

Transoniq

Hacker

The Independent News
Magazine for Ensoniq Users

MR Patch: TineDream

Robby Berman



TineDream is an ethereal three-layer electric-piano-based sound I created on my MR-Rack. Its ethereality (call the word police!!) is based on a synth wave that floats behind the main electric piano tone. The synth wave is tuned upward by a fifth, so this sound is best played a couple of notes at a time (playing two-handed chords requires a more harmonically open mind than rests atop my knotted shoulders.) In addition to the electric piano and synth components, I've added in a touch of glockenspiel for a slightly exaggerated, but pretty, tine effect.

It all started, as I dimly recall, with one of the factory electric pianos. I lopped off everything but a single

layer, which is Layer 1 in TineDream. I softened the response of the wave to reward a tender touch, since I was after something dreamy to soothe my tired noggin and help summon the Muse. For the same reason, I set the wave to pan back and forth in stereo using a nice, soft sine-wave LFO. (I'm getting sleepy just thinking about it.) Though I set up the glockenspiel to pan together with the electric piano, I programmed the synth wave to pan as a result of the application of smoothed noise. The effect is similar to what I did with the LFOs, but not exactly the same. My intent was to get everything softly swimming around, but to create some conflicting motion with the synth wave. Being a head-phone user, I find stereo panning effects like this to be quite enjoyable.

Oh, about the LFOs: I set them to normal mode, but if you're sequencing, you can set them to one of the values that synchronizes them to the tempo of your sequence — you can get things swinging hither and yon in time, if you like. I wasn't sequencing with this sound. In any event, I'm kinda fond of the little accidents that

In This Issue ...

Articles:

- MR Patch: TineDream
Robby Berman cover
- Play That Sound Card!
Duane Frybarger 4
- Ensequencing – Part 7: Step Editing
Jack Stephen Tolin 5
- Vintage Synths – ESQ/SQ-80
Boosting Bass and Treble
Kirk Slinkard 7
- Memory Management in the ASR
Pat Finnigan 10

Reviews:

- Basement Tapes: Roshan & Shivani
Steve Vincent 13

Regular Stuff:

- Random Notes 3
- Hacker Reinitialization
SQ/KS/KT/E-Prime – Effect Algorithms
Clark Salisbury 15
- Classifieds 18
- Transoniq-Net 18
- The Interface 19
- Current O.S. 27
- Hacker Bootseq 31

occur when everything isn't tightly synchronized. The LFOs are also used for vibrato here — which should only be gently applied — and I left the synth wave's LFO untriggering in another attempt at randomness as the vibratos of the first two layers and the third argue a little when the mod wheel is subtly raised. The trick of tuning a single wave up a fifth is not a new one, but can produce sounds that are inherently interesting, especially when the fifth is played by a different texture than the basic note. Other intervals work well also, particularly

fourths and sixths. One other programming note worth mentioning: When adding a bell tone such as the glockenspiel, it's not a bad idea to scale its volume as you get lower on the keyboard. What's tinkly on top can easily turn nasty on the bottom.

And with that memorable aphorism hanging in the air.... ■

MR Standard Sound Patch Sheet: TineDream

Robby Berman

Sound Parameters

Layers in Sound	3
Bend Down	2 down
Bend Up	2 up
Restrike Limit	Default
Pitch Table	EqualTemper
Held PBend	Off
Sound Category	PNOLYR-E
Demo Sound?	Off
User Sound?	On
Sound Bank #	1
Sound Patch #	127
Use MIDI Chan	1
Use Handshake?	Yes (live)

Edit Context Parameters			
	1	2	3
Edit Layer			
Enable	On	On	On
Use Lyr	1	2	3

Select Parameters			
	1	2	3
Volume (dB)	-3	-31	-6
Pan	0	0	0
Semi Tune	0	24	7
Fine Tune	0	0	0
Trigger On	Keydown	Keydown	Keydown
Low Key	A0	A0	A0
High Key	C8	C8	C8
Vel lo	0	0	0
Vel hi	127	127	127
Trigger Ctrl	Off	Off	Off
Ctrl Low	-	-	-
Ctrl High	-	-	-
Glide	Off	Off	Off
Glide Time	-	-	-
Voice	Poly	Poly	PolyP
Bend	On	On	On
Sustain	On	On	On
KeyGp	Off	Off	Off
Layer Delay	0	0	0

Pitch Parameters			
	1	2	3
KeyTrack	PitchTbl	PitchTbl	PitchTbl
Pitch Mod	Off	Off	Off
Mod Amt	-	-	-
Mod Range	-	-	-
Env1 Amt	0	0	0
LFO Amt	0	0	10

Wave Parameters			
	1	2	3
Wave Class	Keyboard	Tuned-Perc	Waveform
Wave Name	FM EPNO A	Glockenspiel	Analog WV 8
Direction	Forward	Forward	Forward
Start Index	0	0	0
Wave Mod	Off	Off	Off
Wave Mod Amt	-	-	-
Shift Mode	Off	Off	Off
Shift Amount	-	-	-

Envelope 1 Parameters			
	1	2	3
Time 1	-	-	-
Time 2	-	-	-
Time 3	-	-	-
Time 4	-	-	-
Time 5	-	-	-
Level 1	-	-	-
Level 2	-	-	-
Level 3	-	-	-
Level 4	-	-	-
Level Vel	-	-	-
Attack Vel	-	-	-
Key Scale	-	-	-
Release Mod Amt	-	-	-
Env Mode	-	-	-
Vel Curve	-	-	-

Filter Parameters			
	1	2	3
Mode	3LP/1LP	2LP/2HP	3LP/1LP
Flt 1+2 Link	On	Off	Off
Filter 1 Parameters	1	2	3
FC1 Mod	Off	Off	Off
FC1 Mod Amt	-	-	-
KeyTrack	1	Off	1
KeyT Breakpoint	C4	-	C4
FC1	69	87	42
Env2 Amt	46	76	56
Filter 2 Parameters	1	2	3
FC2 Mod	-	Off	Off
FC2 Mod Amt	-	-	-

KeyTrack	-	1	Off
KeyT Breakpoint	-	C4	-
FC2	-	127	40
Env2 Amt	-	0	33

Envelope 2 Parameters			
Time 1	0	0	0
Time 2	24	22	27
Time 3	24	16	33
Time 4	55	37	77
Time 5	11	20	20
Level 1	127	127	0
Level 2	120	115	71
Level 3	93	93	85
Level 4	1	1	1
Level Vel	89	89	25
Attack Vel	0	0	0
Key Scale	0	0	0
Release Mod Amt	0	0	0
Env Mode	Normal	Normal	Normal
Vel Curve	Linear	Linear	Linear

Amp Parameters			
Amp Mod	Off	Velocity	Off
Amp Mod Amt	-	7	-
Pan Mod	LFO	LFO	Smooth
Pan Mod Amt	80	80	80
Rolloff Mode	Off	Off	Off
Slope (dB/oct)	-	-	-
Key	-	-	-
Noise Rate	64	64	64
Noise Sync	Normal	Normal	Normal

Envelope 3 Parameters			
Time 1	0	0	0
Time 2	25	18	22
Time 3	29	24	25
Time 4	55	55	81
Time 5	11	20	61
Level 1	127	127	0
Level 2	120	121	98
Level 3	90	106	85
Level 4	4	1	0
Level Vel	50	45	25
Attack Vel	0	0	0

Key Scale	0	3	0
Release Mod Amt	0	0	0
Env Mode	Normal	Normal	Normal
Vel Curve	Linear	Linear	Linear

LFO Parameters			
LFO Shape	Sine	Sine	Triangle
Retrigger	On	On	Off
Timebase	Normal	Normal	Normal
Rate	28	28	65
Depth	125	127	0
Delay	0	0	0
Phase	0	0	0
Depth Mod	ModWhl	ModWhl	ModWhl
Depth Mod Amt	127	127	127
Rate Mod	Off	Off	Off
Rate Mod Amt	-	-	-

Effect Parameters	
Alt FX Bus	Default
Send Insert FX?	On
Input Mix	57
Insert Cho Mix	0
Insert Rvb Amount	0
Insert FX Name	Phaser-Rev

Insert Effect Settings: Phaser-Rev

Input Mix=44.4% wet	Feedback=-46%
GlobalReverb amount=0	Rev Mix=22.0% wet
Global Chorus=Full Dry	Decay=2.1 sec
LFO Rate=0.3Hz	HF Damping=7.0kHz
LFO Shape=Sine	HF Bandwidth=15.6kHz
Phaser Depth=70	Diffusion 1=41
Phaser Center=52	Diffusion 2=91
Notch Depth=100%	Definition=43
Mod Src=Off	

Bio: Robby Berman is (altogether now) a musician living in New York's scenic mid-Hudson Valley, where the big news these days is the arrival of two new kittens: the 23-toed Mia, and the mind-bogglingly cute Perseus. His latest album is, aw, the heck with it.

Front Panel

RND (🎵🎵)

Hacker News

Our *Transoniq Hacker* web site address has changed to: <http://www.transoniq.com>. (You no longer need the trailing /~trnsoniq.) The old address will work for a while, but you should probably update your bookmarks.

Ensoniq tells us that they are no longer offering technical support for a few older products such as the Mirage,

SDP-1, ESQ-1, SQ-80, and EPS. We've asked for a little elaboration on the term "technical support" so we'll know what's included and what's not included. We should have more info next month. Meanwhile, Ensoniq is looking for other resources to support users of these older synths. If you know of any possibilities please contact either us or Ensoniq.

Ensoniq will be showing Paris and the ASR-X at the upcoming AES show (Oct. 1). More info to follow...

Play that Sound Card!

Duane Frybarger

One day as I logged on to my email account, I received a message from an email pal in Toronto, Canada. She told me that she was at a really cool website that was playing a MIDI file on her computer. She said I ought to write something like that for her website and asked me if I'd give it a shot.

I had already encountered MIDI files on the Web. The first one I heard was done by Scott Garrigus, a multimedia musician and music journalist whose articles appear in *Electronic Musician*. I had read an article he wrote about putting up a website on AOL and I cruised on over to check it out. I wrote him email explaining how I found him and how I enjoyed his site. I invited him to my website, which he subsequently visited. He downloaded some of my album clips and was very supportive of my work. He encouraged me to submit my work to *Keyboard Magazine's* Discoveries column, which led to my appearance in the September 1996 issue. He later added a MIDI file to his website and invited me to come check it out.

It was really impressive and I started poking around in my Cakewalk program to see if I could figure out how to do it myself. I just couldn't figure out how to access my sound card's sounds and after a while, I decided it was more trouble than it was worth. But then my friend from Canada asked me to give it a try and so I decided to cruise around the net and download a few shareware sequencers. I installed them one-by-one and with each installation, attempted to play a demo file. When I found one that was properly configured to play my sound card, I started working with that.

The biggest challenge in writing tunes for sound cards is the lack of decent sounds on most old and/or inexpensive sound cards. I have a Sound Blaster Pro and I briefly considered upgrading. However, I know that most people that cruise the web have a sound card similar to mine, so I figured if I could make a tune sound good on this card, chances are that it would sound good on most other cards.

I wrote a little Asian-sounding tune using a Kalimba patch for both the bass and a background arpeggio part, a Steel Drum patch for another background part and a couple of other patches that worked well in this context. It took quite a bit of experimentation to find patches that worked.

At the time I was writing this first tune, I had previously done all of my own drum tracks. However, the percussion sounds were so limited, I ended up using a little drum pattern I found with a demo tune on the sequencer I downloaded. This eventually led to my discovering how great MIDI drum files are and how much they can add to a piece. It ultimately changed the way I compose — as a keyboard player, it can be rather inspiring to play along with a drum part recorded by a professional musician.

After writing this first tune, I started working on another piece in more of a jazz style. I used an Electric Piano patch for the lead and comp part and again, a Kalimba patch for the bass. I soon found the shareware sequencer I downloaded to be too limited for my needs. There were no editing functions — I could only re-record a track. And so I went back into Cakewalk and finally figured out that I could play that sound card after all. It turned out I needed to go into the Settings Menu and change the MIDI Output Port to Yamaha OPL2/OPL3 Synthesis.

This made the writing of the next couple of pieces much easier, since I had all of the editing power of Cakewalk at my disposal. I was still limited by the sound palette of an FM sound card, but that forced me to concentrate more on the melody and harmony.

I eventually ended up with three cool tunes that are now up on my website. When people come in to my main page using Microsoft's Internet Explorer, they are greeted with a little tune playing on their sound card. I tried making it available for Netscape users, however Netscape requires a "plug-in" and if the user

doesn't have it, then a window pops up asking the user if he/she would like to go get it. I often encountered that pop-up window and found it very annoying. Microsoft's browser simply ignores the command to play any sound file (.wav, MIDI, etc.) if a sound card is not available. I've since discovered that there is a little Java script program that will detect a browser, but I haven't yet looked into implementing it. I decided to just go with the IE command to play the MIDI card, however, on my website, I've included the instructions and code for both browsers.

MIDI files are great because they download so quickly. A fifteen-second .wav file will be 300-400k in size and take several minutes to download. A 2-minute

MIDI file can be as small as 20k and download in a few seconds — on the Web, that's instant music! It takes some creativity to use the sound cards limited palette effectively, but it was a good learning experience for me. And as I mentioned earlier, it led me to using MIDI drum files in my other projects. In fact, I'd like to write more "sound card" tunes, but I'm having too much fun in my MIDI studio with my MIDI drummers! ■

Biop: Duane Frybarger is a composer who lives in San Francisco but spends much of his free time in cyberspace. His latest CD is "A Musical Feast" and his Web site is at <http://www.creative.net/~duane>.

Ensequencing

Part 7 — Step Lively, Watch Your Step

Jack Stephen Tolin

As I was listening to Petra the other day, I couldn't help but notice the lightning fast lines played by Mr. Lync-man himself, John Lawry. Having seen Petra in concert, I can attest to the fact that he actually plays all of his stuff live — or, at least he can. Another Christian artist who amazes me along the same lines is Mr. Yes-man himself, Rick Wakeman. About this particular player, so much has already been said.

Another artist I have to admit I am impressed with is myself. I amaze myself every time I listen to music I make with my SQ-1 and ASR-10. The textures are incredible! And those lightning fast lines are just so intricately played. You see, it really is not a narcissistic thing at all. It's more knowing how to use the equipment you've got. Ensoniq truly creates the technology that performs — even if they do change their slogan. The trick is knowing how to use it properly.

At any rate, the point here this month is recording in what we refer to as step editing. This is the little secret for those of us who probably will never play as fast as either Lawry or Wakeman. It's a nice little way to im-

press with those kind of lightning fast lines without having to actually play them real-time. Recording would be such a nuisance unless you were able to slow the tempo down massively. Sometimes, however, not even that is enough. Sometimes we could just make things so much easier. "Sometimes building ivory towers, sometimes knocking castles down."

For a good way to demonstrate this feature, step through the following instructions. Although I will be using an SQ-1, there should be a similar way to use this with any new(er) Ensoniq sequencer — check your owners manual for specifics.

Create a 16-beat sequence at 100 beats per minute with drums on one track — the bass drum hitting once on each odd numbered beat and the snare drum hitting once on each even numbered beat. Make sure that the effect you happen to have on the sequence is not a long reverb. On another track, find a sound you would like to use to experiment with the step function directly. For our example, this sound must be tonal with a quick attack and very short sustain (no pads please).

Some sounds that might do well would include marimba, vibes, certain bells, certain guitars, certain pianos, and so on.

With this new track selected, do the following: Go to the Control Bank. Find the Step Entry parameter. Set it to ON. Press Record and hit Play. Notice that you do not hear the drums playing as you normally would in any other recording mode, although you should hear the thump of the first bass drum. (I am presuming that, if you are following this so far, you are either playing through speakers or through a headset so that you can indeed hear what you are doing.)

The screen now prompts you in some way, shape or form to let you know that you are currently "Step Recording!" and will notify you as to whether or not Auto Step is ON. If you ignore this prompt, it will remain on whatever setting it tells you when it comes up. For our example, we will be using Auto Step = ON, so you can adjust accordingly. This little helpful feature will allow you to choose between having the sequencer stepping after each key press or note hit, or having yourself press Enter when you are ready for the sequencer to step. Auto Step = ON will not allow the recording of nice little things called chords, and, as they say in ASL, "that's why."

Now, press the right arrow or Enter, and you come to the Gate= page. This will determine the duration of the notes entered while step recording. There are three, count them, three choices at this point: MANUAL, STEP, FIXED. MANUAL allows you to determine how long a note sustains by simply holding it down until enough clocks have gone by as engineered by you — when you are ready to release, then release. STEP allows the duration to be determined by the Step parameter (on the SQ, it's on the next screen) — each key will be of the same duration. FIXED is much like the previously listed option in that all the notes recorded will have the same duration, but with a major exception — the length of the note is actually determined by an additional parameter on the next page especially made for this option.

This last one is what we will be using for our example, that is, FIXED. Hit Enter and select or change the note value to sixteenth notes, or a note with a stem with two flags on it. Then press the right arrow. This is the

very last screen you will need to be on for this example.

At this point we will be entering information from the keyboard. The information itself as to what you will be playing is actually up to you, but follow these guidelines: For the sake of simplicity, begin near the center of the keyboard and, working your way up, play the notes to a scale: major, minor, blues, pentatonic, harmonic minor, or so on. Do it this way: Begin near or on middle C; just go right up the scale until you get to the highest note and then work your way back down until the sequencer goes into audition mode; with each note, play only one at a time, and hold each down for about a second. You will notice that, as you play, the drums will kick off every now and then as you step past them. When the sequencer goes into audition, take a listen and hear what you think.

This is just one example of how the Step function works and what it sounds like. Go back and try the same thing at different step sizes, like sixteenth note triplets, etcetera. Also, so that you can get a better feel for what kind of things you can use creatively, try following the same recording procedure for a scale, but, instead of recording it the way you did for the first shot, try recording it by playing one step down for every two forward. For example, in the key of C major, play C, D, E, D, E, F, E, F, G, F, G, A, and so on. Try this at 32nd notes or 32nd note triplets.

I am convinced that this is a feature that is fun and adds that fun to your music. Maybe you will even be taken for the next Steve Morse of the keyboard!

Well, that's all for this month. Bye for now, everyone, and keep your sequences on track! ■



Bio: Jack currently attends Nazarene Theological Seminary and works for Sprint in much, much, much of his spare time.

Boosting Bass and Treble on ESQ and SQ-80 Patches

Kirk Slinkard

Have you ever wished that you could turn up either the bass or treble of an ESQ or SQ-80 patch right at the synthesizer? Maybe just one patch needed a little extra brightness or depth to stand out more in the mix? Or maybe the waveform you were using wasn't quite dramatic enough by itself. Well, here is a couple of techniques that might give you some extra tone that you might not have thought you could get from your synthesizer. All four demonstration patches in this article start with the same basic PULSE-wave sound and show specific methods for boosting the bass and treble. They all sound alike until you move the mod wheel forward, then each one demonstrates a different effect.

Treble

The first two patches "BRITE1." and "BRITE2." demonstrate treble-boost. BRITE2. is not shown, but it is exactly the same as BRITE1., except that its "Q" value on the FILTER page is set to 16 instead of 31. They both use the low-pass filter to ADD brightness to the patch. This may sound incongruous at first, but since the ESQ/SQ-80's low-pass filters have resonance, they can be used to place emphasis on any frequency in the audio range (but of course, the frequencies above its setting will be filtered out). If the resonating filter's cutoff frequency is set at the upper limit of the synthesizer's frequency response range, only the highest frequencies will be boosted, and the filtering effect falls outside of the range of the instrument. This is most noticeable on waveforms that are brighter to begin with. That's why I used the PULSE wave for these demonstration patches. They aren't intended to sound really nifty, just bright.

The first patch "BRITE1." has the filter's resonance

setting all the way up to 31. This places maximum emphasis at the cutoff frequency and places minimum emphasis on the frequencies in either direction. The second patch "BRITE2." turns down the resonance to the halfway point, and consequently emphasizes more frequencies, but none of them quite as much as the first patch. Compare these two patches with the MOD WHEEL all the way forward. The different Q settings give slightly different personalities to the treble boost.

ESQ PATCH: "BRITE1" by Kirk Slinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH		
OSC 1	-1	00	00	SINE	*OFF*	---	*OFF*	---		
OSC 2	-2	02	00	PULSE	LFO1	-63	*OFF*	---		
OSC 3	-1	00	04	PULSE	*OFF*	---	*OFF*	---		
	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH				
DCA 1	--	OFF	---	---	---	---				
DCA 2	63	ON	*OFF*	---	*OFF*	---				
DCA 3	53	ON	*OFF*	---	*OFF*	---				
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH			
FILTER	108	31	00	WHEEL	-15	*OFF*	---			
	FINAL VOL	PAN	PAN MOD	DEPTH						
DCA 4	63	08	KBD2	+63						
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD		
LFO 1	04	ON	ON	TRI	32	00	--	*OFF*		
LFO 2	--	---	---	---	---	---	---	---		
LFO 3	--	---	---	---	---	---	---	---		
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	---	---	---	---	---	---	---	---	---	---
ENV 2	---	---	---	---	---	---	---	---	---	---
ENV 3	---	---	---	---	---	---	---	---	---	---
ENV 4	+63	+48	+26	51(L)	00	00	08	52	19	00
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC		
MODES	ON	OFF	OFF	00	OFF	OFF	ON	OFF		
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY			
	OFF	-----	OFF	-----	OFF	-----	---			

Bass

The SINE wave is very useful for adding some bottom to a sound. In fact, for decades I've thought of this particular waveform as "the bass-boost wave." On a subtractive synthesizer like the ESQs or SQ-80, it doesn't seem to have a whole lot of other uses. Well, O.K. — maybe for percussion or specific drawbars in Hammond-type patches. And I've seen it modulated by LFOs for some pretty cool rumbly-type sounds and Star Trek phasers. And don't forget test-tones. Oh, all right, back to the subject! The "DEEP" patch starts with the same basic PULSE sound, and then as you move the MOD WHEEL forward, the SINE wave in OSCILLATOR 1 is gradually introduced into the

ESQ PATCH: "BRITE2" by Kirk Slinkard

Note: same as BRITE1., but filter Q set at 16.

ESQ PATCH: "DEEP" by Kirk Slinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	00	00	SINE	*OFF*	---	*OFF*	---
OSC 2	-2	02	00	PULSE	LFO1	-63	*OFF*	---
OSC 3	-1	00	04	PULSE	*OFF*	---	*OFF*	---

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	00	ON	WHEEL	+63	*OFF*	---
DCA 2	63	ON	*OFF*	---	*OFF*	---
DCA 3	53	ON	*OFF*	---	*OFF*	---

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	00	00	*OFF*	---	*OFF*	---

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	46	08	KBD2	+63

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	04	ON	ON	TRI	32	00	--	*OFF*
LFO 2	--	---	---	---	--	--	--	---
LFO 3	--	---	---	---	--	--	--	---

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	---	---	---	---	---	---	---	---	---	---
ENV 2	---	---	---	---	---	---	---	---	---	---
ENV 3	---	---	---	---	---	---	---	---	---	---
ENV 4	+63	+48	+26	51(L)	00	00	08	52	19	00

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	ON	OFF	OFF	00	OFF	OFF	ON	OFF

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

sound. Note that the "OSC" parameter on the MODES page is active. This is very important in this type of application. It insures that the SINE or "bass-boost" wave is added in phase to the main waveform you are trying to modify. If OSC were not active, you might actually end up with some unpredictable and uncontrollable amount of bass removal.

This particular patch doesn't sound exactly the same as using the bass control on an amplifier or stereo system. Where an external bass control would boost mostly the lower frequencies in the lower notes, here the fundamental of each note is boosted equally, no matter where you are on the keyboard. So on the upper notes, it actually becomes more of a "mid-boost."

Both

So the "BRIDEP" patch (short for BRIGHT/DEEP, not "Bride of P") uses the KBD2 to make the SINE wave in OSCILLATOR 1 work mainly on the lower

ESQ PATCH: "BRIDEP" by Kirk Slinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	00	00	SINE	*OFF*	---	*OFF*	---
OSC 2	-2	02	00	PULSE	LFO1	-63	*OFF*	---
OSC 3	-1	00	04	PULSE	*OFF*	---	*OFF*	---

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	00	ON	WHEEL	+44	KBD2	-32
DCA 2	63	ON	*OFF*	---	*OFF*	---
DCA 3	53	ON	*OFF*	---	*OFF*	---

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	16	00	WHEEL	-31	*OFF*	---

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	08	KBD2	+63

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	04	ON	ON	TRI	32	00	--	*OFF*
LFO 2	--	---	---	---	--	--	--	---
LFO 3	--	---	---	---	--	--	--	---

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	---	---	---	---	---	---	---	---	---	---
ENV 2	---	---	---	---	---	---	---	---	---	---
ENV 3	---	---	---	---	---	---	---	---	---	---
ENV 4	+63	+48	+26	51(L)	00	00	08	52	19	00

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	ON	OFF	OFF	00	OFF	OFF	ON	OFF

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

notes and leave the upper notes alone. This gives a more "natural" bass boost. This patch also boosts the treble at the same time to demonstrate both effects together.

Epilog

These four patches start with a normal sound and boost the bass and/or treble with the MOD WHEEL. In actual practice, you would probably want to take an pre-existing patch and fine-tune the filter's resonance (Q), cutoff frequency (FREQ), and possibly also the "KEYBD" parameter by ear according to your taste for added brightness. And for added deepness, you would need to adjust the KBD2 parameter (or KBD if you prefer) and the appropriate DCA level (whichever one applies to the "bass boost" oscillator with the SINE wave in it) until it sounds right.

But be warned, this method of treble boost will not work on a patch that uses the filter dynamically as a basic part of its tone, such as a wah-wah sound for ex-

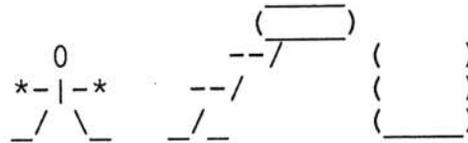
ample. And if the patch needs all three oscillators and can't spare one for boosting the bass with a SINE wave, then this method will not be of use. But you might find that you can use these techniques on many patches you already have that could use a little help with their tone.

Mod you later. ■

Autobio: I synthesize around near Denver and sometimes eat enchiladas.

Picture:

(me playing my two Ensoniq synthesizers on an Ultimate pedestal stand through a big tuck-and-roll vintage Kustom amplifier)



Cases for Electronic Equipment

OPTI-CASE, like the great pyramids, built to last and protect.

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

**Models available for all Ensoniq
keyboards and racks!**

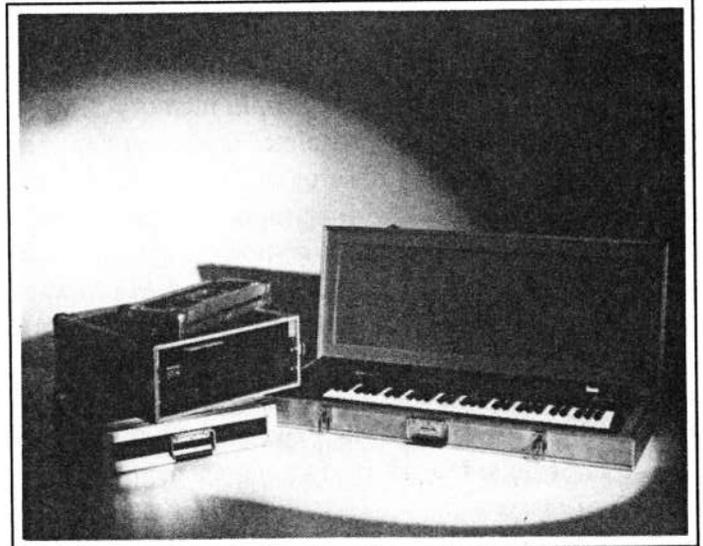
*Mention the (TH) code number 839 when inquiring to
receive our special factory direct pricing.*

CALL US AT 1-800-637-6635

8:00 am to 4:30 pm CT, Mon. - Fri.

We accept: COD, Visa, Mastercard, American Express.

Dealer Inquiries Welcome!



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

THE OPTIMUM IN PROTECTION

OPTI-CASE • 1175 CR 481 West, Henderson, TX 75654 • FAX: 903-657-6030

Memory Management in the ASR

Conserving Resources

Pat Finnigan

Well, gang, been a busy summer so far: finished a CD project that was keeping me up late at night, got another day gig with another computer company (this time a NASDAQ, not a Dow Jones), and, in another coupla months, my wife will gift me another child. So my sincere apologies to all those I missed, and thanks to all those I didn't miss for their patience. Crazy AND busy world out there, still working on the 28-hour day...

But in the sanctity of the music room, all truths are revealed, and this month I'd like to touch on memory conservation techniques for the Malvern sampling boxes. This has not been a big issue 'til recently when memory prices fell through the basement. Now that everybody has access to cheap 30-pin memory SIMMS (they're rapidly becoming obsolete, btw), you can load up your ASR to the max for around \$100-\$150. But the Interface still abounds with questions about Ensoniq memory expansion. Seems everybody wants to compare the 16 Mb limit of the ASR to the 64 Mb limit of the R box, or the 128 Mb limit of the new Y box, and demand that Ensoniq respond in kind as if they could simply mail some new O.S. disk that would magically grow 168-pin EDO DIMMS expansion slots on your ASR's logic board. And it ain't gonna happen, for a number of reasons...

So, rather than whine (awwww, Weeeen-deeee) or gripe (@#\$\$%^&) about not having 256 meg of RAM in your ASR, let's put that 16 Mb to good use. Ensoniq has already measured the ASR and supplied us with the largest sample library in existence, and the factory wareS are some of the best from any manufacturer to date. But as I quote in any of my reviews, all of them are grist for the mill: they're all highly polished, digitally recorded and processed samples, but they're still *samples*. They represent Ensoniq *samples* ("sam'-pul,

n., an individual portion by which the quality of more of the same sort is to be deduced or judged"). As such, by definition they are not whole entities or absolutes...

Consequently, they can (and should) provide ripe fruit for harvest into (a) more or (b) less representation of a sound. The first step in getting 10 pounds of sound into a 5 pound bag is to, admittedly, drop some of it. What we want to do is to drop the least representative particles of sound while keeping those particles that define the samples' hereditary character and nuance. And it may seem impossible — Ensoniq puts thousands of dollars of sounds and process on its *very* affordable CD library. How can we top that?

Gang, we aren't trying to top it. We're trying to get more of it into a smaller space. That's what it's about, and that's where we're heading now...

Ways & Means

Okay, get out your OS 3.53 disk and boot with it. Locate the "Blues Bass" (file 13) and load it into tracks 1 and 2. Don't copy the track, load it twice. Press the FX button and pull the data entry slider all the way to the bottom to shut the FX off. Repeat for the other track. Now we're at ground zero...

Next, press the edit button: display should read "Blues Ba Lyr=3 WS=2." Okay, play a key and then press button #8 (Wave). Scroll around to see the sample takes up 32 blocks (we'll start with an easy one here). Now right-scroll to the loop position page (Looppos=6036 (91)). Highlight the 91. This number represents a percentage of the total wave space. Now Down-arrow 20 so that the highlighted number reads 71. Now play a note; sounds the same, doesn't it? Press the other track button that holds our unedited "Blues Bass" sample and

play a note to compare. Isn't that strange? We've moved the loop position up another fifth INTO the sample, and yet there's no audible change. OK, now select your edited "Blues Bass" track and scroll that number down more until you hear a difference. Typically, you'll hear a timbral shift: you're moving the loop position into an area of the sample in which its harmonic content hasn't stabilized or is still decaying. I found that point at about 45-50%, and any point further into the sample made the decay loop sound way too bright.

Now press Command and Wave, and scroll to the "Truncate Wavesample" screen. Press yes, then press Edit and Instrument and scroll to the "Size = XXX" page. Compare the edited version to the unedited version of our "Blues Bass." Hey, it's half the size! How did that happen? We just threw away about half of the "unrepresentative particles" I described. Save the edit to a scratch disk, and presto, here's a 19-block bass. Get the picture?

This method proves invaluable for small instruments with few multisamples comprising them. It represents the primary staple for making lo-cal instruments out of high-fructose corn syrup sounds. So write this down; "LOOP POSITION." This one edit alone will win you back anywhere from 20-40% of your valuable ASR memory. It's a technique we veteran loopers learned to perfection on the EPS Classic, where all you got was a whopping 4096 blocks to stuff everything in. Once you get the hang of it you can progress to multisampled instruments where, as in *Double Jeopardy*, "the scores can really change"...

Plan B: Drums

Drum kits are especially notable candidates for editing and represent an alternate approach/method to instrument size reduction. Do you *really* need a gated kick that was sampled at 44.1k? Or a low tom sampled at an equivalent CD sample rate? Given, it sounds exactly like what was plugged into the ASR's sample inputs, but can you hear the clarity/position/stereo image of a kick in your mix? Not mine: I always center the kick in my mix so both my woofers work equally hard...

Take that kick drum sample and downsample it to 29.76k. If you get the "Current Effect is 44.1k," you're

only getting 21-voice polyphony, so press the FX button and select "31 Voice 30k." You should be there anyway unless your songs only require 21-voice polyphony. In this 64 and 128-NOTE polyphonic world, leave your ASR camped out at 31 voice. Then select the kick drum wave, press Command & Wave, then scroll to the "Convert Sample Rate" page. Use the data entry slider and decrement down to about 70-80% of its original sample rate, then press enter. You may get the "Copies will Change" menu — press yes and wait for the ASR to selectively discard bits of this kick drum. When you see the "Keep OLD — NEW" screen, audition your sample with the old. Again, do you hear much of a difference?

Do you hear *any* difference? Save your edit to disk, and realize another 10-25% return of memory pool return. Repeat this procedure using a lower sample rate on a copy of the original instrument loaded into another track for comparative purposes. When you get to a sample rate that is audibly different, repeat using the next higher sample rate. If you edit all the drum samples in this manner, you can effectively reclaim the same percentages across the kit. Depending on which samples and the degree of sample conversions, your individual mileage may vary...

Plan C: Layers

Depending on the instrument, this may or may not reap substantial gains, as many layers utilize "copies" of the original wavesample. I curly-quote "copies," because, in Ensoniqspeak, a copied wavesample can be a true verbatim duplicate of the original (which is identifiable by its size in the Edit Wave menu) or, in many cases, a copy of the wavesample parameter data ONLY (i.e., a copy of all pertinent wavesample data EXCEPT the actual wavesample itself — just pointers that are aimed at the original wavesample). And, unless you use the patch select buttons on these types of samples, you can ditch the layers and samples they point to and again reclaim more memory.

A confusing aside to this rule is for you OEX-6 users: the output assignments are saved as a part of the sample data (a subject of some grumpy Interface letters as well). But at this point, the issue becomes more of a disk capacity issue rather than a memory issue, as to have one instrument that plays out the L and R jacks

takes up XXX blocks of DISK space (not internal RAM). The same instrument must be saved AGAIN when assigned to play out any of the OEX's outputs, effectively doubling the disk space required.

Not a big deal unless you've only got a 20 Mb SCSI drive on your ASR.

Plan D: Other

Occasionally, you'll come across a huge multisample with scaled data and bowtie x-fade loops that velocity switches between samples and layers that was washed thru Pro Tools, assembled in Alchemy, normalized to DAT and burned to CD. Punt. You can try for a field goal if you've got a fast computer and an expensive editing app like Sound forge or Alchemy, but typically, you're more often than not trying to paint a 747 with a Q-tip. Considering the time and money it takes to move a sample to and from the ASR into a host CPU and back again and the attendant nightmares and necessary voodoo just to get the two speaking together, let alone sample processing and auditioning time issues, as I mentioned earlier, punt. Unless you can configure your ASR and CPU in a hardwired SCSI chain so they'll never be separated and have the time and money to devote to serious sound development, this is a worm hole you'll fall into and never return. I have documented behavioral case studies detailing infected individuals trying to break free of the tractor beam perpetually drawing them towards their bank...

Conclusion

In this \$69, 16 Mb, 72-pin SIMM world, one can incorrectly assume that Ensoniq had taken too long a nap and gotten passed, blown off by the Asian workstations. After all, what other manufacturers use 30-pin SIMMS in their expansion slots? We've all thrown away our '386 machines for '486 machines and dumped our 30-pin SIMMS for 72-pin RAM, then we threw away our '486 machines for '586/'686/Pentium machines and dumped all that 72-pin RAM for 168-pin DIMMS. (Right?) So it would appear Ensoniq is three generations late on their sampling boxes (non-inclusive of the lone 72-pin slot in an ASR-X)...

Au contraire, mon frere. What we've all forgotten is just HOW far advanced the Ensoniq sampling box is compared to all the other hardware out there. The ASR is a

third-generation EPS, and *that* box commands a premium price in the used channel (a loaded one w/SCSI, 4X, OEX-8, bells and whistles *still* hovers around \$1000!). It wasn't until this year that the K-company offered their HDR option (Hi Jerry!), which is basically the equivalent to Audio Tracks on the ASR, so let's get one thing straight here. Just because the rest of the world has caught up to the Malvern box does *not* make the Malvern box less valuable or any less desirable. And, in the interface department, the competition has miles to run before they even remotely catch up to the ease of use and functionality of the Ensoniq finish line.

And now the clincher: *nobody* has as broad, as diverse, as affordable, and as large a sample library as the Ensoniq box. I mean, what good is a \$5600 box that offers 128-voice polyphony and 256 Mb expansion if there's nothing musically noteworthy to load into it? Or charges \$1200 a CD? That other K company that does samplers had to offer the ability to read Ensoniq samples *and* add onboard FX processing before it took off. We've taken that for granted since 1991; let me up. Lead time is everything in this business, and right now the market seems to be blurring the distinction between a digital recording system and a sampler. That's a rant I'll save for later...

So before you make the same critical mistake I did years ago and dump a Malvern box for the Microscope View, remember the purpose of the box: to create music. By judicious use of the basic editing procedures outlined above one can be sure to get more sounds shuffled in and out of the box. Other benefits manifest themselves as desirable side effects — smaller instruments load faster, you can resample with effects and take up the same room as the unedited sample occupied, you'll attain a more educational relationship with your instrument. Cost-effective, no accessories required, and you already have the tools and the raw ingredients in your possession.



You'll never approach the Malvern box in the same viewpoint again... ■

Bio: Pat's still trying to lead a normal life.

Down 2 Us — Roshan & Shivani

CD: *Down 2 Us* (c) 1995 Cosmic Cat Music.

Artists: Roshan & Shivani.

Contact Info: Cosmic Cat Music, 98-151 Pali Momi St, Suite 111, Pearlridge, Hawaii 96701. Phone: 808-637-4635.

Equipment: Synths & modules: Ensoniq VFX-SD, Korg M1R-EX, Roland D-110, TR-707, TR-626; Guitars: Ibanez RG530, PRS Custom, No Name yard sale special (15); Effects: Roland GP-16, various Boss pedals, DeArmond volume pedal, Lexicon 480L and LXP-1, Roland SE70, Alesis Midiverb II, BBE862 Sonic Maximizer, Roland GR70 guitar synth controller; Recording gear: guitars recorded on Fostex A8 (1/4" 8-track), vocals recorded on Teac 16-track; Anatek Pocket Sync.

Roshan and Shivani Kumar are living my dream: a well-outfitted home studio in Hawaii, producing their own music in Paradise... Only those who have spent some time in the Hawaiian islands can sense the feeling of that magical place permeating their music. Perhaps this is why this duo uses the word "Cosmic" so often to describe their style. Roshan and Shivani met at a "full moon meditation" for musicians in Malibu, where they gathered under a full moon and "just played" whatever flowed from them. Thus they embarked on a journey that has found them playing many different styles of music in as many venues, but settling in Hawaii in 1988 and forming their own label, Copy Cat Music.

From their letter: *"Down 2 Us is a musical journey depicting the liberation of the human spirit when it is awakened and inspired by finding love with another. The styles range from rhythm and blues/latin influenced grooves to ethereal new age flavored gems, while the lyrics speak of life experiences both personal and universal. Together Roshan & Shivani have molded these elements into a fresh distinctive sound."*

While you might find *"Down 2 Us"* in the New Age section, it is indeed an eclectic compilation of songs representing the styles listed above. Roshan points out that all of the instrumentation (except guitars and vocals) was sequenced in the VFX-SD sequencer (except for one tune, sequenced on the M1R because the

VFX-SD will not record tempo changes) and synced to multitrack tape using an Anatek Pocket Sync, which Roshan mentions works "very well" (a good tip for home recordists). He used a Roland GR-70 midi guitar synth to record horn and fretless bass tracks into the sequencer, and most of the drum parts were sequenced from the VFX-SD keyboard.

Let's listen to a sampling of the eleven tracks on *"Down 2 Us,"* then it's wringer time...

"The Meeting" — This dreamy instrumental opens the CD with rhodes piano and what Roshan calls "singing" guitar: volume-pedal guitar yielding string-like sounds. After these brief (1:15) noodlings, the second track breaks the trance-like spell with...

"Old Friends" — All but two tracks on this CD are vocal tunes, and they feature Shivani's clear, sweet, perfectly-pitched vocals weaving strong melodies around pop, latin, and slightly jazz-influenced progressions. The latin percussion and rhodes piano on this tune are reminiscent of early Stevie Wonder.

"Anything You Want" — This straight-ahead pop song has some R&B and Motown influence, brought out by the nice horn lines and Roshan's "\$15 special" clean guitar (the best \$15 guitar I ever heard! My first axe was a \$15 Teisco Del Rey). Shivani's beautiful, clear voice carries this tune. The percussion feels a bit ponderous and heavy-handed for what should be a light, lilting beat. Part of this could be fixed with different drum sounds (much lighter hat and snare) and bringing the percussion track back in the mix.

"Soft Summer Dreams" — Another latin-influenced vocal tune, this track features a delightful vocal/guitar doubled solo in the middle. The lyrics might sound cliché to anyone who has never been entranced by the romance of all-night sounds of warm waves and tropical breezes gently massaging the soul, but those who have been under the spell of Hawaiian nights will simply get lost in the memory...

"The Last Ride" — Blues with a slightly hip-hop beat. The idea, progression, even the lyrics are good... but something fails to "work" here... The instrumentation is a bit odd: clavinet keyboard and fretless bass just don't fit here; I'd rather hear a growlin' B3 or piano for the keyboard duties, and a Fender electric bass. At least bring the bass down in the mix for a better balance. Halfway through the song, the meter changes to 3/4 and slows considerably; this also works well, after the first shock of, "Oh, we're going to break up the song with an obvious change here." Shivani's vocals really turn on during this last half of the tune.

"Mankind" — Combination of "island" and "bubble gum" styles, this is probably the weakest track on the CD because of its cliched lyrics ("Mankind, be kind to your fellow man / Mankind, you will find everyone's your friend") and shamelessly "feel good" lilting pop progression. This is an unusual inclusion on this project, because it sounds very much like a television commercial for chewing gum, and doesn't fit with the duo's otherwise classier material.

"Down 2 Us" — The title track is a disco-ish dance tune, complete with 16th-note sequenced hi-hat. Shivani's vocals save it from the skip button, but just barely. Don't get me wrong, this is a good tune! Everything that needs repairing could be fixed in the production stage of the project. The percussion needs to be humanized; it sounds too "sequenced" (yes, even for a dance tune), and the bass and keyboard parts sound too "thin" to my ears. Roshan commits the common sin of using a "slap bass" patch for fast bass runs which no bass player would slap on every note; a dead giveaway that a sequencer is playing a sterile sample. Find a more "synthy" and less "sample-y" bass patch, and also edit the hi-hat pattern so there are some dynamics, not just 16 notes per bar at the same velocity. Breathe some life into this track, and I guarantee you'll have the audience on their feet, index fingers pointing skyward, crowding the dance floor.

"Moon Magic" — It is obvious by their music and lyrics that Roshan and Shivani are writing and singing about magic they have experienced. When the finished track can convey a feeling that you could easily imagine yourself experiencing, that is artistic communication. On the technical side, the vocals on this one could blend more "dreamily" with the swirling pads and guitars if they were mixed further back and washed in reverb.

"Pegasus Rising" — This final track on the CD begins with a beautiful instrumental, again featuring Roshan's "singing" guitar and Shivani's fine piano. One would swear that Phil Keaggy was weaving his guitar magic on this intro.

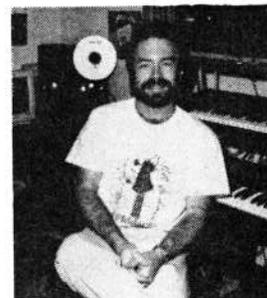
As a CD project documenting this couple's musical journey, *"Down 2 Us"* succeeds admirably. Not only do the lyrics journal the events and dreams of their lives, but the styles cover the wide range of musical genre that this experienced duo has dealt in over the years. But crafting a CD for the listener is a different focus, and involves choosing musical styles that will work well together for 45 to 70 minutes. The compilation does not need to be a seamless opera, but many listeners I know enjoy putting on a CD for a certain mood. Is this a New Age CD, or is it Latin? Blues or disco or hip-hop or pop? The answer is "Yes!" Happily, two things run like threads throughout this project, giving the recording a consistency of feel: Shivani's vocals, and that unexplainable element that I can only call "spirit," in this case, although Roshan and Shivani never use the term, I definitely would call it the "aloha" spirit of Hawaii.

If you would like to order *"Down 2 Us"* by Roshan & Shivani, contact them at the above address. CD's are \$15, cassettes are \$10, plus this bonus for Hackers: mention the Transoniq Hacker and Roshan & Shivani will cover the postage. Is that "aloha" or what. ■

Tapes Recently Received

Antares — Joe Rodriguez

If you want your tape run through the wringer, err, Hacker, just mail it off to: Basement Tapes, *Transoniq Hacker*, 1402 SW Upland Dr., Portland OR 97221. Please include your e-mail address!



Bio: Steve Vincent produces demos and CDs at his home-based Portent Music, and can be reached via email at vincent@harboret.com, or at his website at <http://www.kspace.com/vincent>.

One of our most common requests from new subscribers (new owners) is for more basic tutorial information. We've all been there. Unfortunately, the *Hacker* is usually "there" when a new instrument first makes its appearance — and then we move on. While back issues can answer many questions, not all are still available and they do represent an additional expense for the new reader. Hence, "*Hacker Reinitialization*" — yup, old goods in a new wrapper. We feel a little funny about the whole reprint thing — so we're going to keep it small. In some cases minor updates have been made to include newer instruments.

The Book of SQ (& KS/KT/E-Prime) — Part XIII, "It Goes To 11"

Clark Salisbury

Welcome back, programmers. In this month's installment, we'll be wrapping up our rather long-winded discussion of the effects algorithms by examining the last two effects, the "DIST+CHORUS+REVB" and the "CMPRSS+DIST+REVB" algorithms.

Both of these are multi-effect algorithms, which is probably fairly obvious. The "DIST+CHORUS+REVB" algorithm contains three separate effects: distortion, chorusing, and reverb. The "CMPRSS+DIST+REVB" algorithm actually contains four effects: compression, distortion, reverb, and flanging.

If you've been following these articles, programming the "DIST+CHORUS+REVB" effect should pose no difficulty — the only effect contained in this algorithm that we haven't yet discussed is the distortion effect, and it only has one parameter to worry about — "Dist Level," which is used to set the amount of distortion.

The distortion generated by this algorithm is generally best used for more subtle effects — to add a little edge to an electric piano or organ sound, for example, or to add a touch of "crunch" to an electric guitar sound. The reason for this is that the distortion in this algorithm works much like the natural distortion generated by tube amplifiers — the more you turn up the amp, the more distorted the signal becomes. To achieve this effect, however, the distortion is set up to be interactive with the output stage. What this means is that if you want a highly distorted signal out, you need to have both the distortion level and the voice output level turned up fairly high, and this can make the resulting sound a good deal louder than most of the other programs you'll have on board. So for highly distorted sounds, you're probably better off using the "CMPRSS+DIST+REVB" algorithm, which we'll talk about in a moment.

At any rate, to get a sense of how the "DIST+CHORUS+REVB" algorithm works, let's try it out on an organ sound — ROM sound #31, "Organ 1." After selecting this sound, enter edit mode by pressing the "Edit Sound" button. Go to the effect editing menu, and then hit the screen 0 button to move to the first of the menu pages. You'll find that the effect is currently set to "ROTARY SPKR+REVB" — use the cursor buttons to

select this parameter (it should start flashing) and change it (using the slider or up/down buttons) to "DIST+CHORUS+REVB." You'll immediately be able to hear the change in sound — the organ is now fairly distorted and somewhat louder (owing to the extra gain boost from the distortion effect).

A little experimenting will show you that the FX1 and FX2 bus parameters are used solely to control reverb levels for voices routed to either of the two effects busses. Distortion level and other effect parameters are controlled elsewhere. And in keeping with conventions established for the other multi-effects, voices routed to the FX1 bus will be routed through the distortion, chorus, and reverb, while voices sent to the FX2 bus will be routed through the reverb only. This, of course, allows you to have a mix of both distorted (and or chorused) and straight sounds, without having to give up the reverb for either type of sound. In this case both the voices that make up this sound are routed through the FX1 bus, which is the way we want it.

Move to the next page in the effects menu. Here you can set the reverb decay time (remember that level is set from the FX1 and FX2 bus parameters) and the distortion amount. Note that varying the "DIST LEVEL" parameter not only varies the amount of distortion, but also the overall level of the sound. You might think that you could set the amount of distortion you want here and then use the voice output level to control the overall level of the sound, but it ain't so; reducing the voice output level will also reduce the distortion amount. That's why I prefer to use this distortion algorithm for more subtle effects.

At any rate, setting the "Dist Level" parameter to something like 26 will give us a nice gritty organ sound, without being overly loud. Unfortunately, using this effect algorithm means having to give up the "ROTARY SPKR+REVB" algorithm which is so effective on organ sounds. You can, however, use the chorus to simulate this type of effect.

Move to the next effects menu page. Here you can set the chorus rate and depth — the default values for both of these parameters is 20. Leave it there but set the depth parameter to 06 — this way when we speed the chorus rate up to simulate a fast Leslie speaker setting, the sound won't get overly wobbly. Now hit the screen 3 button to move to the next page, and set the chorus center parameter to 92 or thereabouts (which will have the effect of making the chorusing more pronounced on the upper frequencies), and set the feedback parameter to +50 to thicken the overall effect up a bit. Finally, go to the effects

modulation page and set the effect up to "Modulate RATE by MODWHEEL +60." This allows you to control chorus speed via the modwheel, and viola! Simulated rotary speaker effect.

Now let's move on to the final effect algorithm, the "CM-PRSS+DIST+REVRB" effect. To get a bead on this one, we'll try doing a distorted electric guitar-type of sound. Start by selecting ROM program #24, "Clav." I often like to use clav-type sounds in place of guitars, particularly for live performance; they sometimes seem to cut a little better.

Enter editing mode and move to the top of the effects menu pages. Select the current effect (in this case it should be "CHORUS + REVERB") and select the "CM-PRSS+ DIST+REVRB" effect. Play a few notes now and you'll find that the sound is pretty gonzo already — lots of crunch, with a bit of feedback (the ringing sound at the tail end of a note), and an abrupt decay.

As with the other multi-effects, FX1 and FX2 are used to control reverb amounts. The rest of the effect levels are controlled from within the algorithm itself. However, the reverb in this effect is interrelated with the compressor in a way which we'll discuss in a moment, so we may find we're using the reverb a bit differently in this effect than in others.

Move to the next page of the effects menu, and here's where you'll find controls for reverb decay and HF (high-frequency) damping. As you may remember from previous discussions of reverb parameters, HF damping allows you to control the rate of decay of the high frequencies contained in the reverbed signal. A higher number for this parameter will cause the high frequencies to decay more quickly than the lower ones.

Move us to the next effects menu page. From here you can set the one parameter related to the flanger, rate. A higher flanger rate will make the flanging more pronounced; values above about 30 or so will begin to sound downright silly. If you don't want any flanging, set flanger rate to 00. Also available on this page is the "Compression" parameter — basically, a compression amount control. A compressor is a gain-control device which will attenuate louder signals and boost quieter ones. The net effect is to remove dynamics from the input material, so don't be surprised if sounds that are highly compressed don't seem as responsive to keyboard velocity as other sounds — that's the way compressors work. Compressors became popular among guitar players when it was discovered that they could help to increase the apparent sustain of the guitar. Of course, sustain is not generally an issue with the SQ family, since most of the waves are looped and can be sustained as long as desired. But the sound of compression has become so associated with certain types of guitar sounds that its inclusion in this multi-effect is most welcome.

Note that if you set the compression control up full — 99 —

most of the dynamics from the clav sound will have disappeared. Also, the overall level of the sound will increase a bit, driving the distortion a bit harder, so the sound will become grungier as well. Leave compression set to "72" and move to the next effects menu page.

From here we can control the distortion amount. This distortion algorithm presents us with both distortion "In" and "Out" controls. Putting more signal into the distortion will drive the distortion harder, providing more grunge. Of course, putting more signal into the distortion will also cause the signal at the output to be louder, so the distortion "Out" control allows you to bring the overall level of the effect down into a listening range that won't endanger your good standing with your landlord. You'll find, though, that these controls are somewhat interactive and are also interactive with the voice output level parameter located in the AMP section, so the most distorted sounds are only attainable at rather high volume — just like in real life. You'll also note that the range for both the "In" and "Out" parameters is from 00 to 11 ("It goes one more than 10" — Nigel Tufnel, guitar player for the band, Spinal Tap).

Go to the next page, "Reverb to Cmprss Feedback." You can use this parameter to route some of the reverbed signal back into the compressor and on through the rest of the effects, allowing you to simulate the effect of an electric guitar feeding-back into its amplifier. The effect will be most pronounced at the tail end of a note played (that is, if you keep this parameter set within a reasonable range — about -10 to +10. For settings greater than this I can take no responsibility — you're on your own).

Onto the next menu page. This presents us with a two-band filter, allowing the sound to be further tonally tailored. You will remember from our discussion of filters that the "HiPass" filter is used to filter out lower frequencies, letting high frequencies pass through. This will have the effect of thinning out the overall sound. The "LoPass" filter does the opposite — it lets low frequencies pass through, while removing the highs. This will have the effect of mellowing the sound out. Note that using either filter to remove some or all frequencies will also affect the overall level of your sound, since the filters actually remove frequency-specific parts of the sound.

The final page of the this algorithm is the effect modulation page. We've already spent a good deal of time discussing modulation in previous articles, so I won't go back into that here. And with this we finally wrap up the effects programming section of our journey through the SQ series of synthesizers. ■

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

Rubber Chicken Software Co.

**Your Ensoniq Resource
Sounds**

ANNOUNCING!



Tools

Total Editor for Windows Platforms **\$59.95!**

- ◆ Edit/Create/Program All Layers and Samples
- ◆ Build your own ASR-X Instruments
- ◆ Powerful Optimum EPS/ASR-to-ASR-X Translator

**Ensoniq Tools
Programs for
Windows 95**

- ◆ Read/Write Format Ensoniq floppy & SCSI drives
- ◆ Convert .WAV and AIFF files to AND from Ensoniq instruments
- ◆ Create and Edit Banks
- ◆ Audition Ensoniq Waves
- ◆ Edit Individual Parameters
- ◆ View your Ensoniq SCSI Drives with an Explorer-like interface

BETTER than the ZipDrive?

Nomai 540mb

Removable Drive

\$179.95!

- ◆ Lot's of room for Disk Tracks
- ◆ Compatible with 16-Plus and EPS
- ◆ Carts are \$54 - 10 a meg!
- ◆ Comes with cords and instructions
- ◆ Solid, compact metal casing



Download a Demo at our Web site!

Chicken

CD-ROM Drives

\$139.95 (ASR), \$99.95 (16+, TS)

- ◆ Fast, inexpensive, easy to use
- ◆ Tray-loaded, small, light weight
- ◆ Comes with all cables

SIMM Memory

\$79.95 pair, \$149.95 two pairs

- ◆ Solid, dependable, 4mb chips
- ◆ 8-chip, 60ns, 30-pin
- ◆ Comes with install instructions

DON'T FORGET OUR SOUNDS!

We offer high-quality sounds exclusively for Ensoniq samplers - fully programmed and ready to kick into live performance or recording work. Available on floppy, CD-ROM, Zip or Nomai cartridge, or even ASR-X format!

- ◆ PIANO! Pak
- ◆ Microwave Chicken
- ◆ Chicken CD-ROM 1 & 2
- ◆ Renaissance & Ten-Tone Temperment
- ◆ Transwave Library
- ◆ And lot's more!

EAVES

EPS/ASR VISUAL EDITING SYSTEM

**MIDI Parameter Editor for
Mac OS - \$59.95**

- ◆ Edit ALL parameters in realtime via MIDI
- ◆ View Wave Onscreen (AIFF format)
- ◆ Edit Envelopes graphically

THE DEMO'S

ENSONIQ CD-ROM FROM PELLE PIANO

Many of these sounds offer a live quality never found on any sampler. You can hear the inner mechanics of a Fender Rhodes, on the Brush set you can hear the snare ring when you hit the Toms, when the kick drum is released you can hear the chain from the pedal. Fretnoises are among the other goodies applied to these samples. It all sums up to a great experience - and we have even mentioned the demo sequences yet (you have to hear them to appreciate them).

ONLY \$59.95!

TOLL-FREE ORDER LINE: 1-800-8-PRO-EPS

INT'L, FAX, TECH SUPPORT 1-320-235-9798

E-mail: chickenEPS@willmar.com

Web Site: www.soundcentral.com/~chickeneps

714 5th Street SE

Willmar, MN 56201

Classifieds

HARDWARE/SOFTWARE

Ensoniq MR-61, MRD-1 Sound Disk, Mark of Unicorn software (IBM), MR-Flash sample board. Like new, only home use. \$1700. Phone: (937) 433-2455, Bill.

EPS-16+ Turbo rack, 2 Meg ram, 1 meg Flash. Includes Waveboy Rez, Voder, Transwave, Audio-In and more. \$800. DP-4 \$600. Offers or trades for analog or MIDI/CV gear considred. 919-755-9994.

SOUNDS

Four unopened Ensoniq CD-ROMS for sale: CDRs #11 (keyboard), #12 (drums), #13 (percussion), and #15 (L.A. Riot #1). All for #320. Call Mike, 805-492-0224.

Clean custom drum licks for your EPS-16+. drums from 01/W, SP-1200, D4, SPD-8, Roland-Boss (TR-909, DR-660, TR-626, XP-50, DR-220A, CR-1000, etc.), Yamaha QY-20, K2000, Simmons, and others. Various formats available. P.O. Box 2072, Norfolk, VA 23501. 757-489-8783, gkeeper@bellatlantic.net.

OUT-OF-PRINT BACK ISSUES

M.U.G. will provide Out-of-Print issues for cost of materials and postage. Write: G-4 Productions, PO Box 615TH, Yonkers, NY 10703. Attn: TH Back Issues. *** Folks in the New York City area can get copies of unavailable back issues of the *Hacker* - call Jordan Scott, 718-983-2400.

FREE CLASSIFIEDS!

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

Transoniq-Net

HELP WITH QUESTIONS

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

All Ensoniq Gear - Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:00 pm EST Monday to Friday. 610-647-3930. Ensoniq's Fax On Demand line, (1-800-257-1439) can also be used to retrieve specs, OS info, hard-drive info, and the like.

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

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

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

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

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

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

VFX, SD32, and EPS-16+ Questions - Dara Jones, Internet: 71055.1113@compuserve.com or call 214-361-0829.

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

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

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

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

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

EPS/MIRAGE/ESQ/SQ-80 M.U.G. 24-Hour Hotline - 212-465-3430. Leave name, number, address. 24-hr Callback. Email: G4Prod@aol.com.

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

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

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

eTH — A Faster, Cheaper Hacker

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

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

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

TH,

I have been going nuts creating EFE samples and playing them on my TS-12. I mainly use them to free up a track on my old cassette 4-track by sampling rhythm guitar sections and sequencing them with drums and bass, etc. When I can get the sample to retrigger successfully, it's great because I can save a whole track for background vocals!

But...I am having a problem retriggering my wavesamples while sequencing. I set the sample to Forward-No Loop as suggested in previous eTH issues. I keep the sample down to a four beat measure, so every four beats, I restrike the key. Sometimes it just doesn't sound.

I am interested in finding out if there are other sample parameters I should be tweaking to ensure that while I am sequencing, the sample will fire every time. I always set the retrigger parameter to 0.

Thanks for your input!
Ted Bicknell
Bicknell@sprynet.com

[PF - Ted: The best way to do this is to edit the sample so that on key down it immediately starts playing. Problem is it's gonna be trial and error, and you've got to import the sample into the TS every edit. But once you've got it trimmed properly and the sample start point adjusted, you should be able to quantize the track it's on to strike dead on beat 1, clock 001.]

Greetings,

I have a SCSI computer system with a

CD-R. Also a ZA2, wave editing software, and a SCSI '16+. I have saved files on removable drives, and on the computer harddrive and was wondering exactly what I needed to do to save to my CD-R. I saw an article somewhere on the net concerning this issue. I don't know if I should save as a wav file or do I need some file translation software from Giebler Enterprise?

Thanks for responding
gkeeper@bellatlantic.net

[PF - gkeeper: What format do you want to save them onto the CD as? Typically, you need to make a partition on your hard drive of 650 Mb (which matches the capacity of a CDROM), copy the soon-to-be-CD files onto this partition, and then copy them over using the supplied software (Asarte Toast, Anubis Discribe, or equivalent).

If you want to put Ensoniq-format files onto the CD, you'll need some program to convert the files into Ensoniq format. Typically, you copy the contents of the SCSI HD connected to the ASR to the 650 Mb partition of your computer's hard drive. I don't know if you're using a Mac or a PC, so I'd refer to the software instructions that came with your CDW for details. I've done this on a Mac (it's a snap) but I'd think it's just as easy on a PC with a SCSI card installed. You may need a utility that will let you mount the hard drive without writing your host machine's file format and directory structure on it, as you want to preserve its "bootability" on an ASR...]

Hi,

When I leave my Mirage on for a few hours, the back of the case gets almost

too hot to touch. What gives? Is this how most Mirages behave, or is something wrong? Also, what are the parameter numbers for Sample Editing Functions in MASOS 2.0? I would get the ASG, but I'm a little strapped for cash (read: poor student).

Thanks,
Michael
msoong@greenhills.pvt.k12.mi.us

[PF - Mike: The back case of the Mirage serves as a heat sink for the power supply regulators. Don't worry, the case may get warm but it's a good thing, because that tells you that it's working VERY well as a heat sink.

As for the ASG, contact Syntaur Productions at the related links. They handle all the Mirage goodies now with Ensoniq's blessing.]

TH -

1. Do you have a description of the File-Formats GKH, INS(EFE), EPS-Formatted Disks??? I want to split these disk images into their instruments and back.

2. Do you know the new mail address of Michael Chen (author of EPSdisk)? I am interested in the source code of this program and his old address is no longer valid.

I hope you can help me!!!

Thanx,
Sascha
klein@gfi.ihk.de

[PF - Sascha: I'd call Ensoniq. The person you're after is the gentleman who redesigned their web page, so they

should have a more current eMail address for him. I don't know if it's proper netiquette to give that out without his permission, but I'd certainly give them a try.]

Dear sirs,

I have a special problem and I hope you can help me.

I want to import files into my TS-12 from my EMU-Lib. I know the EDE-Tool to create the Ensoniq file structure. Now my questions:

* Is there a tool available, which imports samples from EMU CD-Rom, or disk or ESI-32 (from SCSI Interface) into my PC?

* Do you know of a tool which converts the imported samples into Ensoniq format?

* Is it possible (with Giebler EDE) to format a SCSI harddrive in Ensoniq (directory structure) format?

* Do you know another (maybe simpler) way to get samples from my ESI-32 into the TS-12?

I know you can answer some of my questions and thank you for your help.

Ciao,
Eric
Erich.BESCHORNER@st.com

[PF - Eric: This is a good question for Dr. Giebler. I'm pretty sure the Giebler utilities will not format a SCSI drive in the Ensoniq format, as his x-platform utilities are largely floppy-disk based. But maybe he's authored an EMU-Ensoniq converter. You can contact Gary directly at Giebler Enterprises at 610-933-0332 (voice) or... Rubber Chicken Software also distributes these utilities, so ping them as well - aim your browser at <http://www.soundcentral.com/~chickeneps>

[Rubber Chicken Software Co., (chick-

enEPS@willmar.com) - Giebler's Utilities (the Ensoniq Disk Manager) does do a wide range of SCSI utilities; the same with our Tools line of products. If you could send us a EMU-Lib file you'd like to translate, we'd be happy to give it a try.]

TH,

Here goes another round of questions...comin' at ya...

But first allow me to segue into a word of appreciation for the TH. I have been a skeptical TS buyer, and since I have been using the TH to really investigate 1) what it can do and 2) what the competition can't do, I really feel good about the buying the TS for my one-man-band style home recording hobby. Segue out.

1) My TS-12 sometimes "freezes" when I am tweaking loaded EFE/ASR samples. None of the buttons respond after these freezes. I have to hard reboot (no three-fingered salute here!). I have only recently begun to explore using samples on the TS-12, and when I had 2 Meg of sample RAM, I never had a system freeze. I never used samples much either. I recently upgraded my sample RAM to the whole whopping 8 meg. I believe the RAM is installed correctly and working, because I have been creating, loading and using EFE/ASR samples regularly in both banks 8-9 for the last three weeks. It's just that once and awhile, *poof*, and I gotta reboot.

There is one EFE sample I converted from stereo WAV format using AWAVE which will freeze the machine anytime I try to tweak any sample parameter. But there are two others, seemingly straightforward mono converted WAV samples which will do the same thing. All my other samples, no problem. I believe that information in the samples may be giving the TS-12's OS a problem here. Should I be feeling like I'm dealing with my Win95 development environment here (rebooting a daily occurrence with out of bounds

memory errors and page faults), or should my keyboard see the doctor? What usually causes this behavior?

2) Is there any way I can take the patch programming information included in the TH, and convert it into SysEx data (if that's the way its done) and just dump it into my TS-12? Yes, lazy me. I want to cut, copy, paste, convert and send. Possible?

3) TS or MR? I am not a performing musician. I'm a "stay-in-the-home studio and make basement original space/rock music songs and tapes for friends" kinda guy. Sounds like a fit for the MR, right? The guys at my Ensoniq dealer have told me I'm not missing anything with the MR, and that it's really more designed for the single home studio, stay-at-home musician type songwriter. In fact, I could probably sell my TS for almost more than I paid for it. I really trust the guy who told me this, but it left me wondering. I have closely followed the TH articles discussing MR issues, and despite some of the birthing pains, I think it might be the better keyboard for my personal needs. Any thoughts, or is the horse still dead? Should I jettison the TS mother-ship? Wait for the next keyboard? P.S. If I could create, stereo, layered sample instruments (like EPS and ASR files), but in WAV format, I'd almost buy the MR today.

4) Digital Hard Drive recording: I am about to buy a desktop. Assume 64 meg RAM, P266, 6 gig hard-drive, etc. I want to replace my analog 4 track with a direct-to-disk digital recording...thing.... What will I need and what should I look out for? Can you point me to some on-line forums where this type of question is answered?

That's all for now! As usual, thanks to TH for their existence.

If anyone is debating the TS/MR issue as they read this, drop me an email and let's mind meld...

Ted Bicknell

Bicknell@sprynet.com

[John Seboldt (rohrwerk@pconline.com) – Boy, let me tell you, don't get rid of that TS! I have the TS-10 and the MR-61, and wouldn't give up either one – well, if I didn't need another actual keyboard I would have gotten the MR rack... TS benefits: reads EPS/ASR samples, programmability, fast layers/splits, sequencer depth, patch select buttons, poly aftertouch (on the TS-10). MR benefits: synth engine, drum machine, fast sequence assembly, PC format disks, import .mid files. If you just want the sounds, get the MR rack and control it from the TS.]

IMHO, of course.....]

[PF – Ted: If you feel that strongly about selling your TS, sell it to ME! I'll take it. I'll pay COD, Prepay, whatever you want! What I'd recommend doing is checking the SIMMS in your TS-10. Here's what might be hardware-problematic with your TS (educated guess):

(a) Your SIMM modules might be two different speeds or two different types. They should be identical in terms of speed, appearance, chips, etc. Ensure they aren't 100 ns or slower (higher number like xxxxx-10 or xxxxx-12 or xxxxxx-15). Ensure they say something like xxxxx-70 or xxxxxxx-80. Those are golden.

(b) They're loose or misfit. Take a look to make sure they're properly seated. Easy way to do this is simply remove them and reinstall them. Make sure the SIMM sockets aren't broken or fractured. Ensoniq used SIMM sockets with plastic clip/stays that will break off if

you don't remove or install the SIMM modules properly. This might be the case as well, so take a peek under that removable panel. Or have a tech do it for you if you feel uncomfortable about doing this.

*(c) Your *.wav files are corrupt or have some insidious tag byte set that gives the TS a headache. Try some genuine ASR samples to stuff that 8 Mb zone full of and see if the problem persists. We need to differentiate if this is a hardware or software-related problem...*

(2) Only if you're Arturian (see the 2nd reel "out-of-deep-freeze" kitchen scene of "Aliens" for this explanation)...

(3) Both. The TS (like my SD-1) has the best control surface and user interface a musician could hope for – 24 tracks of real-time tinkering, patch buttons, presets; it's a match for the gig. The MR has such a broad and diverse wavetable (even without the expansion boards) it's a resource for live performance. I concur with John's rationale: use your TS as the interfacel/controller/brain, and hang an MR rack on the MIDI out. What do you need with two sequencers when the TS has 24 tracks, anyway?

(4) Don't get me started on Intel xxxxbboxes. For what you'll pay for an operable and compatible computer alone, PLUS a DAR card (Entry level PARIS 2-channel input is \$2900 estimated upon release next year), you're talking a \$4000+ investment. Don't go there. OK, here come the flames. I know how elegant cutting and pasting MIDI data as well as real audio data is, I know how noiseless and un-destructible edits are, yada-yada-yada. Buy an ADAT and be done with it. EVERY

studio has a couple, uses them to death, they do noiseless edits, etc., yada-yada-yada. The keyword here is medium of exchange. And you can buy a DAT with the change AND an MR-Rack.

Hang tough, and again, if your TS ever comes up for sale, eMail me FIRST...]

TH –

I'm looking for new sounds for my SD-1. Specifically, I need a tabla and a tambora drone for some east/west tracks I'm doing in the studio. Have any idea who may have those patches or if they exist at all?

Any suggestions would be welcome.

Thanks,
LEE
stratman@idt.net

[PF – Lee: I'd consult Sam Mims at Syntaur Productions. He's one of the premier SD-1 hackers out there and probably has what you're looking for. Ping him at: <http://www.fatsnake.com/syntaur> for the details...]

Dear Interface:

I've been an Ensoniq user for many years, owning an SQ-80, an SD-1, and KT-76. I am about to take the leap into computer sequencing. I have a shop-made Pentium 133 with 32 MB RAM, 1.6 gig HD, sound card, etc. I just bought Cakewalk Home Studio Version 5, with four tracks of audio recording. I am completely new to this. Any tips or advice before I load it?

Change of Address

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

Missing or Damaged Issues?

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

Thanks,
John Bolles
JBolles702@aol.com

[PF - John: Tips?

(A) Prozac is helpful for the fits and config fun involved.

(B) Watch your sleep-wake cycles closely. This is the leading cause of headaches.

(C) The age-old adage comes to mind "Why ruin a perfectly good relationship and get married?"

Seriously, though, it's fun to tinker with, it's fun as a hobby, and it's fun to play with, but I don't think it's gonna make you any more music than you're already making. It's a tossup: I enjoy playing with *.wav files and have a Soundscape Elite installed married to a Roland Sound Canvas for playing games (The sound tracks from Doom, Descent, Quake, Etc. are pretty cool when played thru something other than an OPL3 FM 11-voice chipset). But I don't take it any further than that. For serious music composition I don't use anything BUT my Ensoniq gear. Call me craggy, call me hopelessly antiquated, but for professional music I use only my Ensoniq gear. It was designed for that very purpose, and that's precisely how I use it.

The computer is rapidly emerging as an all-purpose home "appliance" due to the nature of its architecture. It fares well doing assorted chores, but to really do one thing well you have to give up a lot of the "appliance" features and dedicate its configuration to a specific need for it to truly work properly. And, since I have Ensoniq gear dedicated to that purpose, I leave the PC as a "household appliance" configuration, and dedicate my Mac to serious music chores. But Cakewalk is the premiere sequencing app for PC's, and being able to cut and paste live audio tracks as well as MIDI tracks is threatening to be the rage of the decade, so do your homework.

Ah, the marriage of science and art. All I can offer is to tread carefully. The two are diametrically opposite, yet in the synthesizer world, one without the other is neither. Strange bedfellows...]

An open letter to Ensoniq
(posted here so it would be in a public forum):

Why don't you publish the details of how one can write their own algorithms for effects on the ASR/EPS-16? I find it remarkable that you don't exploit the potential of this feature further, relying on just two (Waveboy and Prosoniq) COMMERCIAL vendors to fill in the gaps of creating new effects.

There are smart people among your users, many of whom would love to get a crack at programming the DSP chip.....C'mon, what cha say?

Dan Nigrin
dnigrin@welchlink.welch.jhu.edu

[PF - Dan: Right - and Microsoft's gonna give away their source code, too. But I'll second you on this - just so the German and European cracks of Ensoniq code become worthless when Ensoniq puts it in the public domain. I'm not holding my breath, either, but it's a valid request.]

[Ensoniq - Writing your own algorithms is a highly technical process involving an extensive knowledge of the assembler language. At this time Ensoniq does not have the resources to support this process on an end user level.]

Hi,

I have an Ensoniq TS-10 keyboard. I am recording in a studio that has an EMU-E64 sampler. Do you guys know of any software that would allow me to take a sound from the EMU sample library and convert it to Ensoniq sample format (so I can take it home and play it on my TS-10)?

Tom
HORAN.TOM@ntrs.com

[PF - Tom: Why, that would be too logical. No, we have to take the parent file and make a *.wav (or equivalent) out of it, then convert it into Ensoniq format. Awave will do the latter, but I don't know what shareware/freeware app will do the former. I THINK Alchemy will do this, but I don't own the program, so I can't say if it'll read an EMU CD file and convert it into a raw .aiff file to convert to Ensoniq format within the app.]

Good question. I'll visit some URL's and get back to you later.]

[Rubber Chicken Software Co., (chickenEPS@willmar.com) - Answer for you as well as "gkeeper" - there are no current utilities to convert E-mu format (disk or file) to the Ensoniq format. Maybe in the future.]

TH -

Is the Syquest EzFlyer 230MB drive compatible for disk tracks on the ASR-10? I'm planning to buy it, but want to be able to record direct to disk, so if you could please let me know.

Thanks for your help.

[PF - The Syquest 230 EzFlyer is not an approved drive for disk tracks. By the same token, neither is the 135 Mb flyer, or other removable media due to the speed issues involved. Someone explained the exact reason a couple months ago, but, naturally, I've spaced it. Something to do with the buffering and data thruput of removables make them unusable for disktrack use. It's gotta be a vacuum-sealed device to record ATRK (audio tracks).]

Dear TH,

I read your news of the KT upgrade eagerly.....unfortunately nobody seems to know what it really does. Can you

help? Even the Ensoniq Homepage has nothing about it....and the dealers even less...

If you remember, I wrote about shipping my KT to Australia. Well, I've arrived and it has arrived intact too. I shipped it in its original box with the Airborne Express company (which was the cheapest!) and I managed to buy a suitable AC step-down transformer for AU\$75. It works fine here! Mind you, if you are thinking of importing an instrument into Australia, there is a 21% duty levied on electronic goods. Beware!

Mark Tie
<http://www.geocities.com/Hollywood/Lot/3720/>

[TH - We're not sure if all you've seen is the announcement (Issue #145) or the followup (Issue #146). If you haven't seen it yet, the followup gives a little more info on how this upgrade converts your KT to an E-Prime. Did you have some specific question regarding this that we can chase down?]

[PF - Mark: The KT upgrade basically turns your KT-76 or KT-88 into an E-Prime. With that exchange rate, I don't know what it will cost you to have this done (it's \$149.95 here in the U.S.), so I'd call your FRIENDLY Ensoniq dealer down under to get the details.]

[Mark Tie (mtie@hotmail.com) - Does the upgrade mean that I lose some of the existing sounds or does it add sounds only?]

[PF - Mark: The upgrade means that your KT-76 or KT-88 becomes an E-Prime in both sound and functionality. I would assume you'd get the E-Prime patches that would normally be occupied by KT patches. So you might wanna back them up if you've got some pet sounds.]

[Ensoniq - we confirm the E-prime upgrade information to be correct. The upgrade will give the unit all new sounds, therefore it is a good idea to

save your old sounds prior to getting the upgrade done.]

TH,

I recently purchased a used JL Cooper PPS-2 to sync my multitrack recorder to my Ensoniq TS-12. The PPS-2 didn't come with a manual, but seems to be pretty self explanatory... MIDI In to keyboard, MIDI Out back to sync box, sync box audio to tape, tape machine back to sync box. The only changes to my TS that I made was to set the clock control to MIDI(ext). I record a sync track to tape, and then play it back, the sync light comes on on the pps-2, but the sequencer doesn't seem to respond. I have tried the different time codes on the pps-2, mtc, dtl, and fsk, but nothing seems to work. Any advice would be greatly appreciated!!!

Greg Mann
gman@alink.com

[PF - Greg: I'd contact Jim Cooper directly at:

*JLCooper Electronics ,
125000 Beatrice St., Los Angeles, CA
90066. Phone: (310) 306-4131; fax
(310) 822-2252 .*

I'd offer a URL, but the only one I found was German. I apologize for not being familiar with this piece, as I use a MTP A/V, but I remember seeing them. Very popular box. I think it's the cheapest thing out there that stripes SMPTE. Readers?]

[Chris Edwards (cedwards@shvp.sc.ti.com) - Greg, try using only one MIDI connection at a time... MIDI OUT of the Keyboard to MIDI IN of your sync box. Record your sync track, switch ports - MIDI OUT of your sync box to MIDI IN of the keyboard. I did this and it worked fine. It doesn't seem to like both being connected at once. Let me know how it turns out.]

[Greg - Chris, I tried your suggestion, and it worked perfectly. Thanks so

much!!!]

[PF - Chris - The Hacker - veni, vidi, MIDI...]

Hi,

I have just met up with a friend who owns a TS-10. We want to swap some sounds with each other. The sounds that we loaded from my ASR disks onto his TS-10 worked well on his keyboard.

We then saved some of his sounds from the TS-10 onto a TS-10 formatted disk for me to load into my ASR. When I tried to load them it said there were no INST or BANK files. We then tried to save his TS sounds onto an ASR formatted disk, but his TS wouldn't read or accept the disk.

So - is there any way that I can get a TS-10 sound from a TS-10 keyboard and load it into an ASR-10?

I look forward to your reply.
Thanks,
Alfred Dale Tuohey

Back Issues

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

Issues 1- 40, 61, 67 - 74, 77, 79 and 82 - 85 are no longer available. Permission has been given to photocopy issues that we no longer have - check the classifieds for people offering them. A free back issue index is available which contains the tables of content for all issues since #43.

ESQ-1 coverage started with Issue #13. SQ-80 coverage started with #29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage got going with #35 (and also applies to the ASRs). VFX coverage (which also applies to the SDs) got started in #48. The SQs got going in #63. (SQ articles also apply to the KS, KTs, & E-Prime.) DP/4 coverage started in #88 (much of which also applies to the ASRs, and most of which also applies to the DP/2 & DP +). TS coverage got going with #98 but owners should also check out sample reviews for EPS/ASR sounds. The MR-Series coverage really started with #136 - but earlier sample reviews may also be useful.

atuohel10@scu.edu.au

[PF - Al: Since the sound your speaking of was loaded into the TS from an ASR disk, it's an ASR-native disk - just take the disk and load it into your ASR. But let me get this straight: you've loaded an ASR-10 sample (from an ASR disk) into a TS-10, and you want to know how to save it as an ASR disk? The "chicken or the egg" example comes to mind. The TS-10 was designed to read the ASR library, not vice versa. After all, if you have an ASR-10 disk to load into a TS, you should be able to take the disk and load it directly into an ASR (it IS an ASR disk). As far as loading a TS sound into an ASR, you'd have to sample it, as there's no direct way to load wavetable pointer data from a wavetable synth into a sampler without the wavedata present; i.e., an empty sampler has no wavedata to point to.

I assume you've take the ASR disk and loaded it into the TS, and now you want to save it back as an ASR disk because you don't have the original ASR disk that was used to initially load into the TS? I don't know that this can be done: the file formats may be (and probably are) a bit different between the ASR and TS-10. Again, the TS software allows you to load ASR samples. I don't think the ASR will let you load a TS sound file - it's the "child-parent" scenario.

The other scenario is that you are saving TS-10 native sound files onto disk. These will not load into an ASR for the above reason: the files merely represent wave pointer and wavetable parameter data, which means nothing to the ASR, as it has no ROM wavetable. Its sounds are ENTIRELY RAM based. That's why when you turn it off, all sound "leaks" out of it.

Unless you've got a 16+ with the FLASHRAM option, which DOES retain its memory on power off...]

To The Interface, or whosoever can 'elp me....

Hallo, greetings from across t'pond!

Can you tell me how I can covert .wav sample files to run in Cakewalk or Cubase or Cakewalk on my PC? Do I need some specific software to convert the files? If so, where can I get it? Do you know whether I can get it for free anywhere?

Thanx for your help,
Herby
michael@herbscape.u-net.com

[PF - Herby: *.wav files are native to Windows and will play back thru any compliant application such as Media Player (embedded in Windows). You may need a sound card (if you don't already have one) in your PC. But yeah, in Cakewalk 5.0 Pro Audio (and in the new 6.0) *.wav files can be played back at ANY point in the timeline - you just need to specify a file and mark where you want it to start playing.]

Hello Hackers,

I am an ASR-10 owner and I have big problems with FX processing of STEREO DRUMS 3061 blocks from disk AD-007. Those samples are so unnatural, without proper architecture of their attack and other elements (just I think so). It's the same for drums included in O.S.2.00 and O.S.3.00 disks. The sounds from Yamaha, Roland, even Rubber Chicken are much better. I've tried many times to resample the mono snare (root key A#2) with reverbs, expander, eq+compressor, etc., mono or stereo, with varied parameters but I am dissatisfied by the results. Please let me know how I can make realistic drum sounds - please, detailed guides and examples about making a professional sound from factory sounds with the FX of the ASR-10.

Sincerely,
Plamen Petrov, Bulgaria
subpl@mbox.digsys.bg

[PF - Plamen: No amount of processing will make a bad sample sound

great. I'm not saying that the samples you're working with are bad, but they aren't as good (in comparison) as the files from those other sounds your working with (in your opinion).

What I would recommend doing is tweaking the raw sample before doing anything to it. Work on the wave, not the process. Move the sample start parameter in a little bit, resample at a higher sample rate, randomize the pitch a little bit, etc. There are WAY too many ways to adjust (or mutilate) a sample in the ASR to outline a step-by-step in this forum, nor is this the place.

As a subscriber, though, you'll be privy to many articles concerning this very issue, as well as the latest tips/tricks from all other readers. And Ensoniq input into the Hacker is VERY enlightening...]

Hello TH,

Nothing important. I was just looking over your list of current operating systems and was wondering a few things. Does the VFX-SD use the same versions as the VFX-SD version 2? And I've seen the SQ-80M talked about a couple of times in the pages of the Hacker, but never a mention of its operating system. Would this be the same as the keyboard version of the SQ-80? And what about Ensoniq's Digital Sampled Piano (I hope I'm remembering the name correctly)?

Also, does anyone know of any SQ-80-exclusive websites?

Your subscriber,
Kirk Slinkard
Protist@aol.com

[PF - Kirk: Our Malvern brethren pointed me to <http://www.ensoniq.com/html/0010.htm>, where there is NO SQ-80M. I've never seen an SQ-80 module, and there is no reference to it on their Current OS site. The VFX-SD II isn't referenced as well, but I'm pret-

ty sure it's the same OS as the VFX-SD (maybe some wavetable changes were implemented in hardware with the II that make no difference to the OS).

Just like the original keyboard Mirage, which came in three revisions, the OS remains the same for all of them. Same holds true for the two rack-mount Mirages (ever see the Japanese one with the membrane switches?), same OS.

And it's the Sampled Digital Piano (SDP-1), but it uses the same OS as the Digital Sampled Piano.]

Dear TH,

I recently purchased a Roland JV-1080 Synth Module. Don't be offended now. I own plenty of Ensoniq gear - a TS-12, SQ-1, DP-4 and tons of sound cards, disks, and foot pedals. Now that we have that out of the way, here is my question:

The Roland JV-1080 has one user bank, three preset banks, one GM and four expansion board banks. I am controlling the JV-1080 from my TS-12. My problem lies in *real time control*. Not necessarily on the fly. I want to call up the different bank sets via MIDI.

Here is an example from the Roland manual:

If you wanted to select patch number 10 of preset B, you would transmit the following data to the JV-1080. Numbers are given in decimal.

*control change #0 (Bank select MSB value 81)
control change #32 (Bank select LSB value 1)
program change value: 9*

How in the world am I supposed to do this in real time control? The following is a partial Patch Chart to give you further information:

MSB	LSB	PC	Patch Group
80	0	0-127	User
81	0	0-127	Preset A
81	1	0-127	Preset B
81	2	0-127	Preset C
81	3	0-127	Preset D

Now here is the interesting thing. I set up a sequence template as follows:

1	*2*	*3*
MIDI ch 16 80 MSB	MIDI ch 16 81 MSB	MIDI ch 16
MIDI ch 16 *4*	MIDI ch 16 *5*	MIDI ch 16 *6*

Control channel for Patch groups is 16. When I pushed the track 2 button I got the preset A Bank on the Roland. That's as far as I can get because I can't define MSB and LSB at the same time. I don't even know how I got Preset A to come up without sending control messages. It's like it did it automatically (the TS-12, that is). I even tried dedicating more than one track to send this information, breaking it down in a sense. Sort of like sending bank changes from the TS-12 to the SQ-1. This was to no avail. Can you please help me?

I called Roland and they said to call Ensoniq. I called and they said to call Roland. The tech guys at Ensoniq did try to help. It was sort of tough for me to explain the problem over the phone. If you can't scratch where I itch, just tell me and I'll just keep doing my homework. Maybe this can't be done **real time**. If not, I'll just buy three more JV-1080s and give each one a different control channel. Just kidding.

For now, I have been bumping some preset bank sounds over to user bank. But I can't do that much longer. I am running out of room.

However, since I have come across this problem, I have a suggestion for Ensoniq. Design an 88-note keyboard controller. Just a few sounds would be necessary. Have a nice big screen. Build this controller to send the same type information that a computer would

WAVEBOY PLUG-INS

44KHz COMPRESSOR

Your ASR-10 becomes a high-end digital compressor, with this new Waveboy plug-in effect. This stereo compressor limiter has adjustable attack, decay, threshold, and ratio, plus a noise-gate function to control digital noise in more extreme squashing situations. Only in digital can you get true "instant" attack time, which can control the fastest transients. Great on internal sounds, for re-sampling, and for processing external inputs. A must-have tool for recording, mixing, and mastering. Also works on the EPS-16 PLUS (with mono audio-in.) \$49.95

TEMPO SYNC'D DELAYS

GET WITH THE BEAT! Delay times locked to the Sequencer Tempo! The SYNC'D DELAY effect lets you specify delay times in CLOCKS instead of milliseconds. When you change the tempo, all the delays stay synchronized. Simple, but terribly effective for all kinds of music.

Four taps with level, pan, feedback, and delay up to 480 clocks (5 quarter notes.) (Sorry, it doesn't sync to incoming MIDI clocks.) Both 30KHz and 44KHz sample rate versions are included. For ASR-10 and EPS-16 PLUS: \$49.95

SONIQ DEMOLITION

Destroy audio. On purpose. Most effects try to make things sound a little better. These impose serious damage. Sound comes out twisted, mangled, or completely demolished. But in a good way. The SONIQ DEMOLITION DISK offers three drastically new effect algorithms: GRAIN STORM, PITCH-WARP and LO-FIDELITY. Works exclusively on the Ensoniq ASR-10 and EPS-16 PLUS. Kicking on sounds, on sequences, on audio-in (even on the 16 PLUS) and for re-sampling. The unique and powerful transformations of granular synthesis alone make this disk a must-have for any composer of sonic landscape. May be hazardous. Use in a well ventilated area. All three effects just \$39.95

Treat yourself to the best, Send check or Money Order To:
WAVEBOY Industries P.O. Box 233, Paoli, PA 19301 USA.
VISA/MC accepted. PA residents add 6% sales tax; Overseas add \$6. shipping. tel: 610-251-9562 fax: 610-408-8078

send. Maybe two MIDI outs and a MIDI map.

After all, I wouldn't trade my TS-12 in for any other keyboard. It's awesome.

Many thanks in advance.

Sincerely,
Deane Seelhorst
Chalfont, PA

[PF - Deane: No offense taken - we all connect inferior gear to our Ensoniq sometime in our lives, so no apologies necessary. Problem here is you can't do this stuff in real time, or as a macro. You need a dedicated box to xmit that kind of string to your 1080. Perhaps something like an older Yamaha MEP-4 or JLC MSB+. I've got a Media Control Station but it only speaks to an ADB port on a Mac or a serial port on a PC. You might ask around and try to locate another dedicated processor that allows you to write a specific MIDI string and store it under a button so you can press said button and send it. Kawai makes a MIDI mixer called an MM-16 that might do it. It's a lot like the PV 1600, but it's smaller and MUCH more programmable. I got mine for \$200, but I just use it as a fader control surface for an MOTU MIDI Mixer 7s...]

Sorry I don't have any better solution for you, but Roland's MIDI implementation is not really designed for real time control. But consider yourself lucky - imagine what fun it must be to address a 2080 with all eight expansion boards installed...]

TH -

Which 2-speed CD Rom will work with TS keyboard - apart from the Apple CD300?

Also, anybody know about writable CD drives which will work with the TS keyboard?

Thank you,
Peter Banks
pbanks@ihug.co.nz

[PF - Peter: Point your browser to <http://www.soundcentral.com/~chick-eneps>. Garth has a lot of pertinent data about compatible CDROM drives. As far as a CDW for the TS, since the TS reads ASR CD's famously, just ensure that any CDW writer you get has the proper interface for your computer so you can partition out a 650 Mb HD space to load ASR samples into. Requires some of those Giebler x-platform utilities like EDM and such...]

Alas, you cannot simply connect a CDW to the back of the TS and write CDs - the TS interface is read-only.]

TH -

I'm having major problems with my ASR-10 and SCSI. I've got ASR-10, Mac 2cI, Peak, EPSM, external IBM CDrom, Jaz 1Gig and Quantum drive in a Club Mac case. I've tried different cables, turn-on sequences, order in chain, etc. Nothing seems to work.

Any suggestions?
JLEpperson@aol.com

[PF - Readers, I spoke with Jeff on the phone yesterday. Although we couldn't remedy his problem, we were able to isolate the culprit to a non-ASR compatible SCSI CDROM drive. When last seen he was headed toward RCS's tips page, Terje's Node, and the usual points of interest.]

[Ensoniq - In addition to checking the hard drive compatibility, you may want to review Sam Mims' article in last month's issue.]

EPS Hackers:

I cut my sampling teeth on a shiny new EPS-M way back when, and after a couple years of no sampler, and then a couple more with a maxed out 32MB Emu ESI-32, I have returned to the EPS (16+ this time), because I missed the patch selects, modulation routing, and realtime controls in the old box. It felt

like coming home. This is a real hacker's box. Pity about the RAM. Oh well. Guess I'll have to give up sampling entire vocal takes for manipulation.

I can't wait to dig into the effects.

I've been doing my homework first, though, plowing through some 36 issues of *Hacker*, and have a few questions.

1) I'm looking for an EPS 16 Plus Flashbank.

Okay, so maybe they weren't popular. I could sure use one. I see nothing available on the Syntaur or Chicken sites, and I know Ensoniq claims not to have any. Am I out of luck? I'd like to load OS and bank into it so that I can turn off my drive while I'm tracking - noise and all, y'know.

2) I'm the kind of guy who likes to know *exactly* what changed between OS revisions. Can someone give me specifics about what changed between EPS 16+ v1.1 and 1.3? I heard there were some Waveboy effects, and some bug fixes. I'd like to know more.

3) I really liked Polyphonic Aftertouch. However, I can't justify buying a whole new music workstation when apart from that, any keyboard controller will do. Can anyone recommend a master controller that features Poly aftertouch, besides the still-pricey Ensoniq keyboards?

4) Is it me, or is it awfully easy to run into broken Rubber Chicken links? (Weird sentence if you don't know what I'm talking about...)

5) Is there any one company famed for making really expressive EPS instruments (lots of modulation, layers and patch selects)?

6) Is there a good library of weird Tom Waits-ish sounds; trashy percussion, weird little organs, low growly brass and woodwinds? Any samples of traditional instruments either misused or

with really weird articulations?

7) Are there any fun test-mode easter eggs on the EPS-16+? (Yes, Ensoniq, I know, if I mess with the parameters off of CMD/Sys/Env1 I can kill my 16+.)

8) Why don't Editor/Librarian vendors realize that samplers are more than just recording devices? Unisyn could really help me create instruments - layers, mod routings, envelopes, all that stuff would be a hell of a lot easier in that environment. My alternatives are somewhat limited on the Mac. (I think stEPS is pretty much IT, right?)

This has been a running joke for years. I keep thinking "These guys will wake up," and I check back a couple years later and we're still doing it from the front panel! Why hasn't Ensoniq evangelized their samplers for support from Mark of the Unicorn, Opcode, Emagic or whoever?

9) Can one still get that little EPS programming cheat sheet mentioned in some old issue of TH?

10) Which of the Waveboy add-ons provides the best toolbox for creating unusual, expressive sounds, maybe something you'd hear on a Sneaker Pimps or Tricky song? I'm currently thinking Resonant Filter. I can do most of the stuff in Soniq Demolition from within a computer editor, I believe. Does anyone have any opinions?

10.1) The Tempo-Synced Delay is great, I loved that in the Lexicon box I used to have, but I understand that it won't sync to MIDI Clock. Does this mean I must set up a dummy sequence in the EPS to be triggered from my sequencer (in the same tempo) to sync delays to my computer sequences?

Well, I have about eight issues of TH to go, so I'll save the rest of my questions until I've caught up.

Mike Jennings
jennings@biohazard.org

[PF - Mike: Welcome back. Been there, done that, burned the T-shirts. What good is 128 Mb if you can't find your way around it? When your budget allows it, bag an ASR-10 and record all those vocal takes on DiskTracks - only time limit is the capacity of your hard drive (or is it 2 Gb? Ensoniq?).

Answers, in order:

(1) So are ALL the 16+ owners who didn't order it before it was discontinued.

(2) Proprietary Ensoniq Info. Call 610.647.3930 and offer them an expensive dinner and many Pepsies. Usually this will elucidate a favorable response. Clark S. might have posted this info in an earlier issue of the Hacker when Ensoniq announced the OS revision.

(3) Nope: they all cost more than an ASR-10. Most of them don't even have sound engines built in. The Yamaha KX-88 is the most sought-after controller for its feel, but it's channel aftertouch only, as well as the Roland stuff as well. Fatar made a couple (in the \$2K range) that weren't very reliable and have since discontinued.

When you price one of these "exotic" poly-aftertouch keyboards, an ASR-88 Turbo (with 16 Mb, CDROM, Digital I/O, gift CD's, pedal, etc.) is a helluva bargain. AND you get the world's most prestigious sampling engine at no extra charge...

(4) It's you. Garth REALLY stays on top of his site...

(5) See Sam Mims of Syntaur Productions. URL is <http://www.fatsnake.com/syntaur>.

His programming prowess of the Malvern wavetable boxes IS legendary...

(6) Too subjective for me to say, Mike. I think the new Roland organ synth is a cheesy little box, and it's the closest to a B-3 you can get out there. I'd personally try CDR's 1 thru 4 from the En-

soniq Sample Library. Two come free with an ASR-88 Turbo, and there's such variety on these offerings I'd audition them just to see if one of them doesn't hit the spot. And of course, the 3rd parties. Readers?

(7) None past that keystroke combi: "Mr. Knob"'s one of my favorites...

(8) To quote Dennis Miller, "I don't mean to go off on a rant here, but..." I paid \$395 for Unisyn back in 1994, which seemed like an incredible bargain with the promise of free profiles for newer synths when they become available. They sell updated Profile disks as collections of 5-6 newer synth profiles for \$50 a disk. This not only means you gotta buy 4-5 other profiles you don't need just to get the one you want, the fact I gotta buy them at all after forking over \$400 3 years ago REALLY pulls my postal nerve. And try

Current Ensoniq O.S. (Disk/EPROM)

EPS	2.49/2.40
EPS-M	2.49/2.41
EPS-16 PLUS	1.3/1.00F
MASOS	2.0
MIRAGE	3.2
ESQ	3.5
ESQ-M	1.2
SQ-80	1.8
VFX	2.30
VFX-SD	2.1/2.00
SQ-1	1.11
SQ-1 32	2.03
SQ-1 PLUS	1.15
SQ-R	1.20
SQ-R 32	2.03
SQ-R PLUS	1.15
SQ-2	1.2
SQ-2 32	2.03
SD-1	4.10/4.10
SD-1 32	4.10/4.10
DP/4	1.15
DP/4+	2.05
DP/2	1.02
KS-32	3.01
ASR-10	3.53/1.5
ASR-88	3.53/3.50
KMX-8	2.00
KMX-16	1.50
TS-10/12	3.10
KT-76/88	1.62
SDP-1	1.70
MR Rack	1.5x
MR-61/76	2.10
ASR-X	1.12
E-Prime	2.01

to get an answer from their tech support phone line in under 3 hours. Better to eMail them and x your fingers...

But since you're a Mac user, Alchemy (from Passport Designs) will literally knock your sox off. A little pricey, yes, but still the Premiere sample editor for the Mac. Best part of it you can import other manufacturers sound files into it and ping them into your Malvern box, all at SCSI speed. Reviewed by Craig Anderton in the Hacker years ago, it still gets 3 thumbs up. If you don't have the budget, Terje's Node (see the "Related Links" at the Hacker Home Page) has EPSm and some other mondo cool utilities for little more than a stipend; he'll let you try them out for 14 days before they ask for a code he'll sell you for a whole \$24.

Lotta stuff out there, and don't feel limited because you're Mac-based. All this stuff started BECAUSE of the Mac. Finale, Encore, MasterTracks, the entire plethora of music apps wouldn't exist on ANY platform if there hadn't been a Mac to initially write them for.

(9) See (5) above: Syntaur is the repository of EPS/16+ docs and wareS, with Ensoniq's blessing.

(10) Yes, but I'd try the Voder as well for those vowel fx...

(10.1) Nope. Waveboy's TSD disk looks at the 16+ internal clock to generate delays. Since there's no internal clock out of the 16+, can't go there. But I'd try creating a sequence on the 16+ the same length as your computer sequence, then erase ONLY the note data on the 16+'s track just to see how grey an area this really is.

Good questions, Mike. You're a power-user and know your way around it. Read those eight other issues and we'll expect an article...]

[Mike Jennings - Thanks for all the answers you provided, and so fast...

(2) Do you mean to say that nobody can

tell me what Waveboy filter algorithm got added in the 1.3 release? Oh, come on. Bug fixes and new features are not proprietary info. These are things one needs to know about.... I'll call and bug them, I guess. I emailed them, but got a very vague response.

(3) I already own a sampling engine that I'm happy with, the 16+ that I just bought. I guess I'll just find an old EPS keyboard.

(7) "Mr. Knob"?

(10) The Voder struck me as a brilliant hack, but kind of gimmicky - you could only really use it once (yes, I read Craig's review). The Resonant Filter seems like a real toolbox filter, that you could dig around in for a while and keep finding new effects... Has anyone gotten any real mileage out of the Voder? I.e. to use it in a way that Waveboy hadn't expected, for example?

(10.1) So, my options for tempo-synced delay are: a) Use TSD, and control my computer sequencer by slaving it to the EPS start/stop/clock, b) Buy a Wedge or an old Lexicon LXP or something, or, c) Just do the damn math.

I'd just do c) except that I used to use a MIDI Theremin to control delay times interactively, in real time, for cool dub effects - looked great in performance. (And, unlike most Theremins, it was impossible to screw up a tune by using it!) Besides, tempo-synced delay is helpful for tracking rubato material, etc. which I don't believe is supported within the EPS sequencer.

I'd like to take that idea further. So it's either a), which is fairly cheap but obnoxious, or b), which is expensive but elegant.

(I guess I could also try MIDI delays, inside the sequence, but feedback/regeneration and stereo effects start to get really hairy to program - and edit!)

Again, thanks for the responses, and for the forum.

One other question: Have you considered distributing eTH as an Acrobat PDF file? This can be opened on almost as many platforms as the straight text, and is a lot easier to read, supports compression of text and graphics, has a hyperlinked table of contents feature, and overall is probably easier for you to generate from your dead-tree edition layout than it is to munge it into text-only format.

I made a large PDF of the 9 eTH back issues I ordered so I could search it and Bookmark it. It's damn handy to have in my studio.]

[TH - We went through the various possibilities for distributing eTH when we started out on this venture. It was the "ALMOST as many platforms as straight text" factor that eliminates these fancier options. Actually, on our own little antique system, *we'd* have no way of viewing a PDF file - how about that? We'll keep re-looking at this every so often, but boy, the more letters we get with weird little non-ASCII characters and funny line endings and strange formatting assumptions, the more we really appreciate straight text. At least with text, if someone wants to put it into their own preferred format, compress it, hyperlink it, display it in 15-point type, it's just about *always* possible - as you yourself have illustrated.]

[PF - Mike: Is that you? The Mike Jennings of Radius? This is the Pat Finnigan of Truevision. Well, used to be till I went to Vanstar. Small world. Anyway...

(2) In my opinion, Ensoniq REALLY overdoes the "proprietary" argument. Given, a German company popped up with hacks of WaveBoy code and were prosecuted, but that's not the same as what you're asking for.

(3) I find Old Venerable (the EPS Classic) my most favorite of Ensoniq keyboards. Partly because I know it inside out, but primarily because it loads so FAST! It's only got 4 Mb, and the

samples are 13-bit, so it's the fastest box Malvern ever made.

(7) Yeah, the Cmd/I page – right-cursor til you get to that screen. Silly, but an Easter egg...

(10) I'd eMail Rubber Chicken. Garth's pretty knowledgeable about the Wave-Boy stuff.

(10.1) Now THAT's novel use of an alternate controller. Way cool!

I agree with the PDF format. I think it's safe to say most all of the 286 and 386-based computers are out of the loop anyway (if not being salvaged for scrap and sold by the lb.), and Apple's Service Source CD's are an excellent example of how to organize data (the TIL concept). The Acrobat Reader is free and can be downloaded almost anywhere. It's a standard unto itself.

Then again, maybe text is the most common denominator. Now, about that article...]

[TH – Ah, you Windows and Mac folk live in such a provincial little world...]

[Ensoniq – Recording vocal tracks on DiskTracks is only limited by the capacity of your hard drive.]

TH –

I recently found an EPS-16+ behind my neighbor's couch. Please, don't ask... Anyway, the thing worked for a bit but the floppy drive was really noisy and dirty, so when it refused to spin up, I just figured this must be the problem. I replaced it (a place called Techzam will refurbish the these things for about 40 bucks instead of your Ensoniq service centers 150 dollar price tag). And it still doesn't work. I don't have manuals, etc., but for starters, is there a set of key commands to do an initialization or self diagnostic?

Thanks,
Kelly Mason

rubberduck@pacificnet.net

[PF – Kelly: Okay, don't ask, don't tell. The Armed Forces of the US of A live by that code, and so will I.

The 16+ has no schematics, no self test, no diagnostics or initialization – it does that on power up. I'd recommend professional help if it doesn't act properly after it boots from the floppy disk with the OS (have you tried booting it with the OS disk?) It might be as simple as that, and you wouldn't be the first to turn it on and wonder why it just says "Please Insert Disk..."

Other than that, the keyboard PCB halves could be suspect, but without physically looking at it I'd be shooting in the dark. No, escort it to your Friendly Authorized Ensoniq Service Station and have them take a peek under the hood.]

[rubberduck@pacificnet.net – Well, I tried to boot it off of a Terje B-10 disk, but the floppy isn't spinning up. On power up, all the instrument lights come on and the LCD just stares blankly, it isn't asking for a disk. If I push a button, I get a numerical command on the LCD, eg. press load, and an 8 comes on the LCD. All the fuses appear to be ok, at least they read ok with a continuity meter.

Am I service center bound?]

*[TH – Well, *my* personal favorite is to always open it up and wiggle all the connectors and press down on any socketed ICs before I trundle off to a service center...]*

[PF – Not just yet. What you want to do first is check the connectors on the display board. Remove the four allen head cover screws so you can open the hood, then look at the cables going to the display board. If I remember correctly, there's a connector at each end of the display pcb. Wiggle those, or if you feel comfortable doing this, unplug them and clean the contacts with a Q-tip and alcohol. Reconnect them, and then check all the ribbon connectors on the

main pcb (logic board) to ensure they're all firmly connected. Make sure the ROM chips (the 44-pin black things with the LABELS on them) are firmly seated. Give them a firm push down. And ensure when you connected the ribbon cable on the back of the new drive, the RED side of the cable is CLOSEST to the power connector. Then ensure you've got the power cable on correctly and you didn't plug it back on and miss one pin. Same for the ribbon cable on the back of the drive.

If this doesn't work, or the machine still gives you that blank stare when you turn it on, one of the display driver transistors on the power supply board (with the fuses) has gone open. Check voltages coming out of the power supply – you should see a solid +5, -5, +12, -12, and two +28 volt readings with respect to ground. The +28V lines are what drive the display board – if you don't see that, have your dealer order you a replacement power supply, or take yours out and let him repair it. Power supply exchange should be around \$50-\$60, repair of yours should be around half that.

And if that doesn't work, yeah, it's time for a logic board. And since logic boards are around \$350 exchange, you may want to sell it to me for parts...

But only if it comes to that. Keep me posted. Ciao...]

Call For Writers!

In spite of their current god-like status, writers for the *Hacker* were once mere mortals — just like you! If you're noodling around with Ensoniq gear, you too can join their elite ranks. We're always looking for new writers, and yes, there is actual payment involved. If you're toying with an idea for an article, how about giving Editrix Jane a call at 1-503-227-6848 and listening to her soothing words of encouragement?

[rubberduck@pacificnet.net - Good call there, I wiggled and things got significantly better, I will continue to wiggle and see if this will resolve all the problems.

The innards smell of puppy chow, and I have been informed that indeed a puppy threw up on this keyboard...

At this point, the LCD does in fact ask for a floppy disk. The only problem is that when I put one in, it doesn't seem to notice or care.

I am sure my disk is a good one because I made a copy of a friends 16+ OS disk and booted his off this disk without any problems.

My floppy drive is also making some noise now, It is definitely spinning the disks and searching, but it does not seem to be finding. It has a blue stripe on the ribbon cable, judging from the bends, it seems to be properly inserted. On the pc board, the stripe is toward the rear of the EPS, on the floppy, it is on the edge near the keyboard, away from the power connector. Is your red-stripe model is the reverse of this?

The power supply to the floppy is putting out just a bit less than 5v.

Thanks for all the help.]

[PF - Kelly: One last possibility. You seem to have a handle on the instrument now. The only thing I can think of is that the power connector on the floppy drive is intermittent, or one of the 4 pins on the power connector isn't making good enough contact. Ensure that the blue stripe is closest to the power connector (yes, some Ensoniq gear had red stripes marking pin #1), and then wiggle the floppy power connector when it tries to boot. The power connector should have +5 and +12 on it. If you don't find one or the other, trace back and find where you're losing it. Check the voltage regulators (the little black 3-pin jobbies bolted to the heat sink) and ensure you're getting proper voltages from them (7805 and

7905 are both + and -5V regulators, 7812 and 7912 are + and -12V regulators).

If that doesn't do it, I'm afraid it's time to close the hood and spring for a logic board. But at least you gave it the college try. Keep us posted...]

[rubberduck@pacificnet.net - PF, Thanks loads for your help. I now have a working EPS 16+. It is so smooth sounding with its happy new floppy drive and newly cleaned innards.

Your assistance and guidance (and also some similar advice from Terje) had me convinced that something was up with the floppy drive, so as a last resort, I borrowed a 16+ from a friend, swapped his floppy into my 16+ and thus located the source of my problems.

It seems that the people who rebuilt the floppy drive changed some switches in order to run their tests and they didn't change them back. There are three super tiny switches (the handle, the dip, the switch thing, the whatever you call it) are each maybe 1/32nd of an inch... tiny) visible from the bottom of the floppy drive and there are three switches that can be seen if you hold it up and look straight down into the back. Mine were not set correctly. (In my overstimulated state I did forget to write down the proper settings so that I could pass this info along, but this may change with different drives, I don't really know.)

At any rate, I was able to get my EPS floppy repaired for a paltry 29.00 + shipping from Techzam, 1-805-520-9845. Just make sure you look over your floppy drive and take note of these six switches before you send it in. This will save a great deal of annoyance, I assure you.

BTW, Terje informed me that the B-10 cannot be used to boot with - thanks Terje.

Thanks and Out, Kelly]

[PF - Kelly: Our motto: "Any time, day or nite, we do the job, we do it right - Acme!" Glad you're up and running. Now about that subscription...]

TH -

I bought the Giebler MIDI conversion software, for the SQ-2/32 a while ago. Unfortunately, for the \$60 I paid, they left the drum map and patch map filtering up to me. I am pretty upset about that, considering they advertised that it can convert MIDI to SQ-2. That's a lot of money to pay for something I have not been able to really use.

I now have the time to ask for help on this, since they were unable to help with their own product when I called them last.

Question: I am having a hard time figuring how to match the GM drumset to the SQ drum set in the drum filter section of their software. I was hoping someone has a filter for the generic SQ drum set that I could download and use. I have similar problems with the Patch filter editor.

Email me if you need more details on my situation.

Please help,
amandal@egyptian.net

[PF - Dave, Charlotte: The SQ-series presents a particularly difficult problem for drum maps because the SQs only allow 17 drum sounds across the keyboard. What I've heard people do is to create 3 drum kits assigned to MIDI channel #10 on 3 separate tracks, then map each track to 17 sounds in one particular keyboard zone. This would allow only 54 drum sounds, but that's only 7 shy of the 61-note "standard."

As far as the program filtering and mapping patches around for you, I defer to Dr. Giebler - he's the oracle of x-platform utilities. He may have an update available or can offer some tips to get you thru the problem.]

HACKER BOOTEQ

Kinda like a CD-ROM - on a 3.5" floppy disk!

Mega
DISK EPS

This floppy disk is stuffed, jammed, and packed tightly with killer Syntaur samples that will *astound* you with their **HUGE** sound and tiny block size. The MegaDisk has **38 instruments** that will load in a heartbeat, each fully programmed with patch selects, real-time controllers, and effects! Bases, aggressive synths, keyboards, pads, drums, and more. For ASR, EPS-16, EPS, and TS series. All major credit cards accepted.

SYNTAUR
PRODUCTIONS

500 W. Prairie, Eagle Lake, TX 77434
www.fatsnake.com/syntaur

ONLY
\$16.95!

Mention this ad and get
FREE SHIPPING!

(409) 234-2700 or (800) 334-1288

MUSIC LABS  Load and Play Sequences

Sequences for the *gigging* musician...

For the Ensoniq...
EPS, 16+, ASR 10/12, TS-10/12
VFX-SD and SD-1

All titles also available in...
GM, GS standard MIDI

Popular requests, blues, country and classic rock.
Write or call for a catalog or visit our homepage on the web!

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



http://members.aol.com/MLMidi

PROFESSIONAL QUALITY

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

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

Call or Write - Any time, 24 Hours

Music Magic

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

ASR EPS EPS-16+ TS
SAMPLES

WE HAVE THE SOUNDS YOU NEED!

TECHNO - INDUSTRIAL - TRIPHOP
TRANCE - AMBIENT - NEW AGE
HOUSE - HIP HOP - OLD SKOOL
RAP - R&B - MODERN JAZZ
CLASSICAL - FILM - SOUND FX

Tech Star
SOFTWARE

810.783.0470 PO Box 463236
FREE CATALOG AND Mt. Clemens, MI
DEMO AVAILABLE! 48046

MAKE MONEY

Scoring Soundtracks and Jingles

FREE report reveals all!

Fisher Creative Group
323 Inner Circle Drive
Bolingbrook, IL 60440
(630) 378-4109

fishercg@mcs.com
www.mcs.net/~fishercg/

ENSONIQ DISKETTE MANAGER

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

ENSONIQ MIDI MANAGER

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

SEQUENCE CONVERTERS

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

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

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

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

Giebler Enterprises

26 Crestview Drive
Phoenixville, PA 19460

(610) 933-0332
Fax: 933-0395



Looking for **Ensoniq**
SOUNDS and other
Samples on the Internet?
**** Look no further ****



"the hassle removed from downloading!"

www.soundcentral.com

L. B. Music Sequences

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

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

Toll Free Orderline: 1-800-3LB-MUSIC
Visa, Mastercard, Amex, Discover Accepted

LB Music Technologies, Inc.

51 Charter Oak Drive
Newtown Square, PA 19073-3044

610-356-7255 / Fax: 610-356-6737
CompuServe: 76255,3713

Internet: http://www.lbmusictech.com

YO ADVERTISERS!

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

2.25" x 2.25" Only \$30!

And now — *Booteeq Jumbo*:
2.25" x 4.6" Only \$45!

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

DANCE SAMPLES

GET YOUR
FREE DEMO
DISK & CATALOG
ASR-10, ASR-88, ASR-X
TS-10, TS-12
EPS, EPS 16+

CD-ROM DRIVES
\$199 with purchase
of pwrhse. reg. \$249
w/cable
scsi 1
2X



POWERHOUSE VOL. 2 - \$199
300 megabytes. Over 1,100 instruments, over 3,000 samples for Ensoniq
Samplers. Brand new drums, synths, vocals, effects, from machines like
the MPC-3000, TB303, moog, and many analog synths too!
"You don't need to orbit the moon, get powerhouse!"

VOCAL BYTES VOLUME - 3 - AVAILABLE SUMMER '97
Samples on 3.5" disk for: EPS, EPS 16,
ASR-10, TS-10, S-50, 550, 330, 770, W-30
MPC 60, MPC 3000, MPC 2000
GREAT SOUNDS! - LOW PRICES!
(800) 301-MIDI fax 562 699-0864

www.midimark.com
MIDI MARK
Since 1989

TRANSONIQ HACKER

1402 SW UPLAND DR., PORTLAND, OR 97221

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

ADDRESS CORRECTION REQUESTED

SUBSCRIPTION MATERIAL
DATED MATERIAL - TIME VALUE

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

Publisher: Eric Geislinger
Editrix: Jane Tallman

Our (somewhat regular) illustrious bevy of writers includes: Craig Anderton, Robby Berman, Paul Bissell, Steve Byhurst, Mark Clifton, Steve Curtin, Anthony Ferrara, Pat Finnigan, Jeffrey Fisher, Frank Fortunato, Duane Frybarger, Gary Giebler, Jim Grote, Garth Hjelte, Jeff Jetton, Dara Jones, Johnny Klonaris, Ray Legnini, John Loffink, Daniel Mandel, Sam Mims, Dan Rohde, Clark Salisbury, Tom Shear, Kirk Slinkard, Jack Tolin, Tom Tracy, Steve Vincent and Garry Wasyliw.

Copyright 1997, TransonIQ Hacker, 1402 SW Upland Drive, Portland, OR 97221. Phone: (503) 227-6848 (8 am to 9 pm Pacific West Coast Time).

Advertising rates: Please send for rate card.
Rates for authors: Please send for writer-info card.

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

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