

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

When We're 64 (Voices) Preview of Ensoniq's KT-76 Synthesizer

Robby Berman

Look out: here comes another one from the merry little elves of Malvern, Pennsylvania. Ensoniq calls it the KT-76. You may call it Katie. It's based on Ensoniq's popular KS-32 and SQ series synthesizers — ya can't argue with success — and anyone familiar with those keyboards will soon find themselves at home on the KT-76. They'll appreciate the familiar messages flashed on the KT-76's new BIG display. They'll also encounter some truly exciting new features.

Let's do the "something old, something new" thing: **Old:** The KT-76, like its forbears, contains Sounds, 180 of 'em — with another 160 on the optional memory card — and can hold up to 80 Presets or Sequences, and 20 Songs (more of them on the card, too). **New:** The Sounds in the KT-76 are based on 211 brand-new wavesamples which boast the best fidelity that Ensoniq has ever offered in a synthesizer.

Old: The KT-76 has the piano-type, weighted-action keyboard that everyone loves so much in the KS-32 and TS-12. **New:** The KT-76 has 64-voice polyphony, making it the world's very first weighted-action keyboard to break beyond the 32-voice polyphony barrier — and that's at any price! It's also, for that matter, the world's only 64-voice workstation. For readers unfamiliar with the concept of polyphony as it applies to synths and samplers, what this means is that the KT-76 can play a whole *lot* of notes at once. You can play whatever you want — even hold down that sustain pedal for as long as you want — and this keyboard will likely keep up with you. For sequencer jockeys, we're talking about the capability of creating big, fat musical arrangements without the need to use any sounds other than the KT's.

Old: The KT has a set of 13 high-quality effect algorithms. **New:** The algorithms in



In this issue

Articles:

- KT-76 Preview
Robby Berman cover
- EPS Hackerpatch — Fairlight Vox
Tom Shear 4
- Scorching Clav — TS
Jeff Rhoads 5
- DP/4 Trekking — 6.6 Sec Delay
Alan Blake 8
- SQ/KS Sounds — Part IX: Reverbs
Mark Clifton 9
- EPS/ASR Computer Programs
Garth Hjelte 11
- TS Hyperwaves — Part II
Robby Berman 14
- Metalize Your VFX
Kirk Slinkard 19

Reviews:

- Ruffbeat's Ghetto Noise Sampling CD
Tom Shear 7
- Basement Tapes: Cowgill & Alians
Daniel Mandel 17

Regular Stuff:

- Random Notes 3
- Hypersoniq 3
- Transoniq-Net 3
- Classifieds 21
- Hackerpatches — SQ: Keypad
Jeffrey Rhoads 22
- The Interface 23
- Hacker Booteeq 31

the KT go way beyond what the KS/SQs had to offer. In addition to Ensoniq's newly-buffed reverbs, choruses, flangers, phasers and compression/distortion effects, the KT offers delay, digital EQ and an envelope-controlled VCF, for analog synth simulations.

Aaah, let's ditch this Old/New albatross and talk about what else is new in the KT-76. General MIDI, for one thing — the KT-76 is fully General MIDI-compatible. It makes a great-sounding General MIDI sound source, with 128 new General MIDI sounds onboard in addition to the regular KT sounds (the GM drum kits, by the way, are available for playing and sequencing even outside of General MIDI). Just hit the KT's General MIDI button, and press play on your GM sequencer. Couldn't be simpler.

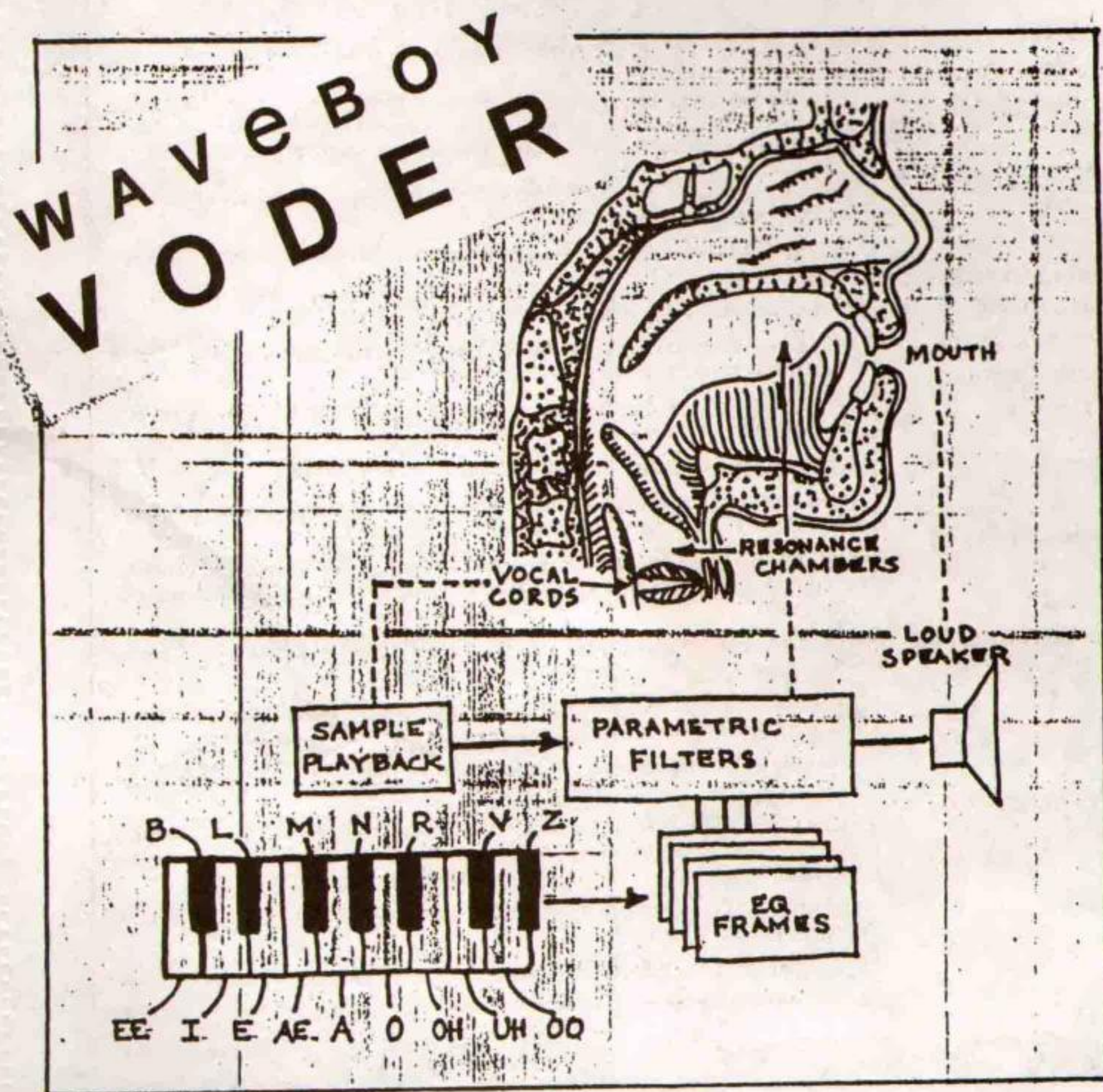
Ensoniq has also given the KT-76 a new Transpose feature — with the press of precisely one button and one key on the keyboard, you can transpose whatever you're playing to any other key without changing your fingerings one iota. Any of you who have ever had to quickly find a comfortable range for a singer to sing a song in will be certain to find this a tremendous convenience. When you're done, one more button press and you're back to normal pitch.

Ensoniq's SoundFinder, a very helpful amenity first introduced in the TS synthesizers, is also included in the KT-76. SoundFinder's job is to help you sort through all of the KT's sounds when you're looking for a particular type of patch. If,

for instance, you're playing an electric piano program and you'd like to see what other electric piano sounds you've got available, simply press the SoundFinder button. The KT will search through its sound banks and find you the next electric piano program. You can keep pressing it to call up other electric piano choices until you've got just the one you want.

Another exciting new aspect of the KT-76 is its sound card. The KT can save sounds, sequences and presets to a standard PCMCIA computer memory card. This has two significant advantages. First, though you can buy the cards from Ensoniq, you can also get them from any computer supply source, affording you the ability to take advantage of all the pricing a competitive free market has to offer. Second, these babies hold a lot of data. Each card can hold both Sounds, Presets and Sequence data. And — pay attention here, sequencer fans — the sequence memory on a PCMCIA card is downright LARGE: well over 100,000 notes. And since the KT plays your sequences right off the cards, anything you put there is instantly accessible, making it great for using at gigs, or simply as a handy and cost-effective place to park a big chunk of your work.

Other goodies in the KT-76 include the ergonomically angled pitch bend and mod wheels, an optional music stand and, in ROM memory, 34 pitch tables, as well as some demo music from Ensoniq that's always there to help you get an idea of what the KT and you can do. There's also a Quick-Start Guide to get you up and running, written by...me! The KT-76 sells for a suggested retail price of \$2495. ■



WILD VOCALS AT YOUR FINGERTIPS!

The Voder synthesizes vocals out of any sampled sound. It can *sound* like a vocoder, but there's never been an effect like this for any other keyboard. The lowest 16 keys of the keyboard each trigger a different vowel or consonant. Your left hand actually forms words by "spelling" them. (OK, it takes some practice to sing a whole sentence.) Your right hand controls the notes and chords of your robot choir. And how long have you been waiting to make a big fat breathy choir sing "Louie Louie?" Or maybe it was a car crash snare that you needed to say "mom!" Need details? The Voder is a 3-band parametric EQ effect for the Ensoniq ASR-10 and EPS-16 PLUS. This EQ can rapidly "morph" between many different settings. These different settings impose vocal characteristics onto any sound that is run through the EQ. It's much cooler than a Morpheus. Audio-in is supported. The Voder disk is \$49.95 and comes with sounds: a choir, a solo voice, a robot voice, a talking rhythm loop. Order by MC/VISA by calling (215) 251-9562 or send check or money order to WAVEBOY Industries, P.O. BOX 233, Paoli, PA 19301 USA. (Price includes shipping but add \$6 outside US/Canada. PA residents add 6% tax.)

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Ensoniq News

Family Demo CD — We are just completing a new audio CD demonstration of the entire Ensoniq product line. This disk will provide demos of each of our instruments, and includes some special multi-instrument arrangements. It is featured on our new family ad, and is available for only \$5 shipping and handling. Call Ensoniq at 1-800-553-5151 for more information.

Free Sample Disks — We are offering a special "value-added" promotion for persons buying TS-10s and 12s, from September 1, 1994 until further notice. When you buy a TS and return your completed warranty card and sales receipt, we will send you a free collection of sampled sound disks.

New ASR/TS sounds

AS-9 "Phunky Phat" — Rap and hip-hop sounds developed by Ray Chew (musical director for the Apollo Theater and performer with Ashford and Simpson, among others). Five disks of loops and choice instruments for the dance producer. List price — \$39.95.

AS-10 "Euro Klub" — A five-disk dance collection from the European perspective, developed by long-time Ensoniq programmer Arnd Kaiser (IPC-1, ISC-1) and his partner. This is a great collection of essential club dance instruments which are also good "bread-and-butter" sounds. List price — \$39.95.

AS-11 and 12 "Techno Synths Vols. 1 and 2" — Two five-packs of analog and digital synth sounds, many from classic synths such as the Prophet T8 and 600, Oberheim SEM module, Roland JP-8 and more. List price — \$39.95.

TS-10/TS-12 Sounds

TSD-1005 "World Piece" — A collection of 120 world and ethnic emulations, which add a new perspective to the sound of the TS. Don't assume that this is only good for new-age and ethnic music. These are great sounds for use in a variety of musical situations. Also includes 30 Performance Presets. List price — \$19.95.

Third-Party News

We'd like to welcome Caruso Music to our illustrious bevy of advertisers.

Be advised — New Sound Music doesn't seem to be returning phone calls. Meanwhile, Valhala seems to be going through Chapter 11....

Hacker News

Yes, of course we have our own domain... Internet surfers are welcome to send e-mail to us at our new addresses:

interface@transoniq.com
articles@transoniq.com
orders@transoniq.com
and, actually, whatever@transoniq.com.

HYPERSOINQ NEW PRODUCTS

(Believe it or not...) **NightWind Sound** is releasing 22 more Mirage disks. *10 Synth/Misc*: sounds from Fairlight, VFX, DX21, Wavestation, M1, EMax, SY55. Includes rAVe DrUmlOopS, guitars and loops, and the usual odd assortment you'd expect from NightWind. *10 Ethnic Disks*: 8 disks of Ethnic Voices — loops and phrases from around the globe, 1 disk of Ethnic Winds, and 1 disk of Ethnic Strings. And, finally, 2 "MediVal" Disks: RaVe dRumS meEt RavIng MonKs. 20 of these disks were sampled by Ireland's Gerald Vance, an artist working with Sonic Sculpture and time-based artforms. Samples were then looped and relooped and programmed by NightWind's Jim Newton. A CrO2 cassette demoing most of the disks is available for \$6. For addition information, contact: NightWind Sound, 170 Mar Monte Ave., La Selva, CA 95076.

Third party sound company **Pro-Rec** has released **TECHNO-LOGIC™**, an audio sampling CD featuring a great collection of techno and dance sounds. The disk features 112 all-new techno AudioSequences (featuring Audio Morphing™ to create original, dynamic, heavy-hitting techno effects), 21 original techno drum loops, 180 techno synths, basses and dance sounds, 23 drum sounds, and 3 complete 909 techno drum kits. The disk is made entirely with classic analog synths and voltage-controlled sequencers to offer a complete and excellent techno collection. \$89. For further information, contact: Pro-Rec, 106 W 13th St., Suite 13, New York, NY 10011. Phone: 212-675-5606.

Transoniq-Net HELP WITH QUESTIONS

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

All Ensoniq Gear — Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:30 pm EST Monday to Friday. 610-647-3930.

All Ensoniq Gear — Electric Factory (Ensoniq's Australia distributor). Business hours — Victoria. (03) 480-5988.

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

VFX Sound Programming Questions — Dara Jones, Compuserve: 71055,1113 or Internet: ddjones@netcom.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 Questions — Robert Romano, 607-533-7878. Any ol' time.

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. (305) 792-9231. Compuserve: 72203,2303.

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.

Sampling & Moving Samples — Jack Loesch, (908) 264-3512. Eastern Time (N.J.). Call after 6:00 pm.

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

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

ESQ-1, MIDI & Computers — Joe Slater, (404) 925-7929. EST.

EPS Hackerpatch:

Do-It-Yerself Fairlight Vox

Tom Shear

Aside from worldwide female adoration and the eerie ability to cloud men's minds, one of the nicest benefits of being a *Hacker* writer is that you get to hear from a lot of very nice readers out there. It feels good to know that people are getting some use out of your articles and not just turning the page to the centerfold. As you might imagine, I get a lot of questions. Two of the most common ones are "Will you please do another Hackerpatch for the EPS?" and "Are Sam Mims and John Oates of Hall & Oates really the same guy?" The answers are "Gladly" and "Of course not, he's actually Darryl Hall."

But seriously, (no need to send any mysteriously ticking packages my way, Sam) I have been messing around with ways to tweak and combine the factory samples for a while and came up with some interesting stuff I'll share in future articles, but I thought it might be a neat idea this time if I gave you directions for a patch made up of sounds you sample yourself. That way, even though it'll be the same type of sound, everyone's will be unique. So with that in mind, grab a glass of water and your sampling mic.

The type of sound we'll be making is an atmospheric voice pad with a chifty breath attack. The kind of thing that made the Fairlight CMI so famous. Once you're comfortable and have your mic properly hooked up to the input jack, you're ready to go. The first thing we'll do is make the breath part of the sound. Press the sample button and select the instrument slot you want to use. Hold the mic about six inches away from your mouth and let out a sustained, deep breath. To be more specific, the timbre you should be trying to emulate should sound like Darth Vader when he exhales; throaty and hollow ...got me? Once you've set your sampling threshold to a sufficient level press "YES" and sample the sound. Select any root key (you can tune it properly later) and go to the looping page. Now we have to get a decent loop on this thingy which is no mean feat with a complex sound like this. I got excellent results from getting as decent a loop as I could and using the SYNTHESIZED LOOP smoothing command. Before we forget, hit COMMAND-AMP and NORMALIZE GAIN this puppy. Next, go to the EDIT-FILTER page and select the 2/LP 2/HP filter. Set the frequency values of both filters to 00. Scroll right one page and set the ENV levels to +99 and +99. Finally, go up to the ENV 2 page and select the PIANO preset envelope. When you play the sound now you should hear a fairly responsive chiff-like attack with just the slightest hint of tone to it. Later, when you put together your patch selects, try all of the different envelopes here for very different, very interesting effects.

Go up to the EDIT INSTRUMENT page and deselect LAYER 1 so it won't interfere with our taking of the next sample. Next we need to take samples that will make up the major portion of this sound. If you don't feel comfortable with your voice, perhaps you could fool...er, convince a friend to help you. Sampling your own voice is a tremendously difficult thing to do. Even if you think you're a pretty decent singer, getting a good sustaining note that is consistent both in pitch and volume is much harder than you'd think. This becomes very apparent when you start looping and any of these eccentricities are repeated ad infinitum. So get comfortable, this is most likely going to take you several tries. CREATE a NEW LAYER and press the sample button, selecting this new layer as the place you want it go. As before, set your levels and take the sample. Select an arbitrary ROOT KEY and let's hear what we've got. Pretty terrible, huh? If you think it's salvageable, go ahead, but if not, repeat the above steps until you like what you have. Once you have what you feel to be a decent sample, it's time to loop it. There is no hard, fast law of looping, so you'll just have to experiment and find what works best for you. In my case, I got as decent a FORWARD LOOP as I could and then fed it through the SYNTHESIZED LOOP command. This even added a slight chorusing to my voice which fattened it up nicely. If that doesn't work, try using a BIDIRECTIONAL LOOP and use the BIDIRECTIONAL CROSSFADE on it. If you have the loop set up pretty decently to begin with, the crossfade will make it perfect in most cases. Don't forget to NORMALIZE the GAIN.

Once you have the voice layer close to what you want, TRUNCATE off any extra wavedata and go to the ENV 3 page. We want to give this a pad sort of envelope. What I did was choose the STRING preset and scrolled over to the TIMES page and set it to 45 for an atmospheric quasi-reverb effect. This way, it sounds great even without any effects. Next, press EDIT-AMP and set the pan position of this layer to -99. Now do a COMMAND-LAYER and copy this layer. Select the new layer for editing and again hit COMMAND-AMP, this time setting the pan position to +99. Do an EDIT-PITCH and tweak the FINE value of our new layer a bit for some subtle chorusing.

Now you'll want to tune all your layers (you can press EDIT-INSTRUMENT to the PATCH SELECTS page and bring the chiff back now). You can use whatever method you want for this. In fact, it wouldn't hurt if you simply used a tone from another keyboard or something to sing along with (in headphones, of course) when you take your sample in the first place. Finally, you're going to want to set the relative volume

levels of the chiff and the voice layers. You want a nice balance so that the chiff isn't too overwhelming, but it isn't lost beneath your massive voice pad either.

So there you go, a pretty cool sound that we just got for free. I could get used to this. As I mentioned before, try using different envelopes on the breath layer for different sounds. Giving it the same filter envelope as the voice layers' amplitude envelope will give you a nice variation. I'd love to hear what you all come up with, so I'd like to extend an offer. Any Hacker who sends me a disk (must be formatted DS/DD to



work on an EPS-16+) with their version of this sound on it, will get my version in return. You can reach me at: Tom Shear 726 4th Ave, Williamsport, PA 17791. ■

Bio: Tom Shear believes he is the namesake of the TS-10 and 12. He also believes the world is flat and the moon is made of cheese.

Scorching Clav

Jeff Rhoads

In 1973 I saw Herbie Hancock, Keith Jarrett, and McCoy Tyner in a solo date at Carnegie Hall. Jarrett and Tyner were both amazing on the acoustic 9 foot grand piano. Only Hancock, a new champion for ARP synthesizers and the Hohner D6 Clavinet, sat behind an electronic barricade. His attempt at accompanying himself with what were surely the first analog sequencers was something less than successful. Everything, I mean everything, was out of sync. But, through the whole mess, that D6 bit its way through like some twangy, twisted Strat. Hancock's D6 had this otherworldly howl...and a wacka-chacka. How'd he do that?

The following year, I heard Hancock again at Philly's Academy of Music. This time he appeared with a suitcase Rhodes, a D6, an ARP String Ensemble, an ARP Odyssey and one of the hottest electro-jazz quartets to ever play live. These guys didn't swing... they SWANG! And with every dotted chop, these new Headhunters chiseled out a new, raw sort of funk that would have put even James Brown into a full-fledged seizure. And there was that scorching clav, now with an almost synth-like punch.

This time I was in the second row. I could see the lettering on the boxes below the keys. I followed the cord down from the clavinet and there, turned sideways toward me, was the Mutron 3.

The Mutron 3 filter (cause, that's what it was) was first targeted toward guitarists as kind of an expanded auto-wah. But it didn't take long for clav (and Rhodes) owners to discover that this was an envelope filter equipped with goodies; resonance, the ability to switch from Lopass to Hipass and Bandpass modes, a reverse feature and a threshold control. Remember the years...1973, 1974. This was the box for those of us who couldn't yet afford the most rudimentary analog synthesizer. It's price? \$79.95. And what it *did* to a clavinet.

"HerbiesClav" has two qualities that separate it from the clavinet sounds we're used to hearing. First, Herbie Hancock used a drastically muted clav. To the left of the D6's keyboard, along with the toggle switches, was a small slider. This determined the duration of the mute; add more, you get a shorter note duration: less, a longer one. Hancock's clav-stab was *very* short. Secondly, this patch is very effects-intensive. Sure we need that Mutron filter. So, we've come up with an effects user variation. Let's examine the clavinet by itself before we move on to the effect.

Our sound uses just two voices. We could have built any clavinet patch with Sawtooth, Transwaves, or other alternate waveforms, but the CLAV-WAVES work just fine. Anyhow, I added the second voice, slightly detuned from #1, just to fatten things up some. Voice 1's MULTI-SAMPLE SHIFT range = -12. Voice 2's range = -16. Thus, voice 1 is the brighter of the pair. (In our example, a lower shift range results in a darker color.)

Voice 1's Filter 1 and 2 modes are set to LOPASS/2 and HIPASS/2 yielding a thin high-end sound. Voice 2 uses a LOPASS/2-LOPASS/2 configuration for more bottom. Both voices rely on high to maximum Filter ENV2 values. Clavinet were, after all, quite percussive. Often, percussive tones rely on that ENV2 setting.

We're not using the Pitch Envelope for either voice so it's not filled in on the patch sheet. (All Env1 values to 0, Pitch Mods Section ENV1=0) For Envelopes 2 and 3 all you've really got to know is they're really short. Again, Hancock set the note durations on his instrument to resemble those of a muted electric guitar. Ours aren't quite that short, but they're close.

The D6 was a touch sensitive instrument so the envelope

TS-10 Hackerpatch

TS-10 Prog: HERBIES CLAV

By: Jeff Rhoads

Notes & Special Settings: The mod wheel controls the effect amount. Data slider = Timbre.

WAVES	1	2	3	4	5	6
Wave	Clav	Clav				
Wave Class	Waveform	Waveform				
Delay	0000	0000				
Shift/Index	-12	-16				
Dirac/Modsrc	For	For				
Modamt	-	-				
Sample Start	00	00				
Start Modsrc	Off	Off				
Modamt	-	-				

MOD MIXER	1	2	3	4	5	6
Src-1	Off	Off				
Src-2	Off	Off				
Src-2 Scale	-	-				
Shape	-	-				

PITCH	1	2	3	4	5	6
Octave	-1	-1				
Semitone	00	00				
Fine	00	+03				
Glidemode	None	None				
Glidettime	00	00				

PITCH MODS	1	2	3	4	5	6
Modsrc	Off	Off				
Modamt	-	-				
Bend	Sy5	Sy5				
PitchTbl	System	System				
Env1	00	00				
LFO	00	00				

FILTER 1	1	2	3	4	5	6
Mode	LoPass/2	LoPass/2				
Cutoff	000	000				
Kbd	+31	+12				
Modsrc	Off	Off				
Modamt	-	-				
Env2	+99	+95				

FILTER 2	1	2	3	4	5	6
Mode	HiPass/2	LoPass/2				
Cutoff	044	101				
Kbd	+00	+36				
Modsrc	Off	Off				
Modamt	-	-				
Env2	+81	+85				

OUTPUT	1	2	3	4	5	6
Kbd Scale	00	+10				
Lo/Hi Key	-	-				
Vol (db)	+05	+05				
Modsrc	Timbre	Timbre				
Modamt	+35	+15				
Dest Bus	FX1	FX1				
Pan	00	00				
Modsrc	Off	Off				
Modamt	-	-				
Voice Prior	Med	Med				
Vel-Window	-	-				
Lo	000	000				
Hi	127	127				

LFO	1	2	3	4	5	6
Rate	00	00				
Modsrc	Off	Off				
Modamt	-	-				
Depth	-	-				
Modsrc	Off	Off				
Modamt	-	-				
Waveshape	Triangle	Triangle				
Restr Mode	Off	Off				
Phase	000	000				
Delay	00	00				
Noise Rate	00	00				

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

ENV1	1	2	3	4	5	6
Attack						
Decay						
Decay 2						
Decay 3						
Release						
Peak						
Break 1						
Break 2						
Sustain						
Vel-Level						
Mode						
Vel Curve						
Kbd Track						
Vel-Attack						
Vel-Rels						

ENV2	1	2	3	4	5	6
Attack	00	00				
Decay	34	34				
Decay 2	23	23				
Decay 3	00	00				
Release	00	00				
Peak	88	88				
Break 1	00	00				
Break 2	00	00				
Sustain	00	00				
Vel-Level	70	70				
Mode	Norm	Norm				
Vel Curve	Cnvx1	Cnvx1				
Kbd Track	+12	+12				
Vel-Attack	80	80				
Vel-Rels	-28	-28				

ENV3	1	2	3	4	5	6
Attack	00	00				
Decay	43	43				
Decay 2	00	00				
Decay 3	00	00				
Release	00	00				
Peak	99	99				
Break 1	34	34				
Break 2	00	00				
Sustain	00	00				
Vel-Level	75	75				
Mode	Norm	Norm				
Vel Curve	Cnvx3	Cnvx3				
Kbd Track	+19	+19				
Vel-Attack	56	76				
Vel-Rels	-22	-19				

PGM CONTROL (Page 1)

Type	ALTKEYS
Option	None
Press	Chan
Patch	Live
Restrike	00

PGM CONTROL (Pages 2 & 3)

Atck	-06	V1	+09
Rels	-11	V2	+20
Bright	+10	V3	-
Timbre	127	V4	-
Rate	00	V5	-
XCtrl	000	V6	-

EFFECTS

Effect = 66	Variation = User	
Effect Mix	FX1 VCF Dist = 99	FX2 VCF Dist = 00
Dist Level	In = 18	Out = 99
	Bypass = Off	Pre EQ High Fc = 0050
Pre-Dist VCF	Fc = 01	Q = 19
Post-Dist VCF	Fc = 01	Q = 09
Env	Attack = 50 usec	Env Amt = +20
Mod-1	Src = Wheel	Env Amt = +50
	Min = 00	Release = 100 msec
Mod-2	Src = Veloc	Dest = FX-1 Mix
	Min = 03	Max = 99
		Dest = Pre-Dist VCF Q
		Max = 20

VEL-LEV values are relatively high (as are the VEL-ATCK values — remember Herbie's clavinet was Percussive with a capital P!).

At the Output I've decided to use Timbre as the MODSRC so the data slider becomes a realtime controller. The variance on Timbre adds gain and brightness like a couple of the toggle switches did on the original. For "Herbiesclav" two other Mod Sources are applied within the effect.

We're using Effect #66, VCF--DISTORTION--VCF. We're offered two VCF's, even though the Mutron 3 had only one. But both the D6 and the Mutron produced their own distortion and weird artifacts so having Pre and Post-Distortion settings is just fine. Our user variation DIST LEVEL IN=18: just enough to make our effect slightly dirty. The Mutron 3 itself was PRE-DIST VCF FC =01 but the Q value (or resonance) is set somewhat high to a value of 14. Our gain comes from the ENV AMT = +25 — the Threshold control, so to speak. The POST-DIST VCF ENV AMT is pushed up to +50 so the FC setting at this point is irrelevant. The tonal "path" of the effect or "wah-wacka" is determined by the Effect Envelope Attack and Release values. Since the clav envelopes applied to "Herbiesclav" are short, so are our settings here: ENV ATTACK = 50USEC and RELEASE = 100MSEC.

The MOD — 1 SRC = WHEEL. It's DEST = FX1: when the wheel is in the full down position, we hear the clavinet with no effect. At full up, we hear the clav with all effect. In between, a mix. MOD — 2 uses VELOC to affect the PRE — DIST VCF Q amount. That is, velocity controls the development of the wah effect.

Take note that this filter effect has no reverb. You'll have to use outboard processing for that. However, if you have no other effects and you want reverb, try the effect next door, # 67; WAH --DISTORTION + REV. Try Variation # 2 PRESS-WAH or #3, ENVELOPE WANDER. Better yet, develop your own user variation. Keep in mind, your results may differ from ours. We chose effect #66 because of its architecture's similarity to the original Mutron 3.

Check out the Patch Selects:

00 = "Herbiesclav"

*0 = "Herbiesclav" in 5ths

0* = "Herbiesclav" detuned

00 = "Herbiesclav" alternate filter settings

Special thanks to Bert Neikirk of Ensoniq for his stuff on the Mutron 3. ■

Ruff, Ruff!

Review: Ghetto Noise Sampling CD

Tom Shear

Product: Ghetto Noise Sampling CD.

Price: \$45.00.

Source: Ruffbeat Productions, Distributed by Rubber Chicken, Contact: 1-800-8-PRO-EPS.

This month we'll be taking a look at an offering from Ruffbeat Productions in Syracuse, New York. This 47-minute CD is aimed at the hip-hop and rap audiences and has a little bit of everything one might need to get started putting some slammin' tracks together, all you need are the lyrics. So without further ado, let's wander into the ghetto and see what we find...

The CD begins with drum sounds, both organic and from drum machines such as the Roland TR-808 and TR-909, the Alesis HR-16B, and the XR-10. Most of the sounds are very clean except for some which clearly weren't meant to be. Grungy sound is in these days, you know. The sounds are pretty good, but not much of anything that hasn't been offered on a thousand other sampling CD's before. My only beef with this section of the CD is inconsistency. Sometimes we get three hits of each sound, sometimes we only get one.

It is not a difficult thing to do to consistently provide multiple hits of each sound, and with at least 30 minutes of unused space on this CD, there's no excuse for this.

The next section consists of "roll-ins" which can basically be used as fills over your drum tracks. These were all very good and original and would work quite nicely to break up your drum tracks a little. This is followed by a small selection of synth sounds. To my ears, there was nothing here worth sampling, certainly nothing someone with a decent-sized sample library wouldn't already have better versions of. Also, we see the first instance of something that might turn a lot of people off to this collection. Some of the names for these tracks are not, shall we say, politically correct. Aside from a generous sprinkling of four-letter words, unnecessarily homophobic names rear their ugly head as well. Is there really any good reason to call a mallet sound "Latin Fag"? Homophobic statements are no more acceptable than the racist statements the rap community rails against. Thumbs down on that.

The most original section on the CD has to be the Sound FX section which has lots of cool stuff I could see putting to immediate use. We get everything from phones, to car alarms,

to music snippets and brass hits/squeals reminiscent of Public Enemy, to vocal bites, to space sounds to... well, not quite the kitchen sink, but a mighty good toilet flush. This section was like going to one of those obscure record stores with all the bargain vinyl of really bizarre stuff. Kudos to this section.

Next is the section most people thinking of buying this CD will probably be interested in... the drum loops. I have a ton of sampling CD and have snatched many a drum loop off CD myself and it amazes me that there are still cool beats left that haven't been heard! And yet, here are a bunch of very good loops I didn't have before. This section has a wide variety of mostly organic beats, most of them complete with the sound of vinyl crackling away, as is the trend today in rap. Some of these sounds have music lines over them as well, most of them in the 70's funk/Blaxploitation film theme style. Some also have funky grunts and shouts thrown in for good measure. There were probably only 15 or so loops I would consider too obvious to use, but considering there are over a hundred here, that's really not a bad ratio. So this part of the CD is perfect, right? Wrong. Ruffbeat has committed the biggest no-no of drum loop CDs they possibly could. There are no BPM markings for any of these loops! In addition, the loops aren't even given individual names, but are listed as, for example, "Beat Block 1: 25 loops." There is some great material here, but I'd most likely never use it because it would be such a pain to find what I was looking for. I have never seen any other sampling CD that didn't give BPM numbers for all their beats. Sloppy and unfortunate.

Finally, the CD ends with several sections of movie and

television dialogue. This is extremely questionable legally. While there is nothing wrong with sampling bites from the media on your own, making recordings of a copyrighted film and then offering them for sale is practically begging for a lawsuit. The liner notes contain a warning to the user to "use these samples at your own risk," but why do I want to drop fifty bucks on a bunch of samples that might put me legally at risk? In every case I know about, manufacturers of sampling CDs have either cleared it with the source, offered a good, original simulation of the source, manipulated the sound beyond recognition, or not offered it at all. Furthermore, the dialog samples here aren't even that obscure. If you go out and rent *Trespass*, *The Godfather*, and *Goodfellas*, you'll have almost everything you'd find here and an evening of fine movie viewing to boot. This is a waste.

So as you can see, this CD is a real mixed bag. I hate to trash what is obviously a well-intentioned attempt to provide a source for samples in a terribly neglected segment of the music industry, but I can't in good conscience recommend this unless you've got \$45 that you've just gotta spend. The ratio of good stuff to bad stuff isn't up to usual standards, the packaging is poorly done, and a lot of these sounds should've been edited, truncated, and normalized before committing them to CD. As it is, this CD has a "thrown together" feel to it, but if it were redone with some more useful sounds in addition to the very good sound fx and drum loops, they might have a viable product here. ■

Bio: Despite the striking resemblance and similar last names, Tom Shear and Snoop Doggy Dogg are not related.

DP/4 Trekking

Creating a 6.6 Second Delay

I recently received a call from a radio station asking if there was a way to have the DP/4 act as a 7 second delay for incoming calls. He told me that an ex-employee had configured it to do this but he's no longer with the station. Well, there IS a way to do this!

First, you must set up a 2-Unit Preset. Go to SELECT/CONFIG. Dial with Data Entry Knob to parameter 51 (2Unit Preset). Hit Unit A and use data entry to scroll to parameter 50 which should be "3.3 Sec. Delay." Press SELECT. Now press Unit C and scroll to parameter 50 again. This should also say "3.3 Sec. Delay." Now we have both 2Unit presets with the same algorithm. We now have to reset regeneration parameters to zero. Go to EDIT/Unit A and scroll with right arrow to REGEN=06. Reset this to 00. Now right arrow over to REGEN DAMPING and set this to 00. Go to EDIT/Unit C and reset its Regeneration parameters the same way. We can then save this as a Config. Preset if you want. Just press the

WRITE button and rename and/or save to a particular Config. location.

Since there is no connection between AB and CD we still have a problem. But we can circumvent this barrier by using audio cables to our advantage. To get a 6.6 sec. delay, we need to run an audio cable (mono shielded) from OUTPUT #1 to INPUT #3 of the DP/4. Then run a cable from OUTPUT #3 to your mixer or other monitor. Of course your signal source will be coming into INPUT #1. Any signals coming in will now be delayed by 6.6 seconds! ■

Bio: Alan and his brother John Blake (World renowned jazz violinist) have been involved in composing songs for the Kinocraft Film Co. Kinocraft produces documentaries largely of historical content. Alan has written for and/or performed with Grover Washington, George Howard, Rachell Ferrell, and Kevin Eubanks.

Alan Blake

How Sounds Work

Part IX : Revving Up Your Reverbs

Mark Clifton

We all take effects for granted. After all, just imagine what your favorite string section patch would sound like without that nice concert hall reverb, or your favorite electric piano patch without the shimmering stereo chorusing. What was once a method for merely sweetening sounds (often times using methods and equipment that were, shall we say, unpredictable) has now, thanks mainly to the advent of digital technology, developed to become an integral part of sound design and recording.

Luckily, we Ensoniq SQ/KS owners, with our superb built in 24-bit effects processors, have a little bit of a jump on the competition (in our price range, anyway). Still, many times effects are thrown in only as an afterthought, a mere glaze on the sonic doughnut, if you will. This is really a shame, for the SQ's effects processor is almost like a little synthesizer unto itself, and with a little work, it can be integrated into your patches to give them an extra added amount of sonic complexity and expressiveness not otherwise possible. In the next two articles of this series we'll be looking at a bunch of my favorite SQ/KS effects programs, covering everything from the practical to the bizarre, along with tips for some of your own future FX-periments.

This month we'll look at an effect everybody uses: reverb. The SQ/KS has four main reverb algorithms in addition to several other 'verbs that are tacked on in chains to modulation effects (CHORUS+REVERB, FLANGER+REVERB, etc.). All of the SQ/KS's reverb algorithms are very nicely designed and should be useful in most of the applications you can dream up. Especially notable is the fact that they don't have the harsh, grainy quality that is sometimes present in the onboard effects processors of other lower-priced workstations from other manufacturers (I won't mention the Y word).

The first reverb program we'll look at is "Large Hall," which is the trusty concert hall reverb that I use for my orchestral sounds and sequences (you may have seen variations of this program in past articles). I've always been a fan of big, ambient concert hall reverbs. They add a certain grandness and authenticity to orchestral sequences, as well as help to cover up some of the sonic artifacts present in sampled waveforms, especially bad loops (just try to listen to the VOCAL ENSEMBLE wave dry, without effects — welcome to single-cycle hell!).

The first major feature of this program is the FX Bus amounts. The FX1 amount is set to 50, yielding a fairly wet, enveloping sound, but the FX2 amount is set to 60, making it even wetter than FX1 (wetness is a term used to describe the

amount of the effect present). This is to take into account that the farther back an instrument is on a stage or in a hall, the more reflected and diffused its sound becomes. By routing instruments normally positioned at the rear of the orchestra, such as percussion, brass and choir, to the FX2 bus and instruments normally positioned in the front, such as strings and woodwinds, to FX1, you can create a more realistic, three-dimensional sound. This also comes in handy when using choir and pipe organ sounds, which benefit from a large amount of reverb, in the same sequences as solo or orchestral sounds, which can get muddled or drowned in too much reverb. By routing the choir or organ to the wetter bus (FX2) and the orchestral instruments to the drier bus (FX1), you can get the best of both worlds. You can adjust the balance of the 3-D effect by changing the FX1 and FX2 values; a lower value makes the sound appear closer, a higher value makes it appear farther away.

In conjunction with the bus parameters is the Decay Time parameter, which dictates how long the reverb will take to die away. In this program it is set to 42, which is low enough to keep sounds defined, but still act as a sort of "glue" to bond them together. You can mess around with this parameter to get a variety of sounds, though values kept between 25 and 55 sound most realistic. Extreme values that stray outside these limits, though, can be used to create some weird atmospheric effects (my favorite: a high FX Bus amount with an extremely low Decay Time).

The Diffusion parameter, which controls the length and definition of the reverb's early reflections, is set to 54, a medium value that yields a smooth, neutral sound. Lowering this value will create the shorter, more separated reflections that are characteristic of angular rooms with hard internal surfaces. Raising it will stretch the reflections out, resulting in a sort of metallic ringing (these characteristics are especially evident in percussive sounds).

Large Hall

HALL REVERB	
FX-1	50
FX-2	60
Decay Time	42
Diffusion	54
Detune Rate	36
Detune Depth	14
HF Damping	46
HF Bandwidth	99
LF Decay	+12
MOD (Dest)	FX1-Mix
BY (MODSRC)	Modwheel
MODAMT	+99

The Detune Rate parameter, which controls the rate at which the pitch of the reverb decay bends, is set to the fairly high value of 36, giving the effect a good deal of sonic motion, but the low value of 14 in the Detune Depth parameter keeps this motion subtle. Fooling around with both

these parameters can create some interesting fluttery, seasick effects.

The High Frequency Damping parameter is set to 46, which filters out some, but not all of the high frequencies present in the reverb decay. Lowering this value, which decreases the amount of filtering, leaves all of the high frequencies sounding. Raising it, and thereby increasing the filtering, cuts out the high frequency content almost entirely, making the reverb decay very weak and bassy.

The High Frequency Bandwidth parameter determines how much of the high frequency content in the raw sound will pass into the effect. Here it is set to 99, allowing all the high frequencies to be fed through. Lowering it will prevent any of the high frequencies from being effected, creating an effect that sounds almost as if you were playing inside of a closet.

The last major parameter, Low Frequency Decay, dictates how long it will take for the low frequencies of the reverb to decay. Since they decay rather quickly in a natural environment, this value is set to a mere +12. Decreasing the value makes the reverb sound tinier. Raising it gives a beefy, cavernous sound that, while not extremely realistic, is useful for creating those otherworldly soundtracks of Monstrous Apocalyptic Doom. Under the Modulation page, the Modwheel has been chosen to increase the FX1 amount by +99, though you can change the modulation routings and amounts as you please.

"Lite Verb" is a very subtle all-purpose reverb program that makes use of the CONCERT REVERB algorithm. Its medium-to-high FX1 bus amount mellows out sounds while the

Lite Verb

CONCERT REVERB	
FX-1	50
FX-2	38
Decay Time	40
Diffusion	50
Detune Rate	32
Detune Depth	12
HF Damping	53
HF Bandwidth	93
LF Decay	+08
MOD (Dest)	Decay
BY (MODSRC)	Modwheel
MODAMT	-20

short decay time prevents them from becoming too muddled. The FX2 amount is set to a lower level than that of FX1 and should be used for instruments such as drums that can get weakened by too much added effect. The neutral diffusion amount (50) and the subtle Decay Rate and Decay Depth values (which are set to the defaults) are aimed at giving the sound maximum

smoothness. The H.F. Damping and H.F. Bandwidth parameters are both set so that some of the high frequency content is filtered from the reverb's decay, making it more mellow and unobtrusive and less "tinny" or "hissy" sounding. The L.F. Decay amount is set to +08, which, while adding some body to the sound, is still low enough to keep it from becoming too thick or "cloudy." On the Modulation page, the modwheel has been chosen to decrease the decay amount by -20, increasing even more the subtlety of the effect.

While "Lite Verb" is designed for maximum unobtrusiveness, "Migraine" is an attempt at creating the most delightfully grating, offensive sound possible through the distortion of an otherwise normal ROOM REVERB algorithm. The secret to the sheer annoyingness of this sound lies in the extreme values assigned to its size and decay parameters. The high diffusion amount of 96 gives the sound a high pitched ring that will make an enemy of even the most loyal canine friend. The Decay Rate is set to a fairly normal 32, but a Decay Depth of 00 creates a static, gritty tone. The H.F. Damping value of 00 and the H.F.

Migraine

ROOM REVERB	
FX-1	60
FX-2	45
Decay Time	57
Diffusion	96
Detune Rate	32
Detune Depth	00
HF Damping	00
HF Bandwidth	99
LF Decay	-18
MOD (Dest)	Decay
BY (MODSRC)	Modwheel
MODAMT	-99

Bandwidth of 99 lets all of the high frequencies in the reverb's decay pour through, while the low L.F. Decay value of -18 prevents any warmth or body from creeping into the sound. The Modwheel is set to reduce the decay to its lowest maximum value, chopping off the tail of the reverb and creating only a sharp ringing to sounds that are fed through it. Needless to say, I have used this program on many a techno and cyberpunk track.

These three patches should give you an idea of the wide range of programming options offered by the SQ's reverb algorithms. Hope you enjoy exploring them until next time, when we'll look into the swirly, twirly world of modulation effects. ■

Bio: In between brief stints as a high school student, Mark Clifton programs and composes jazz, contemporary classical and techno music on his beloved SQ-1, as well as play keyboards for the Washington D.C.-area alternative-type band Grape Hate. His Hardwire Sound Collection, a set of 160 sounds for the SQ/KS-32, is available from Latter Sound Productions.

Current Ensoniq O.S. (Disk/EPROM)

EPS	2.49/2.40	SQ-R	1.02
EPS-M	2.49/2.41	SQ-R 32	2.03
EPS-16 PLUS	1.3/1.00F	SQ-R PLUS	1.15
MASOS	2.0	SQ-2	1.2
MIRAGE	3.2	SQ-2 32	2.03
ESQ	3.5	SD-1	4.10/4.10
ESQ-M	1.2	SD-1 32	4.10/4.10
SQ-80	1.8	DP/4	1.14
VFX	2.30	KS-32	3.01
VFX-SD	2.1/2.00	ASR-10	2.5/1.5
SQ-1	1.11	KMX-8	2.00
SQ-1 32	2.03	KMX-16	1.50
SQ-1 PLUS	1.1	TS-10/12	3.04

EPS/ASR Computer Programs

Garth Hjelte

How would you like to connect your EPS/ASR to your computer? Sounds tempting — I mean, look at the powerful resource your computer is — word processing, spreadsheets, desktop publishing, printing beautiful documents — and then look at your wonderful Ensoniq machine which makes out-of-this-world sounds, together with soaring digital effects, surround-stereo sound, and wondrous sequencing capability. A marriage made in heaven?

If you're like the rest of us, you may have found that the link between the computer (PC, Mac, Atari, Amiga, C64, what have you) is not as clear as it seems. First question: After you've installed your MIDI interface, then what? The salesman says buy *Performer*. What! \$400 more! And you can't even understand the EPS/ASR sequencer yet! And this

sample editor — what's this curve called a waveform — ah, I'll just loop it on the EPS... while your MIDI cable and MIDI interface lies dormant, with not a shred of valued MIDI data flowing through it.

Below I've listed all the executable programs I could find that had any relevance to the Ensoniq samplers. Sequencers and other programs that don't directly communicate with the EPS/ASR aren't included. The only thing you'll need is a capable computer (PC, Mac, Atari, Amiga) and a solid MIDI interface. I've contacted the programmers/writers/distributors, and the information/prices/availability is as up to date as I could get it. Most of these programs have had extensive reviews written, so I've referenced them for more information.

IBM/PC

SampleVision

Original, 16-Plus, ASR-10.

DOS WaveSample editor — ports the sample back and forth, provides looping tools and digital EQ — ASR driver is out — SV for Windows due out soon (end of the year, they say...), will have SCSI communication, will look like *Wave For Windows*.

Available through: Turtle Beach Systems 52 Grumbacher Rd, York, PA 17402. Phone: (800) 645-5640, drivers available through BeachComber [9600b, (717) 767-0250, 2400b, (717) 767-5934].

Cost: \$99.

Reviewed in Jan. '90 *Transoniq Hacker*.

EPS-SENSE

Original EPS.

DOS Parameter Editor/Waveform Displayer. Author: Donna Murray, Jeffrey Richter.

Available through: Rubber Chicken Software Co., 4118 SW 61st Ave, Davie, FL 33314.

Phone: (800) 8-PRO-EPS.

Cost: \$45.

Reviewed in the Aug. '89 *Transoniq Hacker*.

EPS/ASR-Tools for Windows

Original, 16-Plus, ASR-10.

Windows Parameter Editor/Remote Control/Programming Assistant — controls most every parameter and function through sys-ex.

Author: Rubber Chicken Software Co.

Available through: Rubber Chicken Software

Co., 4118 SW 61st Ave, Davie, FL 33314.

Phone: (800) 8-PRO-EPS.

Cost: \$59.95.

Ensoniq Disk Manager

Original, 16-Plus, ASR-10.

DOS EPS File/PC File Converter — takes entire disks or single files from EPS/ASR disks and converts them to PC files, automated copying.

Available through: Giebler Enterprises, 26 Crestview Drive, Phoenixville, PA 19460.

Phone: (610) 933-0332.

Cost: \$54.95.

Reviewed in various *Transoniq Hackers*.

Various Sequencer Utilities

Original, 16-Plus, ASR-10.

DOS Sequence Converter — takes EPS/ASR sequences and converts them to Standard MIDI Files, and can take SMF's and convert them to EPS/ASR sequences.

Available through: Giebler Enterprises, 26 Crestview Drive, Phoenixville, PA 19460.

Phone: (610) 933-0332.

Cost: \$54.95.

Reviewed in various *Transoniq Hackers*.

EPS-Wave

Original EPS.

DOS Waveform Displayer.

Author: Richard Robinson.

Available through: Online FTP — oak.oakland.edu:pub/eps/utills/msdos.

Cost: Shareware.

Never Reviewed.

EPSREAD, EPSWRITE

Original, 16-Plus, ASR-10.

DOS-Command Line EPS floppy Disk reader/writer — makes PC files, works from the command line.

Author: Goh King Wha.

Source: Online FTP — oak.oakland.edu:pub/eps/utills/msdos.

Cost: Shareware.

Never Reviewed.

EPSPC

Original, 16-Plus?, ASR-10?

DOS EPS Disk/PC File Converter.

Author: Steve Bey.

Source: Online- CompuServe MIDI/Music Forum library.

Cost: Freeware.

Never Reviewed.

EPSDisk

Original, 16-Plus, ASR-10.

DOS Command Line EPS File/PC File Converter.

Author: Michael Chen.

Source: Online FTP — oak.oakland.edu:pub/eps/utills/msdos.

Cost: Freeware.

Never Reviewed.

AIFF2EFE and EFE-AIFF

Original, 16-Plus, ASR-10.

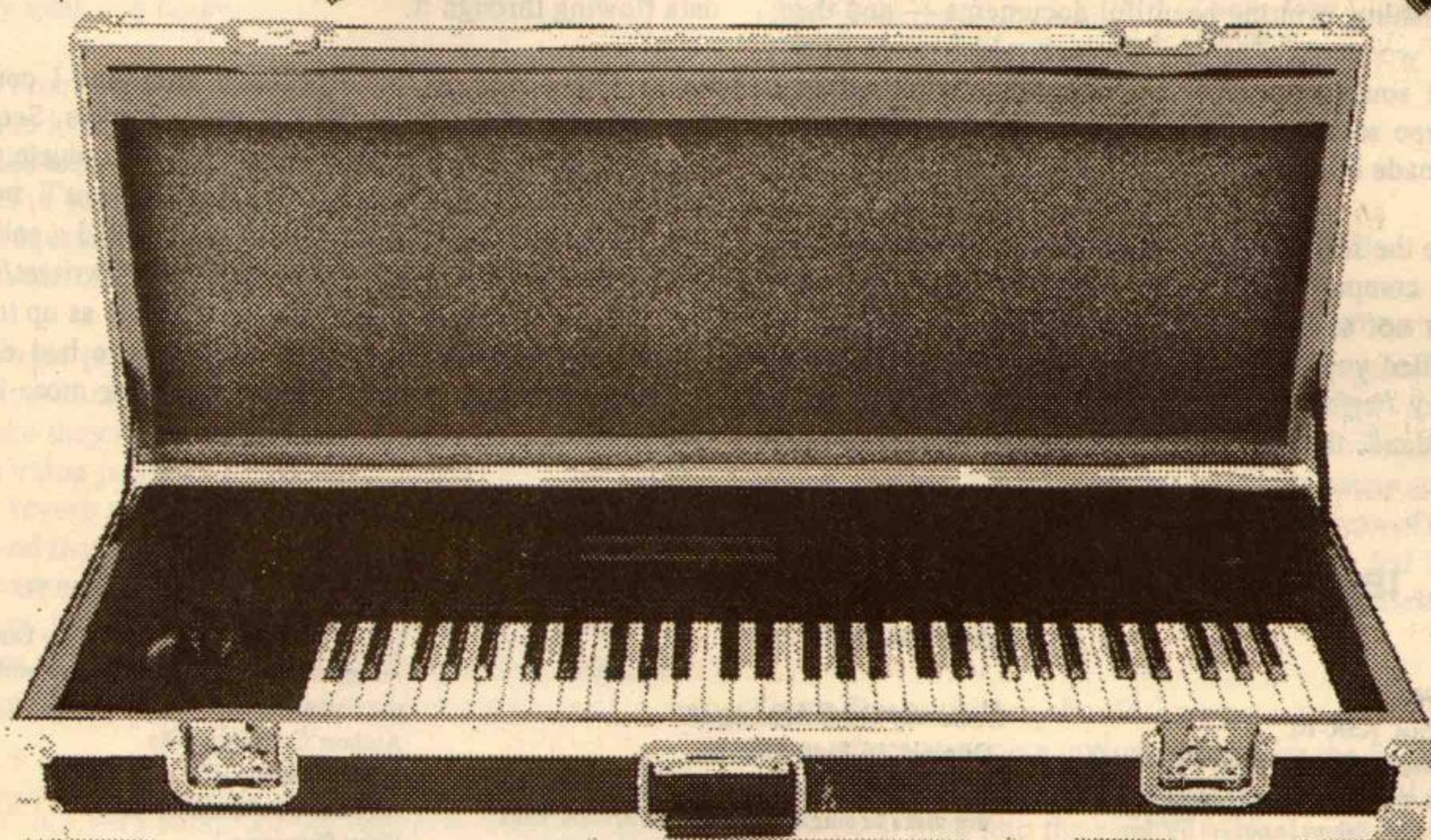
.AIF to EPS instrument file converter.

Author: Terje Finstad.

Source: Online FTP —

oak.oakland.edu:pub/eps/utills/msdos.

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Cost: Shareware.
Never Reviewed.

SoundVert 1.02

Original, 16-Plus, ASR-10.
.WAV File/SampleVision file/EDM File Converter — changes .wav files into something Giebler's utility can write to EPS/ASR disk.
Author: Tim Dorcas.
Demo Source: Online FTP — oak.oak-land.edu:pub/eps/utills/msdos.
Program Source: Tim Dorcas, 17 Kipling St, Providence, RI 02745.
Cost: \$17.50.
Never Reviewed.

MAC

Alchemy

Original, 16-Plus, ASR-10.
Wavesample Editor — lots of features, can transfer waves through SCSI, ASR version needs ASR SCSI or EPSm to transfer samples.
Author & Source: Passport, 100 Stone Pine Rd, Half Moon Bay, CA 94019. Phone: (800) 545-0775.
Cost: \$695 msrp.
Never Reviewed.

Sound Designer

Original, 16-Plus.
Wavesample Editor — now unavailable, except you might find an old used copy for cheap.
Author & Source: Digidesign, 1360 Willow Road, Menlo Park, CA 94025. Phone: (415) 688-0600.
Cost: N/A.
Never Reviewed.

Infinity

Original, 16-Plus, ASR-10.
Much raved about Looping Tool, Wavesample Editor, needs ASR SCSI or EPSm to transfer samples.
Author & Source: Jupiter Systems, P.O. Box 697, Applegate, CA 95703. Phone: (800) 446-2356.
Cost: \$249.
Reviewed in the Aug. '94 *Transoniq Hacker*.

ASR SCSI

Original, 16-Plus, ASR-10.
AIFF-TO-EPS/ASR MIDI/SCSI Communicator — takes a .aif file and sends it through SCSI or MIDI to the EPS/ASR.
Author: Steven Berkly.
Source: Jupiter Systems, P.O. Box 697, Applegate, CA 95703. Phone: (800) 446-2356.
Cost: FREE with Infinity, apparently not available separately.
Never Reviewed.

Tiresias

Original, 16-Plus?
Parameter Editor — mouse driven, nicely laid out, only for the Original, works okay with the others.
Author: Chip Burwell, Bokonan Technologies.
Available from: Online — CompuServe MIDI/Music Forum Library (Demo only).
Cost: Demo version, FREE, Production version unavailable (?).
Reviewed in Dec. '90 *Transoniq Hacker*.

EPSm and other Terje programs

Original, 16-Plus, ASR-10.
Descriptions below.
Author: Terje Finstad, e-mail INTERNET:t.g.finstad@fys.uio.no).
Available from: Online FTP-fysmac04.uio.no.
Cost: Shareware.
Never Reviewed.

KRZ2SD1, K20000 to AIFF

Converter
This will take K2000 files, turn them into AIFF files, which EPSm can turn into files the EPS/ASR can read.

SMAC, Roland (S330, S50, S550, W30) to AIFF Converter.

Same as above, except with Roland samplers.

EPSmINIT, aDownloader

These are programs designed to help the above programs work with System 6.

scEPSi

Original, 16-Plus, ASR-10.
EPS File/Mac File Converter — can also read a Ensoniq-formatted hard drive and do "diagnostics" with it.
Author: Steve W. Berkley with Ensoniq.
Source: Online FTP — oak.oak-land.edu:pub/eps/utilities.
Never Reviewed.

ATARI

Avalon

Original EPS, 16-Plus, ASR-10.
Wavesample Editor, Version 3.0 for Falcon out soon, should include SCSI communication, support for stereo sampling, ASR driver.
Author & Source: Steinberg/Jones, 17700 Raymer St., Suite 1001, Northridge, CA 91325. Phone: (818) 993-4091 (Phil Black).
Cost: \$449, Version 3.0 price unsure.
Never reviewed.

EZE

Original, 16-Plus, ASR-10.
EPS/ASR Parameter Editor.
Author: Gelva Software, P.O. Box 631, Double Bay 2028, AUSTRALIA.
Available from: ? (we don't know).
Cost: Was \$250.
Reviewed in Dec. '89, March '90 *Transoniq Hacker*, Interface letter April, 1994.

MzPatch

EPS, 16-Plus?, ASR-10?
Wavesample Editor (worked entirely off the EPS's interface).
Author: Mr. Zetterquist.
Available from: Was Maartists, who no longer exist, no availability known.
Cost: Was \$149.95.
Reviewed in the Sept. '90 *Transoniq Hacker*.

Disk Wizard

EPS, 16-Plus, ASR-10.
Atari/EPS Disk Manager.
Author: Steve Quartly.
Source: Online FTP — oak.oak-land.edu:pub/eps/utills/atari.
Cost: ShareWare.
Reviewed in the Nov. '92 *Transoniq Hacker*.

stEPS

Original, 16-Plus, ASR-10.
Instrument builder from scratch.
Author: Terje Finstad, Vetlandsvn. 85, 0685 Oslo 6, NORWAY (e-mail INTERNET:t.g.finstad@fys.uio.no).
Source: Online FTP-fysmac04.uio.no.
Cost: ShareWare.
Never Reviewed.

AMIGA

GenWave

Original EPS, 16-Plus?, ASR-10?
Wavesample Editor — not recommended — old program, can conflict with new hard drive controllers which make program inefficient.
Author & Source: Interval Music Systems 12335 Santa Monica Blvd #244, Los Angeles, CA 90025. Phone: (310) 478-3956.
Cost: \$349.
Never Reviewed.

Amiga Disk Manager

Original, 16-Plus.
EPS-to-Amiga File Converter.
Author: Timo Rossi.
Source: Online FTP — oak.oak-land.edu:pub/eps/utills/amiga, Aminet INTERNET FTP site, Aminet CDROM.
Never Reviewed.

The Next (Hyper) Wave

Part 2 — Making a List, Checking it Twice

Robby Berman

Hello, poetry lovers.

We concluded our last discussion of Hyper-Waves with a riddle (This was way back in TH #108. You might want to reread our first installment to refresh your memory — I know I had to). The question was: If Hyper-Waves only consecutively play pieces of ROM waves, how do they manage to play drum and bass parts simultaneously? I promised the answer to this would reveal a powerful facet to the TS-10 or -12 Hyper-Wave personality, and I didn't lie.

Each Sound in a TS synth can have a Hyper-Wave (or "wave list") associated with it. The interesting thing is that while each Sound only has a single list, that list can be accessed up to four times — and four ways.

Select the Sound GRAND-PIANO in Bank 0 of the U0 bankset. Press the TS's Program Control button. On the upper right-hand part of the display you'll see **OPTION=** with ***-NONE-*** underlined. Press the Up arrow button once — this'll take you to a page where you can access one of three special TS Sound programming features. Each of these features uses a part of the TS's memory that's normally allocated to Voices 5 and 6 in the Sound you're working on — we'll gladly sacrifice the two voices for our Hyper-Wave. Press the lower middle soft button, the one below **WAVE-LIST**.

Once you've pressed that fateful button, you're thrown (well, let's say "gently placed") onto the Select Voice page, the same page you'd get to by pressing the Select Voice button, logically enough. And, as you can see, Voices 5 and 6 are indeed gone now — we're using that part of the TS's memory for our wave list.

Gorillas in the List

Press one of the soft buttons below **EDIT WAVE-LIST**. Uh-oh, now we've put our big toe into a Hyper-Wave — we're in the Wave-List Editor! (insert undertow joke here)

It's all pretty easy, really. From the upper left corner of the display, we learn that we're at Step 01 of the wave list (out of 16, remember?). The rest of the top line tells us that this step is playing the **TENOR-SAX** wave from the **WIND+REEDS** waveclass of our onboard ROM samples. The **START** field in the lower left part of the screen allows us to play the wave from somewhere other than its beginning, if we so choose — we don't. We'll get to ***TIME*** and ***PITCH*** a little later.

Press the upper right soft button and then press the Up arrow button thrice so that Step 01 now plays **WAVE=ROOM KICK**

from the **DRUM-SOUND** wave category.

Press the upper left soft button and scroll one notch up to Step 2. Now press the upper right button and the Up arrow button five times so that Step 02 will play **WAVE=CLO-HAT-1** from the **CYMBALS** waveclass.

What we're doing is setting up our own wave-list. We're telling the TS what wave we want each step of our list to play.

Let's set up the next six steps in the same way. Press the upper left soft button to select each step in turn — 03 through 08, since we've already done 01 and 02 — and then choose the desired wave by selecting the waveclass with the upper right soft button and, when necessary, the middle top soft button, to dial in our wave choices. Here are the waves each of these steps should play:

Step 03: **REALSNARE** from the **DRUM-SOUND** waveclass
Step 04: **CLO-HAT-1** from the **CYMBALS** waveclass
Step 05: **ROOM-KICK** from the **DRUM-SOUND** waveclass
Step 06: **CLO-HAT-1** from the **CYMBALS** waveclass
Step 07: **REALSNARE** from the **DRUM-SOUND** waveclass
Step 08: **CLO-HAT-1** from the **CYMBALS** waveclass

This, of course, accounts only for the first eight steps in our wave list. The remaining steps should all play the same wave: **EL-BASS-1** from the **BAS-SOUND** waveclass. Using the same method we just employed, set up Step 09 through 16 to play **EL-BASS-1**.

The Nick of *TIME*

When you've got all the Hyper-Waves steps playing the correct waves, press the upper left soft button and scroll back down to Step 01. Press the soft button below ***TIME***.

This page tells the TS how long to play each step (**DUR** for "duration"), how loud to play it (**VOL**), and how to crossfade it (**XFADE-TIME** and **DEPTH**) with its Hyper neighbors. We'll leave the durations and volumes alone, but let's kill the crossfading. Press the middle lower soft button and set **XFADE-TIME** to 00000.

Press the upper left soft button to scroll up to Step 02, and then select **XFADE-TIME** again to set it to 00000. Repeat this for all sixteen steps.

Perfecting *PITCH*

After all of yer crossfades are zeroed out, press the upper left

soft button again and go back to Step 01. Press *EXIT* and then press *PITCH to enter the Wonderful World of, um, Pitch.

On this display, you get to tell each step to play forward or backward (DIR for "direction"), to change pitch as you play different places on the keyboard ((PITCH-KBD-TRK), and/or to transpose each step's wave by semitones (XPOS) or detune it in cents (DETUNE).

Here's what we need to do.

For Steps 01 through 08 — our drum waves — we don't want the pitch to change as we play in different spots on the keyboard, so for each of these steps, we need to set PITCH-KBD-TRK=OFF. Make it so.

For Steps 09 through 16 — our bass part — we can program a bass line by using XPOS. Set XPOS for these eight steps to the following values:

Step 09: +00	Step 13: +00
Step 10: +07	Step 14: +07
Step 11: +12	Step 15: +12
Step 12: +07	Step 16: +07

Catch a Wave

We've now constructed our own wave list. Play the keyboard and you'll hear — the same piano we started with. Rats! What's going on?

We know that the Sound we've been working with, GRAND-PIANO, now contains a wave list — because we just built it. We can't hear it yet because the TS plays wave lists by accessing them with the voices in a Sound, and, so far, none of the waves in GRAND-PIANO are doing that.

Press the Select Voice button. Press the soft button above PNO-THUD twice to put parentheses around it (thereby muting it). Now press the soft button above GND-PIANO to select it. Press the Wave button. Press the top middle soft button to underline KEYBOARD (if it's not already underlined), and use the Data Entry slider to scroll all the way up to WAVE-LIST.

Once you ascend to these rarefied heights, you'll see a display unlike any other wave page. From here you can direct a wave list to wait before playing (DELAY), determine the wave-list step the voice will start playing the Hyper-Wave from (START-STEP), set which step the voice will go back to after it reaches its last wave list step (LOOPSTART) and determine which is the last Hyper-Wave step the voice should play (END). Set START-STEP=01, LOOPSTART=01 and END=16. Now play a key on the keyboard and you'll hear our wave list playing over and over.

But wait! Can you hear how the Hyper-Wave fades and gets muted after a while? This is because of the way this voice's

enveloping is set — it used to be a piano voice, remember? Press the Env 2 button and set all of the ENV 2 TIMES to 00 and LEVELS to 99, except VEL-LEV, which you can set to 00. Press the Env 3 button and do the same thing. Now when you play a key, you'll hear our work, loud and clear, going 'round and 'round.

Um, Robby?

All of this leads us to the answer to our original question. How do we get different parts of a Hyper-wave to play simultaneously? Have you figured it out yet?

Press the Wave button again. This time, leave START-STEP and LOOPSTART at 01, but set END to 08, our last drum step. The voice will now only play Steps 01 through 08, and then loop back around to Step 01. Play and hold a key on the keyboard to verify this.

And here, at last, is the answer to our question: Each voice within a Sound can access different parts of the Sound's wave list.

Press the Select Voice button. Press the lower left soft button twice to select and unmute another voice. Set its Env 2 and 3 values the same way as we set our first one.

Now press the Wave button, the middle top soft button, and scroll up to WAVE-LIST. This time, set START-STEP and LOOPSTART to 09, our first bass-wave playing step. The voice will start playing our wave list there, play it through Step 16, and then loop back around to 09, never playing anything but our bass waves.

Play, say, C3 on the keyboard. On keydown, one voice will play the wave list from Step 01 to 08 and around again, while the other will play steps 09 through 16 ad nauseam, until you let go. When you've had enough, save our new groove-infested Sound as "HACKER-GRUV."

You can set any available voice within a Sound that contains a wave-list to play any part of that list.

And so, our lesson is: Beware innocent questions.



Next time, we'll get into the TIME and PITCH subpages in more detail as we explore how to use Hyper-Waves to create some really lovely animated Sounds. 'Til then... ■

Bio: Robby Berman is a super-annuated musician coughing up furballs with his wife and five cats in Saugerties, New York. Not that his wife is furry. His latest album is "Rings and Rings."

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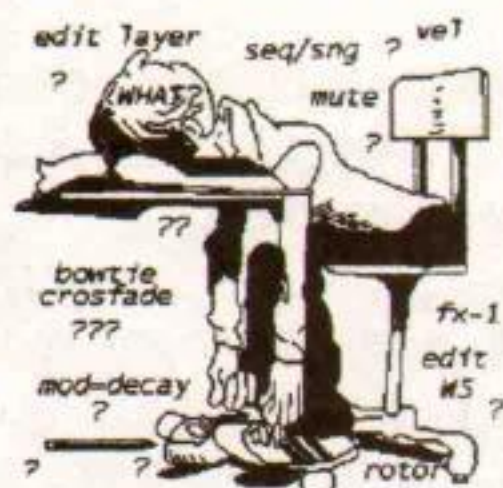
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HACKER BASEMENT TAPES

Daniel Mandel

Journeys Through Time

CD: *More Than Time.*

Artist: Chris Cowgill.

Contact info: 3518 USAF RSQ, A Ave Bldg. 525, New Cumberland, PA 17070.

Equipment: JBL 4312 Monitors, Alesis power amp, EPS 16+Turbo rack mount w/90Meg Frontura hard drive, VFX SD II, U220, SQR, Akai MG 1214 MTR, Studio 3 interface, MacIIxi w/8 Megs of RAM, Vision, Galaxy, Two DPM-7s w/ Macintosh Plus running DPM 7 Pro controlling software, Byer MC740 condenser mic, ART MDC 200 studio controller (compressor/limiting etc.), Lexicon PCM70 reverb, Casio Midi Guitar, Yamaha WX-7 wind controller, various real instruments, EPS samples from Ensoniq library and K. Thomas, DAT mixdown.

Chris's husband Craig wrote, "This CD is Chris's sixth album and the first to have been completed totally in our home project studio. On albums four and five, we recorded

most of the material in the home studio and went to full time pro studios for the final mix. On this last, we felt we had finally arrived at the right combination of equipment to finish the project in house.

We did go to a top of the industry post-mixdown facility in England for CD mastering. This was a wise, though moderately expensive undertaking as these facilities can work magic. This particular place, SRT, had true 20 Hertz monitoring and a Sony 32 bit editing suite (Sound tools 16). We were happy to discover our original master tape was really quite good (from a technical point of view). The one consistent problem was a noticeable lack of good bottom end — clearly a result of monitoring at home. Fortunately SRT was able to improve the lower end through a rather amazing bit of software from Sony."

This CD has a really very simple folk sound overall. The Christian message comes through as clearly as Chris's voice. The usual gathering of traditional instruments is used throughout the CD. There are no surprises and no mistakes. The recording and mixing are quite clear and well done. For the simplest instrumentation I almost get the feeling that I am sitting on the floor in the Cowgill's living room listening to Chris sing.

Sequences used on this CD were very transparent. Either they were used quite sparingly, as backing tracks, or they were very well placed.

The packaging is professional. The cover and inside photo both feature Chris with her cheerful soft-focus smile holding her six string.

Lyrics on this CD, though, are a disappointment. Mr. McLuhan said the medium is the message. On this CD the message is the message. That's it. There is no subtlety. No finesse. No guesswork. No interest.

I Will Be Here is the fourth track, but the first to reach out and capture what Chris's soft and elegant voice has to offer. The bridge is an especially interesting side track from the verse, chorus.

To See The Roses Bloom is a compassionate and beautiful track. (From the liner notes: "For those rejected because they suffer with AIDS. You could "be the one" who loves them to Jesus.) It is a gentle, pretty melody. The lyrics from the bridge bare re-printing:

"When my vision is fading, and you can see farther than me
— Darkness may be all I'm anticipating, and I need you to
tell me what you see."

Whiter Than Snow has a beautiful two-part harmony. It is a basic piano piece.

Two Kingdoms spices up the mix a little with more backing instruments and some interesting flavors of wet synthesizers and electric guitars sprinkled throughout.

Offering Praise returns us to the Cowgill's living room. Maybe this time we've had our coffee and we've moved to a more comfortable chair. A friend is playing the flute solo (or is that a synth?) Soft voices flow in as the song repeats and comes to a close.

Valentine's Day (Be Home Soon) (From the Liner Notes: Dedicated with love to the guys of the 492 fighter squadron [Craig's Squadron] deployed to Turkey for Operation Provide Comfort during the winter of 1992 while this album was being recorded.) This by far is the song of the CD. This is well written and sung with feeling. The words and music are

by Geoff Twigg. The arrangement with piano and backing strings and sax solo are very fitting. I should also point out how nice it is to have liner notes like these that add a sense of depth to our understanding of the artist and the artist's motivations.

You Can Trust His Promises has a great lullaby melody that is reinforced with the children of Hillcrest Primary School in Downham Market, England. A very nice touch.

More Than Time is the title track, with words and music by Chris. This track is second only to *Valentine's Day*, and a fine choice for the title track. It is a good song and a good representation of Chris's sound and message.

Tape: *Paused For a Minute.*

Artist: Alians/Singularity.

Contact info: Ken Picha, 2224 S. 61st Ave. Cicero, IL 60650.

Equipment: Compaq Portable 386, Software by Alians, Cakewalk v4.0

TEAC A-3340S, Tascam M-208, Mackie Designs CR1604, Roland

GR50, Digitech GSP21 LEGEND, Crate G1500, Korg T3, Roland D50,

Ensoniq EPS 16+, Rickenbacker bass, Rickenbacker 12 string guitar,

Fender fretless jazz bass, Fender Stratocaster, Gibson SG, Ovation

Celebrity, Epiphone mandolin, Ibanez DML10.

You probably couldn't guess just from looking at the equipment list what kind of music you hear from Alians/Singularity. This tape really is a refreshing surprise. There is a lot of noise, sound, voices and music strewn throughout in a reasonably interesting way. There are no boundaries to the sounds. Anything goes. Dissonance is pervasive.

Alians is Ken Picha. Singularity is the collaborations between Ken and his friend, Wayne Lekan.

White Light rolls out with a voice-over being manipulated and remanipulated on top of a bed of industrial flavored jams. A tasty and unique combination. The only thing lacking here is emphasis. Who is in control, the creation or the creator? *He Would Not Return* is also a jam session of sorts complete with liquid bells that bend and twist. There are no discernible looping sequences, and yet they are everywhere. Nice ending. *The Most Popular* has a spoken/sung track that is a stream o' consciousness thang that romps on a funky beat. *Moist And Soft* stamps and chokes off a remarkably rowdy percussion session that supports a fast free distorted wet guitar lead. The chord progression is carried by another strumming guitar. This is such a great combination of sounds and textures. It is very open earthy wet and crunchy all at the same time. It ends with the lead guitar in a frenzy.

Him Who Conceives carries on with the same basic percussion ambiance, but in a lighter vein with some nice bass work. *Only Because* is both ethereal and disturbing. We once

again hear the spoken/sung poetry on a lush bed of pads that become complicated by improvised percussion. *What Happened* brings more voices to the table and more vocal manipulations. But they are not here to be heard as much as listened to. Only a few phrases are audible in between the sounds.

Those are just some of the highlights from side one. Side two continues along the same lines. I enjoyed this tape a lot, but I would reiterate that emphasis and control were not demonstrated strongly. Once the interesting jam began or the unique sound was presented, the idea of how to end the song or how to move on in order to maintain interest was lost. That is not to say that getting lost in this way isn't a wonderful journey in and of itself. The interesting thing to me is not why Ken has come out with such a unique work, but why so many

others seem to churn out the same old, same old. Keep up the good work! ■

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



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

Metalize Your VFX

Kirk Slinkard

Ensoniq synthesizers have the obvious strengths and subtleties that attract a large number of musicians, but I keep finding that there is a wealth of capabilities hidden away, buried deep beneath the standard features that are talked about in the owner's manual.

Not to detract from the many capabilities of the VFX/SD-1 type of Ensoniq synthesizer, but when I first started playing around on my VFX-SD, I was a little despondent that I couldn't find any waveform equivalent to the ESQ/SQ-80 "NOISE" series of waves. Ensoniq informs me that these waves are basically made of random data. They are often used to add a "metallic" component or attack to a sound. I have also seen them used to give a grungy or heavy-metal quality to sounds.

Then one day I was experimenting around with unusual configurations and applications on my VFX-SD, and I noticed that when I tuned the "CRUNCH" waveforms way up high, they went into a distortion that did indeed sound like one of the applications of a "NOISE" wave on the old ESQ/SQ-80 synths. In fact, as I moved the pitch upward, this particular wave distorted sooner and more nastily than most of the other VFX waveforms. This is because it is unusually complex and full of dense harmonics and inharmonics. And likewise, some of the other more complex waveforms behave in this manner, notably some in the Inharmonic class, like "TRIANG-LP," "ANVIL-LP," and "CLUSTER-LP." So I thought I would use

this phenomenon to give a metallic attack to a sound, just like on my SQ-80.

The result was the patch included here, "THE-UNKNOWN." Voice 5 uses the CRUNCH-LP wave tuned way high to get the short attack portion of the sound. I turned off the keyboard tracking to keep it in the pitch range where it distorts, then I added a just a little bit of reverse keyboard tracking to give each note a slightly different sound. Note that voice 5 has a high tuning also. The ELECTRO-X transwave is modulated by NOISE (in the LFO section) to give a sample-and-hold effect, and is tuned such that only certain parts of it are distorted as the waveshape jumps around — some parts of this transwave are more harmonically and inharmonically dense than other parts. This gives an even more random sound to the sample-and-hold effect. This sound comes in only after you have held a key down for several seconds. The rest of the voices supply the main body of the sound so that there will be something for the CRUNCH-LP wave to give an attack to.

This is but one example of how using unusual values for some parameters can yield interesting and useful results. Although I certainly didn't use any illegal values here, some programmers seem to think of such extreme tuning as being immoral. But using parameters beyond their normal or intended ranges can sometimes produce really beautiful results. So if you are experimenting around on your synth, don't be

afraid to try the wild and bizarre. Synthesizing is like a box of chocolates — you never know what you'll get.

Mod you later. ■

Bio: Kirk Slinkard hangs out near Denver, plays synthesizer,

SD & VFX Prog: THE UNKNOWN

By: Kirk Slinkard

WAVES	1	2	3	4	5	6
Wave	Kalimba	Inharm-X	Inharm-X	Kalimba	Crunch-LP	Electro-X
Wave Class	TunedPerc	Transwave	Transwave	TunedPerc	StringSnd	Transwave
Delay	000	009	000	006	000	000
Start	99	50	50	99	00	00
Vel Start Mod	+00	LFO	LFO	+00	+00	Noise
Direction	Forward	+50	+50	Forward	Forward	-99

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

PITCH	1	2	3	4	5	6
Octave	+1	+0	+0	+1	+4	+5
Semitone	+00	+00	+00	+00	+09	+11
Fine	-04	-03	+03	+04	+00	+99
Pitch Table	System	System	System	System	All-C4	All-C4

PITCH MODS	1	2	3	4	5	6
MODSRC	Wheel	*Off*	*Off*	Wheel	Keybd	*Off*
MODAMT	+24	-	-	-24	-82	-
Glide	None	None	None	None	None	None
ENV1	+00	+00	+00	+00	+00	+00
LFO1	+02	+00	+00	+02	+00	+00

FILTER 1	1	2	3	4	5	6
Mode	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2
Cutoff	127	096	096	127	090	000
KBD	+00	+00	+00	+00	+00	+00
MODSRC	*Off*	*Off*	*Off*	*Off*	Veloc	*Off*
MODAMT	-	-	-	-	+13	-
ENV2	+00	+00	+00	+00	+00	+99

FILTER 2	1	2	3	4	5	6
Mode	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2	Lo-Pass/2
Cutoff	127	096	096	127	127	000
KBD	+00	+00	+00	+00	+00	+00
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	*Off*
MODAMT	-	-	-	-	-	-
ENV2	+00	+00	+00	+00	+00	+99

OUTPUT	1	2	3	4	5	6
VOL	99	27	27	99	91	99
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	*Off*
MODAMT	-	-	-	-	-	-
KBD Scale	+00	+00	+00	+00	+00	+00
LO/HI Key	-	-	-	-	-	-
Dest Bus	FX1	FX1	FX1	FX1	FX1	FX1
Pan	00	00	99	99	50	50
MODSRC	*Off*	*Off*	*Off*	*Off*	LFO	*Off*
MODAMT	-	-	-	-	+99	-
Pre-Gain	Off	Off	Off	Off	On	Off
Voice Prior	Med	Med	Med	Med	Med	Med
Vel Thresh	+000	+000	+000	+000	+000	+000

LFO	1	2	3	4	5	6
Rate	37	17	16	36	28	-
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	-
MODAMT	-	-	-	-	-	-
Level	00	99	99	00	00	-
MODSRC	Env2	*Off*	*Off*	Env2	Wheel	-
Delay	00	00	00	00	00	-
Waveshape	Sine/Tri	Triangle	Triangle	Sine/Tri	Triangle	-
Restart	Off	Off	Off	Off	Off	-
Noise SRC RT	-	-	-	-	-	91

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and collects and restores vintage rock stuff. His favorite color is ultraviolet and he's the same age as Marcia Brady (a year older than Kevin Arnold).

SELECT VOICE

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

ENV1	1	2	3	4	5	6
Initial						
Peak						
Break 1						
Break 2						
Sustain						
Attack						
Decay 1						
Decay 2						
Decay 3						
Release						
KBD Track						
Vel Curve						
Mode						
Vel-Level						
Vel-Attack						

ENV2	1	2	3	4	5	6
Initial	99			99		00
Peak	50			50		60
Break 1	50			50		36
Break 2	50			50		72
Sustain	50			50		50
Attack	53			53		81
Decay 1	00			00		61
Decay 2	00			00		58
Decay 3	00			00		69
Release	00			00		94
KBD Track	+00			+00		+00
Vel Curve	-			-		-
Mode	Normal			Normal		Normal
Vel-Level	00			00		00
Vel-Attack	00			00		00

ENV3	1	2	3	4	5	6
Initial	50	50	50	50	99	99
Peak	99	99	99	99	00	99
Break 1	99	99	99	99	00	99
Break 2	99	99	99	99	00	99
Sustain	00	99	99	00	00	99
Attack	05	05	05	05	36	33
Decay 1	00	00	00	00	00	33
Decay 2	00	00	00	00	00	00
Decay 3	71	00	00	71	00	00
Release	34	46	45	34	00	85
KBD Track	+00	+00	+00	+00	+10	+00
Vel Curve	Linear	Linear	Linear	Linear	Linear	-
Mode	Normal	Normal	Normal	Normal	Finish	Normal
Vel-Level	28	13	13	28	30	00
Vel-Attack	00	00	00	00	03	00

PGM CONTROL

Pitch Table	Off
Bend Range	**
Delay	X1
Restrike	34
Glide Time	00

EFFECTS (1)

Effect	Chorus + Reverb.1
Decay Time	79
FX1	32
FX2	25

EFFECTS (2)

Rate	18
Depth	34
Delay	033
Mod	+12
Mod	+00
Mix	50

EFFECTS (3)

Waveshape	Sine
MODSRC	Timbre
Reverb HF Cut	On

PERFORMANCE

Timbre	00
Release	-

Classifieds

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SOFTWARE

Cakewalk 4.0a for DOS with original disks and manual. \$50. Bill, phone: 619-465-2916.

WANTED

Dear Ensoniq users: I desperately need your help! My name is Zulikan Royce and I'm in a federal correctional institution. I've purchased a TS-10 to keep me sane but the IRS froze my account before I could purchase a sound library. If you have any type of 3.5" floppy (drum sequences, samples, duplicates, junk, anything!) I would be forever in your debt. Mail it to my supervisor: Federal Corr. Inst, c/o Lance Cole, PO Box 4000, Fort Dix, NJ 08640.

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Prog: Keypad

By: Phil MacEachern, Des Moines, IA

Notes: I came up with this patch while playing with my KS-32. I have trouble finishing sequences, but this one I can enjoy playing solo, because the pad comes right out of the lead keys. (I thought that was different from all my factory presets, but later

discovered "Binary Keys" is based on the same principle.) I've always just played it plain, but for publication I've gone and added mod sources (and a third voice).

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	Strngwave	Strngwave	Strngwave
Wave	GuitarHar	DigiPno	DigiPno
Delay Time	000	000	000
Wave Direction	Forward	Forward	Forward
Start Index	99	99	99
MODSRC	Velocity	Velocity	Velocity
MODAMT	00	00	00
Restrk Decay	00	00	00

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

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

LFO	1	2	3
LFO Speed	28	37	37
Noise Rate	00	00	00
Level	00	00	00
Delay	00	00	00
MODSRC	Wheel	Timbr	Timbr
Wave	Sine	Sine	Sine
Restart	On	On	On

FILTER	1	2	3
Filter 1	3Lo	2Lo	2Lo
Filter 2	1Hi	2Lo	2Lo
FC1 Cutoff	127	127	127
ENV 2	00	+37	+37
FC1 KBD	+08	+99	+99
MODSRC	LFO	LFO	LFO
MODAMT	-42	+24	+24
FC2 Cutoff	077	095	095
ENV2	-20	00	00
FC2 KBD	-42	00	00
FC1MOD-FC2	On	On	On

ENV2	1	2	3
Initial	90	00	00
Peak	92	63	63
Break	94	69	69
Sustain	92	99	99
Attack	19	01	01
Decay 1	17	01	01
Decay 2	17	61	61
Release	17	43	43
Vel-Level	00	00	00
Vel-Attack	00	00	00
Vel Curve	Concave	Linear	Linear
Mode	Repeat	Normal	Normal
KBD Track	00	00	00

AMP	1	2	3
Initial	99	99	99
Peak	99	00	60
Break	99	00	60
Sustain	99	00	60
Attack	00	55	55
Decay 1	00	00	01
Decay 2	00	00	01
Release	31	31	31
Vel-Level	33	26	26
Vel-Attack	00	00	00
Vel Curve	Linear	Convex	Convex
Mode	Normal	Normal	Normal
KBD Track	00	00	00

OUTPUT	1	2	3
VOL	99	99	65
Boost	Off	Off	Off
MODSRC	XCtrl	XCtrl	XCtrl
MODAMT	00	00	00
KBD Scale	Zone	00	Zone
Key Range	A0-E6	A0-C8	F6-C8
Output Bus	FX1	FX2	FX1
Priority	Medium	Medium	Low
Pan	00	00	00
Vel window	00	00	00

EFFECTS — CHORUS AND REVERB

FX-1	16	FX-2	15
Decay time	36	HF Damping	99
Chorus Rate	21	Chorus Depth	05
Chorus Center	44		
Feedback	0		
Chorus Level	99		
MOD (Dest)	Rate		
BY (MODSRC)	Pressure		
MODAMT	+17		

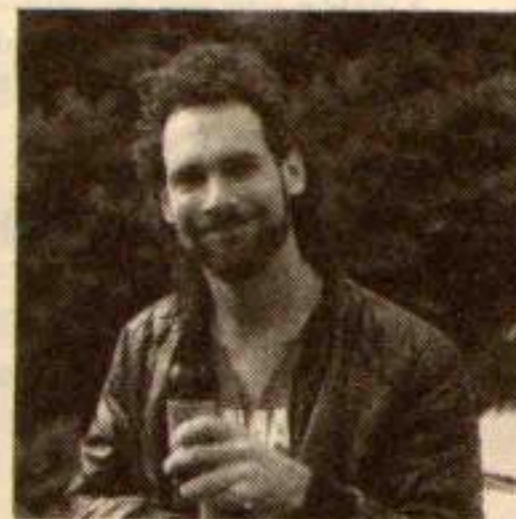
The Hack: This patch didn't really come with a name, so I'm calling it "Keypad." It's one of those sneaky, it-could-be-anything keylike sounds that behaves like a chameleon with just slight modifications. We're going to let it act like a keyboard — that wants to be a pad.

For Voice 3, let's give the Key Range setting something to do. Set Keybdscale to around -15. From F6 up, it should fade down. Go to Voice 1. In the Pitch Section, detune it some by adjusting Fine to +08. You can mellow it a bit by dropping FC1 Cutoff to 085. For that voice's LFO, Level should be 14 while MOD becomes Timbre.

The real dramatic changes happen with changes to the Effects. The reverb isn't doing too much here, so let's choose 8 Voice

Chorus instead. Change the Chorus Center to 15 and Feedback to +60. This will create a Wowing shift in pitch. You won't need too much on the modwheel. Modulate Fdback by modwheel to +14.

Jeffrey Rhoads



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

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The Interface

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

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

Electronic mail - GENIE Network: TRANSONIQ, CompuServe: 73260,3353, Internet: interface@transonik.com.

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

Hiya Hackers!

First, a quick follow-up on Jim Grote's mention of "Pure Temperament" a while back. He quoted the Harvard Dictionary of Music as saying that just intonation only requires that five intervals be "pure" and that you can't have both "pure" thirds and pure fifths. That's true, but what is im"pure" here is not "tempered." To get clean thirds, you have to change one of the "pure" 3:2 frequency-ratio fifths to a less-desirable 40:27 ratio fifth. Only five of the six fifths in the major scale remain "pure" (3:2), but just intonation still only allows exact, untempered 3:2s and 40:27 ratios.

Second, I have an ASR hard disk question: In the case of file-by-file backup to floppy (Cmd:System:Backup/Restore), what happens if it encounters a damaged floppy during a restore? Although the ASR aborts an instrument load (rather than loading what it can), I presume that it doesn't similarly abort a restore operation if that happens, right? Given my luck with floppy reliability, I would hope that it will restore all undamaged files. Zat so?

Thanks for the Hackin' Helpin!

Gary Morrison, Austin TX
[71670,2576]

[CS - I believe that when the ASR encounters a bad floppy during backup, it's intelligent enough to allow you to continue backing-up by simply inserting another (hopefully, good) disk (Ensoniq should be able to confirm this). Additionally, any files already backed-up can be retrieved easily enough by simply loading the files from floppy using standard loading procedures.]

[Ensoniq - Clark is correct, the ASR is intelligent enough to ask for a new disk when it encounters a bad floppy during a backup.]

Dear TH:

I just received the v2.07 O.S. for the ASR-10. I copied the new O.S. to a Syquest 88Mb that I had been using. Booted and I got a ERROR 129 REBOOT? prompt, rebooted and got the same thing again. I then copied v2.01 which was on that cartridge back to it and it booted fine. The next day I called Ensoniq and was told that I was the first person to report this.

That night I spent about four hours of total

confusion because I copied v2.07 to another cartridge and it booted fine. The reason for this is because that cartridge was formatted with v1.61 and the default directories and files had been written to it. In order for v2.07 O.S. to boot for a 88Mb, you must format with v1.61 O.S. (v1.60 O.S. was the original release with the SCSI interface) and you "must" write the default directories and files. Now, you can copy the v2.07 O.S. to it and it will boot fine and you can even delete the directories/files, it'll still boot!! I FAX'd Ensoniq about this but was waiting on a second v2.07 disk to try.

I received the second disk and it worked the same way too! A 44Mb cartridge works fine with no problems writing the O.S. to it. I FAX'd Ensoniq again and received a call from Dennie Edwards at Ensoniq. He said that they have removed the Syquest 88Mb from their approved list because of problems like mine and getting the ERROR 129 is one of them. Funny, the first guy I talked to didn't know about this! In fact, v2.01 produces the same ERROR 129 when the cartridge is formatted with itself too!

I know that the Syquest 88Mb is strange/odd because I've heard this from the people at Dynatek who made my unit. Why do I need those default directories and files on that cartridge for O.S. to be copied properly? Somewhere between v1.61 and v2.01 the formatting for the 88Mb was changed but maybe it had to be for DiskTracks to work. I need a more technical answer, more than can be provided by Ensoniq's Customer Service people whom I'm sure know how to use the equipment.

I received a letter from Steinberg/Jones, the CuBase sequencer people in November. It was about CuBase Audio for the Atari Falcon and included a list of approved and tested drives. It lists the Syquest 88Mb as being tested and approved for four tracks of audio. I'm not sure if I can compare the two but if they can do it, why can't Ensoniq??

Bill Turczynski
CIS: 72277,3524
Genie: W.TURCZYNSKI

[Ensoniq - There are a few questions that we would need answered to fully understand your situation. What OS were you running when you tried to copy v2.07 to your Syquest? Did you boot from SCSI or from floppy? But

rather than try to create a dialog in the Interface (or on Genie, where you first raised this issue), let us explain some things to help you now.

First, here's an approved way to work with your removable cartridges. When copying a new OS to a cartridge you should do the following:

1) Boot from a floppy disk with the new OS on it (the ASR hides certain SCSI-related commands when booting from a SCSI device to prevent you from accidentally erasing the host device which contains the OS).

2) Select the SCSI device to copy the OS to (COMMAND/SYSTEM/5).

3) Scroll to the "COPY OS TO DISK" command and press ENTER.

It sounds like you booted from SCSI running OS v1.61 and then tried to copy the new, larger OS to your cartridge. It's not guaranteed that this will work (as you found out). Or it is possible that your cartridge was bad. We don't recommend your work-around of formatting with v1.61 and then running the current OS. Each OS adds new functionality and has actually strengthened our SCSI implementation. You should absolutely use the newest OS for your formatting.

Regarding our compatibility with Syquest 88 MB in general, we originally had approved them, until we started to get more reports about problems. These problems are not limited to use for digital audio recording. They are related to writing and then reading long continuous files from the drive, which can happen when recording large samples from an expanded ASR-10, or recording DiskTracks. The technical explanation is that an error can occur during the SCSI transfer which the drive doesn't report to the ASR. In the case of your trying to copy the new OS, the ASR may be trying to execute code that was never properly written or is not being read accurately, and the ASR is not getting the proper error message from the drive. We have experienced enough problems with the 88MB units to remove it from our compatibility list. We cannot speak for Steinberg Jones, but it is possible that they will eventually run into the same problems we have.]

Subject: Multimedia and EPS-16+

My EPS-16+ Turbo and I have been getting along fine for three years, but I have never used my SCSI interface. Now I am seriously considering equipping my PC with a sound card and CD-ROM drive to go with my Voyetra Sequencer Plus and my Voyetra V-4000 MPU-401 type MIDI interface. I'd like the whole thing to work with the EPS-16+, but as we all know, Ensoniq equipment has its own ideas on who it likes to have lunch with.

I've read all the articles about SCSI-2, MPC-2, wavetable synthesis sound cards, multi-speed CD-ROM drives and everything else, and I've even called several manufacturers for their specs, but I still can't figure out which peripherals will work with the EPS-16+, and I'd rather not spend a lot of money to find out. Right now, I'm leaning toward the Toshiba 3401 drive and the Turtle Beach Monterey sound card. I suppose I'll need a SCSI controller as well. Can you suggest an optimum set-up for me that will definitely work?

P.S. I also read about a new wavetable sound card by Reveal that uses the Ensoniq KS-32 chip. Is there any advantage to using such a card, i.e., does the technology allow sounds to be transferred from sound card to keyboard and vice versa, and would it make sense to use an "Ensoniq-compatible" sound card?

P.P.S. Could you also talk to the capability to either transfer a *.WAV sample from the PC to the EPS, or transfer EPS samples to the PC and save them as *.WAV files? Could such files be transferred via MIDI? There are numerous samples available on bulletin boards which could be useful on the EPS; there are also EPS samples that could be useful in PC applications.

<GregCoben@aol.com>

[CS - The Toshiba drive should work fine (Ensoniq has found that CD-ROM mechanisms made by Toshiba, Sony, and Chinon tend to work well with their products), although it's always recommended to "try before you buy" whenever possible. As far as a SCSI card for the PC, word has it that the card made by Adaptec (hope I've got the spelling right on that) is the one to get. You should be able to track one down through your local PC dealer, or perhaps through one of the PC magazines (such as Computer Shopper).

As far as sound cards go, there's no technical advantage in buying an Ensoniq card over any other card if you're looking for some sort of compatibility with your sampler. Sounds cannot be transferred from the card to some

other platform (other than through actually re-sampling them from the card's outputs).

Samples can be transferred between your EPS and PC, and stored as .WAV files, however. Samplevision (from Turtle Beach) should allow you to do this, and a new program, "Sound Forge," from a company called Sonic Foundry reportedly provides some excellent sample-editing tools and should provide SCSI support for Ensoniq samplers in the near future (hopefully, we can keep you posted in these pages.)

[Ensoniq - Regarding transferring .WAV samples to and from your EPS-16 PLUS, we also have heard of a program called Sound-Vert that can convert your .WAV and Sample-Vision wavedata to Giebler format. This data can then be loaded into your sampler from disk. Tim Dorcas is the creator of the program and can be reached at (401) 461-0012, or emailed as Tim.Dorcas@Enest.com.]

[TH - And check out Garth's article elsewhere in this issue.]

T.H.

I have a TS-12 and have a question regarding the "key click" on the organ waves. My question is how do I get rid of the key click. I hacked in the hackerpatch .ORGANOMIC. from the April issue and use it at the church I attend. I understand that the key click enables the organ sound to cut through the mix, but there are times where the only thing playing is the organ (actually my TS-12) and it is at a quiet and soft portion of the service.

What I want is a way to eliminate the key click without changing any of the rest of the sound. I also do not want to change the attack of the sound if possible. I would prefer to do this through patch selects or velocity curves as opposed to changing sounds. I do not want the momentary interruption that occurs when switching sounds.

On a related note, the TS-12 manual says that if you switch to another sound that uses the same effect that the momentary interruption will not occur. I have not found this to be the case. Am I doing something wrong?

Also, whenever I double click on another sound while in Sounds mode to layer the sound I get the same interruption. This is quite annoying if trying to add a sound while sustaining a note (which seems to be the only time I try to layer like this). Is there any way to get rid of this as well?

Lastly, are there any good sources of

"Sounds" and "Presets" (i.e. patches not samples) for the TS series. I like the ability to load samples, but I find patches much more convenient.

Thanks,
Allan Lester
Houston, TX
lester@ixtapa.eng.hou.compaq.com

[CS - Probably the best solution for eliminating the key click (or the attack of any sound, for that matter) is to increment the start point of the wave(s) used to move past the click: Select the voice you wish to edit, press the WAVE button twice, and increase the value for SAMPLE-START until the key-click sound goes away. Sometimes, however, starting a wave from within the sample can produce a slight "tick" on the attack of some notes. You may be able to use the AMP envelope to minimize this effect; try setting the initial level for the envelope somewhere in the range of 20-50, then increase envelope attack time to something in the range of 1-5.

For the TS to switch smoothly from one sound to another using the same effect, you need to make sure that "Voice-Muting" (on the Master page) is set to "Off."

There are quite a few patches available for the TS-10, both from Ensoniq, and from third-party developers; watch these pages (and the pages of magazines such as Keyboard and Electronic Musician) for reviews.]

[Ensoniq - Depending on the sound, the key click is possibly being added to the sound by another oscillator. Try soloing the different oscillators in a patch by going to the SELECT VOICE page and double-clicking on different active waves to solo them. They're active if they don't have a parenthesis around them. If you find a voice that is programmed to provide this extra amount of click, you should mute it by selecting it and pressing the soft-button by it, to put a parenthesis around it.]

Transoniq Hacker:

I have been receiving your magazine for over a year now and I feel it is about time I contributed! I first want to say thank you for all the information you pass on from both Ensoniq and the other users. As an expatriate from Australia living in Hong Kong, I have few other avenues for keeping up with product information and I find TH to be a lifeline.

I can not, however, understand the many letters of complaint directed toward Ensoniq for poor service. I purchased my fourth Ensoniq

product, an ASR-10 with 10 MB RAM and a SyQuest 105-MB drive almost a year ago and, as we all know now, this configuration was plagued with problems – particularly relating to the Disk Track recording. I contacted Ensoniq directly regarding the problems I was experiencing and came in contact with Steve Mash. He sent me fax after fax in an effort to fix the problems I was having, and when the notification of O.S. Version 2.07 appeared in TH, I faxed him to ask when it would be available. He responded within the hour, informing me that he had just mailed the new version directly to me. After receiving the software I was still having some problems and, again, Steve was responding by fax within the hour and solving them. I have never experienced this kind of service from any company before and I have nothing but praise for the efforts of Steve Mash and Ensoniq! Keep up the good work!

For those still having problems with this configuration, the problem is this: you can not use any sequence created with any O.S. version prior to 2.07 or from any EPS-16+. In other words, all your old sequences have to be totally re-sequenced using 2.07 in order to have Disk Tracks recorded. The alternative is to play the sequence in from another ASR or EPS. That's life!

A request... Will advertisers please give a fax number so that overseas customers can order by fax instead of phone! Rubber Chicken – I am waiting to buy your samples!

Also, I am trying to convince Ensoniq that they should release more rackmount synths, such as a rackmount TS-10 or KT-76. They feel there aren't enough buyers for racks. What do other readers think?

Regards,
Steven Lees
Hong Kong

[Ensoniq – As far as we know, Rubber Chicken's telephone and FAX line share the same number.

Credit should also go to our software department for their extra effort to resolve Mr. Lees (and others) issues.]

Dear TH and Ensoniq,

I've had my ASR-10 for about a year and a half and am very happy with it, over all. I have some questions for you TH guys and also some issues for Ensoniq.

Ensoniq issue #1: (ASR-10) What's the deal with all these loose screws? Almost every

time I take it out of the house, whether just down the street or across the country, my sampler turns into a metal cased maraca, what with all the screws that have come lose and jangle about when it's moved. After the hassle of opening up the back I can usually place the screws back where they belong. But my collection of homeless screws is growing. All the internal boards seem to be securely in place, but how many screws can an ASR do without? How many homeless screws should I collect before I have someone take the whole thing apart to find their right place?

But the real question is why is this happening on an otherwise very professional instrument? This problem has already ruined one live performance recording; a loose screw found its way to one of the output jacks and repeatedly shorted it out with very loud ugly crackles. I have never heard of this happening on any other manufacturer's instruments, but I understand the EPS series also had this problem. As a professional musician using your product as his main instrument, this screw thing is a *real problem*.

Ensoniq issue #2: Why is the ASR almost 15 pounds heavier than the EPS-16+ and almost 20 pounds heavier than the Kurzweil K2000s? My chiropractor would like to know.

Now for some unsolicited praise. The sound programmers at Ensoniq did an outstanding job on the AS-8 Appalachia sound disks. The "jaw harp" instrument in particular is quite a feat of programming and very fun to play. Good work!

A hacker question: Do you guys know of anyone out there designing alternate tunings for the ASR? It would save me a lot of time if I could access various old harpsichord tunings, various just, pythagorian, and mean-tone tunings, as well as unusual equal temperaments and "ethnic" tunings. Are there any ASR hackers merchandising their tuning work or am I going to have to fill the void?

You guys at TH are doing a great job. Keep it up.

One more thing. How about some hands-on articles exploring the OS 2 hard disk recording? How about a whole series? Is there anyone out there actually using it?

Thanks again,
Miguel Frascioni
Oakland, CA

[CS – 1) Having screws fall out of your ASR is by no means a common problem; I haven't a clue as to why you'd be experiencing this. One thing you might want to try, though.

Before you replace screws in your unit, coat the threads with a little fingernail polish. This should stop them from coming loose, but will not prevent you from removing them should you need to.

2) One of the reasons the ASR is heavier than than its predecessors is that its case is made of extruded aluminum and steel, where as the cases of the previous units are made out of plastic.

Offhand, I can't think of anyone offering alternate tuning tables for sale, but I'll bet there's someone out there who is (maybe Gary Morrison – see his letter). Perhaps they'll see this and respond...

As for hard disk recording info, Ensoniq has available a new applications guide addressing this very subject. To receive a copy, send a check or money order in the amount of \$5 to Ensoniq Corp. Accessory Desk, 155 Great Valley Parkway, Malvern, PA 19355-0735. Ask them to send you the "ASR-10 Version 2 Applications Guide."]

[TH – And Tony Ferrara of Ensoniq has promised us an article on this very subject that should be here in time for next month's

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issue. (We've been getting a lot of requests for this!)]

[Ensoniq - In the ASR-10, the screws are attached to aluminum and/or steel extrusions. Extrusions have become an industry standard for constructing high-quality assemblies. Extrusions are not threaded - when a screw is attached to an extrusion, it creates its own threads. For various reasons, the screws sometimes loosen. Clark's solution to this problem is very good. However, opening the case voids the warranty. Feel free to contact Ensoniq Customer Service at (610) 647-3930 if you feel you need more help.]

Regarding the weight of the ASR-10 versus the EPS-16 PLUS, we have changed our case designs to use a more rugged metal housing as opposed to the plastic case our earlier products used. We made this change to assure that we pass the very stringent approval codes in the US and from countries around the world regarding RF emissions. The metal case also lessens the effect of possible static discharge problems. While it does add to the weight of our products, it also provides more reliable performance, compliance with safety regulations and less case-flexing problems.]

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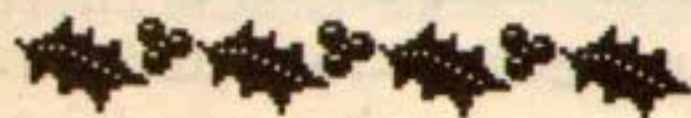


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Hey Hacker.

I would like to comment on Issue 109, July, 1994. I feel for Aeronautics. A little. I own an ASR-10 and re-boot error and I seem to be good friends since I experience this problem quite often. I learned really quickly to back up to floppy disk every couple of minutes or major steps in sequencing or sample editing.

Recently I purchased the digital I/O and also wonder if this has been rushed to market before testing. When I sample for DAT or CD sometimes the sound changes from digital blurps and bleeps and back to sound or music. I then have to reset the whole sample in procedure from digital to get rid of the blurps and bleeps. This is also common when you fast forward or shuttle around on the DAT or CD platter. It almost always crashes down and makes that awful bleep noise when I do that!

Also when I sample from the digital I/O and finish with an instrument and then select a different instrument and start sampling and then looping it, sometimes fragments of the other instruments end up in the new instrument. Should I delete the other instrument? Is the ASR-10 working too hard?

One last thing I would like to comment on is the fact that most musicians purchase Ensoniq products because they are advertised as workstations and as such eliminate the need for a computer - which is the reason I bought it in any case.

So having a workstation, most musicians go for 4- or 8-track cassette type recorders. Not being able to sync the ASR-10 2-track digital recording feature to my multitrack without expensive add-on boxes is a real bummer. That is the point I think the average musician is trying to make - not the fact that Ensoniq feels that asking the owner of a fancy/shmancy Apple Quadro 850 with Vision or Mootu to just set the sequencer to external. That is the reason that I still have no urge to get a hard-drive to use the digital recording function. But, all in all, I will never give my ASR-10 up. Sorry Kurzweil.

Joseph VanOrden
Union Beach, NJ

[CS - The fact that you are experiencing regular crashes, as well as problems recording via your digital I/O leads me to recommend getting your unit in for service (or at least contacting Ensoniq Customer Service, 610-647-3930 directly). While crashes do occur, they shouldn't be common.]

Dear Hackers and Hackerinas,

I think, after all those waspish letters of the last few months, it is time now to raise my little voice. So listen, dear colleagues, I own an EPS-16+ as well as an EPS Classic ("13 Minus") and yes - both work, and have for many years past. I just wanted everyone to know. That is all.

By the way, I even had one of those legendary black Mirages a long long time ago. It was then I became hooked on sampling. Since those days I learned a lot about the strength of the whole Ensoniq sampler family. I also found sufficient ways to get around their weaker points. Nevertheless, there are some features which I missed badly during these years. Most of them were realized with the release of the ASR-10. But, unfortunately, even this great machine still leaves some wishes unfulfilled (I hear the guys at Ensoniq sighing...)

No mercy. Here we go.

1. Graphic display: Needless to explain actually, which is why everyone wants it.

2. File-handling: What I am looking for is the opportunity to re-save the playback parameters of an existing instrument without saving the audio-data too! You have to wait for minutes if you work on a large instrument with a lot of long samples in several layers and want to save them. The EPS/ASR re-writes all data, no matter if you just tuned one single filter setting or really changed the sampled material. Beside the rather boring aspects of this behavior, the danger of write-errors grows with every executed "Save Instrument" command. (This nearly cost me one week of hard work when I was developing the first volume of my "Austrian Sound Library" two years ago, but that is another story.) Last, but not least, I have to make dozens of copies of the same wavesamples when I need slightly edited versions of an instrument for studio-jobs or live gigs instead of just saving the playback-parameters in a new and much smaller file - wasted time, wasted disk space.

Of course I didn't know if the data-allocation on EPS/ASR disks allows any changes of the writing procedure, but I could imagine a "Save Instrument Parameters" option in the CMD-*INST-page (similar to the existing wavesample-command "Copy Parameters Only"). This command should allow to store only the "synthesizer" programming without touching the wavesamples themselves. The benefits of this method are quite clear I think. The possibility of updating an x-thousand-blocks instrument in 0.1 second; no data-

errors worming their way into a previously faultless disk file; and the opportunity of loading (and saving) templates of the same instrument without their sampling data (you know, moving the sample start, changing WS-ranges, editing the release times or the patch selects...). Obviously, before using these templates we would have to load the "original" instrument and use some kind of "Copy Instrument Parameters" or "Use Template Instrument" command as a second step. The whole story sounds a little bit like the way the TS-10/12 handles sample-data...

3. Disk-error recovering and "Undelete": I read something on this topic in the last Hacker. I am not alone!

4. Effect-variations: Each "FX-Program" in the EPS-16+/ASR-10 has four variations (great idea) – which can only be selected by hand (great idea – maybe 10 years ago). I know, the EPS 16+ controls one parameter in real time – but what about changing all settings in the wink of an eye? There should at least exist the possibility of assigning the four variations to the Patch-Select-Buttons (per chance, there are four patches in an EPS/ASR instrument!). Ideally I could select the variations externally with my own MIDI-controller or program-change-message. I think I don't have to explain the enormous creative possibilities of this little feature. And if Ensoniq says "We will keep this in mind for future developments but not for current and/or outdated models" – hey, how about you busy 3rd-party vendors, like Waveboy! You proved more than once that you know the idiosyncrasies of the built-in DSP well enough to find a way to do it!

Dietman "Dietz" Tinhof
Vienna, Austria

[CS – Some good suggestions – thanks!]

[Ensoniq – Thanks for the input! Regarding your desire to change effects variations in real-time, remember that changing all parameters in real-time, even when using the same basic effect algorithm, can result in odd glitches and noises in the output as the delay lines and filters reconfigure. But we recognize that you could want to change effects settings like regular Patch Changes during longer rests. We just get concerned about implementing features that come with stringent rules about when you can use them and the conditions that must precede successfully invoking the command, etc.]

Dear Clark,

I'm in my second year of my subscription to

the magazine and I have always found it to be an invaluable source of information on new developments and so on and essential reading for any Ensoniq owner. I only wish that a similar magazine existed here in the UK. At one time there was a user group here which had its own mag called "Oasis" which was also very informative and useful. They ran an excellent article on a method of cross-fade looping on the Mirage using the MASOS O.S.

I began life as a Mirage user (I think I had one of the first units here in the UK), then I graduated to the EPS and finally to the ASR-10. Although there are many rival samplers out there (and musicians are notoriously conservative), I personally have always found Ensoniq's approach to equipment design to be innovative and user friendly in terms of the interface produced. Just try ploughing through the Yamaha SY85 manual! Also, their level of continuing support in terms of OS development has been nothing short of heroic. Providing hard disk recording as a free software upgrade for ASR-10 users is incredible! Again, I'm sure that most musicians and journalists are largely unaware of this.

I have two requests regarding the emphasis that I would like to see from the Hacker in terms of its contents. I personally would welcome more reviews of new products for the ASR-10 (e.g. the Rubber Chicken ASR Tools software and the Giebler Enterprises software, etc.) I'm sure it's only a matter of time before you review these anyway. However, judging from some recent correspondence in the Interface, visual editing is a real blind spot for the ASR-10 (sorry about the pun) and any information on this subject is always invaluable. One of your readers suggested that visual editing was possible using Avalon running on an Atari 1040. Since I own this computer and already use several Steinberg programs and peripherals, then this news (if true) is dynamite! There would be no way of finding such a gem of information other than through the Hacker. Most magazines are far too general in content to give this kind of specific detail. If anyone has more information on Avalon or are using it successfully with an ASR-10, I would be very interested in hearing from them.

My other suggestion would be tutorials and advice on applications (e.g. how to use the direct-to-disk recording facilities creatively, etc.). Again, this is an area you already cover extensively, so this is meant more as encouragement. You already contain enough valuable information to more than justify my renewal.

Many thanks, keep up the good work!
Hywel Wiliam

South Wales, UK

[CS – Thanks for the suggestions; I'm sure our illustrious (and I'm using the term loosely, here) editor will take your comments under advisement.]

Dear TH,

I am the proud and very happy owner of an ASR-10. I find it very easy to do all the things I want to do, which in the grand scheme of keyboard programming probably isn't very much. It's the first keyboard I ever bought so I don't know very much at all about synthesis. This, of course, hasn't been a problem because I've bought a couple of sample CDs and have happily plundered other people's hard work to get the sort of sounds that I wanted.

But recently I wanted to create a pad. I don't find sampling pads from other sources brilliantly effective because the looping always sounds just a little bit too obvious. Then I remembered seeing an article (in fact two articles) in TH about creating pads on Ensoniq synths. The two part article in Issues 101 and 106 by Sam Mims said that all the info conveyed in the article could be translated for the ASR-10. But guys, I don't have the dictionary. I could find all the stuff on the ASR-10 about filters and envelopes and all that – hey, it even made sense – but I couldn't apply it because I have no idea how to translate the very first few steps of the article into ASR-10-speak.

I really appreciate any help you can give me on this. By the way, I think TH is pretty cool. I don't understand a lot of it, but that's okay. And the ASR-10 is the best thing I ever spent money on. Sure it had to go in for a service once (the plug at the back blew a fuse – don't worry – it was very undramatic), but I have so much fun on it. And I recently made my first record! So if you ever hear of a dance act called *Angelmess* you can blame it all on Ensoniq for allowing technoduds like me to create music really simply and quickly.

Thanks guys,
Benjamin Howes
Neutral Bay, Australia

[Sam Mims – The points covered in the Pads articles do indeed apply to the ASR-10, though you will need to be fairly proficient at "button surfing" to get it all happening. The main difference with using a sampler, however is that there are no raw waveforms in memory to begin constructing your sound. So you can't just dial up a vocal waveform and get started, like you could with a synth.

The alternatives? You can start with a sample you already have, perhaps one of the Ensoniq factory disks or you can take a quick sample from another keyboard, loop it, and use that as your basic waveform. While the article used vocal waves as the example, many other types work just as well. You could even use a basic square wave that you can create within the ASR without doing any sampling at all. (Use the Create New Wavesample command, by pressing Command, Wave, then 0. See page 242 of the manual for more details.)

Once this is done, you're ready to follow the points covered in the articles. The "filters and envelopes and all that" are indeed there on the ASR-10, and are quite similar to those on the synths, so everything in that department should apply directly. See your manual for instructions on how to get to them. The only translation that you will need is from synth Voices to sampler Layers. When I say to go to the Select Voice page and call up a new voice, this should translate to "Make a copy of the layer you are working with, and make sure the new layer is enabled for the 00 patch select."

I realize all this probably sounds like gibberish unless you're already somewhat

familiar with programming on the ASR. The articles were intended to guide the novice programmer through creating their own pads, but they really only work this way for the synth folks. Sampler types have to work a bit harder (hence the disclaimer in the title, "Okay, and Samplers, Too, With Some Diddling"). Give the manual a quick read tonight (it's only 422 pages), and you'll be ready to tackle this in the morning...]

Dear Clark and Hacker,

Hold on 'cause this may be the least vitriol-filled letter ever written. I own a TS-10 as well as various Kurzweil and Yamaha synths/samplers/digital pianos and, of course, they all have their ups and downs. But my TS-10 has some obviously superior capabilities over the rest of the lot. (1) Hyperwave sequencing and (2) the Hacker (who says Kurzweil Whacker wouldn't work?). I love my TS-10 (and my Hacker) and it competes very successfully with every other workstation I've heard - and I've heard everything!

Now for a few questions.

1. Is it possible to get equally superior sound

quality on a computer as on a synth? Some of my friends constantly make foolish attempts at convincing me this is possible, but I suspect they're just jealous of my TS-10.

2. Will the optional TS-12 music rack be made available for the TS-10? Sure would come in handy.

3. There hasn't been a TS Hackerpatch in ages guys (and gals). Hopefully, I will be joining the oh-so-illustrious bevy of writers soon (didn't I say "no vitriol"?). We should be seeing a lot more about the TS-10. Until then, I sure would like to see a nice, swooshing, in-er-face new-age patch utilizing hyperwaves. There are some cool sweeping pads on the factory disks, but none of them are quite as swooshing as I'd like.

4. Does Ensoniq have any 88-key, weighted boards in the works? I've heard rumors of a soon-to-be-released TS-52, but I can't remember for the life of me whether it has 88 or 76 keys.

5. Number 1 on Dave Letterman's Top Ten List: "Everywhere you look - Clark Salisbury!" I see the drawn-out form of CS (and sometimes I wonder if he really is a person or

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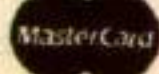
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if he's just a vehicle of modesty with which Jane and Eric hide their incredible omniscience) on my Ensoniq disks, my *Electronic Musician* magazine, and in many other places. Let's all give our friendly answer man a hand.

6. I was scrolling through the file types on my TS-10 and noticed one called "diagnostics." Is it possible for us TS-10 owners with expired warranties to get our hands on some of this diagnostic software? (Not that I could ever have any need for it or anything. Really!)

7. As if I'd ever let you rest! Could someone explain to me some advanced uses of LFO? Actually, could someone (CS) tell me what it does besides create vibrato and tremolo?

8. How 'bout a public access Hacker TV show?

Well, thanks a bunch, my friends. Everlasting infinite kudos and candybars to Clark, the Hacker, and Ensoniq for top-notch work. (Although I sure would like to hear back from Al Blake who said he'd call me back about a month and a half ago.)

P.S. Could someone please tell me the mailing address for Rubber Chicken Software? Are they in Davie or Hollywood, FL? Thanx again!

Clay Greenberg
South New Berlin, NY

[TH - Regarding #5: (As anyone who's talked to us more than a little will tell you) we, Jane and Eric, know very little about all this stuff. What we do know a little about is how to put out a magazine and how to cajole writers like Clark to be a part of it.

Regarding the PS: While the Chicken roosted in Hollywood for a spell, the current address is 4118 SW 61st Ave., Davie, FL 33314 - which you can almost make out in some of their ads...]

[CS - 1) It is possible to get professional-quality sound out of a computer - if you use a professional quality card. The catch is, the card will cost you as much (or more) than a pro-quality synth. And so far, all the pro-cards I know of are pretty much dedicated to sampling and sample processing - not synthesis, per se. I know of nothing available for a computer that would give you the programmability of the TS-10 along with the quality of sound one would expect of a TS-10.

2) Unfortunately, the music rack will not be available for the TS-10.

3) Looks like a job for HACKERPATCHMAN!

4) Dunno. Ask Ensoniq.

5) Huh. And here I was thinking all you subscribers were a figment of Jane and Eric's imagination. And thanks for the hand - it sure beats the rather less complete version of a hand I'm more accustomed to getting...

6) No. There's nothing available as far as diagnostic software that would be of any use to the mortal man. So don't even think about it.

7) While it is true that the most common uses for the LFO include vibrato and tremolo effects, there are other applications, as well. The LFO is a general-purpose controller and, as such, can be applied to anything that accepts a modulation input. Try applying a slow LFO to the filter for subtle (or not-so-subtle) tone shifts as a note is held. Also, don't neglect the variety of LFO waves - applying a square-wave to pitch, for example, can produce a variety of pseudo-trills. And don't forget that LFOs can be used to control a number of Hyper-Wave and loop start and range parameters, as well as Transwave sweeps.

8) I like it - the "Ensoniq Friends Network"!]]

[Ensoniq - (1) It is possible, but computers are a much more hostile environment when it comes to background noise and hum induced by ground loops, so it is imperative to be careful in the design and manufacturing of such products.

(4) Could you be talking about the TS-12, which we released in November, 1993? It has a 76-key weighted action keyboard.

(5) The latest rumor circulating around Malvern is that there really is no Clark Salisbury - he is simply an acronym for our Customer Service Department. Clark's wife (and cat) both disagree with this unsubstantiated theory.

(6) Actually the diagnostics are used in conjunction with our automated board tester and wouldn't be of much value in the field.]

Dear TH,

I bought a TS-12 in March. So far, so good. I think it's a great synth. The only problem I have had concerns the effects unit.

1. There is no effects algorithm that allows me to place distortion on the guitar while also using a digital delay on the guitar, and reverb for the other tracks. In fact, there is no delay + distortion combination at all. This is unfor-

tunate. However, I have found a solution and I wanted to let other readers know. If you are having the same problem, here is one way around it. Use an effects algorithm that allows distortion on guitar and reverb on other tracks. Once you have your guitar track finished (mix and all) copy the guitar to another track and then shift the copied track -96 clock ticks. This will give the same effect as a digital delay with only one repeat.

2. Ensoniq should have allowed us a separate effects mix. A mixer that would allow us to set a level for each track's feed into the effects chip. And then given us a feature that would allow us to record changes in this mix, just like the mixdown facilities for the track volume. This would help tremendously.

Even with these limitations, it's still a good synth. I am very pleased.

Also, I want you to tell me, concerning the ASR-10, what is this about recording audio tracks? Can you record a vocal track with your sequences or something? Please explain. If I could record vocal tracks in my sequences the ASR-10 would be a welcome addition for me.

That is it for now. Thanks for being there for us Ensoniq users.

Sincerely,
Randy Jones
Pine Knot, Kentucky

[CS - 1) Thanks for the tip! It may also be possible to get a short delay out of the chorus contained in the DISTORT+CHORUS+REV algorithm (I haven't tried it, but it'll work if the CHORUS CENTER parameter provides enough range). Try setting CHORUS RATE and WIDTH to 000, and use CHORUS CENTER (delay time) to control delay time. Additionally, you should be able to use the REGEN parameter to control the number of echoes.

Yes, you can record vocal (or any other audio source) tracks into your ASR sequencer. Contact your local dealer or Ensoniq for details on Version 2 software; it's free to registered users.]

[Ensoniq - (1) There are only so many simultaneous effects that the DSP can perform at once. Good solution to your problem!

(2) We recognize that this is a desirable configuration, but our current hardware does not allow separate effect sends per voice. The "tracks" are a software construct; we would still need separate sends per voice in order to achieve separate sends per track.]

Dear Hacking Types,

I'd like to pass on two enhancement suggestions to Ensoniq. And I'd like to mention them here so that I can encourage others who would find these useful to tell Ensoniq. Also, perhaps other users can suggest a better way to solve these problems.

I'll pose these in terms of the ASR-10, but they probably apply to your other machines as well.

First: It would be very nice if there were an option on the Edit:Layer page to choose wavesamples based on the actual pitch of note being played rather than on the key being played. This would be a major godsend to microtonal weirdos like me. We very frequently play in tunings where an octave's span on the keyboard represents a pitch span of less than an actual octave. In that scenario, we have to go through an arduous process of remapping the keyboard split points between wavesamples on every instrument, for every tuning we explore. If the keyboard splits between wavesamples were based on the pitch calculated from the pitch table, then all we have to do is create or copy a pitch table to an instrument, and everything automatically adjusts.

My second suggestion is of value to a wider user-base. On the Edit:System page, it would be nice if there were an option for what I'll call a "Nonadaptive Volume Mode" for a given number of notes. I feel that this would give Ensoniq a significant advantage over its competitors. Anybody who does ensemble arrangements (e.g., for school or church bands and orchestras) runs into the problem that this would solve.

Here's the problem: I have eight instruments loaded, and no notes are currently playing. I select a clarinet sound, and hit a key. The synth OS now has an interesting volume-level problem question to deal with: Is this an unaccompanied clarinet solo, or is this one clarinet in an orchestra of 500? In the latter case, it has to play that note at a very quiet volume level, just like a lone clarinet on the stage of Carnegie Hall. But if it's a clarinet solo, the performer is probably going to be pretty annoyed if it comes out at 1/500th of the available peak amplitude!

In short, the OS cannot possibly know how to treat that note. The performer has to tell it how, because only the performer knows how big an ensemble s/he's simulating. What the EPS and ASR OSs currently do is implement a really frustrating AGC algorithm that dynamically compands the volume to fit

however many notes are being played at any particular moment. That destroys an ensemble simulation's dynamic contrast, but that's simply the only option without a hint from the performer.

This new mode I'm suggesting would allow the performer to state the size of the ensemble for which the OS is to target volumes – to be more specific, a total number of notes (or better, layers) playable at any one time. If, for example, I am scoring for some sort of octet, I would set it into nonadaptive volume mode for 8 voices. At that point, all notes I play endure an automatic 18 dB (i.e., 1/8 peak amplitude) volume drop, and all compansion is disabled. Further, if I ever attempt to play more than 8 notes, the OS would reallocate a voice. (The most common usage of this mode would be with monophonic sounds to simulate an ensemble of monophonic instruments anyway.)

(Now, I hope that nobody gets the false impression that the existing Edit:System parameter for choosing the number of voices vs. sample-rate trade-off performs this function. While it does affect reassignment, that parameter does not disable compansion.)

Thanks for listening,
Gary Morrison
Austin, Texas

[CS – Thanks for writing, Gary. And by the way – got any spare micro-tunings (see Miguel Frasconi's letter above)?]

Dear Hacker:

Thanks for a great publication. Two items: (1) I'm a TS-10 owner who would love to see a feature on hyperwave programming or perhaps some guest patches; (2) I write in what appears to be a "Hearts of Space" niche format along the lines of Steve Roach, Robert Rich, i.e., ethnic percussion with complex synth textures. Any suggestions as to where I can connect with other composers who write in this style either via electronic bulletin boards or snail mail? I'm interested in sharing ideas on patch programming and composing.

Thanks
Kelly Yaksich
7421 Mill Run Dr.
Derwood, MD 20855
KYaksich@FCC.gov

[CS – 1) I believe Ensoniq has some sort of publication or instructional video that addresses Hyper-Wave programming; you could get in touch with them at (610)-647-3930. Also, yours truly will be published in an up-

coming issue of Electronic Musician on the topic of programming Hyper-Waves for the TS-series; watch for it at your local newsstand in a month or so.

2) I don't have any suggestions, but perhaps one of our readers would...]

[TH – And in this very issue, Robby Berman has another installment on hyperwaves.]

[Ensoniq – We have an Application Guide on programming TS Hyper-Waves, written by Howard Massey. It is available for \$5 shipping and handling. Contact us at 800-553-5151 to order it.]

Greetings Clark!

I need to know how to make my TS-10 correspond to Roland D10/General MIDI percussion maps. (starting at C1 Kick thru F#5 Pedal Hi-Hat) I have read the manual, but since I have never done this before, I am unsure on how to make the TS-10 respond to:

Note#	Key	Perc Sound
36	C1	Kick drum
37	C#1	X Stick
38	D1	Acoustic snare etc, etc, etc.

I did get the TS-10 to the Edit Drum Map page, but I couldn't line the drums up the way the General MIDI map asks for (C2 Kick was as close as I could get to C1 Kick). Am I correct in my understanding that the TS-10's 61 note keyboard starts at C2, and there is no way to map it to C1 – or am I way off the idea? I do understand that rev 3 has GM, but that is not what I am interested in (my computer soundcard is an Ensoniq Soundscape). Could you be so kind to shed some light on this subject?

Thanks in advance!
James Stanley [72133,1132]

[CS – First of all, not all manufacturers label key numbers the same way. So while Roland might call note #36 (the lowest C on the keyboard) "C1," Ensoniq calls the same note "C2." Simply increment the Roland numbers by one to determine the correct Ensoniq numbers, i.e., where Roland specifies C#1 for X Stick, assign that sound to C#2 in the TS-10.

Easier yet, though, is to start with a drum kit already mapped to GM specs; there should be several included in the user banks for your TS-10. Pick the one most like the kit you'd like to end up with. That way, you won't have to re-map every single sound to produce the drum kit you're looking for.]

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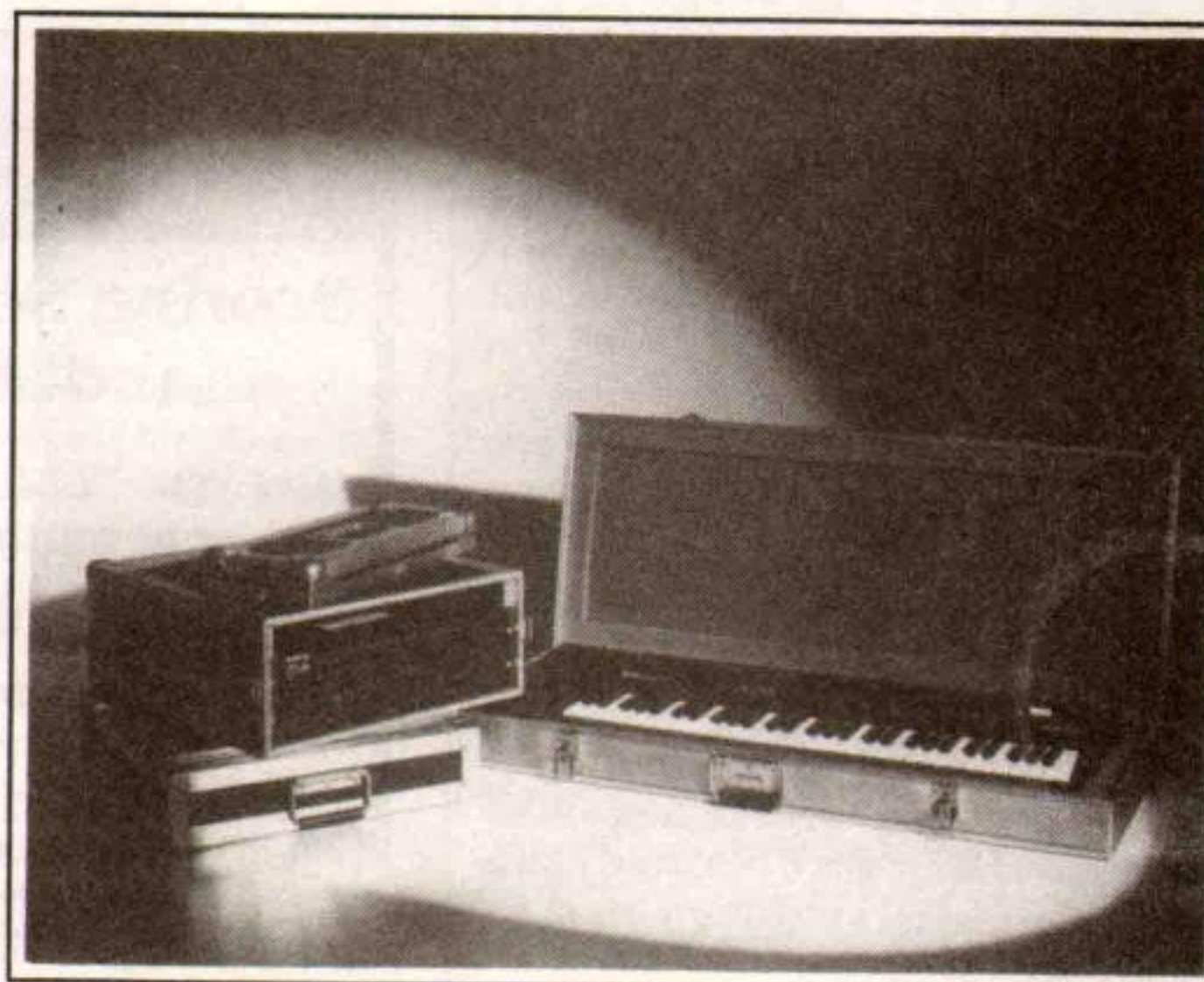
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