2. I am about to get the mod done to boost the S/N ration of my EPS by 6dB. I understand that in the U.S. the parts for this are free and the user pays labour. My local distributor wants to charge me for the parts as

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well. What is the policy on the upgrade outside the U.S.?

3. What is the present circulation figures for TH?

Scott Fisher
University of Western Australia
Nedlands, Australia

[CS – 1) EPS OS 2.0 and higher are designed to handle the SCSI system in the EPS. If you are not using a hard disk, computer, or other SCSI device with your EPS you probably are fine with the ROM OS you are currently using.]

[TH – Unfortunately, we do have to use an overseas mailing service to keep the cost down. The postage would close to double if we used the regular mails. Overseas subs are already $30 – and they're just about a break-even deal at that price. So... they're about two weeks slower (but still once a month...). Hacker subscription circulation hangs in pretty steady smack between three and four thousand. Additional thousands are sent to Ensoniq for inclusion with instruments.]

[Ensoniq – 2) We do not set service or customer support policies for our international distributors. It's important to note that while the parts are free for the distributor they still have to pay import duties and taxes. We're sure that they just passed on those costs to you, which we see as being reasonable.

A RAM version is the software that is loaded from disk into the EPS and VFX-SD RAM. ROM version refers to the software that is permanently programmed into the Eproms.]

Dear Hacker,

I must tell you that lately there has not been enough information on the **ESQ-1** or the **Mirage** which are the only Ensoniq products I use. I have decided to continue with the Hacker because your publication is excellent and should there be any information about the ESQ-1 or Mirage, I certainly don't want to miss it. Plus, the information on the newer Ensoniq products may be helpful if I decide to purchase one in the future.

Question: Sometimes while playing the ESQ-1, notes will remain stuck on as if, (but not because), I changed MIDI channels before a note off command was sent. Sometimes it will be only one note even if I was playing chords and I have not determined a consistent pattern. I can always correct it by playing a tone cluster of more than eight notes. Help!

Sincerely,
Joe Quinn
North Andover, MA

[TH – There's no denying it – the Mirage coverage has trickled to about one article per issue. ESQ-1 coverage has continued to be fairly strong, but we're presently running low on ESQ articles, too. We'll keep printing if people keep writing – there's still lots of life in those instruments.]

[CS – The "stuck notes" problem you describe is not normal for an ESQ-1. If it happens consistently on the same note or notes, it may indicate a hardware problem with the keyboard. I'd suggest contacting Ensoniq Customer Service at 215-647-3930.]

Dear Hacker:

I have a couple of questions about my **EPS** that you might be able to clear up.

1. When using the MIDI data recorder to save programs from other instruments to disk, it works for all my instruments except for my Roland Juno 1. I've tried everything I can think of, playing with MIDI modes, etc. on both the Juno and EPS, but as soon as I hit DUMP MIDI on the Juno, the process is over in well under a second and the data uses up only one block of EPS memory. When I try to lead the data back into the Juno, the Juno's display reads "Bulk load ERR!" Since I have had no trouble saving the data from my Roland P-330 and Alesis HR-16, I assume that the problem is with the Juno, but if you have encountered any similar problems with MIDI data recording and know of a solution, please let me know.

2. Sometimes if I have a particular EPS drum sample that I like better than the built in Alesis samples, I trigger it while the sequencer is playing. I prefer to do it that way because it's much easier to edit a single pattern on the Alesis than to edit the EPS in SONG mode. But when triggering this way I get much more voice-stealing than I should. On a particular occasion, I was losing snare drum beats when only seven voices were being used (Yes, I took into consideration layers, sustaining notes, "set number of voices=20," etc.), But when I recorded the notes separately into a Song track on the EPS, my problems were over. My question is this: What difference does it make whether you trigger the samples during playback mode or actually record the notes and then play them back?

And by the way, about the difficulty in editing in SONG mode, have you noticed that while using Event Edit Track command it gives you the grand total number of bars instead of the number of the song step and the bar? It's very difficult to locate this way because you have to count the bars in each sequence, count the sequences, and so on just to find out where the hell you are. That's especially a problem with drums versus melodic instruments because the notes tend to sound a lot alike. Is this little problem anything a NEW O.S. could clear up?

Thank you,
R. Shelton
Lawrenceville, GA

[CS – 1) Unfortunately, there is no way to save Juno patches to the EPS. The Juno requires two-way communication (handshaking) with a host in order to send and receive system exclusive data. The P330 and HR-16 do not require handshaking, and therefore present no difficulties in this regard.

2) The difference is that the EPS gives priority to samples being played "live" over samples that are being sequenced. My only guess is that your drum machine may be sending more notes to the EPS vial MIDI than you realize. Since you can't assign separate MIDI channels for different notes on the Alesis machine, any time you play a pattern from the HR-16, it will be sending the EPS note on commands for every drum note it plays. Since these "live" notes are given priority, your EPS may be doing some voice stealing to try to accommodate them. However, when the sequence is played back, these same MIDI notes (which I am assuming have no EPS samples assigned to them) are given a low priority, as the EPS assigns higher priority to samples that are currently sounding than those that are not (all else being equal). You could check this out by recording a snare drum pattern into the EPS sequencer, and then examining the sequence using the "EVENT EDIT TRACK" command to find out what notes are actually being recorded from your drum machine.]

Dear TH:

In response to Barbara Ockel's letter in TH #60, June 1990, she mentions that she is responding to the original letter from Daryl Jefford. I, too, have this problem with my **EPS** using O.S. 2.4. Ensoniq's response to Daryl's letter was the same as their response to Barbara's: "We weren't aware of this." I hope they don't respond to my letter that way. I hope that by the time this is received that they

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have looked into it and have some answers. It is an extremely annoying problem. I often avoid quantizing, except as a last resort, because of this problem. Please look into it, and help us out.

Thanks,
Dennis Gurwell
Los Angeles, CA

[CS – Please see Kevin Head's letter and our responses below.]

Dear Hack-One-Kanobe,

I just thought you might want to know I'm alive and booting up properly. Some EPS things on my mind:

First, I'd like to address the quantization glitch that Daryl Jeffords wrote about in issue 58. I encounter this bug regularly (O.S. 2.40). To reuse his example, a drum pattern with kick on 1 and 3, snare on 2 and 4, quantized, will pull the snare on 4 to beat 4, clock 47. When quantizing multiple measures, the last measure is affected. I've had this happen using quarter, eighth, and sixteenth note values so far. I've even had a chord, played on beat 3, show up at beat 4, clock 47, after quantizing. It seems that the last clock event in a quantize range is what's affected. So, a good work-around is to insert a dummy note (either a key that plays no wavesample, or a note with a velocity of 1) after the last clock event, and then hit the quantizer. This will cause the dead note to appear at beat 4, clock 47, leaving the real notes intact. This works in real-time and in event-edit mode. If it makes a difference I always run my sequencer in record mode – ADD, and I have a 2x expander. I had Ensoniq send me a new O.S. 2.40 on a brand new clean disk, but that didn't fix nuthin'.

I had a brainstorm recently (well, a slight drizzle). I use my HR-16 drum machine via MIDI instrument, works great, but I'm getting really tired of those snare drum sounds. So I take my MIDI instrument, create a layer, copy my personal-fave-cool-snare sample into it, Edit Instr- send keys to-Both, MIDI Ch – same as HR-16, Program Out – let's say, ch 11, which will call up pattern 10 on the HR-16 (one less!), oh yeah, Pressure Mode – Off, and save to disk. Now I connect my OCTAPAD-80 MIDI out into my thru-box, into the EPS and the HR-16. Why the fuss? Well, now I can record voices from both machines onto ONE track on the sequencer in ONE pass! Cool, yes? Of course to play it back I need to connect the EPS MIDI out to the in of the HR-16, a simple flip of a switch on my MIDI thru-box. This gives me a 17 sample drum instrument for the price of one snare sample. Of course, as many samples can be added as desired, but I try to same memory for other larger instruments. This is such a simple idea, I wished I would've thought of it a long time ago. And sequencing drum patterns from the PAD-80 is so much more realistic, thank you. I also try to do drum tracks in the Song Mode whenever possible so I can express myself that much more realistically.

And PAD-80 users! Layer the same note number twice, set to velocity mix...free flange! Add that to your grab bag of free EPS digital effects. And while you're at it, don't forget about that MIDI SYS-EX recorder in your EPS. Use it regularly to back up all your MIDI gear memory. It's easy to do, and fun for the whole family, too! Mom! Dad! I once lost some valuable drum machine data (probably worth a million dollars!) when a storm blew down some nearby power lines, causing memory wiping voltage fluctuations.

And that OEX-8 cable? Duct tape! Sometimes I'll push my entire rack, EPS perched atop, up against a nearby wall That'll keep that puppy plugged in! Cuts down on pedestrian traffic, too. Or how about a longer cable? That way I could velcro THE BOX into my rack, prewired, and then just run THE CABLE.

The OEX-8, a splitter? Yup. Live, I copy my kick and snare (PARAMS only) to multiple layers and route them to different outputs. This allows me to have my own ungodly monitor mix without affecting the main mix. Simple, huh? Only took me a year to think of that one.

Well, I hope I've brought up useful ideas. Maybe something someone hasn't thought of yet.

By the way, Ensoniq, my EPS is addictive. I feel like I need a fix daily or I just don't feel right. Have you considered putting warning labels on the shipping cartons?

Kevin Head
Columbia, MO

[CS – Regarding the quantizing problem: I have still been unable to duplicate this problem on my EPS (with 2x expander, SCSI, and OEX-8). Time and again I have created short drum sequences of the type that you (and others) have described, and have no difficulty quantizing them. Upon viewing the quantized data in the event edit mode, the only thing that resembles the effect that you describe is the presence of a "non event" (a "") at clock 47 of beat 4 of the final measure of the sequence. This event makes no sound on playback, and does not affect the overall length of the sequence.

This is not to say that there isn't a problem. Enough readers have written in describing this same glitch that I am led to believe that they are doing something differently than I am. If you would be so kind as to let me know exactly what it is that you are doing, step by step, from the moment you first turn on your EPS until the problem occurs, as well as what (if any) auxiliary equipment you may be using with your instrument, and what OS version you are using (both disk and ROM), I will do my best to replicate your problem, and pass the info along to Ensoniq. (By the way, you can check the ROM OS version on your by pressing "Command", "Pitch", scrolling to "Software Information", and pressing "Enter" twice.)]

[Ensoniq – No, of course we are not going to

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say we haven't heard of it, but we haven't been able to duplicate it or find a cause. We will keep working on it, and as Clark says, if someone could supply an exact procedure for recreating this every time it would be a great help.

The OEX-8 can't work with a longer cable. It would cause problems in the audio outputs.

First labels on records, then labels on keyboards – when will it stop?!]

Dear TH,

I can just barely glean half of the pertinent and needed help and info every issue provides. I always load the Hacker patches into my library of sounds.

Now...The Million Dollar (or worth that to me in satisfaction) Question – I have O.S. 3.5 in my **ESQ-1** and after reading pieces of TH here and there concerning the "Phantom" waveforms, if I were to buy an SQ-80 ROM, would it play them like an SQ-80? Also, could you print the names of the other 40 or however many waveform names? I'm afraid I am smitten here with Transonickness.

Thanks,
R. & C. Gamble
Tucson, AZ

[CS – To access the 75 additional "waves" in the ESQ, I refer you to Gary Sterling's article in issue #54 (Dec. 1989) of TH. In that article he describes a process whereby you create a program on the SQ-80 using wave #75 (the highest numbered wave in the SQ-80), and store that program to an EEPROM cartridge. When this program is then loaded into an ESQ, you can use it as a starting point for selecting waves numbered higher than the ESQ-1's standard 32. The reason for selecting the highest numbered wave in the SQ-80 in the first place is that the ESQ will not allow you to increment beyond the first 32 resident waves – although you can decrement back down from wave 75 using this technique. I will caution you, however, that these are not bonafide waves, and will not play back the same as the waves in the SQ-80. Some of the waves may not even sound that great and the sounds obtainable using this method will vary depending on which ESQ-1 OS you are using.]

[Ensoniq – Let's make something clear up front: these "Phantom Waves" are not new waveforms, but simply a way of confusing the ESQ-1 into improperly reading its existing waveform ROM. This is like randomly rearranging the words in a sentence – the results might be neat and might make an accidental sort of sense, but they are nonetheless random. The "hidden" waves do not have names because they are not real waveforms; they are random chunks of the existing waveform memory. Putting an SQ-80 O.S. ROM would not help. The waveform ROMS are not updateable; the ESQ-1 would not see any additional waveforms since it was not designed to look at the ROMs from a different product.]

Dear Hackers:

As a regular contributor with a background in electronics, I found a few errors in Sam Mims "Bizarre Applications of the CV-Pedal Jack." While these errors shouldn't cause anybody to fry their beloved Ensoniq keys, they nonetheless deserve mention so to hopefully minimize frustration amongst the unwary:

1. The article failed to mention that the **EPS** CV input is designed to accept a 0 to -10V control voltage (all other Ensoniq designs use a positive voltage). So if your EPS fails to work with your modular Moog, etc., it's probably due to this sudden change on Ensoniq's behalf. Those with some electronics chops can fix this by summing in a negative bias voltage, which should be sufficient to bring things into the proper range for operation.

2. Sam suggested buying a breath controller that "incorporates a 10k resistive device" which would allow one to plug the controller into the CV jack. Unfortunately, there's a little more to the problem than that.

The breath controller used with the DX-7 is technically known as a "strain gauge;" these devices require additional circuitry to produce a usable output voltage with the proper range and polarity. Without this circuitry, the controller alone simply doesn't have enough 'oomph' to drive the Ensoniq CV input. So before anyone runs out to buy a 10k breath controller – remember, it won't be enough: You MUST add this other circuitry before the two will work together! If anyone out there would be gracious enough to send me a new, unused, breath controller, I'll be willing to sit down and design up the missing circuitry, and write it up for the Hacker. If not, maybe I'll buy one myself and do the design anyway; however, it will probably end up taking a good deal longer...

3. Sam also suggested using the pedal input so that one might play his or her's MIDI-compatible axe from a Minimoog or other CV-based dinosaur synthesizer. Gee, Sam, as a Mini owner/fanatic myself, I couldn't help notice that a stock Mini has only CV inputs, not outputs (thereby preventing most Minimoog/Ensoniq owners from trying out this idea). Even if you are blessed with a dinosaur with a CV output, you'll probably find that the two instruments are not capable of tracking (i.e., staying in tune) worth a hoot. And with MIDI-to-CV boxes on the market that let your CV-based antique work within a MIDI system, why would anyone wanna want to try this backwards approach anyway?

Sam is a gifted programmer and author, and his contributions have certainly made the Hacker a great source of information. Nonetheless, his strongest talents are not in electrical engineering, and I would have preferred to have seen Sam use these pages for a subject within his range of expertise. Better luck next time...

Best wishes,
Charles R. Fischer
Hercules, CA

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[Sam's response – I was unaware that the EPS's CV jack is set up "backwards" (why, pray tell, is it?), and appreciate Charles's insight on this. I hope I didn't cause anyone to pull their hair out when they tried sending +10V to their sampler.

My article was not really intended as an electronics project (I only know enough electronics to be dangerous); instead, it was meant to stimulate thoughts and offer ideas on what could be done with external modulation sources. I suggested that it would be nice to be able to plug in a breath controller, and Charles outlined how it could be done in practice. It is exactly this sort of expertise that I hoped to tap into.

I did think that the Minimoog itself had a CV output, but apparently I missed. (I don't have one anymore.) The point, though, is that many older synths do have such an output, and this voltage can be used as a modulation source. Again, what you do with it is your business. You almost certainly will, as I mentioned in the article, encounter some tracking headaches, but on the other hand, you may not need the pitches to track. After all, many sounds are composed of inharmonics; doubling a "tuned" sound with a non-tracking timbre is certainly a valid way to make interesting noises. But instead, you may want to control the stereo panning or the filter frequency from this external keyboard, in which case the tracking won't need to be so accurate.

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Creative ways of hooking gizmos together may lead to some creative sounds, which may stimulate some creative music. That was the goal of my article, and I hope it does trigger some interesting applications. I apologize for the boo-boos, and am glad that Charles was able to set things straight.]

[Ensoniq – On the EPS the CV jack was set up that way to allow the ability to sense when the pedal was unplugged – that's how the circuitry worked out. We have since developed a different approach which returns us to 0 to +10V response.]

Dear TH and Ensoniq:

Well, after four months of peanut butter and jelly sandwiches and all sorts of assorted scrimping and saving, I've finally rubbed enough money together to get a **VFX-SD** (which I happened to choose over the Yamaha SY77!) My compliments on a fine machine.

The note editing, sound quality, effects, sequencer, and AUTOMATED MIXDOWN features are nothing short of killer!! I've been using the VFX-SD live and been getting great response!

Like other people out there, I've had some problems with my EPS. To Ensoniq's credit, they've stood behind the corrections 100%. So far, I've only experienced some very minor bugs (O.S. 1.37) with the VFX-SD – no major problems. At the very worst, I think it's fair to say that Ensoniq puts out at least as good a stand-alone keyboard workstation as is available on the market. Good Show Ensoniq! I'm going to be very interested to see how you top yourself!

You might be interested to know that just recently, a gorgeous woman came up to the piano to sing a number and spilled coffee all over the VFX-SD. It spilled down the data entry slider, the LCD display blacked out, and I turned the VFX-SD off as quickly as I could. (DO NOT UNDER ANY CIRCUMSTANCES TRY THIS ON YOUR OWN!!!) A few days later when they turned the keyboard on at the Authorized Repair Station, it fired up just fine. WHHHHHEEEEEW!!! Fortunately, I got away with just the cost to clean out the unit. It has worked fine since.

Oh! And one final note, when do we get to hear about the killer sampler I've heard about through the rumor mill that you're supposed to be coming out with. I've heard it's supposed to blow all the other samplers away!

George Finzio
Redlands, CA

[CS – Actually, we are interested in trying to replicate some of your results. I've got the coffee ready – perhaps you can help with the other variable.]

[Ensoniq – We announce products when they are ready to ship and not before. Rumors have a way of growing bigger than life and are not necessarily based on any tangible facts.]

Hey:

And I don't write many letters, either.

Like another reader of the Hacker, I too find myself wading through material – don't get upset, now – all excellent and thought-provoking material, before I find the rare but increasing material on the **VFX-SD**. I hope it continues to increase, too, because I feel like I'm paddling a boat on a very deep (but warm) ocean and I need swimming lessons. This machine is really incredible.

I started my indulgence in music in a high school garage band. Played drums and was lead vocalist off and on for about six years. Then, after about ten years of idleness, I bought a Casio CZ-5000 with the onboard sequencer and was hooked, deep. I recently started looking to fill the gap left when I sold my CZ. I went into a local music store and was introduced to the VFX-SD. I slapped the headphones on and began pushing a few keys, a button, a few keys...you know. Then I pressed the "play" button on the synth and started listening to Demo E/W" or whatever it's called. Then I accidentally hit the button for the "mini-lead" program and started bawling. Really. Isn't that weird? I guess the sound brought back a lot of analogy-type memories of the keyboard player (ARP and MOOG) in our band. Then I discovered some of the organ programs and B-3'ish memories started rising. I paid my $1450 and took the keyboard home to be MINE! (Ok, it WAS more than $1450, I just wanted to make sure that you weren't asleep.)

This synthesizer is the best thing that's happened to me in my entire life, except for my family and all that stuff. Further, I actually have something to say to everyone out there concerning the VFX-SD and the bugs and such. Remember your first date, and second, and third, and even fourth? Were they perfect? Ever use commercial software? I do. A lot. NONE of it is ever at its best the first or second (sometimes third) go-around.

The VFX-SD offers the best combination of stuff for the money that you have ever seen, bar-none. The sequencer is almost embarrassingly easy to use, and the sounds are already being quoted as industry standard. KEYBOARD loved the machine. And you, after careful consideration, bought one! Show the world that you made the right decision and stand by Ensoniq the way they will stand by you. I called them once to ask about an anomaly that I encountered and was very, very impressed with their concern and willingness to talk to me for a long time AFTER solving the problems (it was my fault – I was plugged into a circuit where the voltage fluctuates from, oh, say 60 to 10,000 volts).

Sometimes the individuals who seem to have scores of problems with one company probably have scores of problems with just about everything in their life, even if they aren't on-call (Tee-hee. That's for you, Doc. RELAX! I'm just kidding...)

Scott Bevans
Maple Park, IL

[CS – Actually, it's my last date I don't remember so well.]

[Ensoniq – Thanks for your kind comments. We hope you make some great music with it!]

Dear TH:

As a regular subscriber to Transoniq Hacker since about Issue #3, I offer the following comments and criticisms of the Interface section. These are directed not only to the Hacker editor, but to the people who write in:

1. Interface is too long! We don't need to read five letters about how version "x" software has a bug in it, for example. One or two representative letters would do it.

2. To third-party vendors who write in complaining about the review of their product: it is one thing to point out technical inaccuracies in a review; it is quite another to be insulting, hostile, and even threaten to withdraw advertising from the Hacker. Let me put it this way: I would not be inspired to buy products from these guys, nor would, I'm sure, most Hacker readers. I am referring mostly to the letter from Vincent Bitetti of Sound Source Unlimited, June 1990. My advice to small vendors: take a course in Public Relations, or hire someone to do your PR for you. IF you want to stay in business, that is.

3. To readers who write in complaining about some shortcoming of an Ensoniq instrument, making the snide remark that they wish they had bought some other instrument: you will not find another company that endorses a publication as open (read: critical) as the Hacker. I receive newsletters from Roland, Peavey, Yamaha, and others; they all publish only "good news" about their products. Does this mean that their respective products never have shortcomings or malfunctions? I think not.

In closing I would like to say, if I bought another Ensoniq product it would be mainly because of the wealth of information I receive from the Hacker. Also, I would like to commend Dick Lord of Upward Concepts for his outstanding third-party products for the Mirage; besides, he's a nice guy and has always been extremely helpful in answering my questions over the phone.

Sincerely,
Ernie Mansfield
Mansfield Music-Graphics
Berkeley, CA

[CS – Thanks for the constructive criticism. We do try to pare things down a little bit, and we are at least trying to get more mileage out of the ANSWERS by referring to them when the question repeats, but this column is, after all, a reader's forum. The letters you see here are pretty representative of the mail received. We're sure a lot of letters DON'T get written because so much is covered in this column.]

Dear Transoniq Hacker:

I purchased my first digital keyboard in early 1987 which was an Ensoniq **Mirage**. It boggled my mind when I subscribed to the Hacker magazine and found that Ensoniq was making the effort to respond to many of the consumers' complaints personally. I discovered an American company competing in an industry that has been fairly dominated by the Japanese, a company with an excellent product at a reasonable price. I was impressed to say the least.

Early in its production I purchased an **EPS**. I read all the complaints about the lack of manuals, low output, no 4X expander, on and on and on. My conclusion was that I would rather have the keyboard in my hands now, and the manual whenever it comes, rather than waiting for the keyboard until the manual is finished. This is especially true when, every time I had a problem or question, someone from Ensoniq customer service was happy to help. They made sure that I understood the answer and never made me feel like there was something more important they would rather be doing. This treatment is not standard in the industry!!

The EPS developed a problem with loud clock noise and crackling in the outputs after 11 months. I took it to the store where I purchased it and they sent it to Ensoniq. I had it back in 5 days, fixed, no charge. They replaced the main board. Last month the same problem started again; I thought I was sunk. I've owned the EPS for almost two years. I called Ensoniq since I no longer live near the dealer, and the customer repair service rep said take it to a dealer or ship it in to them for repair. I decided to deliver it to the factory myself. I was told that since I had this same problem before, they would handle it under warranty. Burt, the customer service rep, showed me around the place on his lunch hour and five days later, I was playing the EPS back at home with a new main board and power supply. NO CHARGE!!!!

I am writing this letter to say that I have been treated well by Ensoniq. I believe they are not only building a quality product, but are providing better after-the-sale support than any other manufacturer. I was so happy with the way they handled my EPS problem that I took the money I saved on the repair and bought a **VFX**. The moral of this story is, if you are having a problem with a piece of Ensoniq gear, tell someone that counts. Every time I have called Ensoniq, my problems were taken care of. It is real good in this day and age to do business with a company like Ensoniq. Thanks Guys.

All I need now is a librarian program for the VFX to run on an Atari 1040ST, then life will be simple again.

Very Sincerely,
Eric Hulien
Stony Brook, NY

[CS – Jeez, seems like nothing but "way-to-go-guys!" letters this month. I think I'm starting to like this job.]

[TH – Yeah, but the bitching always has a certain sparkle to it, too...]

[Ensoniq – Contact Hybrid Arts (213-841-0340) or Dr. T (617-244-6954). They both have programs for the Atari ST. And thank you for your commentary and loyalty.]

Hacker:

Well, I took your advice and called Ensoniq. Bert said most of my issues would have to be handled by an engineer; no more word on that. He did, however, pass along an interesting tidbit that I'm surprised has not been published in the Hacker: how to do a hard reset.

Basically, a hard reset is required for the **VFX** when it won't even boot up on power on. Symptoms are typically that some portion of the screen: "CALIBRATING KEYBOARD – DO NOT TOUCH" shows and the machine locks up. Before 2.0, you had to take the box in for a reset (here that ran $36). Now, at 2.0, you can do it yourself, though it's a bit strange:

Turn the VFX on. As soon as anything comes up on the display, turn it off. Repeat the above for a total of seven times. On the seventh time the display should show the soft initialization screen (OK to erase memory yes/no). Press "YES" and you're on your way.

I would hope that this would get passed along to owners. I'm surprised Ensoniq hasn't done this yet.

P.S. I'm working on a program to print out something along the lines of Sam Mims chart for the VFX directly from the MIDI dump. So far I've got a program that prints out a blank form (over three sheets of paper). Do you think it's worth uploading to CompuServe (C-64 only)?

Johnny Klonaris
>INTERNET:johnny@hpcuhd.cup.hp.com

[CS – It should be stressed that doing a hard reset, (like doing a soft reset), will erase all sequences (as well as the sequencer itself), and will replace all internal sound programs with the ROM programs. Regarding your VFX patch sheet program, I should think there would be at least some interest in your program from C-64/VFX users. I'm sure an upload would be appreciated.]

CURRENT ENSONIQ OS'S

EPS	2.4
EPS-M	2.4
MASOS	2.0
MIRAGE	3.2
ESQ	3.5
ESQ-M	1.2
SQ-80	1.8
VFX	2.1
VFX-SD	2.0
SQ-1	1.0

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Publisher: Eric Geislinger
Editor: Jane Talisman
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Our (somewhat regular) illustrious bevy of writers includes: Craig Anderton, Chris Barth, Michael Carnes, Gary Dinsmore, Pat Finnigan, Charles R. Fischer, Garth Hjelte, Bryce Inman, Jim Johnson, Bill Lewis, Dick Lord, Kenn Lowy, Sam Mims, Gary Morrison, Michael Mortilla, Earle Peach, Clark Salisbury, Jordan Scott, Mick Seeley, Kirk Slinkard and Bob Spencer.

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Advertising rates: Please send for rate card.
Rates for authors: Typically 4 cents/word upon publication.

Subscriptions: 12 monthly issues. US: $23/year, All others: $30/year. Payable in US funds.

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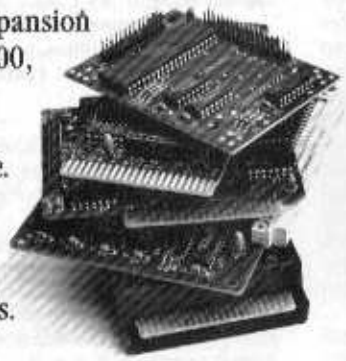

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