TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

Programming the VFX: Initializing the Program

by Jim Johnson

Where do I begin?
To tell the story of how great a love can be?
The sweet love story that is older than the sea,
The simple truth about the love she brings to me,

Where do I start?

The VFX doesn't really have much in common with silly love songs, but this immediately came to mind when I first began programming the instrument. As I mentioned last month, the VFX can be very intimidating at first, because each of its programs are so complex. When you first play a sound like PLAY-1-NOTE or SHIMMERY, it's perfectly natural to wonder how on earth you're EVER going to be able to build sounds with that kind of sonic complexity. It's easy, though, if you take things one step at a time. But where to start?

One minor problem with the VFX is that its program banks don't include a BASIC program--that is, a relatively innocuous, undistinguished sound that can be used as the basis for creating new sounds. Of course, you can actually start with any sound when you're programming from scratch, but it's usually a lot easier to start with something that has no strong characteristics of its own. Another advantage to this approach is that the sounds you create are unequivocally your own, which is a little hard to claim if your brass sounds are all variations of the factory SOLOTRUMPET program.

So, the first step in learning to program the VFX is to create a dummy "initialized" program that can serve as a base for experimentation. This isn't very hard to do, thanks to the instrument's Copy button, but it does mean that you'll have to erase one of the existing programs. If you intend to create your own programs, this shouldn't cause any heartache (though I'm continually amazed at most people's reluctance to erase ANY factory sounds--the purist in me wishes that all synths were sold unprogrammed, though I realize that's ridiculous), but if you haven't had a chance to decide which factory sounds you want to keep, I'd suggest tossing out STARJAMHOLD--a sound effect that most humans will find to be of zero value.

If the VFX didn't have its Copy features, all I'd have to do from here is present a VFX patch sheet showing the settings for each parameter in the BASIC program, and I'd be done--but you would still have to slog through each of the 500-odd parameters that make up a VFX program and enter them one by one. No fun at all. Thankfully, the Copy button provides a number of short-cuts for this job.

First step in initializing the program: press the Select Voice button in the Programming section. This presents a list of the six components (or voices, if you prefer) that make up a VFX program. Select and solo the first voice by double-clicking its button (this is all explained on page 7-4 of the VFX Musician's Manual). Now when you play the keyboard, you'll only hear the first voice in the program, which should be an ugly low-pitched rumble, if you started with STARJAMHOLD.

Now the first trick: even though there is no way to initialize an entire program, individual voices may be initialized with the Copy button. Press this button, and you'll see three options: DEFAULT, RECALL, and MAKE COPY. (Note that the label in the top of the display should read COPY ALL VOICE PARAMETERS; if it doesn't, press Select Voice followed by Copy, and everything will be cool.) As you may have guessed, DEFAULT initializes the voice to what Ensoniq's engineers thought was a good starting point, so go ahead and press that button now.

If you play something on the keyboard

In This Issue...

SAMPLERS:

Review: EZE
Michael Mortilla 5

Approved Hard Drives 5

Mirage to EPS Conversion (2)
William Pont 9

Life With E. van EPS
Pat Finnigan 10

EPS Click Tricks
Bryce Inman 13

The Wind in the Wires
John Gummere 14

Alternative Scales for Mirage and EPS
Gary Morrison 18

Using Your EPS to Make Coffee
Tom Jordan 18

The Expressive Mirage (& other synths)
Don Slepian 24

SYNTHESIZERS:

Programming the VFX
Jim Johnson ..... Cover

75 Waveforms in an ESQ-1!?!
Gary Sterling 12

Pipe Organs
Kirk Slinkard 16

Galloping Synth Horses
Michael Mortilla 19

Hackerpatch
Sam Mims & Contributors 20

GENERAL:

Random Notes 3
Transoniq Net / Hypersoniq 6
Current O.S. / Clinic Schedule 7
Classifieds 22
The Interface 26

now, you'll hear a bowed string sound. I don't want come across as a nit-picker, but this is, in my opinion, not a good starting point for most sounds. Why? Because when you hear it, it immediately says "I'm a bowed string." A good BASIC sound should say "I'm nothing." This means the next step is to go to the Wave page and select a more boring waveshape. I'll leave it up to you to decide which is the blandest of the VFX's waveshapes, though I personally recommend SAWTOOTH, the granddaddy of all synth waveforms.

All of the remaining parameters in the first voice are set to more-or-less neutral settings by the DEFAULT option, so the first voice is now initialized. (You might want to punch through its parameters at this point, though, if you have any personal prejudices you'd like to impose on the BASIC sound at this time.) The next step is simply to copy this voice into the remaining five slots in the program. Once again, the Copy button makes this procedure painless.

Press the Select Voice button again and, after making sure that the first voice is still selected, press the Copy button. (Note that it's essential that you press Select Voice before pressing Copy; otherwise, you'll only make a copy of part of the voice, rather than the entire voice.) Copying a voice from one location to another is really a two stage process: first, making a copy of the voice, and then recalling that copy into the new location. As you may have guessed, the MAKE COPY button makes the copy, so press it now.

After making the copy, return to the Select Voice button and select the second voice. Press Copy, followed by RECALL, and return to the Select Voice screen. If you did everything right, the second voice should now show SAWTOOTH as its waveform, just like the first. Now repeat these steps for the remaining four voices, and we're almost done. (Note that there's no need to make a new copy after recalling a copy, since the original copy is still stored.) Once you've initialized all six voices, mute all but the first.

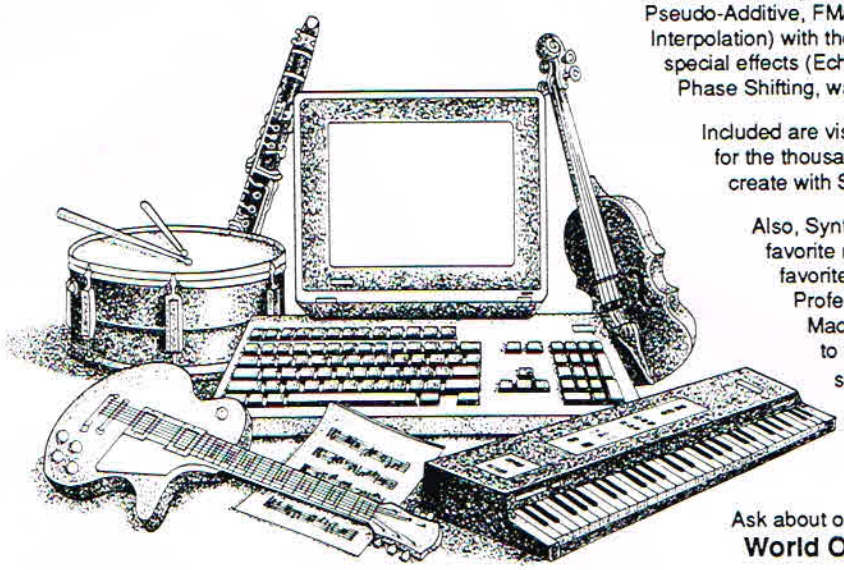
Now the settings in the Program Control and Effects sections of the program need to be initialized. There's not much that needs done in the Program Control page--just make sure GLIDE is zero, that RESTRIKE is set to some low value, and that the BEND RANGE is set to ** (which means that the master pitch bend range will be used). In the Effects section, you should simply set FX1 and FX2 to 0, so that you get no effects when you start to program. This is an area that I'm sure many will disagree with me about, but I have always felt that it's best to start programming a new sound with no external effects, or perhaps with just a hint of light reverb. Otherwise, you may have a tough time hearing exactly what you are doing to the sound (though if you are going to bury it in effects, small changes to the sound itself may not be too critical).

Now you have a blank program that can easily serve as the basis for any sound, from a horn section to a starship. Be sure to save it, using a name like BASIC or INITIAL. And when you want to create a new sound that is uniquely your own, resist the temptation to start with a factory sound; instead, start here. It may require a bit more work, but you'll be a better programmer for it, and no-one will ever say to you, "So you used the factory VFX sounds on that cut, didn't you?"

Next time, we'll look at the logic behind the VFX's Dynamic Component Synthesis system, and learn how to build a sound from components. Until then, adios, amigos! ▬

Bio: Jim Johnson, an electrical engineer, has played synths in several Phoenix, AZ bands. He's written for Electronic Musician, KCS, and co-wrote Dr. T's Algorithmic Composer package. He is owner of JAMOS Music, a MIDI programming and consulting firm.

Build a $20,000+ sound studio!



Synthia Professional

Synthia Professional turns your Amiga® into eight different 16 Bit synthesizers, (2 Drum Synths, Additive, Pseudo-Additive, FM/PM, Subtractive, Plucked String, and Interpolation) with the ability to add more than a dozen special effects (Echo, Reverb, Chorusing, Graphic EQ, Phase Shifting, waveshaping, etc).

Included are visual editing and looping capabilities for the thousands of instruments your Amiga® can create with Synthia Professional.

Also, Synthia Professional will work with your favorite music programs as well as your favorite midi keyboard sampler. Synthia Professional supports most Amiga® and Macintosh® sound formats allowing you to transfer sound samples between samplers and sound formats.

by The Other Guys

1-800-942-9402 1-801-753-7620

Ask about our NEW educational products:
World Odyssey and Math Odyssey

Amiga is a registered trademark of Commodore-Amiga, Inc.
Macintosh is a registered trademark of Apple, Inc.

Front Panel

RND (♪♪♪)

NEWS FROM ENSONIQ:

Notes:

The list of disk drives published in last month's RND section contained an error - the Panasonic JU364 drive which was listed as single-sided is, in fact, double-sided.

Announcements:

Ensoniq announces O.S. version 1.30 for the VFX-SD. Contact your local dealer for more information.

Ensoniq also announces VFX Version 2.0. This major upgrade offers improved buttons, sonic enhancements, improved software and new effects. Contact your local dealer for more information.

Ensoniq uses its sound technology in a revolutionary new product for the hearing impaired

A revolutionary solution to the difficult human problem of hearing loss has just been announced by Ensoniq. While seeking a device that would help one of the company's founders with his personal hearing loss, Ensoniq Corp also succeeded in creating breakthrough technology that can be applied to over 16 million people who are estimated to suffer from a hearing impairment.

The Ensoniq Sound Selector is so different from existing technology that it is not called a hearing aid but rather a high resolution listening instrument. Housed in the case of a conventional hearing aid the Sound Selector uses a custom microchip and software designed by Ensoniq to detect, respond and compensate for an individual's hearing loss across 13 bands of sound in steps as small as 1 db.

Even the most advanced hearing aids available today have only one, two or three bands of equalization and can't be adjusted in such fine steps. This results in unnecessary gain in certain frequencies causing hearing aid wearers to regularly face problems of feedback, harshness and unnatural sound. Sound Selector's wearers have described the difference in sound quality as "the difference between listening to a high quality car stereo after having had an old-fashioned AM radio."

Ensoniq appoints new Customer Service Representative

Wm. David McMahan has been appointed Customer Service Representative at Ensoniq. Mainly assisting Ensoniq users in the North Central United States, Dave has an extensive background in keyboard sales and service. In addition, he has also earned enviable credits as a musician, programmer and keyboard player in the Cincinnati area with such artists as Midnight Star, WCPO-TV, King's Productions and the Woody Herman Orchestra.

With a degree in Musical Performance earned at Miami University, Dave was the first freshman to be accepted into the M.U. Jazz ensemble. Among other projects, Dave later became Musical Director for the "Uncle Al" Show on WCPO-TV in Cincinnati and also consulted in the field of Computer-Aided Music as well as Electronic Music Synthesis.

New drum sound library for the E.P.S.

A new ten-pack Ensoniq Sound Library, SLT-8, may very well make your EPS the most powerful drum machine on the market today. This ten pack of discs features up-to-date drum sounds including tasteful ambient jazz kits, "larger-than-life drums", as well as modern rap and electronic drum and percussion sounds. Created by the same man who developed the sounds for the Alesis HR 16 and HR 16B, "Drum Doctor" Ross Garfield recorded the sounds at the internationally acclaimed Music Grinder Studios in Los Angeles. This studio was chosen particularly for its ability to capture high quality drum sounds and is a consistent choice of many of today's top drummers including Phil Collins, Tony Thompson, Jeff Porcaro and John Robinson among others.

Also included in SLT 8 Drum library is a Bonus Beats Disc which provides sequence information designed to provide basic drum beats and fills which can be linked together to create the drum track for a song.

Upcoming SLT's promise to be equally exciting. Look for the release of a Sound Effects sound library consisting of the HolophonicTM Sound Effects like those featured in Michael Jackson's *Bad* L.P. Also, soon to be released is an S.L.T. capturing the high quality brass and percussion sounds of the popular Miami Sound Machine.

NEWS FROM HACKER:

Well, *we* have one - even if you don't. A patch sheet for the VFX, that is. Sam Mims has put together a 1-page sheet for VFX patches. Right now we're trying to typeset the sucker. If all goes well, it should be ready for the next issue.

* * *

Speaking of patches - Sam's running low on candidate ESQ1/SQ80 patches for *Hackerpatch*. Give it a shot!

* * *

A couple of new names on the Transoniq-Net: Maestro Sounds (EPS), and Sam Mims for the VFX.

* * *

There's a freebie Mirage/C-64 utility program available in the CompuServe MIDI forum in the Commodore Files Library. The utility (by Johnny Klonaris) allows you to display waveforms and parameters from a Mirage on your C-64.

* * *

Reader tip: *Atari Explorer* magazine is supposed to have some very good articles on MIDI workstations in their July/Aug and Nov/Dec issues.

* * *

Note to dealers: Ensoniq's received some complaints from dealers regarding the fairness of including information in their synth boxes promoting certain mail-order discount stores. (That's *Hacker* ads in our free sample issues they're talking about.) Anyway, Ensoniq has no desire to "censor" us, but they *do* want to keep their dealer network happy and they *are* in charge of what goes into their boxes. On the other hand, we want to keep our readers informed (and sell ads!). The bottom line is that mail-order discount dealers who directly compete with other Ensoniq dealers will be able to advertise via inserts that will ***not*** be included in the free sample issues that go into Ensoniq's boxes but *will* be included in all other copies.

* * *

Transoniq Hacker is typically on a 4-week, 4-week, 5-week schedule. You should receive the next issue (#55) in approximately 4 weeks.

Cesium Sound

******EPS SAMPLES******

Big, high quality, *memory efficient* sounds with lots of ***punch*** and presence.

D-50	M1	Minimoog	Drum Machines	DX7II
1.) Keyboards	9.) Acoustic Keyboards	16.) Synth Bass	21.) Roland 626	26.) Keyboards
2.) Basses	10.) Electric Keyboards	17.) Lead Synths	22.) Yamaha RX15, RX21L	27.) Basses and FX
3.) Synths	11.) Basses	18.) Synth Brass	23) TR808	28.) Mallets and Bells
4.) Pads	12.) Brass	19.) Pads and Strings	24.) HR16 Kicks and Snares	29.) Plucked
5.) Ethereal	13.) Woodwinds (sax)	20.) Percussive	25.) HR16 Toms and Cymbals	
6.) Pitched Percussion	14.) Atmospheric			
7.) Woodwinds	15.) Drums and Percussion			
8.) Strings				

Addt'l FM	K1	"Real" Sounds
30.) Keyboards	32.) Layers	34.) Alto Sax
31.) Basses	33.) Instruments	35.) Fender Rhodes

Disks:	3 for $39.50	8 for $98.00	16 for $149.00	35 for $279.50 (Half Price!)
15.95 per disk	4-7 disks $13.00 each	9-12 disks $12.00 each		17-30 disks $9.00 each
Shipping	$3.00	$4.00		$6.00

Special Deal!! Buy a Maartists 4X Expander for $549.00, get any four disks as a bonus for $1.00!! Bonus disks apply toward quantity discounts. ***All 35 disks plus expander just $798.00.***
Demo cassette $5.00, sound list with descriptions $1.50. C.O.D. $4.00 additional shipping, cash or M.O. only.

****

NOW!!!! New VFX Sounds !!!!

60 Sounds and 20 Presets

Huge lush strings; atmospheric pads and washes; resonant synth sweeps; crisp, clear percussion; basses, guitars, and much much more.

Patchloader™ disk for Atari, Mac, or IBM compatible, (no librarian needed) $50.00

ROM cartridge $70.00
RAM cartridge $110.00

Sysex file on EPS or SQ-80 disk $40.00

TX81Z Sounds on Cassette

8 volumes (256 sounds) $30.00

Demo cassette for any library $5.00 each
Sound Lists with descriptions $1.50 each

Please include $3.00 shipping, CA residents add sales tax.
COD orders $4.00 additional, cash or MO only.

Ultimate ESQ-1 Library

960 sounds in categories $96.00
available on cassette, Mirage disk,
EPS sysex disk, MC-500 disk; ESQ-apade, Blank Sound File Opcode, Patchmaster+, ESQ-1 Manager™ Formats; ST Super Librarian disk (no librarian needed) and C64 Librarian.
ROMs, RAMs call or write for prices, info.

Complete SQ-80 Library

640 categorized sounds on disk $80.00
1600 ESQ-1 and SQ-80 sounds $128.00

D-50 Sounds on cards or disk

1. Top 40
2. Analog
3. New Age, Space
4. Orchestral

ROM cards $50.00 each, 4 for $160.00
All four volumes on disk $80.00
Dr. T's ST, Dr. T's PC, Opcode, Prolib, Patchmaster+, MC500 disk and ST Super Librarian disk (no librarian needed.)

Cesium Sound, 1442A Walnut St. #300, Berkeley, CA 94709 (415) 548-6193

MasterCard VISA

ESQ-apade is a trademark of Dr. T's Music Software. Opcode is a trademark of Opcode Systems. Blank is a trademark of Blank Software. D-50 and MC500 are trademarks of RolandCorp. TX81Z is a trademark of Yamaha International Corp. ESQ-1, Mirage, SQ-80, and Ensoniq are trademarks of Ensoniq Corp. Super Librarian is a trademark of Pixel Publishing. Patchmaster is a trademark of Voyetra Technologies. C-64 is a trademark of Commodore Computer Corp.

EZE? It's Hard to Tell

Reviewed by Michael D. Mortilla

For: EPS and Atari ST (mono screen & 1 MEG minimum).
Product: EZE - Visual editing of samples & instruments.
Price: $249 US (Demo Disk $7).
From: Gelva Software, PO Box 631, Double Bay, Sidney, NSW 2028, Australia. Phone: (02) 665-1040

Well, the EPS has been out for some time now and, as expected, third party support is under way. The first program to hit my Atari 1040 ST was the demo disk from Gelva Software. Their EZE disk is touted as a complete sample editing program and, if all the promises of the demo disk are fulfilled in the actual program disk, they'll have a sure-fire winner on their hands.

Unfortunately, I can't tell you how this program interacts with the EPS because the demo disk has no MIDI capabilities. In other words, the demo disk will show you the graphics and how they function, but how that all interfaces with the EPS is left to your imagination. Running this demo disk is like test driving a Porsche without turning on the engine! "Oh yeah! It's fast," the salesman says, "it handles like silk." But the proof of the pudding is in the eating and, in the world of MIDI and computers, the important things are interface and compatibility. I can't tell you anything about that from the demo disk, but I can tell you how the demo disk performed.

After reading the "Read Me" file, loading the "Program" file takes 30 seconds. Then, for 12 seconds, a beautiful logo comes whooshing across the screen and says it's OK to run the demo. A click on the dialogue box and the disk whirred for yet another 45 seconds. Finally, after a minute and a half, you're into the demo program.

This is not really an external editor as much as it is an external controller for the EPS. In other words, the changes you make to your instruments happen in the EPS, not in your ST. This speeds up the process of editing tremendously because you don't have to wait for the transfer of wave data out of the EPS. It's not really clear from the demo disk, but I assume that when you make a change on the ST screen that you can hear the results by playing on the EPS keyboard. Whether or not you must select the instrument on the EPS or if it's done through MIDI is one of those little questions left unanswered by the demo disk.

Like the logo, the program graphics are very well done. At first the instrument and wavesample parameter screens seem a little crowded. In fact, they are organized in a logical way. The instrument screen shows all the layers active in all the patches at once, as well as most of the edit and command instrument pages available on the EPS display! In and of itself, that is a big time saver. The wavesample screen is in the form of a flow chart (also very logical) and really helps in understanding how the EPS sounds are structured and manipulated. Clicking on the little envelope screens calls up the big envelope screens for editing. Both hard and soft velocities appear at once, each taking half a screen. While I could call up the wavesample screen, I couldn't enter data since there is no way to access MIDI in the demo program. I think it would be safe to assume that the wavesample and auto-looping screens would work just fine.

There are a few important things about this program which concern me. For one, when I selected Master Tune from the System menu, a little box appeared in the middle of the screen. I entered the box with the mouse and clicked (the left button for decrease, the right button for increase) and was unable to step by a single digit no matter how fast I clicked! The value always jumped between 6 and 12 digits at a time. The same held true for the Fine Tune box on the instrument screen. It's odd, but it only happened on Master and Fine Tuning. Also, once I set my Master Tuning, I couldn't re-call the Master Tune box unless I called up a different box first, then went to the System menu and called up the Master Tuning box. This may be a bug in the demo disk, but again, I have no way knowing for certain.

Another questionable item I found was the range of values available in this program as opposed to the EPS. For example, Master Tuning on the EPS is +/-99; in the EZE program the value range is +/-127! Global bend range on the EPS is 0-12; in the EZE program it is 0-13! Anyone who has worked with the EPS via MIDI is probably familiar with the Error 144 message. Ensoniq tells us that means "too much MIDI data." (I've gotten that message while there was nothing connected to the EPS!) The point is: what will happen when the EPS receives data out of range? My guess is that it will crash with an Error 144 message, but again, I have no way of knowing - at least not from the demo disk.

My instinct is to say that this program looks like it should work, but a more practical demo disk would be much more convincing. The fact that the company is based in Australia makes calling them expensive if you need information about the product, so my recommendation is to either wait until the program disk is reviewed or to take a chance if you can afford to part with $250. If the program works (as I suspect it does) the only other thing you'll need is a sequence editing program for the EPS. After that, you should have every tool you need.■

Tested and Approved Hard Drives for the EPS

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

TRANSONIQ-NET

HELP WITH QUESTIONS

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

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

VFX QUESTIONS - Sam Mims, Syntaur Productions. 818-769-4395. (CA)

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

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

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

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

ESQ-1 QUESTIONS - Jim Johnson, (602) 821-9266. 8 a.m. to 5 p.m. Mountain Time (AZ).

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

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

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

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

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

MIRAGE OPERATING SYSTEM - Mark Cecys. West-Coast Time. Days. (408) 253-8547.

MASOS - Pete Wacker. Whenever. (602) 938-0906.

BACK ISSUES

Back issues are $2.50 each. (Overseas: $3 each.) Issues 1-9, 11, 13-23, 27, 29, 30, 36, and 38 are no longer available. Subscriptions will be extended an equal number of issues for any issues ordered that are not available at the time we receive your order. ESQ-1 coverage started with Issue Number 13. SQ-80 coverage started with Number 29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage started with Number 30. (But didn't really get going till Number 35.) VFX coverage got started in Number 48. Permission has been given to photocopy issues that we no longer have available - check the classifieds for people offering them. Reprints in our "Quick and Dirty Reprint Series" are available: MIRAGE OPERATIONS, for $5, and MIRAGE SAMPLE REVIEWS for $4. Each contains material from the first 17 issues.

CHANGE OF ADDRESS

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

HYPERSONIQ

NEW PRODUCT RELEASES

Mirage Disk 1, a set of samples for the Ensoniq Mirage keyboard, is now available for $7.95 from **Syntaur Productions**. The disk brings to the Mirage the sounds of three popular keyboards: the classic Minimoog, the Yamaha DX-7, and the Ensoniq VFX. Samples: Minimoog Bass, Minimoog+Slap Bass, DX-7 Slam Bass, VFX Breathy Flute, VFX Breathy Voices, and VFX Funk Guitar. There are four different program variations of each sample. All sampling was done using the Input Sampling Filter for maximum rejection of aliasing noise. For information: Syntaur Productions, 11116 Aqua Vista, #2, North Hollywood, CA 91602.

Rubber Chicken has a new toll-free order hotline: 1-800-8-PRO-EPS (1-800-877-6377). Calls not involving orders should go to 206-242-9220.

Full Logic Studios is pleased to announce that Michael Duhaime, the owner and founder of **Softworx MIDI Systems**, has joined the staff at Full Logic as studio and sound engineer. Duhaime has a world-wide reputation as a premier sound engineer. Full Logic will be marketing products previously sold by Softworx. Contact: 603-352-DISK.

Sound Source Unlimited of Canoga Park, Calif. (sounds for Yamaha, Roland, Korg, Kawai & Emu products) announces its new libraries for Ensoniq products: *VFX Synthesizer Library*, and *EPS Sample Library*. SSU has also acquired the popular **Technosis** line (programmer Mike Peake) of ESQ/SQ80 sounds. For ordering or information, call toll free: 1-800-877-4SSU (US or Canada) or 1-818-882-2574 (all others).

The Other Guys announces the availability of *Synthia Professional* - a 16-bit complete sound synthesis/processing studio for Amiga computers. *Synthia Professional* includes sample rates from 4 kHz to over 50 kHz (CD quality), more than a dozen special effects (such as phasing, reverb, echo, chorus, pitch shifting, graphic EQ), utilities that allow file transfers between the EPS and other samplers and Mac and Amiga music programs, visual editing, and many other features. Suggested retail: $395. A demo disk is available for $10. Contact: The Other Guys, 55 N Main, Suite 301, PO Box H, Logan, UT 84321. 800-942-9402.

Turtle Beach Softworks announces the shipment of Oview/Proteus, their Synth Programmer for the E-mu Proteus and IBM compatible computers. This new product is the first of a series of synth programmers being developed by the company. The second Oview (now under development) is for the Ensoniq VFX and will be called *Oview/VFX*. The series represents a quantum leap in contemporary music software design. Capitalizing on their expertise in graphics for music programs, Turtle Beach has taken "user interface" to a new level. In the Oview series, the user is presented with a mouse / icon / pulldown menu environment which adheres to all industry standards and guidelines. The user is invited to design his/her own preferred "views" of the parameters of the synth in question. These views can be associated with function keys on the PC and can be switched instantly. In addition to all normal ed/lib functions like full bank editing, MIDI audition functions, and program cataloging, Oview provides the "Patch Stretcher", which generates sounds by reformulating existing ones, rather that the hit and miss techniques by random generators. Of particular interest to Ensoniq fans is the announcement that Turtle Beach is teaming up with Jim Johnson as the programmer for the Oview series. Jim has been involved with music software for five years, and has written several well-known algorithmic composition and patch-editing programs, and is also an expert on Ensoniq keyboards. Contact: Jeff Klinedinst, Turtle Beach Softworks, 717-757-2348.

Ensoniq Fall/Winter Clinic Schedule

Ensoniq Clinics are a great way to check out new products and developments as well as investigate new sounds and sequences and learn the latest "tricks-of-the-trade." Look for a clinic at a store in your area.

Date	Dealer	Address	Phone	Clinician
11/21	Irv's Music	1639 Atlantic Ave, Atlantic Cty NJ	609-345-6643	Doug Nestler
11/21	Rubinos Music	8102 Georgia St, Merrillville IN	219-736-9344	Mike Lundin
11/21	Vinces Music	110 Doucett Road, Lafayette LA	318-988-1717	Rick Parent
11/25	Earl Teat Music	Blue Hen Mall, Dover DE	302-736-1937	Doug Nestler
11/28	Naperville Music	618 E. Ogden Ave, Naperville IL	312-355-1478	Mike Lundin
11/28	Only Guitar	Route 9, Clifton Park NY	518-371-1232	Bob Stillman
11/28	Sam's Music	128 Holiday Ct, Franklin TN	615-794-4450	Bruce Wismer
11/29	Back Porch	511 Main St, Grand Junction CO	303-243-9711	Rick Parent
11/29	Coyle Music	4688 Cemetary Rd, Hilliard OH	614-771-9300	Doug Nestler
11/29	McNeil Music	Triphammer Mall, Ithaca NY	607-257-1142	Bob Stillman
11/29	Paragon Music	304 S. 72nd,Cedar Knoll,Omaha NE	402-390-9043	Mike Lundin
11/30	McNeil Music	4517 Old Vestal Rd, Binghamton NY	607-729-1548	Bob Stillman
11/30	ProSound	2417 N. Academy, Colorado Spr CO	719-597-9962	Rick Parent
12/1	ProSound	1638 Pearl Street, Boulder CO	303-444-1731	Rick Parent
12/2	ProSound	7405 E. Iliff, Denver CO	303-751-7575	Rick Parent
12/4	American Music	17045 S. Center Pkwy, Tukwila WA	206-575-1970	Bob Wehrman
12/5	American Music	14340 NE 20, Bellevue WA	206-641-5005	Bob Wehrman
12/5	Far Out Music	2008 Coopers Lane, Jeffersonville IN	812-282-1122	Doug Nestler
12/5	Simon Music	4303 44th Avenue, Moline IL	309-762-6834	Mike Lundin
12/5	Tarpley Music	3737 50th St, Lubbock TX	806-797-5833	Rick Parent
12/6	Music World	S. 38th Street, Tacoma WA	206-473-2120	Bob Wehrman
12/6	Owensboro Music	2350 New Hartford Pk, Owensboro KY	502-684-2156	Doug Nestler
12/6	West Music	1212 5th Street, Coralville IA	319-351-2000	Mike Lundin
12/7	American Music	4327 Freemont Ave, Seattle WA	206-633-1774	Bob Wehrman
12/7	Musicmakers	4100 San Pedro, San Antonio TX	512-737-0612	Rick Parent
12/7	Music Unlimited	8631 Douglas, Des Moines IA	515-278-4685	Mike Lundin
12/7	Opus 1 Music	3810 1st Avenue, Evansville IN	812-464-2909	Doug Nestler
12/10	Guitar Center	3228 N. Clark Street, Chicago IL	312-327-5687	Mike Lundin
12/12	Alexandria Music	5902 Skye Street, Alexandria LA	318-442-9686	Rick Parent
12/12	Willcutt Guitar	419 rosemont Garden, Lexington KY	606-276-2713	Doug Nestler
12/13	Easterling Music	604 Carter Street, Vidalia LA	318-336-7239	Rick Parent
12/13	Pied Piper Music	103 Kanawha Mall, Charleston WV	304-925-7676	Doug Nestler
12/14	Be Bop Music	2560 Government St, Baton Rouge LA	504-343-7433	Rick Parent
12/14	OB Fawley Music	233 High Street, Morgantown, WV	304-292-3352	Doug Nestler
12/18	Southern Radio	1909 Tulane Ave, New Orleans LA	504-524-2343	Rick Parent
12/19	Lake Charles	1000 E. Piren Lake Rd, Lake Charles LA	318-474-0430	Rick Parent
12/20	Guitar & Banjo	4355 Calder, Beaumont TX	409-892-8628	Rick Parent

Current Ensoniq Operating Systems

INST	OS	DISK	EPROMS
EPS	2.4	X	
EPS-M	2.4	X	
MASOS	2.0	X	
MIRAGE	3.2	X	
ESQ	3.5		X
ESQ-M	1.2		X
SQ-80	1.8		X
VFX	2.0		X
VFX-SD	1.30		X

Soundsets 1 & 2 for

ESQ1

SQ-80

New: VFX Mirage samples

Our sounds speak for themselves.

(Sometimes, others help.)

"I've been blown away by how much I like the Soundset 2 collection... Patches like AMBHIS and SERENE sound like they fell right off the Roland [D-50] truck."

Chris Barth, Soundset 2 review, Transoniq Hacker, Oct. 1989

Syntaur Soundsets 1 and 2 for the ESQ-1 and SQ-80, by Sam Mims. Each set of 40 sounds, with booklet of patch sheets, programming notes, and performance tips, is available for **$17.95** on data cassette, SQ-80 disk, or Mirage-format disk. Both Soundsets (80 patches) in above formats for **$29.95**, or on EEPROM for **$59.95**. Please specify format when ordering; all orders postpaid.

Mirage Disk 1, with Minimoog Bass, Moog+Slap Bass, DX-7 Slam Bass, VFX Breathy Flute, VFX Breathy Voices, and VFX Funk Guitar: **$7.95**.

SYNTAUR PRODUCTIONS
11116 Aqua Vista #2
North Hollywood, CA 91602

(818) 769-4395

ESQ-1 SQ-80 ESQm

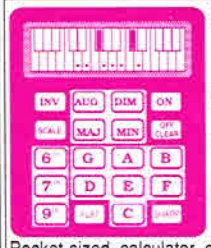
80 Voice ROMS **$25.00** ea.
160 Voice ROMS **$52.00** ea.
320 Voice ROMS **$99.00** ea.
80 Voice Percussion ROM **$30.00**

ORCHESTRAL • BASSES • PIANOS • BRASS • STRINGS
And many, many more!
WOODWINDS • SYNTH SOUNDS • ENSEMBLES • NEW AGE

Valhala was the first company to make ROM cartridges available for the ESQ1. We are also the only company to offer a 320 voice ROM. At Valhala, we take pride in keeping one step ahead of the rest. In fact, our voices are so great that the Ensoniq Corporation used Valhala's ESQ1 ROMs to help demonstrate their ESQ1 at the January 1987 NAMM show.

You can't ask for a better recommendation than that!

Please write or call the info line for complete voice listings.



KEYBOARD CHORD COMPUTER

only **$49.00**

Now available: Guitar Chord Computer only $49.00.

Pocket-sized calculator displays keyboard on which you can instantly show all common chords and inversions, notes of all major scales, melodic ascending and descending minor scales, harmonic minor scales and all augmented and diminished triads as well as diminished 7th chords - and it transposes all chords and scales up and down by half steps. ***An indispensable aid.***
Size: 3 3/8" x 4 7/8" (Batteries included.)

757 Voices

for your DX7, TX7, DX21, DX27, DX100, TX81Z, DX11 or V50.
Available on Data Cassette, Mac™ 3.5" disk for Valhala's TX81Z program or Opcode's Mac program or V50 3.5" disk.

$56.00
per format

Add new dimensions to your Synthesizer!

D-50 D-20

Top 40 • New Age • PCM Analog • Digital • Orchestral • Sound Effects •

The STUDIO SERIES™ 448 New and exciting voicesnow available on our seven different STUDIO SERIES™ Sound Blocks for your D10, D20, D5, D50, D550 or D110.

$40.00 each

D-10 D-110

NOW AVAILABLE!

ROMS and RAMS For:
KORG M1 / M1R

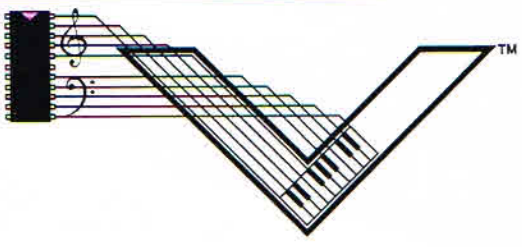
VALHALA's ROMS M101 thru M104 for use with your M1 and the keyboards internal PCMs. Only $45.00 per ROM card.

VALHALA MCR-03 RAM memory cards as low as $65.00 each when purchased in quanties of three or more!

Send a Self-Addressed Stamped Legal-Sized Envelope for complete info and voice listings.

DX7 SPL™	$29.00
TX81Z/DX11 SPL™	$25.00
ESQ1 SPL™	$25.00
ESQ1 Bible™	$19.00

Each Sound Patch Library™ has 757 new & very useful patches. Voices range from traditional acoustic instruments to New Age sounds. The only comprehensive library of sounds in printed form. The ESQ1 Bible™ will help novices to enhance their voice programming skills, and it even includes 40 patches explained.



For info requests, voice listings, assistance or to check on the status of an order call:

1-313-548-9360

Our toll-free number is for the placing of Visa or MasterCard Orders ONLY (No COD's). When calling have your card number ready along with the expiration date.

VISA

ORDERS ONLY call:
1-800-648-6434 ext. 506

MasterCard

Shipping Handling Info

Mail-Orders, write down product wanted and include correct S/H fee and tax if in Mich.

Continental USA $4.00 S/H; 2nd Day UPS $7.00. Mich. res. add 4% tax. Alaska, Hawaii & Canada $12.00 S/H. All others $25.00 + $3.50 for each additional item ordered. All foreign payments must be in USA FUNDS drawn on a USA bank. All ChargeCard orders under $15.00 subject to a $2.00 Service fee.

VALHALA Box 20157-TH Ferndale, Michigan 48220

Specs/ prices subject to change without notice. Studio Series, ESQ1 Bible and Sound Patch Library are trademarks of Valhala Music, Inc.. This ad and text Copyright ©1989 VALHALA Music, Inc. Macintosh is a trademark of Apple, Inc.

Mirage To EPS Conversion (2)

(Or, how to get 8 sounds into 1 instrument)

by William Pont

Greetings to all you EPS and Mirage addicts, from the Happy Hacker. In previous articles folks like Dick Lord and Steven Fox have been byting the bugs; in this contribution I hope to bug the bytes... By now it is safe to assume that ever EPS-nut has read Clark Salisbury's article on converting MIRAGE-sounds to EPS-format. See *Transoniq Hacker*, Issue #36, June 1988. If you missed it this may be a good time to order some back issues?

There are some nifty things you can do with a MIRAGE-sound that wasn't covered by Clark. Although we won't be doing wholesale memory-saving it appears frequently in the form of TRUNCATE WAVESAMPLE. More on this later. For a detailed look at saving memory refer to another of Clark's articles, *"Surviving the Memory Shortage"*, Issue #38.

In this session we will attempt to become EPS-taxidermists, i.e., we will try to stuff as many sounds in as little memory as possible. This can only be achieved through the use of all eight layers rather than copying wavesamples.

First, get Sound Disk 2 of the MIRAGE. This disk is special in that it contains many more sounds than do the standard sound disks. If you don't have it, buy it, or copy it (some local authorities may disapprove of the last suggestion, but get it anyway...) Keep a blank diskette handy, you may want to save your newfound riches.

Insert the Mirage disk and load Lower Bank 1, Program 1.

(Details on how to do this can be found in your *Musicians Manual* and in yet another of Clark's articles.)

This bank contains four sounds: a bell, something called meta, an organ and a clavinet (hohum...). It occupies 268 blocks of EPS memory, approximately 68 Kbytes. The bulk of this is taken up by the bellsound, at 218 blocks.

After you have loaded the file play a key.

The bell still sounds like a bell but the loop has become painfully audible. This is due to the advanced circuitry of the EPS and Ensoniq has been advised to re-do the loop of some of the Mirage sounds on a number of occasions.

So. Let's play doctor.

Press EDIT/INSTRUMENT and scroll to UNNAMED INST. Give this baby a name, perhaps MIRAGECLONE, HELLS BELLS or whatever.

Press EDIT. You are now at the layer-wave page.

Underline layer and set it to 2. Press COMMAND/LAYER. Scroll to DELETE LAYER. enter YES. The EPS asks for confirmation. Press YES again and layer 2 is gone. Play the keyboard again and discover that our bell is still there albeit a little softer than before. Not to worry. While in the layer/wave page, observe that the bellsample consists of just one sample. That means that all the other samples are unused. Delete them. If you don't see the other samples then press the up or down arrows. You will get quite a few different numbers and then ALL. Read Clark's article "MIRAGE TO EPS SOUND CONVERSION". All the details of getting rid of unused wavesamples can be found there.

Now that you have deleted all wavesamples except #1 we can get to work.

Press EDIT again, then wave. Scroll to SMPL START=0 (0).

The first figure is the actual sample-count, the second figure is the position indicator in percents.

The bell starts at 0 so on to SAMPLE END=55040 (84).

As the position indicator shows, 16% of our sample is occupying memory but is not used in the bell. Press COMMAND/WAVE and scroll to TRUNCATE WAVESAMPLE. Enter YES and now the EPS wants some O.S. so insert your O.S. disk. After a short while the command is executed and you have just shortened your file from 268 to 218 blocks.

Not bad, huh?

But we still have a bad loop. Get back in EDIT/WAVE mode. Scroll to LOOPSTART=54527 (83). Set it to 53417 (81). If the EPS doesn't settle on this value it may be because the auto-loop function is on. You can switch it OFF in the EDIT/SYSTEM page. But since the second half of the bell sample is a fairly constant sound this should not be a problem with auto-loop still on. Now scroll to LOOPEND=54783 (83). Set this to 54442 (83).

And, unless you intend using a complicated "BOW-TIE" loop, I suggest you set SAMPLE END to 54442 as well. Then truncate the wave again and save another 3 blocks. The file is now 215 blocks big. SAVE! Always save when finishing work on a particular sample. Make this a habit right from the start.

The save command can be found in the COMMAND/INSTRUMENT page. Since you've already named your file HELLS BELLS, you can press ENTER/YES after the display shows the name.

You now are the owner of such a perfect bell your parish priest will be jealous.

On to sound 2; META. Load the MIRAGE disk as before. Now that you have the new sound loaded, reload HELLS BEIIS. Again get rid of all unwanted wavesamples and layer 2.

After you have stripped all the flotsam from the meta sample, get into the EDIT/WAVE page. Observe that the SMPL START=57344 (87) and SAMPLE END=60672 (92). It follows that this wavesample occupies a mere 5% of the entire memory used by this Mirage bank. Truncate as before. Think of truncating as follows: everything between the sample start and end parameters is lifted out of its present environment and moved right to the beginning of the EPS memory, or if there is

something there already, right behind that. Everything else is "forgotten," discarded. Truncation is essentially a copy routine.

After this operation, your new file should be 16 blocks long.

Now here is a bit of exiting news for the most ardent of you save-memory-junkies, this sound can be shortened significantly without much loss of fidelity. You could try bringing down the LOOP START parameter and the LOOP END parameter. Very tedious if you do it that way. Instead use the LOOP POSition parameter. The loop length stays the same, but the actual loop is moved within the wavesample. By using your ears (and your eyes) you can determine, with a high degree of accuracy, where the loop will sound the same as it did in its original place, thus saving huge amounts of memory. A good example is the organ sound which can be shortened to a single page (256 bytes) if you play your cards right.

Let's get back to our META noise. 16 blocks. Copy this sound to HELLS BELLS in the COMMAND/LAYER page. Scroll to COPY LAYER. Hit ENTER/YES. The EPS offers either TO UNNAMED INSTER or HELLS BELLS. Since we are creating a new patch for the latter, that is the one to choose.

We are copying from one instrument to another so both data and parameters are copied. (If you copy within an instrument the EPS politely offers the option of data and parameters or parameters only.)

After an instant the display reads LAYER 3 CREATED. (The bell has 2 layers) Playing the keyboard now yields not only our META but the BELL as well.

That is not what we had in mind. Press EDIT/INSTRUMENT and scroll to the patch-page. The display shows 00 PATCH 123---- which is the default patch. No patch buttons depressed. If you press any of the patch buttons now, you should get a star instead of the zero.

The EPS always initializes layers 1, 2, and 3 when you create a new instrument. Another strange quirk... The cursor is under the 1. Now press the left patch-button. Use the down arrow to turn everything off except layer 3. If it is OFF turn it ON with the up arrow. Now you should only hear our metallic sound. Time to save to disk again unless you want to copy layer 3 to layer 4 for a fatter sound, but remember: there are only 8 layers, so if you do that you will only have 4 sounds in your instrument. If so, delete layer 2 so you can use it later for another sound. Name layers before saving otherwise, if you have 8 sounds, you may forget what they are. Naming layers is done in the EDIT/LAYER page.

SAVE.

By now you should have the idea. The organ and clavinet both have a loop click so for convenience sake a list of wave parameters follows. Everything else is as described above.

Suffice it to say that you could have all the Mirage drums into layers 1, 2, & 3 and still have 5 layers free.

Consider the technique used by Mark Cecys in SoundProcess. 72 samples in one bank, 32 sounds instantly available! If you had sounds of not longer than 2, 4 or 8 pages, you could assign a different sound to each key of the EPS by using the multisampling possibilities.

Memory permitting one could have 488 sounds in the EPS at the same time, each having one key. The possibilities are truly endless.

After loading the sound, set the parameters as below, THEN truncate. If you have problems setting the loops, switch off the AUTO-LOOP. ▬

SOUND/BLOCKS =	BEL	215	META	16	ORGAN	4	CLAVINET	4
SMPL START =	0	(0)	57344	(87)	61106	(93)	63207	(96)
SAMPLE END =	54442	(83)	60672	(92)	61363	(93)	63463	(96)
LOOP START =	53417	(81)	60159	(91)	61106	(93)	63207	(96)
LOOP END =	54442	(83)	60415	(91)	61363	(93)	63463	(96)

"Life with E. van EPS"
The First Week

by Pat Finnigan

OK, I shopped and shopped and coulda bought an M1 but it had too weenie a sequencer for me. I thought about Kurz modules to expand my ESQ-based system (2 DSK's, a rack, D-110, SPM 8:2, Midiverb) but I needed a change. I got so tired looking at all the "*MIDI*" track assignments on old faithful, she deserved a rest. I wore out the ROM sockets installing every updated OS for her. I simply figured she was getting lonely performing all the sequencing chores.

So I popped for the EPS, got it home, pulled a DSK and plumbed it up. I'd like to share this first week with you techoids just as a matter of how trial and error are our best friends...

DAY ONE: Picked it up at local music dealer. Filled out Warranty Card at 1:30 pm. Opened it at store and lo and behold, the AAG is bundled with disks, ac cord and sustain pedal. EPS installed T-frame by 2:30 pm. Power up, audition disks, power down at 5:15 for dinner. 5:42 pm: back at EPS with *"Night in Two"* disk booted trying to overwrite horrible trombone voicing of bridge. Discovery that "Save Sequence" adds new bridge to disk file without replacing old. Open Musicians Guide for 1st time and discover bridge sequence must be titled as old bridge to replace bogus 'bone tracks. Audition *"Night in Two (nesia)"* feeling like Tommy Dorsey. Amazed at how many more menu pages in this box than ESQ: old programming conventions die hard. Power down after

formatting box of disks. Pass out at 2:30 am.

DAY TWO: Power up EPS to discover I forgot to write OS to disks. Ah, disk chores. Operational at 5:17 pm. Notice lot of hiss in headphones. EPS suspect. Turn down EPS channels, hiss still present. D-110 culprit. Power down all instruments and shut down channels of all but ESQ. Hiss disappears. Turn sequencer on *"Night in Two"* - music jumps out of Roland phone. Stop sequencer, still no hiss. I find noise claims of EPS to be commensurate with depth of cow urine upon flat rock: EPS quietest gear in rack, perhaps quietest keyboard ever invented. Pat myself on back for making right choice. Break for dinner 6:27. Resume at 6:41. Begin Mirage-like task of assembling disk for personal preference. Discover EPS w/2X memory greater than disk capacity. Kick self in butt for not noticing this in two previous road tests. Delete OS from disk by reformatting, power down at 1:35, grumble to sleep at 2:30ish.

DAY THREE: Power up at 5:15 and open AAG for 1st time to find how to delete file from disk without saving desired file to blank disk and reformatting old one. AAG raises flag and points to *Musician's Manual.* Shoulda bought a desk w/unit. Discover how to find free system and free disk blocks as an aside. Lose interest due to stomach growling louder than headphones. Break for dinner at 6:12, resume 6:30. Decide to venture into MIDI realm and create "Smart MIDI out" instruments. Success w/drum kit at 6:55, all tracks titled and saved by 7:08. Feeling better about EPS again. Amazed at how fast MIDI instruments are saved. 7:33: stumbling through manual and discover Bank command. Breakthrough! Load times reduced as streamlined Bank saves. Save MIDI instruments as bank, power down and power up to time boot load of MIDI bank. Confidence restored in Ensoniq, I "bank load" *"Night in Tunisia;"* what's this message, "Load Song Too?" Press yes and tracks/instruments automatically assigned to proper locations? Play confirms, pat self on back again for making right choice and kick self in butt yet again for not reading manual. Out to Chi-Chi's at 8:30 to appease neglected spouse, to bed to read manuals at 10:25: pass out at 2:12.

DAY FOUR: Power up at 5:16 for extended button-pushing exercise to see what commands displayed. Just like the manual said; amazing thing? OK, time for serious MIDIology. Press System and MIDI and presto, System Exclusive. Decide to eat before I do the old in/out b/w EPS & ESQ: break at 6:06. Resume operations 6:11. Attempt full ESQ dump (Free=00032; Viola! "Receiving" blinking at same frequency of "*Formatting*". Save to disk, title and note file is 436 blocks. This thing is pretty slick. Sell one DSK to retiring auto worker to tinker with. Now thinking comparison of DSK to EPS similar to Casio and New England Digital. Attempt reload of same file after reinitialization. Forget to switch "Sys-ex on" on both EPS and ESQ. Try again, no luck. Hour and a half later of switching MIDI cords, find bad one, replace, still no success. Hour later, remember to switch thru box in's to ESQ, Success! (What did I do with the OS 3.5 leaflet after I reassembled the ESQ last time?) Decide to try transfer ESQ song to EPS. EPS won't record all tracks simultaneously (like D-20). Can't get EPS to record any track at all. Discover "MIDI In" pages of EPS. Mute all ESQ tracks but one, set common MIDI channels; no luck. Decide to call Malvern tomorrow. Save work, power down at 1:22 to retire to manuals. Pass out 3:10.

DAY FIVE: Call Ensoniq 1:20. Discover "POLY" mode must be on EPS and ESQ, base channels must be alike, and MIDI all tracks to be transferred on ESQ. Thank customer service for waiting while I wrote this all down. Rush home, power up, config system on both instruments; more success! Noting p.43 in AAG I promise self never to call Malvern again until I memorize last five pages of *Musician's Guide.* Transferring tracks so time consuming, decide to keep ESQ and rack, trade other DSK for signal processing gear and software. Keep rack DMS and ESQ for live performance, EPS for composing (or will I?). Take break at 10:48 to stretch and visit bathroom, resume 10:54. Getting very tired of waiting for track transfer b/w ESQ & EPS; getting very tired in general. Retire at 11:15 - wife asks, "What broke?" Off to sleep at 2:30ish after sys-ex w/spouse.

DAY SIX: Early start today (Saturday) at 9:15. After massaging the EP off of the EPS today we transfer Mirage samples to the EPS. Discover Mirage writes odd-numbered samples to EPS. Am grateful to Malvern for including this scheme into OS; library very grateful. Wallet thanks me for insight. Discover that SS/SD won't store, and one of my SS/DD has "Corrupted Disk Data." Also 3M DS/DD 1.OM disks such; fortunately only lost diddles and easily replaced MIDI instruments. Note to power users: bass samples undergoing sample rate conversion get unbelievable low boost in the process. My E. Bass A DX sample went deaf on me, but it fits so well with "hit Kit" demos I included it onto the bank. My trusty S-10 fretless sample turned into Jaco's dual 360's. I don't need EQ anymore. Dump SAE 1800, reset all SPM 8:2 patches to flat, and break for supper at 7:30ish after packing up ESQ for gig tonight. Not yet brave enough to unveil EPS to buddies yet as Performance Presets still mystery to me. Return home at 2:20 to undress and throw smoke- and beer-infested clothing outside to wash in morning rain. Pass out after reading looping chapter of AAG at 2:53.

DAY SEVEN: Early morning rain too gentle as wet clothes still smell sorta like last night. Into the drink w/them and assorted others. Power up EPS 11:22 and write first song - *"Brain Dead."* Hey, zooming thru pages and commands, I finally have a working knowledge of this instrument. As this song underwent construction I realize a little knowledge is a dangerous thing. I now have trouble navigating around the ESQ, but isn't that why I bought this thing in the first place? Transferred more DSK samples to EPS; I'm managing memory as if I designed this thing. "Free Disk Blocks" are between 8 and 22 now. Pulled out #42 TH w/Salisbury's *"Surviving the Memory Shortage"* to come to grips with layers. Hey, I didn't get *"Fantasia"* with my EPS. Pulled out the one converting the "Bass and Sax" DSK conversion; Viola! "Just like the record" comes to mind. Finish tune; tape: audition on livingroom B&O stereo: Happy Camper. Power down and watch 49er's beat Bangals.

Although the times noted are approximate to the nearest 10 minutes, the thing that surprised my the most was the LAST thing I learned were the sampling functions. I don't know if that is a blanket indictment of my preoccupation with the whistles and bells of a new technology or my experience with the labyrinth of DSK sampling (w/filter). I bought a sampler and the last thing I did was sample with it. Is that an endorsement for this product or what? As for if I made the right choice when deciding on this instrument, tell me; seen any EPS samples for the M1? ▬

Bio: Pat Finnegan is an A/V service tech who repairs broadcast video equipment by day, audio equipment by night, and composes on as EPS, ESQ-1 and 3 Mirages by morning. Weekends he plays bassoon and collects and restores Corvair convertibles. Ah, the good life...

"75 Waveforms? In an ESQ1!?!"

by Gary Sterling

Yes, dear Ensoniq fans, the ESQ1 that we all know and love does - repeat DOES - accommodate 75 waveforms. In fact, the phantom waveforms are already there, inside your ESQ! (or ESQ-M)! Although they're not the same great 75 waves as in the SQ-80, the ESQ does contain 75 locations with some kind of waveform in each. In this article, I'll tell you not only how to access them, but also how to make a patch template so that you can make your own patches with the newly-discovered waves.

First, you'll need access to an SQ-80. No problem. Just go down to your friendly, neighborhood Ensoniq dealer where you bought your ESQ1. Second, you'll need to take along one of your ESQ-1 EEPROM cartridges.

Ok, you're standing in front of the SQ80. Now what? Relax, this only takes about five minutes. First, call up any internal SQ80 patch. It doesn't matter which one. Next, call up the "OSC1" page and set the OSC1 waveform to DRUMS5. (That's the last waveform in the SQ80--number 75.) Then do the same for OSC2 and OSC3. Set them to DRUMS5 also. OK, now you have a new patch in which all three OSCs contain the DRUMS5 waveform. You can ignore all the other parameters for now, and don't worry about how it sounds. You're only interested in the OSC values.

Next, rename this current patch with a title you'll recognize, like WAV75 (real original, isn't it?). Now put your ESQ EEPROM cartridge (that you brought with you) into the SQ80 cartridge slot and copy your newly-made patch to it. I copied it to two different locations just to be safe. That's it. You have what you came for. So pull out your EEPROM cartridge, thank your SQ-80 source profusely and hurry home to your trusty ESQ-1.

Upon arrival, insert the EEPROM cartridge into the ESQ1 cartridge slot and call up the WAV75 patch. Before you get too excited, though, you may want to turn off DCA2 and DCA3. That way, you can audition each waveform separately. Now, select the OSC1 page and look at the waveform. It says "WAV 74"! Voila, PHANTOM WAVEFORM 75 (Ensoniq counts 0-74, not 1-75). Go ahead, play the patch. It probably sounds weird, but it does play something, doesn't it? That's because there is a location 75 with a waveform in that location! Now, decrement one waveform to WAV 73 and play it. Weird again, right? But it still plays something. As you decrement, most of the waveforms seem to be some kind of noise, but some are actually musical. Interestingly, several of the waveforms sound differently depending on the position played on the keyboard. Once you decrement below waveform 32, you find the standard ESQ-1 waves.

Now, try to increment back up above number 32. Gotcha! You can't! You can decrement but can't increment. That, my friends, is why we made this WAV 75 patch template. It allows you to create and store patches made from all 75 waveforms. But, since you can't increment above #32, any patch you want to make (from the additional 43) must start at or above the desired waveform for each OSC.

If you would like to "clean up" your new patch template a bit, you might standardize some of the other parameters, such as turning off all MODS, setting DCA volumes equally, etc. Set up the template any way you like, or set up several with different parameters. But you need only one template to make all the patches you want. Just save them to another location in your ESQ1 EEPROM cartridge, internal memory, patch librarian, etc,

So there you have it. Seventy-five waveforms in your ESQ-1, a way to access them, and a patch template for using them in your patches. All of the waveforms may not be useful to you, but I guarantee you can create some intriguing sounds with them. And, who knows, maybe someday, Ensoniq just might...

[NOTE: Ensoniq informs us that the sounds obtained via this method may vary from O.S. to O.S.] ▬

BIO: By day, co-owner of small computer repair business. By night, songwriter, occasional perfomer, and MIDIot.

A NEW LIFE
FOR THE ESQ-1

"THE WORX"

THE DIFINITIVE LIBRARY OF 1760 SOUNDS FOR THE ESQ-1 AND SQ-80. CASSETTE, OPCODE AND STD MIDI FILES FOR THE MAC ONLY.
$99.95

"INFINITY"

FOR THE EMAX - 10 DISK SET. OVER 550 PRESETS OF TOP SYNTHS FROM AROUND THE WORLD. INSPIRED! OPERATING SYSTEMS 3.2 AND SE.
$199.95

"WAVEFORM-1000"

KURZWEIL K & PX-1000. 64 SOUND PROGRAMS. MAC AND ATARI.
$39.95

FULL LOGIC STUDIOS
115 RAILROAD STREET
KEENE, N.H. 03431
603 - 352 - DISK

MC & VISA

EPS Click Tricks

by Bryce Inman

It's been a long, tedious tack, but I've finally converted all my old Mirage samples into the EPS format and whipped them into shape. As I was transferring all those sounds, I developed some extremely profound philosophies:

1. This is a good time to split up a lot of the sounds. There's really no reason to load a cello and flute at the same time, for example. Besides, the EPS is so easy to operate that putting sounds back together is a breeze.

2. This is also an excellent time to get rid of a lot of samples of questionable quality. Sampling is so easy on the EPS that it's often easier to make a new sample than to attempt to resuscitate an ailing Mirage sample.

The process of converting all these sounds proved to be an excellent tutorial for learning my way around a multitude of EPS functions. The focus of this article will be the methods I developed for getting rid of those annoying "clicks" or "pops" in otherwise wonderful wavesamples.

CLICKS AT THE END OF NON-LOOPED WAVESAMPLES

This is a relatively simple operation. Press EDIT and make sure the number of the offending wavesample is underlined. Now press Wave and scroll to the Sample End page. Underline the number on the left and press the down arrow once. Play a note and the click should be gone. If it's not, continue pressing the down arrow until the click is gone. Now truncate the wavesample and send that click into oblivion. (I know it's been written in these pages before, but I'll repeat it because it's so important--TRUNCATE ALL YOUR WAVESAMPLES. The amount of memory you can save is often enough to take care of the federal deficit.)

CLICKS AT THE END OF LOOPED WAVESAMPLES

This one really had me puzzled - the wave sounded gorgeous with a seamless loop and I had truncated the wavesample. Nevertheless, whenever I let up on a key, there was that hideous click, cruelly laughing at me.

I finally found the culprit in the filter and amp envelopes. If you've got a wavesample with this problem, check out the values on the times page of both the Filter and Amp envelopes. Look at the time on the far right (release time). If the value for time 5 of either of the envelopes is 0, move it up to about 10.

Apparently, the EPS is offended when it's told to shut up too quickly. So, if the release time for either the filter or amp is set to 0, the EPS lets its feelings known with the click. By increasing the value a little, you can reach a compromise with your EPS: the cutoff is still almost instantaneous when the key is released and the board doesn't get its feelings hurt.

CLICKS IN THE MIDDLE OF A WAVESAMPLE

This procedure is a bit more involved than the first two, and is something you may not want to bother with unless you just can't live without a particular wavesample.

A couple of cautionary notes - This is a "cut and paste" type procedure that could really screw up your wavesample - so, make sure you have the wave stored to disk first. Also, I have only performed this operation on non-looped sounds, so I'm not sure what effect it may have on waves that are looped.

The first thing we need to do is pinpoint the location of this evil click. Let's do this step by step:

1. Press EDIT and make sure the correct wavesample is underlined.

2. Press Wave and scroll right, writing down all the values on the Sample Start (we'll call this value A) and Sample End (we'll call this value D) pages.

3. Go to the Sample End page, underline the coarse adjust (the number in parentheses) and, while playing a note, press the down arrow until the click is gone. How underline the fine adjust (the number on the left) and move it up and down until you find the exact point preceding the click. Write down this number as value B and return the sample end to its original position.

4. Now go to the Sample Start page and repeat the procedures in Step 2 to find the exact point after the click. Write these numbers down as value C and return the sample start to its original position.

It's quite possible that there is a better way to accomplish this next part, but this is how I do it.

Let's assume that the wavesample we're working with is Wavesample 1 in Layer 1. We need a destination for the data we'll be editing, so do the following:

5. Press COMMAND, then Layer. Press Yes on the Create Layer page to create Layer 2.

6. Press COMMAND, then Wave. Press Yes on the Create New Wavesample page to create Wavesample 2.

When we created Wavesample 2 we also created a square wave which we don't want, so we'll blast that sucker!

7. Make sure you're working with Wavesample 2 then press COMMAND and then LFO.

8. Scroll to the Clear Data page and set START ADDR = 00 (00) and END ADDR = 144 (99) then press Yes.

One more step and we'll be ready for the real magic of this operation:

9. Set up a patch that will play only Layer 1 and another that will play only Layer 2 so you can compare your work as you proceed.

Now for the surgery:

10. Go back to Layer 1 and be sure that Wavesample 1 is underlined.

11. Press COMMAND, then LFO. Scroll to the Copy Data page and press Yes.

Set the values as follows:

FR INST = 1 LYR = 1 WS = 1
START ADDR = Value A (from Step 2)
END ADDR = Value B (from Step 3)
TO INST = 1 LYR = 2 WS = 2
DEST ADDR = 00 (00)

Now press Yes.

We have just moved all the data proceeding the click in Wavesample 1 to the beginning of Wavesample 2.

12. Once again, get back to Layer 1 and underline wavesample 1.

13. Press COMMAND then LFO. Scroll to the Copy Data page and press Yes.

Set the values as follows:

FR INST = 1 LYR = 1 WS = 1
START ADDR = Value C (from Step 4)
END ADDR = Value D (from Step 2)
TO INST = 1 LYR = 2 WS = 2
DEST ADDR Value B (from Step 3) PLUS 1!

For Example: if Value B is 2500 (50) then DEST ADDR should be 2501 (50).

Now press Yes.

We have now taken the data after the click in Wavesample 1 and appended it to the data in Wavesample 2.

The final step is to copy the parameters from Wavesample 1 to Wavesample 2.

14. Go back to Layer 1 and underline Wavesample 1.

15. Press COMMAND then Wave then scroll to the Copy Wave Parameters page. Press Yes. And set the following values:

TO INST = 1 LYR = 2 WS = 2

Press Yes.

Now press the patch button that will allow you to listen to only Wavesample 2. You should hear your beloved wavesample without that nasty click.

It occurs to me that there may be some people of questionable mental stability who might be saying, "Hey! I love that little click. It's the rest of the wavesample I want to get rid of."

I'll leave that one up to you. ▬

The Wind In The Wires

by John Gummere

If you happen to be one of those folks who has tested the waters of the sampling world and suddenly found themselves immersed in a realm of exciting possibilities, but haven't yet decided which currents to follow (or even if you've done it a lot and are looking for interesting new things), then allow me to take you to a cool little lagoon called "Stringed Instrument Harmonics." It's a fun place to pull up and explore around; if you're patient, you might spot a curiosity like the Flying Koto, or an Overdrone, or perhaps the rare, elusive Howling Dingbat...

Once upon a time back in the dim past, about 10 years B.C. (Before Chips), an alleged "crackpot" musical inventor, Prof. Henri Pique-Guarde, was toying around with an idea for a new-fangled instrument called the Harmonet. The Professor's concept was a sort of harp-like contraption which would be arranged so that the harmonic nodes of each string could be extensively manipulated while playing, thereby making notes and chords using only the pure harmonic-type sounds that resulted. The design was aimed at making something relatively easy to play without excessive mechanical complexity or unwieldiness, which proved a difficult tradeoff to resolve. It was finally decided that the Pneumatic Many-fingered Vector Positional Array was the best solution. The customers would simply have to provide some means of transport for the thing. No problem. Performers could get their audience to help, for instance.

Anyway, if there's anyone out there who has come across one of the rare prototypes, please let me know and I'll send a truck over someday. (it's rumored that the Professor has since moved to the Himalayas). In the meantime, though, I'm preoccupied with this Digital Thing.

Well, these days such ideas don't have to lie forgotten in some limbo attic. The enterprising wave hunter can simply go and lift harmonic-type sounds right off any old guitar or fiddle lying around (a beat-up plastic toy ukelele might do just fine, actually) and come up with interesting variations on plucked sounds or perhaps something completely different.

It turns out, with a little experimentation, that there are a number of ways to present this type of sound to the EPS's sampling circuitry. In addition to the different timbres of the various string thicknesses (plus your choice of electric vs. acoustic), there also seem to be lots of different attack flavors, too, depending on how you strike it. There's a plethora of thumps and tings and buzzes and what have you. Also, one has the option of mixing the harmonic itself with the fundamental by varying the way one fingers the node after plucking the string. You may have to work with the "WaveSample Range" (accessed by pressing Set Keyboard

Range button just after sampling) function if you don't pick the right root key for the frequency range you want the sound to ultimately be in.

You can also play a fretted note and damp it just so to achieve a sort of keening resonance; a "harmonic bite," if you will (players such as Ol' Jimi were masters of this technique). At one point I found myself accidentally duplicating the opening note in the Beatles "I Feel Fine." Stashed that one away pretty quick!

One very useful trick that no electronic keyboardist/ experimenter worth his power supply should be unaware of is the technique of transposing a sampled high frequency sound down to see how it does in bass duty, and vice versa. Carefully executed harmonics can get you some good results with this, though you may find that when you start out with a high note, you may have to raise the sampling threshold level and give it some pre-trigger in order to deal with the blank space opening up in front of the attack when you transpose it down.

And don't forget Loop-or-Not-To-Loop. It turns out both are quite usable; though you'll find, of course, that an unlooped harmonic is a real block eater due to that long decay (especially on lower notes). Loops are real easy to find on the purer harmonics, though, probably due to the simpler waveform. And, as on any sample, if you bring the loop start right up next to the attack you'll often find a completely different sort of sound can result. I was struck by the variance between the pure unlooped sample and the little piece of short loop repeating itself at various frequencies. By gosh, uses practically no memory at all, too! Amazing.

Using a visual editor, as is urged a lot, can be the "plush" way to go, especially if you've got some really busy stuff going on; I like using the "Moon Gardens" frequency analyzer in the SampleVision program, which is undeniably useful for hunting down noise and tweaking equalization and such.

I have found, though, that being adventuresome with various parameters can sometimes bring really satisfying results, especially when flying on the front panel instrument; after awhile you slowly begin to realize that this trip you're on is really a quest for some sort of Grail that might be called the Perfect Mistake.

Some people prefer to use the sampling thing to try to create simulations of existing instruments; other folks are looking for the unusual-but-useful sounds, a kind of serendipitous "found art" synthesis. I myself, admittedly a bit skeptical at first, have now fallen headlong into this latter category.

So, now I have a bunch of disks labeled, "Harmonet 1, Harmonet 2, Harmonet 3" etc. (The Professor would be excited, I'm sure.) These can now be used by themselves or ganged together with other voices for excellent contrast and enhancement effects.

And what about the "Wind in The Wires" business? I was just getting to that. Out here in the desert where I live, there are a set of power lines strung nearby, which, when the wind is blowing at right angles make the strangest moaning sound. It's spooky (especially at night... kind of primeval or something). So I was wondering how the Professor might construct an instrument on such a scale when it suddenly occurred to be that, hey, why not just get a Nagra or a DAT and a mike or maybe a sound van and rent a cherry picker and, and... 15,000 volts, hmmm. Well now, y'know, I'm kinda chicken actually. Afraid of heights.

I've heard, though, that the legendary Groaning Toadfish makes a good Primordial Ooze-type sound. Maybe I'll go find one of them.

Recipe for "Flying Koto": I was experimenting with some Oriental-style compositions and needed something just a bit offbeat to express them, so I worked up this little sound.

- Take one EPS and one electric guitar (I used a nylon stringed electric); get a good, clean sample of the A or D string, balancing between the 1st order harmonic (12th fret) and the fundamental. Pick root key A3 or D4. Transpose wavesample up or down depending on the high/low mix of your result (or where you ultimately want to place it on the keyboard). SAVE Instrument immediately when satisfied. Then process sound for loops, memory economy, etc. (Short ramp-down on this one.)

- Reset the sample button to another Instrument and place your thumbnail up against the G or B string in a place where it doesn't ring harmonically, and pluck it nearby (w/ flatpick) to obtain short "tink" sound.

- Obtain sound from Mirage disk #15, "23 Synth Sounds on Wheels," U & L #1, Program #2 (it's gotta be, uh.. "Meteor Billiards") and convert to an EPS Instrument. There's some fat on this one (unused Layers, extra sample time) which you might as well trim off.

- Combine all these sounds (using COPY Layer) as separate Layers in one Instrument; use AMP/ENV 3 levels to obtain volume balance between the soft and hard velocities on each Layer (very important).

- COPY a new Layer (params only) in the same Instrument using the basic harmonic tone and transpose it down a 4th. Balance it for low levels in ENV 3 Soft Velocity. Do the same with an additional COPY Layer and detune it for chorusing. Now play a counterpoint melody in pentatonic (Oriental) mode. Serves many.

Well, there you go. There's just tons more that the EPS can do (Mixing, Merging, Filtering, Pitch Envelopes, etc.) which would probably take up an entire magazine or two, so I'll leave that to the happy experimenter. I find that many so-called "gimmicky" sounds are quite useful as enhancers, i.e. blending them in subtle ways into other voices can add spice; you just have to try this and that. Just remember, keep saving whatever you like along the way; it's awful hard to get that watch back together again if it ever flies apart... ▬

Bio.: Name: John Gummere (rhymes w/ "montgomery") Address: 3620 W. Goret Rd. Tucson, AZ. Mailing address: P.O. Box 5231, Tucson, AZ 85703. Phone: (602) 743-7863. Occupation: Designing and building electro-mechanical medical equipment for a small Tucson, AZ based engineering firm. Have logged many hours behind a soldering iron and a CADD (Computer Aided Design/Drafting) system. Favorite spare time occupation: MIDI'ing sequences and voices into the "hard disk sketchbook".

SUBSCRIPTION INFORMATION

12 MONTHLY ISSUES

US: $23/year. All others: $30/year. (Please use International Money Order, payable in US funds.) Please make payable and mail to:

TRANSONIQ HACKER,
1402 SW UPLAND DR., PORTLAND, OR 97221.

Pipe Organs

by Kirk Slinkard

The sun sinks down behind the mountains, darkness slowly creeps across the land. I descend the wooden stairs to my underground laboratory. I flip on a series of switches. Current hums through the big amplifiers and the SQ-80 flickers to life. I select an appropriate pipe organ voice and out of the speakers explodes Bach's *"Toccata and Fugue in D Minor."* Hapless neighbors on the streets above glance at each other in fear and curtains are drawn closed in nearby houses.

The factory presets and third-party patches that I've come across are just not realistic enough to evoke emotional response similar to that of a real pipe organ. To make my own patches, I referred to the voice structure of actual pipe organs. The sounds I wanted to imitate were produced by a combination of several different sounding pipes for each key depressed. For the most part, they used several octaves of flute pipes for the mellower fundamental sound with a few string and brass pipes added for harmonic excitement. The flute pipes send air across a slot to cause the air within to vibrate, producing a mellow sound not unlike an actual flute. The string pipes have a brighter tone. The brass pipes use a vibrating reed to make a bright, almost raucous sound.

Five octaves of flute pipes can be approximated with the "organ" waveform. Unlike its pipe organ counterpart, the "organ" wave has its component sine waves tuned perfectly in relation with each other. Some people have tried using two or three "organ" waves detuned slightly to get some of the spaciousness and majesty of the imperfect pipe organ sound, but the results seem to me to be harmonically impotent. So I tried to do the equivalent of adding one string rank and one brass rank of pipes. (By the way, a "rank" is the pipe organ equivalent of a waveform). I tried the "string" and "brass" waves, and they sounded good. These had to be detuned slightly to imitate the pipe organ's tuning imperfections. The result was the "Pipes 1." patch.

If you are using an ESQ-1, I recommend using the sawtooth wave in place of the string wave, and the pulse wave in place of the brass wave, and, of course, leave the "R" off the envelope T4s. The pedal is set up to copy the function of the swell pedal by increasing the amplitude of the string and brass waves and opening up the filter a little to sound like it is activating more ranks of pipes.

To add more to the sound, I used a second program to simulate more string and brass ranks. I was careful to make sure that no wave had exactly the same pitch as any other wave (see the fine settings on the oscillators). This makes for a very big sound. The wheel gives some random stereo separation. Another idea that works well is to use "KBD2" as a modulator for panning. The "piano" wave in "Pipes 2." may seem like an unusual choice, but I liked the way it sounds. A lot of different waves can sound good in this context - experiment.

I hope I have given hackers a few useful ideas and non-hackers a couple of ready-to-use programs. Mod you later.

Bio.: Kirk lives one block outside of Denver and plays synthesizer. Kirk says, "Other than that there's nothing distinguishing about me. I'm just a normal guy who does normal things. No big deal."

SQ-80 PROG: PIPES 1 BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	ORGAN	OFF	-	OFF	-
OSC 2	2	0	2	BRASS	OFF	-	OFF	-
OSC 3	0	11	31	STRING	OFF	-	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	44	ON	KBD2	30	PEDAL	19
DCA 3	44	ON	KBD2	30	PEDAL	19

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	53	0	0	ENV4	63	PEDAL	10

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	50	8	LFO1	63

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	63	63	0L	0	4	0	0	15R	63

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

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

SQ-80 PROG: PIPES 2 BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	1	SAW	OFF	-	OFF	-
OSC 2	0	0	3	PIANO	OFF	-	OFF	-
OSC 3	0	11	30	SAW	OFF	-	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	41	ON	KBD2	12	PEDAL	14
DCA 2	48	ON	KBD2	5	PEDAL	14
DCA 3	39	ON	KBD2	11	PEDAL	20

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	15	0	0	ENV1	63	PEDAL	48

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	50	8	LFO1	63

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	63	63	0L	0	0	0	0	0R	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	63	63	0L	0	5	0	0	15R	0

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

SPLIT/LAYER	S/L PRG	LAYER	LAYER PRG	SPLIT	SPLIT PRG	SPLIT KEY
OFF	-	ON	PIPES 1	OFF	-	-

"I Love My MUSIC PACK EPS!" - Michael Josephs "America's Most Wanted" composer (featured in June '89 KEYBOARD)

Smart Accessories

ESQ-1/M/SQ80 $49.95

160 Voice Programmable Storage Cart

ONLY a few more left! MUSIC PACK MR-4 now in its last production. Get it now before you regret not having one. Loaded with 160 Rock, NuAge, & Accoustically Modelled patches. Limited quantities. One Year Warranty.

ESQ-1 $59.95

20,000 Note Sequencer Expander Cartridge

ONLY a few more left! MUSIC PACK SEQ20, now in its last production, is an approved plug-in cartridge that records up to 20,000 note/events. It is identical to the Ensoniq SQX-20. Limited quantities. One Year Warranty.

VFX/VFX-SD $89.95

60 Prog./ 20 Preset program storage cart.

New! MUSIC PACK MR-1 60 Program/ 20 Preset programmable storage cartridge is a replacement for the Ensoniq STC-32. The MR-1 also features a cartridge data protect switch. One Year Warranty.

DX7-II/ TX802/ RX5/7... $99.95

Identical to Yamaha's RAM5

The MUSIC PACK MR5 stores as much data as 4 RAM4 cartridges and features "MIDI MODE" which lets you change data banks via MIDI, bank select parameters on the synthesizer, or cartridge bank switches! The MR5 comes loaded with 256 DX7-II patches. One Year Warranty.

DX7/ DX5/ DX1/ RX-11 $64.95

128 Voice EEPROM RAM cartridge

For the original synth hero, the programmable MUSIC PACK MR2 comes loaded with 128 fine DX7 voices. One Year Warranty.

K1/ K1r/ K1m $39.95

64 Single/ 32 Multi RAM card

The MUSIC PACK K1 RAM card comes loaded with 32 excellent accoustically modelled voices by programmer Glenn Starnes. The patches are the best we've heard. One Year Warranty.

Satisfaction Guaranteed

Full Refund if you're not completely happy

Return your purchase within 30 days for a full refund if you're not completely satisfied. No restocking fee.

Order Now 1-800-832-2737

Call Maartists anytime. Write or FAX to: Maartists, Inc; PO Box 956172; 3881 Murdock Center NW; Duluth, GA 30136 PH: (404) 623-1559; FAX: (404) 623-1293. US ship charge: $3.50. Int'l ship charge: $10. No other charges apply. MC/ VISA/ COD/ personal check/ money order/ bank wire accepted. Business hours are between 9-5pm M-F E.S.T. Maartists (pronounces Mär'tists) has been manufacturing support products for professional musical equipment for five years. We supply musicians, wholesalers, and other manufacturers, large and small, with our original and OEM products. Over 15,000 Maartists products are in use throughout the world. What people love about our products is their exceptional value. We give them a lot for their money, and warrant everything for at least one year! Try us. We're sure you, too, will be pleased!

EPS Memory Call

Fully Approved 4X Memory Expander

Chip Prices Have Fallen! !MUSIC PACK EPS is your best bet for memory expansion. That's because it doesn't cause start-up or technical problems like other expanders. It is fully approved by Ensoniq, and is the ONLY user-installable, 4X+SCSI expander that fits entirely inside your EPS. (Technical specs below.)

EPS SCSI $119.95

Fully Approved SCSI Interface for MUSIC PACK EPS

When you're ready to upgrade to SCSI use the Maartists MUSIC PACK SCSI Interface card. When installed in conjunction with the Maartists MUSIC PACK EPS memory expander, your Ensoniq warranty remains intact. MUSIC PACK SCSI allows the use of an SCSI hard drive such as the Maartists HDXX/s series.

EPS Software $179.95

Sample Editing on Atari ST 520/1040 (monochrome)

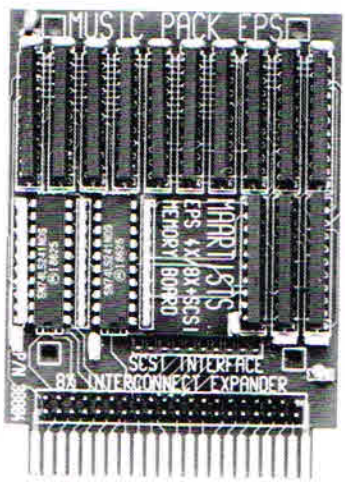
Enjoy greater creative control over your voice library. Easy access to all parameters. Create more intricate and elaborate samples. Use memory more efficiently. Every paramater is visible in a clean, organized fashion. Pop-up windows for quick setting of options. Global parameters are within reach of every screen display. Enjoy easy editing of instruments, layers, patch button settings, wavesample parameters, mapping, loop points, cuts, names, filters, envelopes, LFO's, aftertouch, velocity-sensitivity, pitch, portamento, legato-layers, panning, etc. Save all edits to disk! US Technical support. 30 Day Money Back Trial.

EPS Samples $49.95

SOUND SOURCE Digital Textures Sample Disks

Exciting, expressive, original studio grade samples. The SOUND SOURCE Collection comprises: Symphonic; Rhythm Section; Orchestral; Synthesizers; M1 Classics (Vol 1/2/3/4/5/6); DX7 Classics (Vol 1/2/3); U20 Collection (Vol 1/2). Each set contains five inspirational sounds..

MUSIC PACK EPS Technical Specifications



- 1 megaword RAM memory safely expands internal memory to 2.1 megabytes for quadrupled sampling times, and 80,000 notes of dedicated sequencer memory.
- Fully buffered 4 layer PC card for superior operational reliability and ultra low digital noise.
- Protective plastic case (not shown) for safe and easy user-installation.
- Port for Maartists MUSIC PACK EPS/SCSI Hard Drive option for fast access to hundreds of samples.
- Port for Maartists MUSIC PACK EPS/8X Interconnect Expander for continued upgradeability.
- All connectors gold plated for long term operational reliability.
- Two Year Warranty.

Maartists®

*Helping Technology Create Music*SM

For complete literature and assistance contact: Maartists Inc., PO Box 956172 Duluth, GA 30136 Ph: (800) 832-2737 (404) 623-9251 FAX: (404) 623-1293

Alternative Scales for Mirage and EPS

- Something New for Ensoniq Sampler Owners

by Gary R. Morrison

I've got something new for you Mirage and EPS owners. Most of you will either love it or hate it. From what I've seen, few people say nothing when they hear it. Reactions range from "This stuff is wild," to "Interesting..." to "Why?" to the predictable: "Yuck, this sounds awful!" The people who promote it range from mainstream musicians to eccentric geniuses. Some are professional musicians, and some are biochemists, engineers, writers, shop keepers, and real estate brokers. They all have one thing in common - they see a tremendous newness in the future of music. They are looking into the vastness of a new frontier in music.

I'm talking about "Xenharmonics" - music based on unusual tuning systems. (That's pronounced "zen-har-monix".) By "unusual," I mean anything other than the traditional twelve equally-spaced steps within an octave ("12-tone equal-temperament," or "12-equal" for short).

Quite a few Transoniq Hacker readers have shown interest in new tuning systems. This is not surprising, for several reasons. First of all, Wendy Carlos has embraced the idea in her album Beauty in the Beast. Second, several third-party software packages for Ensoniq products provide this capability. Ensoniq has addressed the topic in the EPS. Probably the best reason is that Ensoniq products can produce very natural-sounding timbres, which lets listeners concentrate on the tuning rather than getting distracted by the timbre. If you change too many aspects of your music from the norm, people tend to say, "Well, that certainly was... weird!"

Unfortunately, you ESQ/SQ-80 owners won't be able to try these new ideas out. EPS- and Mirage-owners will have a lot of fun with this column. The EPS itself has operating system provisions for Xenharmonics. You Mirage owners will have to buy Upward Concepts' Microtonal Scales Disk. If you have Triton's SoundProcess then I'd be happy to send you the source-code for a program that you can execute on an accompanying computer to use the Xenharmonic capabilities of SoundProcess.

I plan on writing future articles that will give you what you need to explore Xenharmonics. Many of the articles will contain tuning tables for the EPS and the Mirage Microtonal Scales Disk. If you own an EPS and would like to avoid typing in a long list of pitch values, you're welcome to send me $10 and I'll send you my EPS Xenharmonic Scales Disk, which contains a lot of the tunings that I shall discuss over the course of the next few months. My address is 5850 Beltline, #904; Dallas, Texas 75240.

Each article will explore a new topic in the field of new tunings. Usually, this will be information on a particular new tuning system. The first two articles will give some important background information on the basic concepts of what is called "Just Intonation" and "Temperament," respectively. These will not only give you a fresh, historical basis for understanding and evaluating these new tunings, but it will let you hear the tuning system we're all used to in a totally new perspective.

The main thrust of this series is to let you hear and use these new sounds. Far too much about Xenharmonics has been written in cold, silent text.

Until next time, stay tuned; after then you may not know exactly what "in-tune" means! ▬

Using Your EPS To Make Coffee and Other Useful Routines

by Tom Jordan

Recently in the Hacker I have seen some words of encouragement for the development of alternative EPS operating systems, and I think we users need to let our wishes be known. I'm definitely a "user" and I know better than to take up hacking. All I can do is offer up my respect for musical engineers and creative hackers.

And those of us who are the submissive users need to let our more techy-oriented brethren know what would be neat to have. For anyone that is considering offering a new product, it can only be helpful to hear a resounding appeal for a list of goodies. The Ensoniq utility for copying disks is just the kind of help we will all use.

What are your wishes and dreams? I'll toss in a few ideas.

1. I have handled the tedious task of slowly stepping through some percussion tracks to figure out which wavesamples were not used. I want a routine that will check the sequence notes used against the wavesamples that are used, and then allow you to delete any unused wavesamples (and layers?). All of this to win back some more available memory.

2. How about some other disk utilities? Change filenames, reorder files, note pad, maybe be able to customize the OS.

3. I'd like to be able to read a Bank without actually having to save all the instrument files. When I'm doing some early draft all I care about is an approximate instrument and its location for my sequences. I would really like to be able to back up my songs without having to save redundant instrument files. At times I wish that I could load a bank without having to bother to actually load the sounds. Then I could get the whole "picture" on one disk. Pressing an instrument button would display the anticipated resident file. Tricky, tricky. I'm not real clear on my own analysis of this, but it would be nice to have some choices here.

4. A "wrong note finder" and a "fat finger fixer" that could spot key velocity anomalies and alleviate wasted instruments. Sort of like a spelling checker program.

5. If someone comes up with a way to call additional sub-routines for the Ensoniq OS, it would be fun to have an onboard, synchronous arpeggiator and selectable note lengths for the LFO sample & hold.

Hey, I can keep on going ... it's fun to just keep right on dreaming. I don't know, maybe some sharp hacker can really make it work!

6. An answer machine! Yea, that's it! The EPS NSR-1, $59.95.

You see, you hook it up to your phone, and it answers with 13-bit fidelity and then it records your messages at 52.1 kHz! Don't leave home without it! ▬

How I Got Horses to Gallop Out of My Synth

(actually, they took their sweet time)

by Michael D. Mortilla

The time: Between 3:30 and 4:30 am.
The place: A dark alley in your mind.

The cast: You & Sticky Fingas (right off the cover of *Keyboard Mag.*) The scene: You're walking down Patch Vendor Blvd. looking for some new and unusual sounds. All the shops are closed, but you're out to have a good time anyway. The only sound you hear is the sound of your own footsteps on the damp cobblestone street. Suddenly, you're startled by a seedy shadow. It's ... Fingas!!!

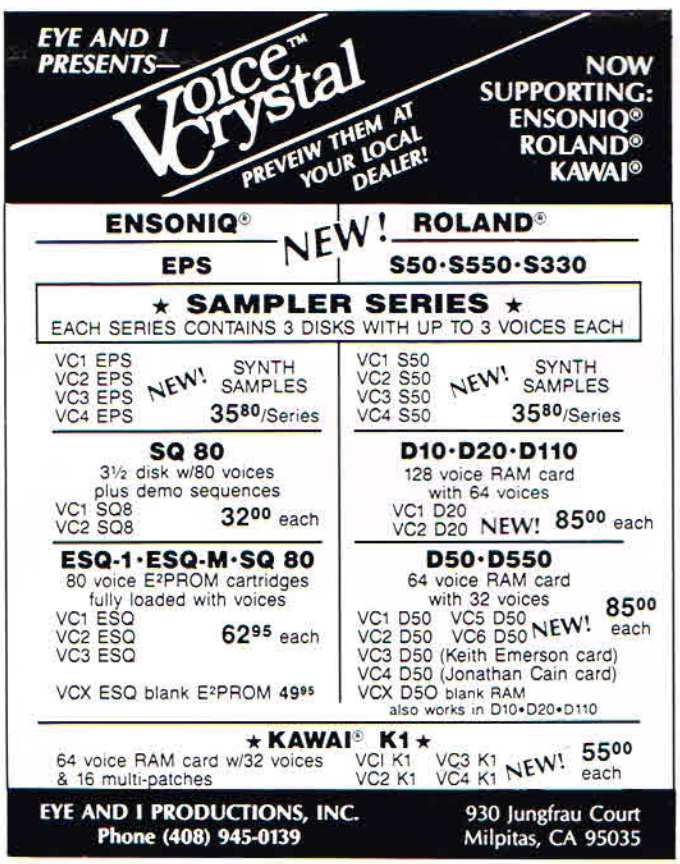
(Pssst ...) Yeah, you! C'mere. C'mon. that's it ... That's it ... Hey, you wanna random patch generator for your synth? Naw, it doesn't matter what kinda synth you got, it works on 'em all. Yeah, that's it! It works on 'em all. So, DX, you name it and this'll work for ya'. Naw, you don't need no computer except the one ya' got upstairs, you know what I mean, ya' brain buddy! That's right! The only computer ya' need to run this program is ya' brain and I'll tell ya' what ... (sotto voice) ... they say the guy who wrote this program didn't even have a brain!! (louder) Imagine that ... (louder still) ...he didn't even have a brain ... ha, ha, ha, ha ... (laughter mixes into its own echo and you wake with a jolt!) Would you buy a random patch generator from this man?

As its name implies. a random patch generation program creates random patches. If you've bought patches from one of those vendors who offer "millions of patches for a fraction of the cost" or even if you've paid premium prices for just a few good sounds, there's a good chance you already own sounds created with a random patch generator. Usually it's a computer program that works like an editor/librarian except that the purpose is to totally screw-up existing sounds by randomizing their parameters. Nietzsche style programming - out of chaos comes order. I am not criticizing the sale of sounds developed this way. Indeed, some of my best patches (not to mention some of my best friends) have been created by random generation! I am, however, about to show you (in one easy lesson) how you can create your own random patches for any synth you own. All this without a computer or special program!

The procedure is really quite simple. Randomly select any existing patch for editing. Start your data entry knob going up and down with one hand (careful not to abuse it, as it wasn't meant for this type of non-stop action) and, with the other hand, start pushing parameter buttons. On most synths (ESQ, SQ, DX, etc.) the values will change as you select the parameter. As you randomly move from parameter to parameter, you change the original sound in unexpected ways to arrive at the new patch. Just keep that data entry knob moving.

I've had excellent results with this method but there are a few things to be watchful of. It's easy to mess up the volume of the patch so that you can't hear the new sound. Either you've closed down a DCA or filter, modulated it with something that closes it down (an envelope, LFO, velocity, etc.,) or you've transposed a sound source below or above its useful range. About 80% of the time I end up with a patch that is unique and worth hacking further (until it's refined to my taste). Maybe 15% of the time I get either inaudible patches or just plain trash. The other 5% of the time I end up with wonderful results the first time through. When you consider that in a relatively simple synth - like the ESQ or the early DX series - there are hundreds of thousands of patches possible, if not millions of billions, then random patches make lots of sense. But the best part is that they're free! ▬

Bio.: Michael Mortilia is currently composing scores for twelve Charlie Chaplin films for French TV using an EPS, SQ-80 & Mirage, exclusively. He is the Sr. Musician/Resident Composer at the U. of CA, Santa Barbara in the Dept. of Dramatic Art & Dance. He was recently appointed Guest Lecturer/Music for Dance, as well. His theatre & dance music is performed world-wide. His favorite color is the color of his wife's eyes, which are green.



Hackerpatch

By Sam Mims

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

The Patch: OWBASS

by Rich Trommer, Aurora, IL

*I was in the mood to jam with my ESQ-1 without having to concentrate on serious chord changes, and Herbie Hancock's "*Chameleon*" came to mind. The first step was to lay down that classic "Ow Ow Ow Ow - Ow - Ow" bass line into the sequencer, but what to do for a patch? I came up with OWBASS. It doesn't use any of the LFOs, or the mod wheel, or ENV 2. There's no modulation on any of the oscillators, and all three DCAs are identical. The patch is very simple - just like the chord changes in "*Chameleon*." But, then again, that record sold quite a few copies, no?*

The Hack

This is a bass patch that you'll probably find several applications for. The "Ow" sound is caused by the filter resonance; you may wish to increase or decrease this to suit your tastes, but it works well as is.

I added a subtle mod-wheel vibrato with LFO 1 by setting FREQ=24, RESET=OFF, HUMAN=ON, WAV=TRI, L1=00, DELAY=00, L2=00, and MOD= WHEEL. (SQ-80 owners may prefer MOD=PRESS, to control the vibrato with aftertouch.) Then I applied LFO 1 as MOD 1 to all three oscillators, with DEPTH=+10; the effect is subtle but useful.

Several different waveforms work nicely as OSC 3, and change the character of the sound. NOISE3 gives a nice attack punch, and interestingly enough, KICK works well for this too. Other waves to try are SQUARE, PULSE, VOICE2, REED, PULSE2, and BASS 2. On the SQ-80, try using REED 2 and 3, all three GRITs, CLAV, DIGIT2, PICK 1, SLAP, PLINK, and KICK 2.

The Patch: PGLASS

by Steve Cohen, Riverdale, NY

P(hillip) GLASS was created after reading Jim Johnson's Hacker *article, "LFO Synchronization and Magic Tempi" (issue #26). The LFO frequencies selected yield half-notes, quarter-notes, and eighth-notes. The tuning of the oscillators and the depths at which the LFOs are used as modulators yield the multiple pitches for each oscillator.*

This patch is particularly effective when sustaining stacks of perfect fourths or fifths. Staggering the entrances by eighths or quarters produces a rippling stretto effect. If you have some tiresome houseguests, this patch may cut their visit mercifully short!

The Hack

PGLASS is lots of fun! (The patch, that is; I've never met the person.) What's going on here is this: the three oscillators are set up to play different pitches (the tonic, the fifth, and the sixth), and a square-wave LFO "trills" each oscillator between its normal pitch and another pitch. The "trills," however, are not fast, but are rather rhythmically timed (as per Jim Johnson's article mentioned above). The result is that holding down one single note produces a complex rhythmic and melodic pattern, like several arpeggiators operating together. (To hear what the individual oscillators are doing, turn all but one DCA off at a time.)

I like the patch just the way it is, though I did experiment with a couple of changes. First, you might want to set L1=00 on all three LFOs, and change the MODs to WHEEL. This plays the patch normally when the mod wheel is pushed forward, but eliminates the note changes when the wheel is off (i.e. a single note plays a static chord of tonic, fifth, and sixth). I went a step further here, and changed DCA 3 so that LEVEL=00, MOD#1=WHEEL, and DEPTH=+63; this leaves out OSC 3 (the sixth) when the wheel is in its normal position, but plays Steve's original pattern when the wheel is rolled forward. As an alternative, you might do the LFO changes mentioned above to LFO 1 only; this gives two different patterns for each extreme of the mod wheel. (This doesn't work as well for LFO 2 or LFO 3.) Finally, turning on the SYNC (MODES page) gives a variation of the original pattern. Have fun!

The Patch: GUITAR

by Tim Edwards, Durham, NC

I won't pretend to believe that this is a perfect acoustic guitar imitation; I stopped twiddling with the sound when it got to this stage. I was playing around with metallic sounds that can be produced by putting NOISE2 on OSC 2 and then turning SYNC ON. The best sound, in my opinion, is up in octaves 4 and 5 of NOISE2, but a good sound can be found in a lower octave if your operating system doesn't support octaves above 3. [If not, it's well worth the small upgrade cost. SM] The mod wheel creates a repeated delay because I couldn't think of anything better to do with it.

The Hack

GUITAR gives a pretty nice imitation in the lower register, though the top end is not as good. But I like the sound quite a bit just the same. The patch can be made much more convincing - in fact pretty darn good - on an SQ-80 by changing the WAVE of OSC 3 to STRING and the OCT to -1.

For those without CV pedals, change the MOD of LFO 3 to OFF and the MOD#2 of DCA 3 to WHEEL to get the pedal effect (removing OSC 3) at the expense of the echo effect. To get guitar-wielding chickens from outer space, merely turn the filter RESonance to 31.

The Patch: KBRAS2.

by Kirk Slinkard, Lakewood, CO

No notes on this one.

The Hack

Kirk has programmed a very nice horn patch that is pretty realistic. Aftertouch controls a slight vibrato, and the CV pedal darkens the sound, creating more of a synthesized texture. LFO 2, controlled by the mod wheel, modulates the stereo panning; it was a bit slow for my taste, however, so I cranked it up to 7 for a more pronounced effect. For more of a fat chorused sound, try turning the FINE tuning of OSC 3 up to 4 or 5.

ESQ owners can change the waveforms of OSC 1 and 3 to SAW for somewhat of an approximation of Kirk's patch, or try SAW for OSC 1 and REED for OSC 3.

Bio: Sam Mims is a studio session player in Los Angeles, and a member of the band THE NEWKS. *He is a Contributing Editor for* GIG *magazine, and owns Syntaur Productions - a company that produces music for television, radio, and film. In addition, Syntaur markets synth patches for the ESQ-1 and SQ-80.*

ESQ-1 PROG: OWBASS

BY: RICH TROMMER

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	1	BASS	OFF	-	OFF	-
OSC 2	-1	0	0	SAW	OFF	-	OFF	-
OSC 3	-1	0	3	VOICE1	OFF	-	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV1	63	OFF	-
DCA 2	0	ON	ENV1	63	OFF	-
DCA 3	0	ON	ENV1	63	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	7	17	28	ENV3	63	OFF	-

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

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	20	20	0	0	0	50	63	20	9
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	63	7	-41	28	0	0	16	32	20	3
ENV 4	63	43	-63	17	0	2	33	48	20	0

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

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

ESQ-1 PROG: P GLASS

BY: STEVE COHEN

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	BELL	LFO1	16	OFF	-
OSC 2	0	7	0	BELL	LFO2	-13	OFF	-
OSC 3	0	9	0	BELL	LFO3	-37	OFF	-

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

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	80	0	0	OFF	-	OFF	-

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

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	18	ON	OFF	SQR	63	0	0	OFF
LFO 2	9	ON	OFF	SQR	63	0	0	OFF
LFO 3	12	ON	OFF	SQR	63	0	0	OFF

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	63	63	20	0	0	32	32	20	0

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

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

ESQ-1 PROG: GUITAR

BY: TIM EDWARDS

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	BASS	ENV2	1	LFO1	1
OSC 2	5	0	1	NOISE2	OFF	-	OFF	-
OSC 3	0	0	3	SYNTH1	OFF	-	OFF	1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	43	ON	ENV1	24	OFF	-
DCA 3	63	ON	OFF	-	PEDAL	-63

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	8	0	42	ENV3	52	LFO3	-63

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	47	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	4	OFF	OFF	TRI	9	9	19	OFF
LFO 2	-	-	-	-	-	-	-	-
LFO 3	16	ON	OFF	SAW	0	1	0	WHEEL

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	54	17	15	0	0	22	45	18	32
ENV 2	63	0	0	15	0	0	10	0	20	63
ENV 3	61	26	2	25	0	0	25	41	20	0
ENV 4	63	63	0	30	0	0	24	44	18	10

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

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

SQ-80 PROG: KBRAS2.

BY: KIRK SLINKARD

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	2	BRASS	ENV2	1	LFO3	1
OSC 2	-1	0	0	SAW	ENV2	-1	LFO3	1
OSC 3	-1	0	1	BRASS	LFO1	4	LFO3	1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	61	ON	OFF	-	OFF	-
DCA 3	61	ON	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	0	2	35	PEDAL	-16	ENV1	63

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

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	63	ON	OFF	NOI	0	0	0	ENV3
LFO 2	1	OFF	ON	TRI	0	0	0	WHEEL
LFO 3	23	OFF	ON	TRI	0	5	10	PRESS

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	54	20	52L	12	15	26	55	38R	21
ENV 2	27	0	0	0L	0	0	17	0	0	15
ENV 3	63	0	0	0L	0	0	15	0	0	0
ENV 4	63	63	63	27L	18	15	0	0	11R	8

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

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

Classifieds

SAMPLES

ORIGINAL EPS SAMPLES from M-1, D-50, DX7II & Proteus. Digitally recorded in one of NY's finest studios. Alchemy signal processing & fully pre-programmed patch selects. $12 per disk, $10 each for 5 or more. Call or write for info. **Maestro Sounds**, 113-30 199th St., Jamaica, NY 11412. (718) 465-4058.

2000 QUALITY SAMPLES. 3 hours on 2 Maxell cassettes. From the BEST KEYBOARDS around. VFX, D50, M1, K1, K5, DX, MINI/MEM MOOG, STEINWAY CONCERT GRAND. Sample and play. Easy to use, $15.95. NEXT-DAY FREE SHIPPING. WILDWOOD SOUNDS, 4726 Pebble Creek Terr., Pensacola, FL 32506. 904-944-6012, Tony, after 6 pm.

SCOTTISH SIDE DRUM sample for EPS. Very limited appeal, but if you're into bagpipe bands... check this out! 200 blocks, multi-player effects, sequenced drum parts (4) and playing instructions. $5.00 to David Grebos, 220 Homan Ave., State College, PA 16801. 814-234-1512.

EPS and Emax samples of Matrix-12, Super-JX, CS-80, Prophet VS, Kurzweil, Oberheim & Moog Modular Synthesizers, DX7 layers. Also horns, sticks, pianos. Demo disk $5.00. Send SASE for catalog. ROCKET SCIENCE, Dept. TH, PO Box 4991, Thousand Oaks, CA 91359-1991.

EPS owners: I have hundreds of sampled sounds in my library for trading. For list, write to: Tim Hamel, 1726 SW Anthony Dr., Aloha, OR 97006, or call 503-649-3312.

VFX SAMPLES for the Mirage! Mirage Disk 1 contains Minimoog Bass, Minimoog+Slap Bass, DX-7 Slam Bass, VFX Breathy Flute, VFX Breathy Voices, and VFX Funk Guitar. $7.95 from Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602.

EPS Best of Series. 3 Disc sets: (I) Alesis HR16 Drums complete. Sequences & easy directions. (II) D50, (III) M1, (IV) DX, (V) VFX. $19.95 each volume. Any 2 volumes/6 discs: $30.00. Free next-day shipping. Guaranteed. Wildwood Sounds, 4726 Pebble Creek, Pensacola, FL 32506. (904) 944-6012 / 7 PM (Tony).

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

EQUIPMENT

MIRAGE DSK sampler with disks, dustcover, $600. ESQ-1 synthesizer, dustcover, $600. Original owner. Wendell Ing, 41 Laimana St., Hilo, HI 96720. Tel. 808-935-4151.

MIRAGE - Turbo MME memory expansion. Gives Mirage 5 disks of sound at once! $175 or $575 with Mirage rack. Korg M1 keyboard - the ultimate sample playbacker. $1550/best offer. Korg M3R (rack version of M1) new, $875. Digital MX-8 MIDI patchbay $225. 201-389-2197.

Tascam 388 Studio 8 tape recorder/mixer. Used for only 10 hours on mixer, tape heads only 1 hour total. Perfect condition. Selling to upgrade to 16 track. 305-437-8312.

ENSONIQ EPS, with 2X expander, 3 mos old. $1750 + shipping. 801-565-0235 after 6 pm MT.

SAVE SAVE SAVE EPS-4X EXPANDERS unbelievably low USER **GROUP PRICES**. Loaded VFX, ESQ/SQ80 160 RAM cartridges. Too low to quote. **CALL TODAY** AND **SAVE**. WILDWOOD SOUNDS, 4726 Pebble Creek Terr., Pensacola, FL 32506. 904-944-6012, Tony, after 6 pm.

For Sale: Mirage Input Sampling Filter: $75.00. Vision's IBM Graphic Editing software for Mirage sampler $130.00. All prices firm and include insured shipping. Call: (313) 543-0088, leave message.

Input Sampling Filter: $95. ESQ-1 Synth: $750. Mirage Rackmount: $675. 612-344-9109. Leave message.

Ensoniq SQ-80. Hardly used, mint condition, hundreds of patches on disk, 1 fully programmable E2 RAM cartridge. Must sell immediately. Best offer over $1300.00. Call David at (914) 735-7774 Days, (914) 784-4871 Eves.

CUSTOM-MADE DUST COVERS for VFX, EPS, SQ-80 and ESQ-1 (post serial #25,000). Made of durable black double-stitched poly/cotton. NOT PLASTIC! Send $22.95 plus $2.00 p/h to: STAR COVER, 21229 Pacific Coast Highway, #1001, Malibu, CA 90265-1001.

EPS with factory 4x and SCSI. Serial #16090-F, Nov. 88, EPS Sound Library Vols. 4 and 5. $2500. (609) 466-0731, Mark.

For Sale - Mirage Rackmount (still under warranty) with IVM expander, will load 9 banks or three full disks in memory. Full library of sounds. $850 or best offer. Also have Mirage filter: $35, sequence expander: $10, Soundprocess disk: $35, C-64 Mirage editing software: $50. Call 615-367-2803, ask for Bruce.

EPS 2x: $120. 616-468-3040 Before 10 EST.

(Holiday Clearance Sale) ESQ-1 with 2,000 sounds and 10,000 note Sequencer Cartridge: $895.00. MIRAGE: $695.00. YAMAHA TX7 with 5,100 sounds: $295.00. YAMAHA TX81Z with 1,200 sounds: $295.00. ROLAND AXIS 1 Remote/Guitar KEYBOARD with hard case: $595.00. All equipment MINT CONDITION!! David Collins, call (303) 722-1477.

EPS 4X Expander by Maartists, $488.00, Fully approved. User installable. **RAM CARTRIDGES**: **VFX**, $89.95; **M1**, $89.95; **K1**, $49.95; **Roland M256D**, $64.95; **ESQ/SQ80**, $42.95 (80V), $69.95 (160V). **FREE** shipping. Five-year guarantee. Made in U.S.A. **SOUND LOGIC**, 1125 Eleventh St., Ramona, CA 92065. For orders: **800-753-6558**.

WANTED

Wanted: ESQ-M. Thorne Harris, (504) 821-4343.

Wanted: ESQ-M. Cam McMinn, 503-626-1135, evenings (PST), 282-0655.

Wanted: Mirage sampling keyboard. Boyd Edwards (304) 293-3422.

Wanted: Memory expander for Mirage Rackmount. Prefer MME (Virtual Engineering), will consider IVM Megabank. Will pay top $ for kit in good condition with docs. Contact Ned Selfe, PO Box 31084, San Francisco, CA 94131. (415) 641-6207.

HOT GEAR

If anyone knows the location of ENSONIQ EPS serial number 18649-F, please contact the Cleveland Metroparks Ranger Department at 216-243-7860 and ask for Ranger Stark or Sergeant Mudra.

SOFTWARE

Digidesign Soundesigner software for Mirage, $100 (Mac); Soundfile and Opcode sequence and bank librarians for ESQ-1, $35 each (Mac). Original owner. Wendell Ing, 41 Laimana St., Hilo, HI 96720. 080-935-4151.

Used Soundprocess. 2 system disks, manuals, and 2 sound disks: $99. Mirage input sampling filter: $50. Tim, 1-414-423-1376, evenings CST.

MIRAGE-AID - Mirage VES for Atari ST (mono), Apple II+/e, and Commodore 64/128. View/Set Loop points graphically from computer. Atari version allows many other sample parameters to be set, and features full GEM interface. Each version: $29.95 + $1.50 P&H + 7% for NYS residents. Apple and Commodore versions require Passport/Compatible interface. Neo-Sync, PO Box 522, Chenango Bridge, NY 13745. (607) 722-8885.

EPS-Sense: IBM Sound Editing System for the EPS/EPS-M reviewed issue #50 of TH. Program: $50.00. MSCI: IBM VES for Mirage reviewed issue #38. Program: $25.00, demo: $7.00. Add $5.00 for S/H. Send check to: Jeffrey Richter/Donna Murray, 3502 Village Bridge Apts., Lindenwold, NJ 08021. Phone: 609-346-0943.

PATCHES

40 OF THE BEST SOUNDS FOR YOUR SQ-80:these patches will make your '80 stand out! Read the review yourself in the April Hacker. $15.95 (CA res. add 7% tax) includes FREE EDITS as you call 'em! MESCAL MUSIC, PO BOX 5372, Hercules, CA 94547. (415) 724-0804.

Grade A, choice ESQ/SQ patches. 40 Patches/Volume. Volume 1: Drums, basses, orchestras, soundtracks. Volume 2: Winds, drums, synths, leads. Volume 3: Keyboards, pads, wine glasses...possibly the best bank available. Volume 4: Killer SOUND EFFECTS!!! $15/volume (Cassette). Patchman Music, 2043 Mars Ave., Lakewood, OH 44107.

Nothing to lose! Absolutely Guaranteed! ESQ & SQ80 patches NOW $12. No shipping charge! Sax (loved by customers!), Tremolo, Distortion, Wah, Acoustic and Steel guitars (best collection anywhere!), Rock Pianos, 96 tear Organ, Blues Harp, "Imagine" piano, Digital Delays, & more. See review TH Issue #48. If you don't like 'em, send it back! Data Cassette. Jim Symonds, 4 Kenwood St., Portland, ME 04102.

D-50-TYPE SOUNDS, natural reverb, and much more for the ESQ-1 and SQ-80. SOUNDSET 2 is 40 new patches from the Hacker's Sam Mims. $17.95 postpaid, available on cassette, SQ-80 disk, or Mirage disk. SOUNDSETS 1 and 2 (80 patches) for $29.95, on EEPROM for $59.95. Extensive programming booklet with patch sheets included. Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602.

<<<<ESQ-1/SQ-80>>>> S.S. Productions.... SS-40.1 + SS-40.2. Two banks: Finest, most useful patches available. Acoustic Simulations, Pianos, Organs, Keyboards, Synths, Exotica, Basses, Bells, Effects, Percussion. Extensive Wheel, CV Pedal, Stereo, Sync/AM implementation. CASSETTE: one bank - $16. Both - $26. Sound list/order, write: Sevan Simonian, 93 Powell Rd., Emerson, NJ 07630. Skeptical? Request free datasheet for a patch from any catagory above.

5,056+ DX711FD/DXTX7Sounds $29.95. SQ-80/ESQ-1: 840 Super Sounds $29.95. 1,030 NEW! V50/DX11/TX81Z/YS200/DX1002127 Sounds $29.95. P/H $3.00. MUSIC WORLD, 617 Panorama Dr., Grand Junction, CO 81503.

SEQUENCES

ESQ1, SQ80 OWNERS learn jazz improvisation with your keyboard. Authentic bebop, modal, latin, blues, and fusion riffs all recorded into your sequencer. Rhythm section accompainment on each section (bass, keyboards, and drums). Comes with chord charts of all riffs written out. Popular jazz and latin grooves and breaks also included. Excellent teaching method. A MIDI drum machine is required. Let us know what model you are using. ESQ1 orders - SQX10 or 20 expander cartridge needed. Specify SQ80 disk or ESQ1 cassette tape. Send $25.00 check or MO to: New Sound Music, PO Box 37363, Oak Park, MI 48237.

EPS SEQUENCES NOW AVAILABLE!!! All styles, custom tailored to your EPS. MIDI set up. For more information or to be put on our mailing list, call 215-626-8890.

MUSIC

Ballroom Dance Music cassette done entirely on the EPS 4x and Roland Drum. $12.00 per tape plus shipping. Fred Cronin, 11 Gibbs St., #B-29, Worcester, MA 01607. (508) 797-5601.

Alternative 12" dance single just released. 100 percent of the sounds on the cuts are from the Ensoniq EPS. Doing very well in clubs. Available for $4.99 + $1.00 for P/H. Ish Records, PO Box 255, Milltown, NJ 08850. Thanks.

OUT-OF-PRINT BACK ISSUES

M.U.G. will provide Out-of-Print issues for cost of materials and postage. M.U.G. Hotline: 212-465-3430 or write: G-4 Productions, 622 Odell Ave., Yonkers, NY 10710.

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

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

FREE CLASSIFIEDS!

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

WHY YOU SHOULD CHOOSE LIVEWIRE'S SOUND DISKS

Only Livewire offers true CD-quality sounds for your sampler. Our sounds are 16-bit digitally recorded with AKG mic's in a recording studio - not in somebody's basement! All sounds are computer-edited for clean loops and the ultimate quality. Need some more reasons?

* Livewire's disks are packed FULL of sounds.
* We have thousands of happy customers world-wide.
* We have been in business for over 6 years, and have ***experienced*** programmers.
* We will continue to support your keyboard when the others have disappeared (how many Mirage disk ad's do YOU see left in this magazine?)
* Livewire is the ONLY company endorsed by Ensoniq, Casio, Roland, Kawai, and Korg as official sound developers.
* Consider our sample demo cassette for $8, so you can hear before you buy.
* A 24-hour, 7-day a week TOLL-FREE phone line for credit card orders.
* Livewire ships the SAME DAY we get your order (exc. personal checks)
* All disks mailed in secure "bubble bags" - larger orders include FREE disk cases.

*And, our new lower prices are VERY competitive. So why buy sounds elsewhere? Livewire has 71 high-quality disks for the Ensoniq **EPS** and Casio FZ samplers from less than $8 a disk ($549 for the entire set), and 26 **Mirage** disks for only $249. Send a stamped, self-addressed envelope for a fast, **free** disk list, or send $8 for our demo tape. (Use money order - personal checks held 5 weeks to check bank clearance). When you're tired of cheap amateur disks, drop us a note!*

Livewire Audio
PO Box 561
Oceanport NJ 07757 USA

*Why **sample** when you could be **playing?***

KEEL PRODUCTIONS... for EPS & VFX!

EPS

For more than a year, KEEL has been supplying the finest third-party sounds available for the premiere sampler!

- 90 disks now available... best selection, best quality
- 4 patches meticulously programmed for each instrument
- flawless loops... superb fidelity... state of the art sound
- total commitment to on-going support and service
- competitive pricing... unconditional satisfaction guarantee

"FOUNDATION" SERIES:
- 50 disks covering all of the most-wanted instrumental categories. Keyboards, Synths, Electric & Acoustic Guitars & Basses, Brass, Woodwind, Solo & Ensemble Strings, Orchestral Percussion, Latin Percussion, Drum Kits, Ethnic Instruments.

"CLASSIC SYNTH" SERIES:
- 20 disks representing the distinctive sounds of the great synths of days gone by: analog classics by Oberheim & Moog... FM sounds by Yamaha & TurboSynth... additive patches created on the Kawai K5, Sequential Prophet VS & SoftSynth... and fabulous MIDI stacks.

"MODERN SYNTH" SERIES:
- 20 disks featuring the hottest sounds of today, based on creative programming of the synths everybody wants to get their hands on: Enxoniq VFX, E-mu Systems Proteus, Korg M1, and Roland D50... plus sounds you won't find on ANY synth, created with TurboSynth.

VFX

Now KEEL applies its acknowledged programming expertise to Ensoniq's latest masterpiece!

- 4 complete collections of superb, original programs
- 60 programs and 20 practical presets per collection
- 4 musically vibrant patch variations per program
- satisfaction guaranteed, or your money back
- full documentation with playing tips, hints, tricks

VOL I – "ROCK & POP":
- The meat-and-potatoes sounds needed for contemporary hit music... keyboards, brasses, strings, synth leads, backing pads.

VOL II – "WORLD WAVE":
- Ethnic instruments, exotic sounds, splashes of colour that will make your original music distinctive, your cover arrangements fresh.

VOL III – "ATMOSPHERES":
- Glowing pads, crystalline keyboard & percussion patches, gentle washes and vocal effects... perfect for scoring to picture, new age composition, backgrounds.

VOL IV – "SLIM & TRIM":
- Yes, you CAN get great sounds on the VFX and still have plenty of voices for multi-timbral sequencing... a collection of great sounding 1- and 2-layer programs.

BOX 3054,
HALIFAX SO.
NS, CANADA
B3J 3G6
902 - 852 - 2931

Write or call for free catalog. Demo tapes available, $5 each (specify EPS or VFX). Great sounds also available for Korg M1, DSS-1, E-mu Proteus. Ask about the KEEL EPS Editing Manual (64-page tutorial with disk of example samples to practise on).

KEEL Prooductions recognizes and acknowledges all registered trademarks mentioned in this advertisement, including: ENSONIQ®, EPS™, VFX™, Moog™, Oberheim®, Sequential Circuits™, Prophet VS®, E-mu Systems™, Proteus®, Korg™, SoftSynth®, TurboSynth®, Kawai™, Yamaha™ and Roland™. KEEL Productions is a registered trademark®.

The Expressive Mirage

by Don Slepian

Here are a set of modifications that will cost you nothing, take very little time, and reward you with a more expressive instrument. I will describe to you a software routine I go through with sounds that I use for performance. I maximize the Mirage's velocity control over loudness and timbre, which gives my touch on the keyboard far greater control over the sound than is customarily found in stock or commercial voicings.

I've made these changes on every sound I use, no exceptions. I tend to be an extremist. Try these changes for yourself and see if they have any application to your favorite Mirage sounds and styles of music.

Before making any changes to a Mirage sound, have a blank formatted disk handy to save the modified sounds. If you are not yet familiar with modifying sounds from the front panel of your Mirage, you should review your instruction manual (or back issues of TH) and practice some simple examples.

The modifications that will make your keyboard more expressive involve the synthesizer part of Mirage, specifically the envelope and envelope modulation controls. To use these parameters you need only to find the correct keyboard section (either upper or lower). You do not need to set the Mirage to the current wavesample.

The most straightforward change is the amplitude control. Set parameters 51, 53, 56, and 58 to zero. There should be little or no sound at this point when you play a note. If the sound doesn't change it means you are playing a note in the wrong section of the keyboard. Find the keyboard section that is being affected. Increase parameters 56 and 58 to taste. You should be able to control the sound from near silence to full volume from keyboard velocity alone. With practice this high level of control will lead to more expressive performance.

The next changes are to the filter. Set parameters 36, 41, 43, 46, and 48 to zero. There should be little or no sound at this point. Increase parameter 36 until you get a very muted version of the sound. Increase parameters 46 and 48 until a moderate touch yields an acceptable average timbre. A soft touch should sound muted and dull, a very hard touch should be quite bright. Some practice here will give you control over this effect.

Note that parameters 41, 43, 51, and 53 are set to zero and remain there. Sometimes just that change alone will improve the playability of a sound. Each one of your ten fingers should be able to independently control the full dynamic range of the instrument, while simultaneously varying the timbre from dull to bright.

If you are happy with your modifications, save the sound to a blank formatted diskette. Compare the sound with the original. Note that velocity controlled filtering can be used as a form of dynamic one-way noise reduction: loud bright sounds mask their noise, soft muted sounds have their hiss rolled off. These modifications transform harpsichord and pipe organ sounds, and reveal some of the true power of the Mirage. Also note that muted sounds appear to be distant, and bright sounds feel very close. Alternating between bright and muted timbres can give a sense of motion to music.

These concepts work equally well with the EPS, ESQ, and SQ80. When you play your softest touch the sound should be voiced so that is almost disappears. Each finger controls at least 40 db of volume as well as some timbre change, either through dynamic filtering or changes in the index of modulation in FM instruments. The Korg M1 family responds especially well to this voicing style. The "I" bank of my Yamaha TX-81Z is full of sounds in which the KVS parameters are all set to 7, ditto for the DX7II. Every sound of every instrument I use obeys these tenets to the maximum degree the hardware and software will allow. They still don't match the expressive range of acoustic instruments, but they get closer. Maximizing the application of velocity control and training your touch so that each finger independently commands the full range of volume and timbre can bring a new level of expression to your playing.

Bio: Don Slepian has been an active performer in electronic music since 1970 and video art since 1976. He has twice been sponsored by the French Ministry of Culture to perform electronic music and computer graphics in Paris and La Rochelle, and presently consults in these areas for Bell Communications Research. His album "Reflections" is on the Audion label distributed by JEM Records.

Get more from your MIRAGE™

MT-1 Multi-temperament Disk $29.95 + $2.50 S/H
14 historical 12-tone harpsichord & organ scales in 12 root keys
±12 semi-tone transpose - harpsichord & pipe organ samples

ME-1 Middle Eastern Scales Disk $29.95 + $2.50 S/H
Select quarter-tone scales using the bottom octave of the keyboard

UD-1 User-defined Micro-tonal Disk $39.95 + $2.50 S/H
User programmable pitch tables (to within 0.17 cents) on disk
16 scales including Alpha, Beta, Gamma by Wendy Carlos

SM-1 Super MIDI Disk $39.95 + $2.50 S/H
MIDI volume, sostenuto, transpose, MIDI overflow, and more

RT-1 Real-time Micro-tonal Disk $39.95 + $2.50 S/H
Polyphonic dynamic micro-tonal tuning via MIDI (plus SM-1)

OS-1 Mirage™ Monitor Disk $39.95 + $2.50 S/H
For the dedicated system hacker who wants to re-write the OS

CH-1 Chameleon - formatter/copier $39.95 + $2.50 S/H
Leaping Lizard's format, copy and system test utility

IG-1 Iguana - SysEx Utility Disk $39.95 + $2.50 S/H
Store and Load up to 99 SysEx messages in a standard Mirage™ file

IJ-1 Iguana Jr.-SysEx Playback OS $24.95 + $2.50 S/H
Send IG-1 SysEx files without having to re-boot your OS

New versions of Mirage™ OS 3.2 by Dick Lord

μPWARD CONCEPTS
85 Bennett Rd., Durham, NH 03824
VISA (603) 659-2721 MC

MIRAGE is a registered trademark of EHSONIQ Corp.

PearlSound Studios, Canton Michigan

Photo by Jeff Pearl

FOR YOUR HARD DRIVIN' MUSIC!

LET ELTEKON'S "OVERDRIVE EX" HARD DRIVE STORAGE SYSTEMS PAVE THE WAY TO SUCCESS!

When performing or laying down tracks, the last thing you want is to fumble around for that one special floppy and then take 45 seconds to load it into your sampler! Eltekon " Hard Drives" deliver your sounds in one hot hurry; with access times as fast as 16.5 ms.You may choose from capacities of 20 megabytes to 600 meg in fixed drives or select our 44 meg removable hard drive .We have the storage system to save your entire library and retrieve it flawlessly on command. Because when every second seems like an eternity, it pays not to keep'em waiting.

The First in Rack Mounted Hard Drive storage with a unique patented shock mounting for the following systems:

- AKAI S1000
- ATARI ST
- CASIO FZ-20M
- DYNACORD ADS/K
- EMULATOR
- SOUND TOOLS
- ENSONIQ EPS/EPSM
- KURZWEIL 250
- KORG Q1
- MACINTOSH SE/IICX
- ROLAND W-30,S-550,S-770
- SUNN SPARC station 1

SEE YOUR LOCAL DEALER FOR THE BEST DRIVE IN TOWN!

ELTEKON TECHNOLOGIES, INC.

313-462-3155

37491 SCHOOLCRAFT RD.
LIVONIA, MICHIGAN. 48150

ALL PRODUCTS MENTIONED ARE TRADEMARKS OR REGISTERED TRADEMARKS OF THEIR RESPECTIVE HOLDERS. . ELTEKON IS A TRADEMARK OF ELTEKON TECHNOLOGIES. INC.

The Interface

Letters for The Interface may be sent to any of the following addresses:
U.S. Mail - The Interface, Transoniq Hacker, 1402 SW Upland Dr., Portland, OR 97221
Electronic mail - GEnie Network: TRANSONIQ, CompuServe: 73260,3353, or PAN: TRANSONIQ.
This is probably one of the most open forums in the music industry. Letter writers are asked to please keep the vitriol to a minimum. Readers are reminded to take everything with a grain of salt.

Dear Hacker,

I'd be interested in seeing an article about the ins and outs of the **Mirage's** input sampling filter; specifically I want to be able to "fool" the Mirage into making the highest sampling rates available to the user without using the I.S.F. I have just purchased an EPS and have realized that I could make a master sample with it, and control the high frequency content as well as I could have with the I.S.F. I could then resample into the Mirage. This could be done by hacking MASOS, or perhaps a design for an edge connector that could emulate the the logic connections the I.S.F. makes when you install it.

Regarding your call for more ESQ articles. Would you be interested in an article that describes how MASOS assigns sequence data to the Mirage wavesamples, and how I manage to store sequence and sound information on the same disk bank (for faster performance loading) in my lounge act?

A note to your Canadian readers from a former resident. If you think prices for Ensoniq products are too high, you are right! You are being ripped off for 15-20% by a middleman distributor. If you are able to get by without customer service (most pros can), buy mail-order from the U.S. (or make a run for the border). I bought an EPS for $1600 U.S. (plus tax). And if you mail-order, the only tax you pay is customs duty. Get out your calculator and see what I mean!

Thanks for your time,
Peter Sturges
Honolulu, HI

[TH - We're almost always interested in such articles. Please send it in.]

[Ensoniq's response - You can't fool the Mirage into sampling faster or with a steeper input filter curve without an ISF. The Mirage internal A/D converter can't run any faster. The ISF actually has a high-speed A/D in it along with the input filter. What you suggest about sampling into the EPS and then resampling into the Mirage is possible. Bear in mind, however, that the EPS sample data can also be transferred digitally to the Mirage using one of the available computer sample editing programs (such as Alchemy or Sound Designer) with much better results.

Regarding mail-order purchasing, Ensoniq does not recommend bypassing our Canadian distribution channel. The extra costs involved are the result of customer service and product service systems that we feel are vitally important for the end-user. You may feel that you are saving money now, but if you have a problem you will need to see your dealer for help. Your local dealer is serviced and supported by that same distributor. Mail-order sales cannot handle that type of customer support.]

Dear Transoniq Hacker,

AARRRGGHHHHH!! BUGS!!!!

The **EPS** is definitely the best keyboard for manipulating samples for the money, but without its costs...

I have a few questions and bugs to talk about. First the bugs! Note that I am using OS release 2.4.

1. The "No You Don't Go Transposing Me" bug.

I need to use the full keyboard when I lay down my samples. Splitting the keyboard up is fine, until you run out of keyboard! Since there is an octave above and below the physical EPS keyboard, one would think that if you had a split setup at the lowest C (C1) for one octave (C1-C2), and since I use an external sequencer, transposed my sequence down an octave along with the key range of the EPS split, (putting it now at C0-C1), that the sequence would play normally. Well, it doesn't. In fact, it doesn't at all. Any splits off the physical EPS keyboard are not accessible via MIDI.

2. The "I've Changed My Mind" bug.

When in MultiMode and using an external sequencer, the EPS will play back on an instrument's channel X, but will send out on that same instrument's channel X-1!

3. The "It Only Works In MIDI Mode" bug.

Set up a loooong sample (10 seconds) so that you need only to tap the key to fire the whole sample off. (Use the Drum envelope). Now quickly hit that same key five times. What you should hear is five copies of the same sample firing off on top of each other. You don't. Each key hit kills the last sample off before firing the new sample.

Not in MIDI though! This works as it should through MIDI. Just not from the EPS keyboard.

There, that wasn't too bad. Now for the questions!

1. I have absolutely no use for the EPS sequencer since its sampling features excel those of any other sampler out there for the money. (Believe me, It took me over two months of research to conclude this.) I use an ATARI ST and would like to know if anyone has developed an alternative OS for the EPS which removes the sequencer and allows for either more memory for samples or more editing features.

2. Here is a great one. Take a waveform and resample it. Go through the resampling frequencies. Notice anything interesting? Maybe some crazy sampling rates? What does this mean? Did someone forget to set a high threshold or can you really sample up a 6.25 kHz sample to one of the many sampling rates over 100 kHz?

3. If you play around on the keyboard while the EPS is flashing one of its "working" messages, sometimes the EPS will crash. An annoying little bug, but one present on a few samplers. Maybe the EPS should just say HANDS OFF instead?

Ok, that's my 2 cents for this time. I've moved and I am enclosing my new address for fear of not receiving my next T.H. issue. That would be bad.

Peter Stone
Mission Hills, CA

[Ensoniq's response - 1) The EPS will respond to the full 88 notes of a piano keyboard, but the ranges of both the Instrument and the individual wavesamples in the Instrument must be set to cover the full range. We suspect that the lowest wavesample has a low key of only C2 and the highest wavesample a high key of only C7. Make sure that the lowest wavesample in any instrument has a low key of A0, and that the highest wavesample has a high key of C8. This should solve your problem.

2) Bear in mind that in Multi mode the eight EPS Instruments receive independently on eight consecutive MIDI channels starting with the base channel. That is, if the base channel is 3, the Instruments 1-8 will receive on channels 3-10 respectively. MIDI out channels, however, are independently assignable for each Instrument (when SEND CHAN=INST on the EDIT/MIDI page). Therefore, there is not necessarily a direct correlation between the MIDI channel an Instrument sends on and the channel it receives on in Multi mode, unless you so configure it yourself.

3) The retriggering you hear is not a bug - it is the normal voice reassignment mode for the EPS. Actually, when you repeatedly restrike a key the EPS alternates two voices to play the notes, retriggering and then "stealing" the voices over and over. A good way to accomplish what you want to do would be to assign the wavesample to several keys, set the PITCHTABLE to NO PITCH on the EDIT/Layer page. Then can play several notes and have them all sustain without the retriggering phenomenon you mention.

Question 1 - The Sequencer only uses sample memory when it is in use. Removing the sequencer would not add to the available sample memory.

Question 2 - You can indeed convert from any sample rate to any other. The re-sampling process simply interpolates new samples between the real samples. It won't necessarily sound any different unless you convert to a much lower sample rate. It's important to note, however, that a sample can't really sound any better than it did at the original sample rate; it will just take up more memory.

Question 3 - We plan to address any problems which might cause the EPS to crash in this manner in the next OS update.]

Friends,

Since I've never had the opportunity to actually write a letter to the Hacker before, let

me start by thanking everyone involved with its publication. The Hacker makes me feel like more than just the owner of Ensoniq instruments; it makes me feel like a part of a large eccentric, but friendly, extended family. I would also like to thank the many great people who have supported the Minotaur sound sample library. To those of you who have offered kind words, encouragement and suggestions, thank you! I've found it very exciting to play a small role in the many great projects you've been working on.

I've owned a **Mirage** for a number of years (and by the way, I certainly agree with Chris Barth (Issue 52) that Ensoniq's naming policy has gone downhill. The Mirage had the best name for a keyboard since the Panther Organs of the 1960's. Of course, Roland has done the same thing. Imagine, going from synthesizers named after a married pair of Roman deities to things like D-50, D-20, D-10, D-5).

Anyway, I never had a weird problem with the Mirage, which was a good thing since the nearest Ensoniq dealer was half a state away. However, as soon as the local music store began carrying Ensoniq instruments, I ran in and grabbed an **EPS**. This EPS (20596-F with OS 2.4) did have a weird problem (or two). It would refuse to calibrate the keyboard from time to time after turning it on, and would, on occasion, stop working little by little (first the keyboard would go, then the display etc.) Since the music store folks cheerfully replaced the EPS with one that works perfectly (the best music store in the world this is, Northern Music & Video in Potsdam, NY. Go there.), this isn't a problem although I am curious about it. My question is this: I had both EPS's next to each other and playing them I realized that the first one had a much firmer action than the second one (20601- F). Is the action of the EPS adjustable? Would there be a way to make the new one feel a little more like the one I returned?

Since I have Mirage people reading this and since the Mirage is now an ancient artifact, I have two questions about the history of that instrument: was the DSK Mirage (same case as the EPS) the first grey Mirage? I know in the middle they were brown, but I vaguely remember a very early Mirage that might have been grey colored. I also know the first Mirage had a very strange feeling keyboard and mine (the new DSK) has an Emax-type keyboard. Was there a third keyboard used in the middle period instrument? These may seem like irrelevant questions, but we must begin to preserve the history of this instrument!

My last question deals with the Pro-Copy software program for the 1040-ST. I use this program to copy Mirage and EPS disks, and I've found that, from time to time, the upper half of the second bank of a Mirage disk is a little screwed up. It loads into the Mirage with no problem, but the envelope will be odd, or the mapping will be different. Anybody have any ideas about this one?

As far as the great **VFX** debate, I have four sampling instruments and three synthesizers plus an organ and piano in a very small studio. They all have keyboards attached to them. If I could ever afford another instrument, I would love a VFX, but it sure would be more attractive without another bloody keyboard to make room for!

Thanks for the info!
Barry Carson
Canton, NY

[Ensoniq's response - No, the action of the EPS is not user-adjustable, and we can't replace your newer one with the older action. We are constantly trying to improve the feel of our keyboards and if you compare older and newer units you may notice the difference. We hope you will find the changes to be improvements. (But then, this will always be a fairly subjective area...)

The first Mirage was in a flat black metal case with grey and yellow trim, and had large square buttons. It used a Pratt-Read keyboard. The second Mirage was in a dark blue-grey metal case with white and yellow trim, smaller rectangular buttons and a new weighted keyboard. The third incarnation, the Mirage DSK, was in a dark blue-grey plastic case with red and yellow trim, the same buttons, and an un-weighted version of the same keyboard.]

Dear TH,

While it is likely that the problems noted in Issue #51 regarding the "COPY/BACKUP/RESTORE" command have already been dealt with by Ensoniq, my experiments with the **EPS** operating system version 2.4 COPY command show the following:

1. The COPY function does indeed produce the correct results provided that the copied diskette is extracted from the drive immediately after executing the command. The diskette free block count will be correct under these conditions.

2. If, however, the copied diskette is left in the drive at the end of the copy process, the block count in the EPS directory will show the free blocks that were previously available on the target diskette before the copy function was executed even though the correct remaining block count is actually written to the target diskette as part of the copy process. In situations where the copied diskette has not been removed from the EPS drive, attempts to save INSTRUMENT files that are either new or that were loaded from the copied diskette will likely cause "FILE OPERATION ERROR" conditions and, error condition or not, effectively ruin the copied diskette. Specifically, the newly copied diskette directory will be updated to show a free block count that is the sum of the free block count taken from that diskette prior to executing the COPY command and the block count of the saved INSTRUMENT file. Attempts to save INSTRUMENT files that were loaded from the copied disk will destroy previous version of the file on the diskette.

Maybe the people at Ensoniq have already fixed this problem for the next release of the EPS operating system. If not, perhaps my comments here will be of interest to them. Either way, my fellow EPS owners might well be advised to go ahead and copy diskettes provided that they remember to simply remove and insert the target diskette immediately after each and every execution of the new COPY command.

Additionally, why is there not a provision for assigning names to sequence and song tracks? Such a facility would seem to be an obvious necessity if for no other reason then

PROFESSIONAL QUALITY
LOW COST
SEQUENCES
FOR
THE EPS, SQ—80, ESQ—1
TOP 40
COUNTRY
ROCK (50's, 60's, 70's, 80's)
BIG BAND
CALL OR WRITE
ANY TIME 24 HOURS

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

ensoniq

EPS

Performance Sampler
Sequences Available

EPS sequences are now available for your MIDI setup!!! All that you need is our disks and a drum machine. No computer - just load our disk in and push PLAY. We have sounds that will fit even if you don't have a 4X expander. For information and prices, call 215-626-8890 or 215-533-MIDI!

LBM

L. B. Music
P.O. Box 261
Clifton Heights, PA 19018

EPS Sequences and More !!!

Voice Crystal™

Close Out Sale

Mail Order Only
2 Month Limited Time Offer

ESQ-1 ESQ-M SQ80
80 Voice
E2 PROM Cartridges
Fully Loaded with Voices

VC1 ESQ
VC2 ESQ **$40 Each**
VC3 ESQ
VCX ESQ Blank Programmable
Voices also available on Data Cassettes: $7.00 per Bank of 40 Voices

VC1, VC2, SQ 80
80 Voice 3½" Disk
$20 Each

All orders will be shipped by next working day. Send check or money order, plus $3.00 Shipping and Handling to:

EYE & I PRODUCTIONS
930 Jungfrau Court, Milpitas, CA 95035
(408) 945-0139 — Call for COD's

to identify which INSTRUMENT is to be used on which track. Better yet, why do we not have the INSTRUMENT name saved automatically when we save sequences or songs? The BANK facility does not seem like a decent alternative.

Yours truly,
Stan Morasch
Calgary, Alberta, Canada

[Ensoniq's response - The Save Bank function is the only real alternative, as the sequencer doesn't know what sounds to load off disk. It only knows to play the track data for a given location on whatever instrument is loaded into that location. The functionality you suggest would obviously be nice. We are always looking at ways to build things like this into future architectures and we thank you for your insights.]

Dear Hacker,

I have a confession to make; I sold my **Mirage** and bought a Roland W-30. But as long as I'm in the confessional, let me hasten to add that I no longer own the W-30; I traded it for an **EPS**. My reason for mentioning this in a letter to the Interface is not simply to absolve myself of the guilt of my temporary apostasy, but to share a few lessons learned about buying MIDI equipment. Just as the prodigal came to himself in the pigsty, so I have completed another course in the school of hard knocks (and the tuition was pretty steep).

Lesson 1 : Take the time to carefully check out all of the keyboards you are comparing. In my case, I have been a subscriber to TH for a couple of years, so I thought I knew a lot about the EPS just by reading the articles. This was a mistake. I never really gave the EPS a real workout, that is until after I'd already sunk a couple grand into the W-30.

Lesson 2 : Don't be seduced by sound alone. In my case, I was seduced by the incredible acoustic guitar sample and demo sequence on the W-30. Quite honestly, that is what sold me on the board. This was stupid: my primary axe is guitar - acoustic guitar at that - I will be playing those parts myself, not using samples! There is a lesson here for Ensoniq, perhaps. Roland has done a heck of a fine job on its samples and sequences, but having used the EPS now, I'm convinced that the EPS has every bit of the fidelity that the Roland samplers have. It's just that there aren't anywhere near the samples available for the EPS as for the Roland units, because the entire Roland sound library is made available to purchasers of Roland samplers, and it's a fantastic collection of hundreds of professionally sampled instruments. It would be the equivalent of Ensoniq supplying copyrights to their Signature Series to anyone purchasing an EPS. I've got about 100 disks of EPS samples now, but 90 percent of them are downright poor. They're public domain, so it's no fault of Ensoniq.

Anyway, Lesson 3: Listen to your wife, spouse, partner, if you have one. My wife reads the *Hacker* and *Keyboard Magazine*, so she of course asked me if the W-30 has as many oscillators per voice as the EPS, if the W-30 has as many voices of polyphony as the EPS, etc. She even read the recent *Keyboard* article on buying your first synth, so she was murder. My mistake? I didn't listen to her warnings to take my time; I had to get the keyboard that very night, in fact within the next 5 minutes before the sale was over!

I learned a lot more through this experience, but I want to mention just one or two things in comparing the two boards, in case any Hackers are doing that. Most important is this; the Roland W-30 is an incredible workstation, and I have nothing negative to say about it. Its positive qualities are exactly what moved me in favor of the EPS. For instance, the W-30 is very user friendly, much more so than the EPS. But I don't need user-friendliness. I personally enjoy being a MIDI hacker, and prefer the greater flexibility. One of the entanglements involved is, simply that the EPS is an Ensoniq board, and I like Ensoniq gear; I'm used to it, and it has a particular feel and quality that makes much more sense to me.

There is one thing I will blast about the W-30, and that's the manual. I have been quite amused by the recent letters to the TH complaining about Ensoniq's manuals. All of you who are irritated by your EPS manuals, order a W-30 manual and read it. I guarantee that the experience will cure you forever of your complaints. After I got my EPS, I literally kissed the two fantastic manuals that came with it. It reminded me of when I returned to the US after spending a summer in an obscure part of Thailand. The W-30

Sounds Your Way *by Cosmo Watts*

all new sounds for the Ensoniq EPS

Set #1 Jazz (traditional, fusion, electronic)
Set #2 country (bluegrass, C+W, modern)
Set #3 classical (strings, brass, woodwinds)
Set #4 rock+roll (60's, heavy, electric)
Set #5 R+B (blues, funk, rap)

We have over 5,000 great sounds available now!!
We also do custom sounds on request.

All of our disc sets include 18 complete instruments & patch setups with drums or percussion kits. These patches sound great, but use less memory!

All sounds are professionally developed by Cosmo Watts, noted programmer for top artists, movies, Ensoniq Corp., & many others.

Call: Sounds Your Way

at **American Music Co.**
(209) 221-0233
2597 E Ashlan Ave
Fresno, CA 90726

$39.95 per set (3 discs)
Dealer inquires welcomed

manual was apparently written in Japanese by electronic engineers who are not musicians and translated into English by the same folks. Now, I have studied ancient Hebrew, Greek, dabbled in a little bit of cuneiform but I have never encountered a piece of literature more frustrating or unintelligible than the W-30 manual. By comparison the EPS manuals are geared toward us English speaking musicians, and, in my opinion, do a fantastic job of elucidating the important aspects of the EPS performance. So quit complaining! Jeez!

At the risk of writing too long a letter, I'd like to switch gears and mention a few MIDI items that in my opinion, deserve some notice. First is the Remote Control **ESQ** program for the IBM by C & M Research Group. This is the cadillac editor for the ESQ/SQ80. I've used others, but this is the best I've seen, and C & M has been very responsive to me in fixing bugs. They kept working on it and sending me updates until it worked right on my machine.

I also commend Orbital Action Music as good folks to do business with. They advertise in the Hacker classifieds, and I've bought stuff from them. They really come through, and with some great prices.

Two more quick items and I'm done. First, I'd like to add a couple of items to the EPS wish list: Ensoniq, is it possible to give us the option of using the regular sustain footswitch to start and stop the sequencer? Apparently this is only possible with the auxiliary double footpedal. It seems like a simple modification. Also, how about adding the capability of programming tempo changes into sequence? This is one area where the W-30 sequencer really shines, but the EPS just sits there. Even if you had to access the system disk for this utility, I think it would be a much appreciated change in the O.S. I could leave my drum machine home once and for all, since I really need it now for making tempo templates to control the EPS. A shame for such an otherwise sophisticated sequencer.

One last shot - in my brief sojourn into Roland-land, I came across their "users group" magazine. I've also seen Korg's and Yamaha's. It made me laugh almost as much as Douglas Adam's books, and confirmed my hunch that the *Transoniq Hacker* is one of a kind. You should get some kind of an award for having the finest independent users group magazine around.

Sincerely,
Steve Vincent
Tacoma, WA

[TH - "Just the money is reward enough." (How's that for different? Actually, we really get off on the huzzahs, too!)]

[Ensoniq's response - Thank you for your words of support. We should point out that we have released many new volumes of sounds for the EPS (SLT-7 to 10 are now shipping with three more SLT's and Vol. 2 of the Signature Series coming before Christmas!). Please check them out at your local dealer.

1) Starting the sequencer with the sustain footswitch would require changing the EPS software. Since this feature is available using the dual footswitch, we are not planning to make such a change.

2) It isn't possible, given the EPS sequencer structure to program tempo changes into a song. You can, however, chain sequences with different tempos to achieve a similar result.]

Dear TH,

A couple of **VFX** questions for Ensoniq.

First, of course, I have to thank Ensoniq for the great job on the VFX; I've owned a Mirage since the first summer they were out - love it. The VFX does seem to have some early problems which I'm hoping are firmware/software related: mine is in the shop right now - stopped booting up - more on this later.

Now, for the questions:

1. I see that revision 1.72 is now available for the VFX. Is there any way short of using a computer to determine the firmware revision? (i.e., is there a set of buttons that I can push to display the firmware revision like on lots of other synths?)

2. I wrote a simple program using the example in the manual to send a Device ID message to the VFX. Sometimes I get a reply, sometimes I don't but the VFX always displays an error (either 144 or 129) when this sequence is sent. From the data returned, I see that I have revision 1.52. Is this a known problem and is it fixed in a later revision? Note I tried sending both versions: one with all channels (127) and one with base MIDI channel (0) as the third byte - no difference. Also, a friend wrote a program to do the same thing and his appears to have failed with the same error.

3. The manual shows that the "family type" should be 5 and the "member of family" 0. The returned values are switched. Which is correct?

4. Could the above mentioned 144 and 129 errors been related to my other problem: on power up the VFX displays: "CALIBRATING KEYBOARD: DO" and hangs?

Well, before I mailed this I got the word back on my VFX from the shop. They tell me that it got confused because apparently not doing a reinitialize after one of the above errors can cause it to get into a state where the VFX can't even be turned on. The hard reset done by the repair shop was $35. It's going to cost me another $35 (they think) to upgrade to 1.72. This seems to be getting out of hand.

My position is this: even if the manual states that I should do a reinitialize, the fact that the VFX can get into a state where it can't even be turned on is a bug, plain and simple. To not cover such a bug under warranty is unacceptable.

5. The VFX doesn't support All Notes Off. This is clearly documented but I was curious

1600 ESQ1 PATCHES
For Your ESQ1/ESQm/SQ80

40 Banks – $32.00

Please specify disk for the SQ-80 or cassette for ESQ1 or disk for ESQM.

Includes a spiral bound book listing all banks by name, number, type of patch, and space for your notes. The second section is an alpha name list by type with bank and patch number.

This compilation is the best of the patches found in the public domain.

$32.00 Includes 1st Class Shipping
Florida Residents Add 6% Sales Tax
Overseas Please Add $7.00 Postage
All Checks Must Be In U.S. Funds.

Patch compilations also available for Yamaha TX81Z, DX11/21/27/100 and the Oberheim Matrix 6/6R/1000.

Thousands of software programs also available for Atari, Commodore, and IBM/compatibles.

Write today for additional information.

Music Software Exchange
Post Office Box 533334
Orlando, FL 32853-3334
(407) 856-12440

greytsounds
SOUND DEVELOPMENT

L.A.'s Premier EPS sample library created by Professional Musicians for Professional Musicians

- **All samples edited on Macintosh Computers with Alchemy™ and Sound Designer™ software to normalize gain, EQ, loop, & tune.**
- **No 8-bit Mirage samples**
- **Demo disk – $9.95***
- **Available on Mac & other sampler formats**

MORE THAN 250 DISKS CURRENTLY AVAILABLE!

Call or write today for a FREE Catalog!

MasterCard VISA

Greytsounds Sound Development
9045 Corbin Ave., Suite 304
Northridge, CA 91324
(818) 993-4546 • FAX (818) 885-6678

*CA residents add 6.5% sales tax

Q - SPECTRUM

"Absolutely mandatory...belongs in every ESQ and SQ80 out there..."
Chris Barth, Review, 6/89

Important News

Dear Friends: As the **ESQ-1/M & SQ80** have been officially extinct some time, we will not be able to manufacture our cartridges much longer and will be discontinuing them. So if you have been considering getting the ***Q-Spectrum*** sounds on ROM or RAM, make your purchase soon while our existing supplies last! *After our current inventory is gone, that's it*; and they will go fast. Get them now before you regret it later. Plan for your synth's future. Give your "dinosaur" a whole new lease on life for years to come !

BLOW OUT SALE !

While Supplies Last !

160-Voice ROM - **$ 59.95** each !
Get *BOTH* for only **$110** !

160-Voice RAM - **$ 94.95** each !
Get *BOTH* for only **$175** !

Blank 160-vc RAM - **$69.95** each !
TWO - **$64.95**/ea. *THREE* - **$59.95**/ea.

Disk (SQ80/Atari/Mac): 160 sounds: $39.95!
320 sounds: $69.95 !

If you don't have the Q-SPECTRUM™ sounds in *your* ESQ, you still haven't heard *half* of what it could *really* sound like --

Programming synthesizers is an ***ART*** as well as a science. You can have the same artistic edge as many top New York studios -- Patches by renowned programmer Jed Weaver, who has created fantastic full-***SPECTRUM***™ **professional** sounds so good, you may find it hard to believe its the same instrument.

Q-SPECTRUM™ -- **For the ESQ-1/ M /SQ-80** -- Sizzling, new sounds that will take you to new heights of performance. Two 160-voice sets full of ***all*** types of instruments -- **acoustic *and* synthetic** -- with special emphasis on superb keyboards. Great basses. Super strings. Real kick and snare. Fat analogs. Digital bells. And much, much more... The sounds critics have been ***raving*** about in reviews !

NEW PRICES!

160-voice ROM Cartridge -- Contains *both* Vols. 1& 2 or -new- 3&4 ! -- $69.95
160-voice RAM (E²) Cartridge -- As above but **fully programmable ! -- $109.95**
Data Cassette -or- **Disk** (SQ-80/ Atari ST [Omnibanker,Dr.T,self-load...] (160 sounds)
Volumes 1&2 -or- 3&4 -- **$44.95** All 4 Volumes! **Special!** (320 sounds) - **$79.95**
Blank 160-voice RAM (E2) cartridge (SQ-80 compatible)- **$84.95**

VISA ***ORDERS ONLY ! (800) 77-SYNTH*** MasterCard
All info and in NY State: (212) 873-2390
Hours M-F 10-7 Sat. 10-2

SATISFACTION GUARANTEED !

To Order: Send check or money order. Call for COD. Specify product/volume. **Add $3.00** shipping/handling. Foreign orders (US$ only)$5.00.NY State residents, add tax. Please print clearly. Write for voice lists. ESQ/SQ80™ Ensoniq. D50™ Roland. 81Z™Yamaha. CZ™ Casio. Contents (C)1989 Patch/Works

Patch/Works
MUSIC SOFTWARE

Box 450 Dept. TH New York, NY 10024 (212) 873-2390

why - this seems a useful function.

6. The demo cartridges are neat. I'm told they're unavailable. Those of us who need to justify such purchases to spouses or selves would like to be able to push a button and have it do its thing. One way would be to release the cartridges. Another would be to simply release the sequences as public domain (this is the one I prefer). Will you give permission for us to make copies of the demo sequences? (I just sent away for Midicaster and would love to be able to drive my VFX from my Mirage with these and other sequences.)

While having to pay just to do a reset has me peeved, I seem to recall that yesterday I had nothing but good things to say about Ensoniq. I should note that at the same time I'm sending the details to the above directly to Ensoniq, but as noted above I felt it worthwhile to publish this.

Thanks for a great rag - read it every month.

Johnny Klonaris
San Jose, Ca

[Ensoniq's response - 1) Press the Presets button, and while holding it down, press Master. The current ROM OS version and the keyboard OS version will be displayed.

2 & 3) There were some problems with the VFX MIDI Sys-Ex implementation which have been fixed. See the notice in the Hacker about VFX Version 2.0.

4) It is possible for any computer to get into a state of confusion such that is can't run its own OS code. (Note: Regarding Mr. Klonaris's warranty concerns - we contacted him directly and have satisfied his concerns.) The newest VFX operating system will contain a sequence which allows a hard reset to be performed by the user.

5) The All Notes Off issue is long-running one - consult back Hackers for a full transcript... In a nutshell, a number of popular keyboards (in violation of the MIDI spec) were prone to sending an All Notes Off message in lieu of the proper key-up messages when all keys were released. This would have the effect of shutting off ALL voices playing on ALL MIDI channels, which is extremely undesirable in a multi-timbral environment. We found that not listening to All Notes Off messages solved many more customer service problems than it caused.

6) It is not cost-effective to release the Demo-Carts for sale, but we are looking at the possibility of making the sequences available in VFX-SD disk format. We'll let you know our decision soon.]

Dear Hacker,

I have been searching the ads in your magazine for months looking for sounds of Renaissance and Baroque instruments that can be used on the **SQ-80**. I am a piano teacher with an interest in early music (my harpsichord is right next to my SQ-80). I

would love to be able to create ensembles with those wonderful old sounds. Has anybody done it?

Sincerely,
Judith Curtis
386 Severn Ct.
Henderson, NV 89015

[TH - We're including your complete address so if anyone can help they can contact you directly.]

Dear Hacker,

Some of the commercial patches I have recently acquired (after intently studying the reviews in TH, natch) have values of +4 or +5 for the "OCT" parameter. Unfortunately, unlike the **ESQ-1** with recent software versions, my **ESQ-M** doesn't recognize those settings.

Is there any chance Ensoniq will make available a software revision for us ESQ-M owners that enables the higher OCT values?

Why do they call it software anyway? Isn't it really firmware if it's ROM?

Sincerely,
Robert E. Mintz
Anchorage, AK

[Ensoniq's response - Since the ESQ-M has been out of production for over 2 years, we are not actively working on software upgrades for this product. We call it software simply to distinguish it from the hardware. While you are correct that it is actually firmware, this is more confusing to the average user.]

Hacker,

How come C.V. pedal so cheap? Like dragging chain across lodgepole. Me think-um ugly Yamaha pedal with modified potentiometer heap better.

Which phrase you reckon more cool - the SQ-80 "Rad Software" or HR-16 "Bummer,Dude"?

Noble Savage
Wahoo,Texas

[Ensoniq's response - We buy our CV Pedal from an outside source. We are not in a position to manufacture them ourselves. We have had very few complaints about the pedal, and it is reasonably priced compared to many others.]

Dear TH:

In TH Issue number 45, Gary Dinsmore's article on the **EPS** entitled *"Sampling an Acoustic Instrument, Part II"* refers us to the *Advanced Applications Guide* page 3, for "a detailed description of envelopes." I am using the AAG "Version 1.1" - and it has no detailed description of envelopes. Am I reading the wrong edition?

P.S. The 4 pages about envelopes in the AAG that were reprinted verbatim from the *Musician's Manual* were *really* helpful.

Sincerely,
David Zimmerman

[Gary Dinsmore's response - Way back in the dim early times of the EPS, there was just the Musician Manual. *Then we got advanced copy of something called the* Advanced Applications Guide - Outline. *At the time TH Issue 45 came out this "Outline" was the latest word. On page 3 of that book was the same detailed envelope description that you have referred. It was indeed copied verbatim into the AAG. My version of AAG is only 1.0, so it is possible that the* Musician Manual *provided now is also a different version. My* Musicians Manual *doesn't have a single word about envelopes.*

The "EPS Users Guide" *has some 40 references to envelopes in its index, and spends three full pages going through all of the envelope parameter pages in detail.]*

SAVE
ON
EPS4X
EXPANDERS
USER INSTALLABLE
ENSONIQ APPROVED
2 YEAR WARRANTY
USER GROUP
PRICES!
ESQ SQ80-160 CART
VFX,DX,K1,D50 RAM
LOADED WITH SOUNDS
CALL
TODAY
WILDWOOD SOUNDS
4726 PEBBLE CREEK
PENSACOLA FL 32506
904 944-6012 TONY
MC/VISA AFTER 6PM

Which comes first, the Chicken or the EPS?

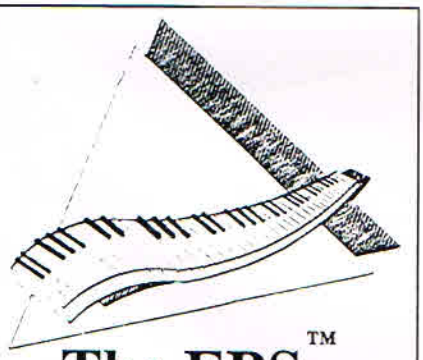
With Rubber Chicken, **you** come first.

The facts:
Samples for the EPS
1200+ sound library
"Original Chicken" samples
VFX samples
Demo tapes
Friendly, personal service
Consumer owned and operated

We are the only 3rd party sample company devoted exclusively to the Ensoniq EPS!

Call us first!
1-800-8-PRO-EPS
(1-800-877-6377)

Rubber Chicken Software
P.O.BOX 428 • RENTON, WA 98057



The EPS™ Users Guide

Reviewed in the April 1989 issue of Hacker. This manual was evaluated as being "...impressively thorough." This 75-page manual has a six-page index and menu diagrams for the edit and command modes. It is written to be a reference manual and companion for Ensoniq's own manuals.

Price: $20 US, shipping and handling: $2 US, $6 Canada, $15 Europe, and $18 Australia, etc. Send a check or MO to Gary Dinsmore, 32695 Daisy Lane, Warren OR 97053. Includes a SCSI and hard disk update in late 1989.

TRANSONIQ HACKER
1402 SW UPLAND DR., PORTLAND, OR 97221, (503) 227-6848

BULK RATE
U.S. POSTAGE
PAID
PORTLAND, OR
PERMIT NO. 913

FORWARDING AND RETURN
POSTAGE GUARANTEED

SUBSCRIPTION MATERIAL
DATED MATERIAL - TIME VALUE

Publisher: Eric Geislinger
Editor: Jane Talisman
Staff: Erica Gullixson

Our (somewhat regular) illustrious bevy of writers includes: Craig Anderton, Chris Barth, Michael Carnes, Dave Caruso, Walter Daniel, Gary Dinsmore, Charles R. Fischer, Steven Fox, Bryce Inman, Jim Johnson, Duane King, Bill Lewis, Dick Lord, Kenn Lowy, Sam Mims, Michael Mortilla, Clark Salisbury, Jordan Scott, Mick Seeley, Don Slepian, and Bob Spencer.

Copyright 1989, Transoniq Hacker, 1402 SW Upland Drive, Portland, OR 97221. Phone: (503) 227-6848 (8 a.m. to 9 p.m. Pacific Time).

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

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

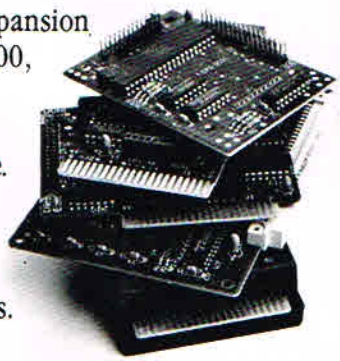
Transoniq Hacker is the independent user's news magazine for Ensoniq products. Transoniq Hacker is not affiliated in any way with Ensoniq Corp. Ensoniq and the names of their various products are registered trademarks of the Ensoniq Corp. Opinions expressed are those of the authors and do not necessarily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

We are sampler memory experts. Period.

Expand your memory! We make memory expansion products for the Ensoniq EPS, Akai S950 & S1000, Roland S-770 and others.

Our commitment to being the best assures you of the highest quality, reliability and value. Each product is designed, manufactured and tested to earn our lifetime warranty. Contact your local music store today.

To expand your memory, rely on the experts. Rely on PS Systems. Period.



PS SYSTEMS
music technology products

9265 Activity Road, Suite 102
San Diego, California 92126
(800) 446-8404 (619) 578-1118
FAX (619) 578-8851