TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

THE EPS

FIRST IMPRESSIONS BY TWO EAST COAST DUDES

Kenn Lowy

Normally, it's pretty easy to write an article like this, no need to go into details, just the facts. But the EPS has too many of those so called facts (ie, new functions worth mentioning) to make this easy. The best place to start would be to tell anyone reading this that if they thought the Mirage was nice, and they like the ESQ, then they should spend some time checking out the new Ensoniq EPS synth.

Ensoniq has made a big deal out of calling this a "performance synthesizer." The new load-while-playing feature has a lot to do with that. While I think that's an excellent feature, it's really just the tip of the iceberg.

I have a Mirage and a rack mount ESQ and lots of software to go with it. I mention this because Ensoniq has taken the finer parts of these synths and software programs and pumped them into the EPS. So here's a little list to explain exactly what I mean:

You can use Mirage disks/sounds. They are converted automatically. However, the EPS sounds better than the Mirage, so the sounds will need some fiddling with. After all, there's a lot more that can be done to a sound once it's in the EPS.)

You can create your own scales (a la Dick Lord's Mirage operating systems) and save them to disk.

You can attach a volume to each sound (so the drums can be louder than the strings, etc.).

It's in stereo, with a pan feature. You can place the sound in the center, a little to the left, right, or wherever.

20 note polyphonic. Very important if you're using a sequencer (which the EPS also has built in).

Polyphonic aftertouch (that works). A special note on the new keyboard: Ensoniq is very happy about this keyboard and they want to see it become a standard. They are genuinely surprised and dismayed that people are talking about the "click." I have to admit I was really curious about it. The click is in the actual keyboard itself, not in the sounds coming out the synth. As an ex-piano player, I can't see or feel the problem. The keyboard feels fine to me, and most keyboard/synth players I know have the volume too loud to hear this click anyway. As far as I'm concerned, it's a non-issue. But you might feel differently if you plan to use the sampler in a quiet environment. But remember, Ensoniq is calling this a "performance sampler," and most people perform on loud smoke-filled stages.

MIDI system exclusive dumps. This is basically what the "Iguana" from Leaping Lizards will do for your Mirage. You can save any sys ex info from any MIDI machine.

Headphone jack (apparently there have been a lot of requests for this).

Memory expansion port. There are three memory expansion kits available. The 2x, will give the user an additional 5 seconds of sampling (at 52.1 kHz), and an additional 42

In This Issue...

MIRAGE:

Synthbank
Erick Hailstone.....7

Sound Lab Version 1.12
Clark Salisbury.....10

Creat-A-Disk #2
David Caruso.....16

A New Sampling Trick
Jack Loesch.....18

ESQ-1/SQ-80:

ESQ-1 System Applications
Jim Johnson.....8

Doing Splits
Sam Mims.....14

ESQ-1, SQ-80 Patch Reviews
Rick Hall.....19

Hackerpatch
Hailstone, Mims, & Contributors.....22

EPS:

First Impressions
Kenn Lowy & Jordan Scott.....Cover

GENERAL:

Random Notes.....4

Footswitch Adapter
C. R. Fischer.....5

Imitating Other Instruments
Chris Barth.....12

Classifieds.....24

The Interface.....27

seconds at 6.25 kHz. The 4x will give an additional 10 seconds of sampling (at 52.1kHz), and an additional 74 seconds at 6.25 kHz, above the 2x. In essence, more memory equals more sampling power. The 4x can also be purchased with a SCSI port which is Apple compatible (for hard disk storage?). The 2x will retail for approximately $200. No price yet on the 4x with or without the SCSI port.

An 8-output expansion slot. By now you're probably thinking that Ensoniq has put a lot into this bugger. There's more to come.

You have looping functions - forward, reverse, synthesized, and crossfade loops.

You can copy a wave. Which wave? Go into the wave page and press a key on the keyboard, the display will tell you what wave number. Pretty nice feature.

Layering. Want to layer 10 wavesamples? - no problem as long as you have enough memory. In fact, you can layer up to 127 of them.

A very user-friendly environment. The EPS is set up like the ESQ, easy to understand pages and readouts. And, NO MORE HEX PAGES!

The operating system is disk based, so people like Dick Lord can do nasty things to it for people like you and me. Unfortunately for them, Ensoniq seems to have added most of the features third party people added to the Mirage. But I'm sure they'll find something missing, even if I can't.

There are also two small buttons on top of the pitch wheel (which is next to the mod wheel) which are like special effects buttons. You can program three different functions (press the left, the right, or both) into these buttons. They can call up another layer with more vibrato, high end, whatever you want. Ensoniq likes to say that you can add a growl to a sax solo, feedback to a guitar solo, and so on. And they ain't kiddin'. While these buttons are meant to be momentary (only on while you have the button pressed down), they can be made to lock in without keeping the buttons depressed.

Ok, there's more to mention, but by now you probably have the general idea. This is not a little step up from the Mirage, it's a giant leap forward. The EPS looks like most Ensoniq instruments, a simple button format with an ESQ-like readout. There are three mode buttons: Load, Command and Edit. A bunch of Page buttons: Instrument, Seq-Song, MIDI, System, Env1, 2, 3, Pitch, Filter, Amp, LFO, Wave, Layer and Track. For anyone who is used to using the ESQ, these buttons are pretty easy to follow. Press Edit Wave and you're into the edit wave page. Press Load Instrument and -- well, you get the idea. I had a chance to play with the EPS at Ensoniq's headquarters. I wasn't able to do any actual sampling or play with the sequencer. [A quick note about the sequencer: it is the same as the SQ-80, and will allow for MIDI out so you can use other MIDI instruments. It is a full-featured sequencer allowing for 8 tracks, overdubbing/punching in, editing, panning and more.] But I was given a very thorough demo and then left alone for a while to do what I wanted to with the machine. I turned it off, watched it boot up, loaded sounds (you can load sounds separately or in banks). You can set up banks to load in a specific order. As soon as one sound has loaded, you can use it. So you can load drums first and start your sequencer (with a drum lead-in perhaps) and then in a second your lead synth sound is up and you can use that, and so on. Layering sounds is also a breeze.

One thing that was mentioned to me was that Ensoniq wants to take the Apple Macintosh approach to synths. Make them very easy to use and very user friendly. I think they've done an excellent job.

Back to loading sounds - the EPS uses double-sided 3 1/2" disks. The amount of sounds you can fit on a disk depends on how complex the sounds are. If a sound has 127 wavesamples on it, you might only get that one sound on a disk. Then again, you might fit a lot more on it. You can place sounds anywhere on the keyboard, like the Mirage, except (and it's a big difference), the EPS will ask you the range of the sound. Hit the bottom key, move the cursor and hit the top key, done. It's easy.

Sampling! Some nice new sampling features. Initially, sampling on the EPS is similar to the Mirage. You choose the sample rate, filter cutoff, pre-trigger (this lets the EPS start the sample before sampling threshold is reached), input level (mic/line), and sample time (this will tell you how much sampling time is available). You then check your sound level (same as the Mirage) and press Enter (or you can press the foot switch) to start sampling. Play the sound and then hit Cancel (or wait for memory to run out). Then the EPS will ask you for the root note. Press that note on the keyboard and the EPS will do the rest (setting up the keyboard so it's in tune with the world as we know it). The EPS will remember what that root note is (you can change it later if you want to), and it will also remember what sample rate you sampled at. Samples are also "normalized" - which Digidesign uses on their software. This means the volume of the sample is made louder without distortion or clipping. You can also truncate/squeeze the wave to help conserve memory.

Ensoniq has no plans to release a rack mounted version of the EPS, and I can understand why. The rack would obviously not have the new Poly-Key keyboard, and would lose much of its power. While I like rack mounted modules, I wouldn't want the EPS without the new keyboard. I could go on and on about the EPS, but as this is supposed to be a first-look article, not a thorough review, so I will stop here (almost). This is really a very powerful sampler and synthesizer. Frankly, I don't know why it's under $2,000 by a buck or two. It does more than a lot of the other samplers out there, and it sounded very good to my ears. It's not a Fairlight, Synclavier, or Kurzweil, but for the money, it's an excellent buy. If you're thinking of buying a sampler, you'd be crazy not to check out the EPS.

Bio: Kenn Lowy is an e-bowist/guitarist/stick player who uses various synthesizers. His first album was out in the fall on the October label. For pure relaxation he runs road races and competes in triathlons.

Jordan Scott

While some may have been disappointed by what they have read concerning the similarities of the new Ensoniq SQ-80 synthesizer to the beloved ESQ-1, all checkbooks be warned, the new EPS sampler is a totally new instrument. It could be a killer. In this brief look I will focus on the sound quality and basic performance, sampling and voicing features of the EPS. Please note that this sampler also has an onboard sequencer as sophisticated as the ESQ sequencer with its only compromise being accessing sequencer info from the smaller 22-character EPS display.

Everyone take a deep breath - here we go.

The EPS features a new VLSI chip produced in-house by Ensoniq called DOC II. The DOC II chip contains over 50,000 components compared to DOC I (the Q-chip which is in the Mirage, ESQ and SQ-80) which has some 22,000 components. Without getting into too many details, this means lots of features including A/D to D/A conversion, digital filters, digital EGs and a complex 20-voice architecture at a cost consistent with Ensoniq pricing philosophy.

The first and most important (and most difficult) question to answer is: how does it sound? Theoretically, the EPS should be able to rival true 16-bit machines with its floating point output conversion of the 13-bit input sampled data (Ensoniq

says the EPS output is equivalent to a 24-bit linear system). At the very least, according to Ensoniq sound designers, it surpasses the Akai S900 in A/B sampling tests. In the short time I had to sit with the EPS (using headphones), it sounded considerably above the Mirage in clarity and, at the least, equal to the other 12-bit samplers. The DOC II chip provides clean highs at the top end of the keyboard, and added definition as samples are transposed down the keyboard. There are, however, no completed sounds for the EPS. Until there's a sizable library, the EPS will have to rely on Mirage 8-bit sounds which can't show off the machine's full potential. (The EPS operating system is still being debugged and currently the EPS will load only Mirage Program Variation 1 from either or both selected Upper or Lower bank. Once Mirage files are loaded to the EPS, envelope and filter adjustments are necessary to correct for differences in voice architecture. Mirage samples can be played with improved fidelity on the EPS and can also be saved to EPS format).

The preliminary EPS Piano sounded noticeably cleaner than the Mirage counterpart, with great "tinkling" highs in the top octave. The rest of the keyboard range sounded thin, but with a few filter and amplifier adjustments, there was noticeable improvement. Some other rough disks included voice, organ, and string sounds and a beautiful layered sound (bells, strings, flutes) called "Fantasia." The EPS sounded good, but at this point, it's too early to say if it will rival top-of-the-line studio samplers.

The EPS, however, is being billed as a sampler for live performance and as such it faces lots of competition from other samplers with many innovative features. As mentioned in last month's spec sheet, the EPS has the same keyboard as the new SQ-80 with its Poly-Key aftertouch. The keyboard makes a noticeable clicking sound, but if that's what it takes to have polyphonic aftertouch, I'll live with it. Pure and simple - it's a fantastically expressive feature. The EPS features a new performance controller called patch select. These are momentary switches above and to the left of the pitch wheel which when held down allow you to select a different layer of wavesamples instantaneously. You can select a completely different sound or add distortion, feedback, detune and a multitude of performance expressions with a single touch.

Loading a sound from disk while continuing play on the keyboard ("Performance Loading" in Ensoniq terms) is a great feature which skirts the problem of long disk load times and the expense of having massive RAM blocks to store sounds which are duplicated on disk files. Assuming there's enough unused RAM left on the EPS, you can load a new instrument while playing a previously loaded one. On the basic EPS, the Piano sound leaves only 40% of the RAM free, so if you want to load another large file, you will have to delete your current sound in memory before loading the new one. In other words, you can't take full advantage of Performance Loading unless you have enough free RAM to load to. With the optional 2x memory expansion (about $300), there's plenty of room for loading several instruments without having to kill the current sound on the keyboard.

The EPS provides a voice architecture perhaps even more flexible than the ESQ-1. In the low-frequency playback mode (for 15K frequency response), you have a whopping 20 dynamically-assigned voices. And now that the filters, EGs and amplifiers are all digital (and handled by the DOC II chip), Ensoniq has been able to give each individual wavesample its own program parameter set (3 EGs - one for pitch, filter, and amplitude, 1 LFO and 12 modulation sources.) The power of the new chip also allows for a unique multimode digital filter. Here are the rough details: 2 filter configurations per wavesample; four filter modes with each mode varying the configuration of the four filter poles. If you like, you can still have traditional analog-type 3-pole low-pass, 1-pole high-pass filtering. The EPS debuts another unique EG structure with 6 stages. Each stage has two programmable levels (one for hard playing, one for soft) and time, with the processor interpolating between the two levels as it tracks keyboard velocity and aftertouch. The last stage is actually a second release stage which can be used to simulate a reverb decay.

While the EPS does not feature onboard visual looping aids as some other samplers on the market, Ensoniq has provided the user with some hefty Digital Sound Processing (DSP) features that may make visual display unnecessary in many applications. Briefly, there's an auto-looping routine which searches zero-crossovers with appropriate slope directions, and several different algorithms including crossfade, reverse crossfade, ensemble crossfade, bowtie crossfade, and synthesize crossfade looping. Unlike the Q-chip, the DOC II won't be so fussy about short loops and loop point boundaries.

These are the basic EPS features at a quick glance. Others, like the ability to play back sounds over the 88-key piano range, SCSI expansion port option, the speedy Motorola 68000 processor, the 8-output and various memory expansions, friendly user interface and a disk-based operating system, reveal a complex and deep sampler that has great potential. We'll be hearing a lot about the Q-chip's new brother and a lot from the EPS performance sampler.

NEW EPS TERMS:

1. *Layer* - a keyboard map of multisamples (up to 127 wavesamples)

2. *Instrument* - up to eight crossfaded layers on the keyboard that defines the sound (ie, piano, strings, etc.)

3. *Stack* - double clicking instruments will stack instruments on each other (up to eight).

4. *DSP* - Digital Sound Processing for advanced looping and wave data manipulation.

5. *Block* - dividing segment of DPS memory. Memory can be used for wave and sequencer data. The EPS divides its memory into 1024 blocks. One block equals 4K.

6. *Word* - a 16-bit word on the EPS. The Basic EPS comes with 256k words of memory (which equals the quoted 480k of memory). 256k words = 80,000 notes for sequencer data.

7. *DMA* - direct memory access for playing while loading from disk.

8. *Display* - 22 character alpha-numeric display with 30 indicators.

Bio: Jordan Scott is a studio/engineer at ABC Network in New York where he pushes buttons and edits tape. His introduction to electronic music occurred in 1981 at Syracuse where, while involved in TV-Radio studies, he wandered into the Crouse College Music Lab featuring Moog synthesizer modules, step sequencers and neon beer signs. Currently, he records stuff at home like everyone else in North America. ▬

RND (♩♪♪)

Well, several people have managed to get their hands on the new EPS this last month. You'll see reports from two of them in this issue. This critter looks really hot. Unfortunately, latest word on the shipping date is now "sometime in late December."

* * *

Our Hackerpatch file is still a little skimpy. Now would be a REAL GOOD TIME to send in that little gem that you've been keeping to yourself. We'd especially like to start seeing some patches from new SQ-80 owners.

* * *

Speaking of new SQ-80 owners (and, eventually, EPS owners) - how about sending us some articles about your new gear? Not all of our regular writers are going to be out there snatching up the latest equipment. We're also going to need some people willing to be listed on the Transoniq-Net and answer some occassional questions. We depend on those of you out there on the edge to keep the rest of us informed. (PLUS - you'll receive the usual fame, fortune, and offers from *real* magazines...)

* * *

A few readers have voiced some concern that if we "go slick" we're going to lose the *Hacker Mystique* - that *insider* look. Never fear, we're not going to mess with the content. We're just going to try to look a little nicer. No, we're not going to have glossy photos of rock bands and the like. We're going to keep publishing more hard info per square centimeter than you'll find in any other music magazine.

* * *

A few issues back we reached the point where the amount of article-type material that we can add is directly proportional to the amount of advertising space that we sell. It certainly wouldn't hurt to let our advertisers know where you saw their ad. It'll help them, it'll help us, and - if we can grow larger - it'll help you.

* * *

TRANSONIQ-NET

The following people have agreed to help with questions:

ESQ-1 QUESTIONS - Tom McCaffrey. ESQUPA. (215) 750-0352, before 11 p.m. Eastern Time.

ESQ-1 QUESTIONS - Jim Johnson, (602) 821-9266. 5 to 10 p.m. Mountain Time (AZ).

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

SAMPLING & MOVING SAMPLES - all over the place. "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.

MIRAGE/ESQ-1 COMPUTER BULLETIN BOARD - Provided by John Connolly of Portland, Oregon for information exchange and file transfer. "Ensoniq-Net": Phone (voice): 503-641-6260. Phone (BBS/computer): 503-646-2095. Free messages. Yearly membership for upload/download: $35.

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

MIDI & SEQUENCING - Leslie Fradkin, Metropolis Music. Eastern Time (NY). Calls between 10 am and 9 pm. (212) 246-8420.

MIRAGE HARDWARE & FIRMWARE - Scott D. Willingham. Pacific Time (CA). Weekdays: 6-9 p.m., Weekends: 12-9 p.m. (213) 397-4612.

MIRAGE OPERATING SYSTEM - Mark Cecys. Eastern Time (NY). Days. (716) 773-4085.

MASOS - Pete Wacker. Whenever. (602) 937-1177.

BACK ISSUES

Back issues are $2. each. (Overseas: $3 each.) Issues 1-9, 11, 13-18, 21, and 22 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. 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!)

PSYCHE SHRIEK'S ESQ-1

Enjoy the holidays! Have a harpsichord:

OSC1 OCT:-1, S:ØØ, F:ØØ, W: NOISE 3, MODS =+ØØ
OSC 2 OCT:-1, S&F:ØØ, W: NOISE 2, ENV1=+Ø9, KBD=+27
NO OSC3. SET DCA 1 AND 3 TO "OFF," OTHERS DO NOT MATTER.
DCA 2 L=63, OUT:ON, MODS=+ØØ
FILTER: FREQ=Ø93, "Q"=1Ø, KYBD=ØØ, MODS=+ØØ
DCA4 ENV 4=63, PAN=Ø8, MODS: KBD2=+5Ø
ENV 1+63, +63, +63, ØØ, ØØ,| ØØ, 63, 63, 63, ØØ
ENV 4 +63, +56, ØØ, ØØ, ØØ| ØØ, 24, 40, 18, ØØ
MODES SYNC: ON, VC:ON, OSC:ON (OTHERS=ØØ/"OF")

Chorus this and use room type reverb. Lower OSC2's ENV 1 level to reduce the key-up glitch. The filter's "Q" controls the "thickness."

ONLY EXCELLENCE! Our 80 voices feature:

- TEN PAGES of modification tips and applications
- No duplicate voices or slight variations
- A free update to version 4.0 when available
- A one year EEPROM warranty

Created and used by professionals, these voices include a complete percussion kit with variations, basses, keyboards, synths, and effects, covering all styles MUSICALLY. Some voices include genuine, variable echo, and a kick drum/reverb that *MUST* be experienced!

PRICES: Data Cassette, $30.00; Mirage Disk $35.00; E²PROM $65.00; Demo Tapes $3.00!

For more information, call the Demo Line: (213) 656-3515.

DON PEAKE MUSIC, INC. 3960 LAUREL CANYON BLVD. SUITE 353, STUDIO CITY, CA 91604-3791.

Please add 2.50 shipping/handling. CA residents add 6.5% tax. Foreign orders use International Money Order, U.S. funds.

Dealer Inquiries Invited!
ESQ-1 and MIRAGE are a trademarks of Ensoniq Corp.

BUILD A FOOTSWITCH ADAPTER

By C. R. Fischer

FOR: ESQ-1, Mirage, EPS, SQ-80.

No matter which instrument you buy, it seems inevitable that it will always have one feature that will annoy you. With my ESQ-1, this feature has to be the tacky little footswitch included with the instrument. It's small, feels weird, and tends to crawl all over the floor unless affixed firmly with large quantities of duct tape. And I don't seem to be the only one - every ESQ-1 or Mirage owner I've met agrees with me on this point.

Yamaha makes a wonderful footpedal for their series of synths and pianos that feels great and stays put - the FC-4. And it works with most other brands of instruments as well.

Except Ensoniq's.

For perverse reasons known only to themselves, the otherwise good people at Ensoniq have chosen to use normally open (N.O.) footswitches in their products while virtually everyone else uses normally closed (N.C.) switching. What this means is if you were to plug the FC-4 into your ESQ-1 or Mirage, you would find your axe sustaining EXCEPT when the pedal is depressed. Yecch.

Those with mechanical talents might consider opening up the FC-4 and changing the internal footswitch with one of the N.O. variety. I would tend to discourage this because mechanical modifications tend to change the "feel" of the action, usually for the worse. Instead, I've come up with an electronic modification that is both simple and inexpensive, and it involves no mechanical mods to the pedal or the instrument the pedal is used with. Matter of fact, if you're hesitant to tear up your pedal, you could even put the adapter circuitry into a small separate box, leaving the FC-4 totally unmodified! Since I hate lugging around tons of little boxes, I put my prototype into the pedal - but it's nice to have the option.

The complete schematic of the adapter circuit is shown in the figure. There's really not too much to it. IC1 is a "Quad Analog Switch," and acts like a mechanical switch under electronic control. When pin 13 is grounded by the FC-4's N.C. footswitch, IC1's switch is held open; depressing the footswitch opens the ground return, and R1 "pulls" pin 13 up to +9 volts, causing the switch at pins 1 and 2 of the chip to close. In essence, the footswitch "tells" IC1 to open and close... and IC1's switch has the proper (N.O.) switching polarity. Since IC1 is open when the footswitch is closed and vice-versa, we have the equivalent of a N.O. switch without having to mess with the footswitch mechanism.

The adapter circuitry is powered from a 9V battery. Because of the low current consumption of CMOS chips, power drain is a minuscule .001 mA in regular operation (and even less with the pedal down). If you're not into electronics, this means that this circuit draws almost no power - the battery should last for almost its shelf life.

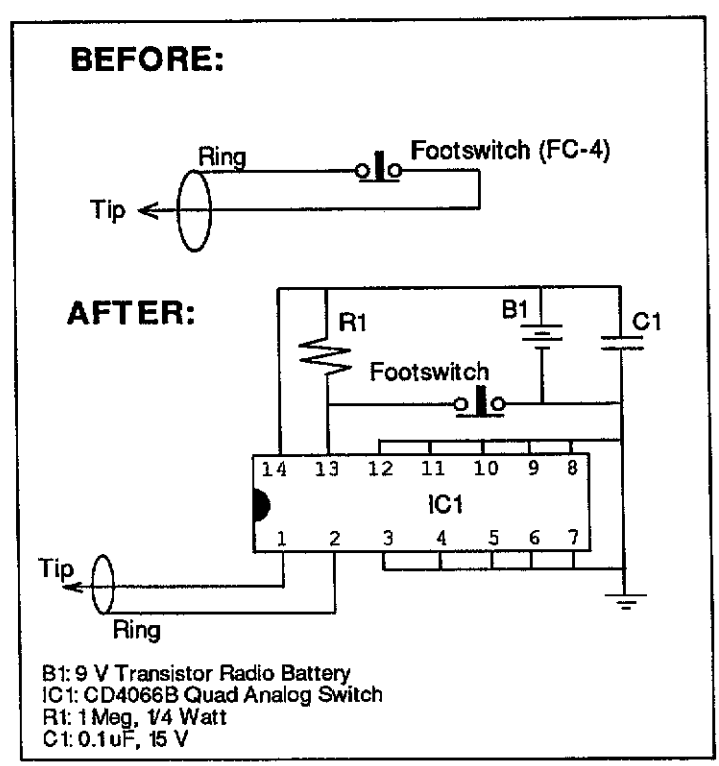
Since many folks do not like shopping for parts, Mescal Music (PO Box 5372, Hercules, CA 94547) is offering the entire adapter circuit assembled for only $12.50 (CA residents add 6 1/2% sales tax) postpaid. This includes all the parts shown mounted on an assembled and tested PC board; all you have to do is wire the thing into a box and add the battery. If you choose to put the thing in a separate box, you will have to buy a suitable container, as well as a couple of jacks so you can plug it in and out.

Mounting the assembly into the FC-4 is straightforward. Underneath the pedal is a rubber flap that can slide out to gain access to the switch mechanism. With a soldering iron and solder remover, carefully unsolder the shielded cable from the switch's two solder joints. Next, solder a wire from the ground pad of the PC board to one of the switch's terminals. Do the same with a wire from pin 13 of the IC. Then take the two cable leads and solder them to pins 1 and 2 of the IC socket. The worst is now over.

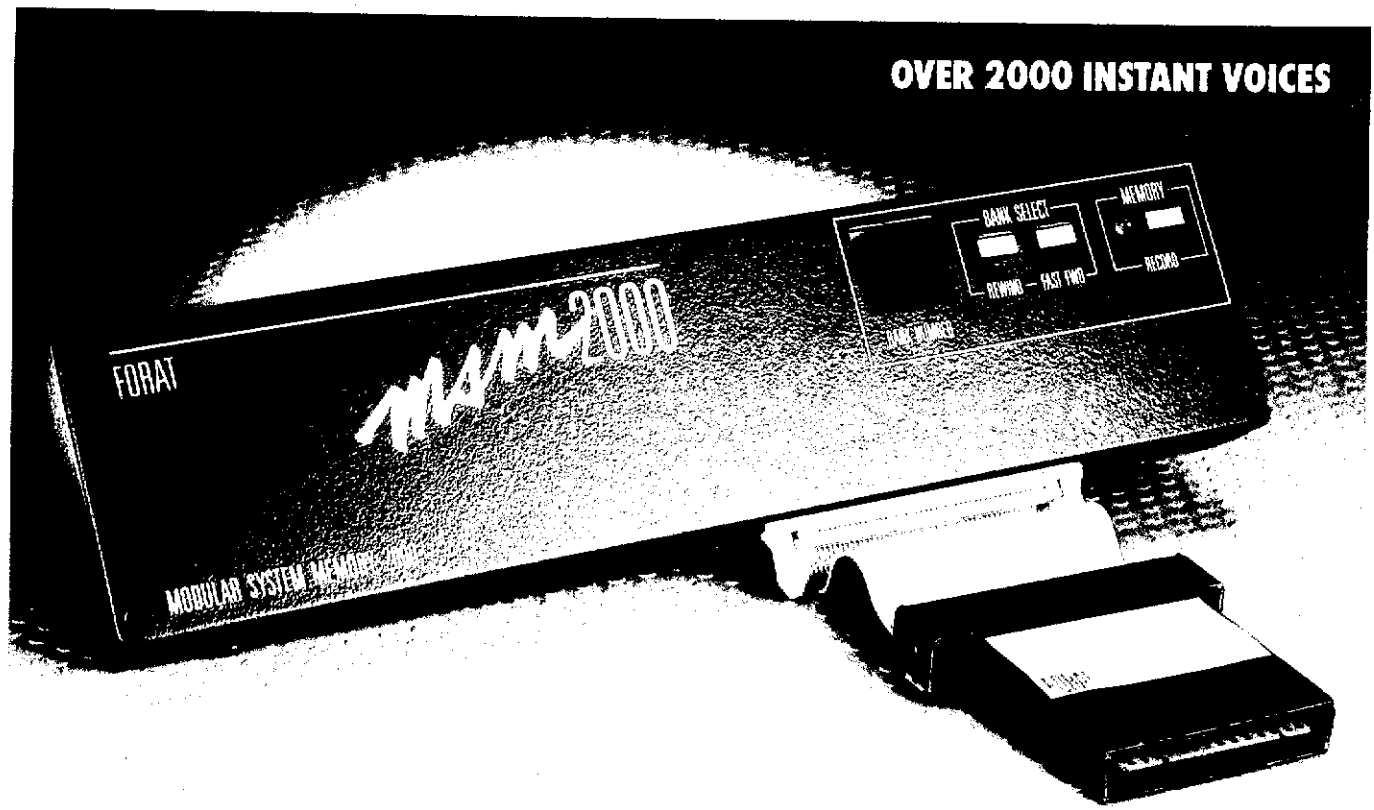
All that remains in the way of assembly is to plug the IC. Because CMOS-type ICs can be damaged from static electricity while soldering, we left the chip out of the circuit until the soldering was complete. Carefully press the IC into its socket, being careful that the IC is properly oriented and that no pins are accidentally bent under the chip. Now hook up a battery, and slide the PC board and battery into the inside of the case. That's all - the pedal is now ready for testing. The only part that can be damaged by misuse is IC1, so suspect it if your pedal doesn't work.

While this newsletter is usually not into construction projects, I feel that this circuit's simplicity and usefulness justify its presence in TH. All I can say is try out a Yamaha FC-4 next time you're in a music store - you'll never want to go back to the Ensoniq footswitch.

Bio: Charles R. Fischer is a professional keyboardist, synthesizer programmer, writer, and electronic designer. He runs Mescal Music, an electronic music consulting and design firm, and has written articles for magazines like Electronic Musician and Modern Electronics. He has also gigged everything from C/W to Rap. ■



B1: 9 V Transistor Radio Battery
IC1: CD4066B Quad Analog Switch
R1: 1 Meg, 1/4 Watt
C1: 0.1 uF, 15 V



GUESS WHAT FORAT HAS IN STORAGE FOR YOU?

The MSM 2000 Modular System Memory from Forat offers you the ability to store over 2000 custom sounds, including the 512 free sounds we give you, for your Yamaha DX-7, RX-11, all new Yamaha keyboards, all Roland keyboards (including D50), Ensoniq ESQ-1 and others. All at the push of a button.

Like your tape machine, the MSM 2000 has three buttons: Fast Forward, Rewind and Record. The first two allow you to step or scroll through 64 banks of 32 sounds each. Pressing Fast Forward or Rewind will move you through the banks of sounds, one bank at a time. You then access individual sounds through your keyboard or drum machine. In a hurry? Hold either button down and quickly scan through the banks. A single MSM 2000, by simply swaping RAM cartridge interfaces, will operate with your Yamaha DX-7, RX-11 or Roland keyboard. Your favorite sounds are on line all the time.

To save a sound, just push the Record button. Once activated, the Record light comes on telling you that "Memory Protect" is off. Now you may save to or format the bank currently shown in the display window. Once formating or saving is complete, the light will automatically go off and "Memory Protect" is enabled. You may cancel the record function by simply pushing Fast Forward or Rewind.

To insure that all your precious work won't get lost, the MSM 2000 comes standard with automatic memory self protection. This is provided through maintenance free rechargeable batteries. Every time you plug in the MSM 2000, the batteries are automatically recharged.

Only the MSM 2000 can give you the freedom, speed and flexibility you need, on the road or in the studio. To experience the remarkable MSM 2000, contact your favorite professional music dealer or call Forat for the authorized dealer near you.

595.00
DEALER ENQUIRIES INVITED

FORAT

11514 Ventura Boulevard, Studio City, CA 91604 (818) 763-3007

© 1987 Forat Electronics

SYNTHBANK

By Erick Hailstone

FOR: Mirage, EPS.
PRODUCT: Synthbank Vol.1.
PRICE: $29.95.
FROM: Cybersoniq, PO Box 1771, Madison Square Station, New York, NY 10159.

O.K. Let's let the cat out of the bag on this one. For $29.95, anybody owning a Mirage who wishes to do more than just play storebought samples (you Hackers out there, right?) could benefit from this product.

Ensoniq put a disk out many moons ago called 23 synth sounds on wheels (Disk #15.0) and one of their first disks [Disk #2] had lower sounds masking upper sounds in a way that gave quick access to several different sounds. Jordon Scott has taken these principles to their logical conclusion.

For your $29.95 you get 2 disks. One has sounds that cover the entire keyboard. The second has upper and lower splits. You also get a manual that is chock full of valuable information on programing the Mirage. There are 48 different waveforms to work with. They are divided up in four categories: 16 FM waveforms, 16 Phase Distortion waveforms, 8 Acoustic Sampled waveforms, and 8 Analog waveforms.

The FM samples were created on an Atari 1040 using several different synthesis programs and downloaded via MIDI. Phase Distortion refers to a CASIO CZ101. Analog sounds were created using a Roland JX3P. Some of these sounds were sampled using digital reverb for enhancement.

Now, before you get carried away thinking that you just bought three really bitchin synthesizers for $30 sit back down. To get this many sounds in the Mirage at once they have to be relatively short samples, in this case 32 pages. When you consider that a complex sound like an acoustic piano uses most of the memory of the Mirage to get its best results you'll have a better perspective. These sounds are very simple. A good $300 synthesizer is going to outperform most of these patches if all you're gonna do is compare them sound for sound, one on one. So why should you buy it? What you're buying are building blocks of sound. The patchlist reference card lists 360 sounds on this one disk. The manual takes these sounds and gives information that will allow the average person to hack his brains out. Of the many combinations of sounds available not all of them will be winners but some will and with the time spent you will come to understand your Mirage in many new ways.

Here's how this system works. Load the disk that covers the entire range of the keyboard. Parameter #27 [wave select] can be changed from 1-8. Here's what the first set of waveforms looks like:

1 FM CLAV
2 MUTED GUITAR
3 MUTED BELLS
4 GUITORGAN
5 MUTED E.P.
6 FMSTEELGUITAR*
7 GUITAR2
8 TO UPPERKB.

The first set of sounds you deal with are all lower keyboard samples with their top key [#71] raised to 61. This masks out any upper samples. When you select waveform 8 its top key is set to 1, allowing you to hear the upper sample all the way across the keyboard with the exception of the lowest note possible. There are also 4 variations for each of the lower and upper waveforms. These are created using the Mirage's synthesizer functions and selected using program changes. Now, right there you have 120 possibilities. Wait! There's more! The mod wheel has been set up to create chorusing for even more variations. Some programs have the Mix Mode [P28] turned allowing the mod wheel to introduce a second waveform.

The second disk uses the same sounds as the first but splits the keyboard in half allowing you to have different sounds under each hand. Parameter #24 [keyboard balance] will allow you balance the levels of the upper and lower samples.

As I said earlier the manual takes these sound building blocks and shows you how to hack your brains out. Here are the headings under MIRAGE SYNTHESIS TIPS AND TECHNIQUES: Velocity Sensitivity, Program Parameters, Filters, Wavesample Parameters, Transposing Sounds and Top Keys, Fun With Loops, Changing Wavesample Pointers, Changing Looping Pointers, and Creating Loop Distortion. There is much down-to-earth information here on how to alter these settings to create your own variations. For someone just getting their feet wet, the Synthbank is a great way to learn the many functions of the Mirage. Most of these ideas can be applied to samples you may already have. For someone who is involved with the Mirage on a deeper level, these disks make great templates for your own samples. ▬

INTERNATIONAL MIRAGE USER'S GROUP

M.U.G. is the largest, fastest growing club in the world. As a member you receive monthly lists of quality user samples to purchase or trade. (M.U.G. has the largest Mirage disk library.) Correspond with members. Special discounts and giveaways each month!!! Sound disks are only $12 each. Blank media available. M.U.G. Sounds Demo Cassette for $10 (refundable with any order over $50).

M.U.G.
G-4 Productions
622 Odell Avenue
Yonkers, NY 10710

Name _____
Address _____
City _____
State, Zip _____
Phone _____

( ) 1 Year Membership: $20 ($30 outside U.S.) Receive 1 free disk!!

( ) Lifetime membership: $65 ($75 outside U.S.) Receive 2 free disks!!

( ) M.U.G. Sounds Demo Cassette $10 (refundable with orders over $50)

( ) Mirage Techniques Video Vol. 1: Members: $19.95, Non-members: $29.95 (+ $3 shipping & handling).

ESQ TIPS
ESQ-1 SYSTEM APPLICATIONS

By Jim Johnson

In previous articles, I've discussed the use of the ESQ-1 as either a slave instrument or a controller. In my own system, however, I use my ESQ-1 as both a master and a slave, simultaneously. As you can imagine, this creates some subtle interfacing problems which, if not tamed early in the game, can cause real headaches when you try to use the system in production. Another subject I've touched on, but never really explored in any detail, is real time control of the ESQ-1's parameters from an external sequencer via non-registered parameter and sysex messages. This is another fringe area of the ESQ's capabilities that few musicians delve into, and consequently, there are a few quirks that haven't received much attention in the literature. This month, I'd like to address both of these subjects, using my own system as a source of examples.

Figure 1 is a block diagram of my MIDI system. After tracing out the tangle of MIDI connections, you'll see that the ESQ-1 and the computer are symmetrically connected; that is, either can send to or receive from the other, and both can control any of the remaining instruments. The advantages of this hookup should be obvious - I can record from one sequencer to the other, or from the ESQ's keyboard to the computer, without repatching, and I can play the ESQ's voices and/or voices in the other synths from the ESQ's keyboard and the Atari simultaneously. Note that both the ESQ and the ST receive data from the MIDI merger's thru jacks, NOT from the merger itself. If the ESQ were tied to a merged output, a loop would be formed between its MIDI in and out jacks, and every note played on the keyboard would be doubled. This is generally not a good thing, to say the least.

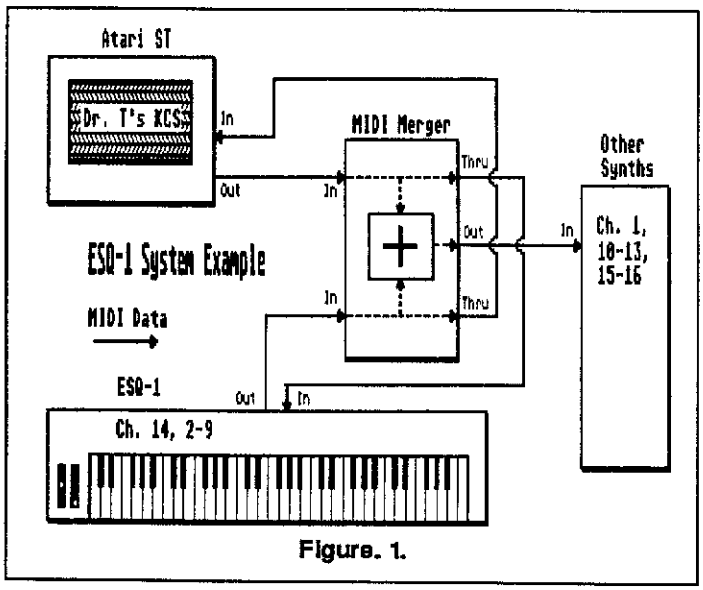


Figure. 1.

The settings on the ESQ's MIDI page are of crucial importance here, as always. For multi-timbral sequencing applications, MULTI is the preferred mode. My channel settings, shown on Fig. 1, are the result of the evolution of my setup. The only rule here is that you must reserve a separate channel for each track of the ESQ that you want to control from the external sequencer, plus a track for the "straight synth" on the basic channel. ENABLE should be set all the way to the top, since sysex messages must be used to do some of the things discussed later, and OVFL should be off, since we want the keyboard to send every note played when controlling the external synths or recording on the ST.

The other critical element of the ESQ's setup is the content of the sequences. As I've said in earlier articles, the ESQ's sequences can be used to perform the functions of "multi-patches," "patch presets," or "configurations" on other instruments, with each sequence containing a different combination of track channel assignments and track statuses. The ESQ's sequences also store the program number and initial volume setting for each track, but I've found that it is less confusing to always set these parameters from the external sequencer, since this allows me to keep fewer sequences in the ESQ's memory. With this arrangement, a particular system configuration can be selected at the start of a song with a song select command, and the patches used by the ESQ, as well as the volume levels for each track, can be changed during the course of the song using patch change and volume control messages.

Within any system configuration, a track can be used in one of two ways. First, by setting its status to BOTH, a track will act as a slave instrument, and can be controlled from the external sequencer. In this case, the MIDI channel of the track is the channel it receives on. Second, if a track's status is set to -SEQ-, that track becomes a controller for the external synths. Selecting a track set to -SEQ- status will cause the ESQ's keyboard to send on that track's MIDI channel, without playing the ESQ's internal voices. After a configuration has been selected and the appropriate patch and volume changes are sent, you can play or record on any of the ESQ's voices or the external instruments by calling up the appropriate track on the ESQ. In my system, I currently only use three configurations. Sequence 1 sets all eight tracks to BOTH status, and assigns one track to each of channels 2 to 9. The second sequence is identical to the first, except that track 8 is set to -SEQ- status and channel 1 (for controlling the synth on channel 1), and the third is the same as the second except that track 7 is set up to control my drum machine, on channel 16.

The timing of any patch changes or volume settings sent to the ESQ and the other synthesizers is important when using the equipment like this. The ESQ-1 seems to need a little time to settle after receiving a song select command before it will recognize any other MIDI data, so put a slight delay before your patch and volume commands. Also remember that the ESQ-1 sends patch and volume settings for any tracks that are set to BOTH or -SEQ- when a sequence is selected, so such messages intended for the external synthesizers should be sent from the computer AFTER the ESQ-1 has settled down. I usually put a measure's rest at the start of every song, and send all this stuff during that period.

Remote control of the ESQ-1's front panel is only hinted at in Ensoniq's documentation, but it turns out that the ESQ has the most complete remote control facilities of any synth I've seen. Everything can be remotely controlled except for one parameter: the ENABLE slider on the MIDI page, which must be manually set to its highest setting before any remote control messages can be received.

Remote control of parameters is accomplished through a fairly recent addition to the MIDI spec called registered and non-registered parameters. Basically, what these allow the MIDI programmer/musician to do is to select any parameter on the ESQ's basic channel (such as envelope settings or the

controls on the MIDI page) using two controller messages, and then to set the value of that parameter with data slider messages. The numbers to send in the non-registered parameter message are listed in Appendix 3 of the ESQ-1 manual, but fortunately, most sequencers should be able to record such messages directly from the ESQ.

To record a parameter change, here's what you do. First, enable the recording of controllers on your computer's sequencer, and start recording. Now select the parameter you want to edit, and adjust its value using the ESQ's data slider (not the up and down buttons). That's all there is to it. Use your sequencer program's editing capabilities to insert this sequence at the appropriate point in the song.

At this point, you may wonder why on earth you'd want to adjust the ESQ's parameters during a song. One good example is the new parameter added to the MASTER page for versions 2.2 and up, namely PEDAL. I like to use the pedal as a volume pedal on some songs, and a mod pedal on others, but I hate changing this parameter by hand, so I insert a parameter change sequence at the start of each song that takes care of this. You could also adjust the parameters of whatever voice is playing on the basic channel from the sequencer, perhaps adding glide only in certain measures, or changing the speed of an LFO from one note to the next.

There are, however, a few unexpected surprises involved in this technique as well, at least when using version 2.2 ROMs. First, the ESQ must be set to receive system exclusive data in order to recognize non-registered parameter messages, even though these are not sysex messages. Second, voice parameter messages are only recognized on the basic channel, which means that it's impossible to change the parameters of voices playing on tracks 1 to 8. And finally, the ESQ-1 won't recognize any parameter change messages unless some parameter page is shown in the display! Since the ESQ's display shows a sequence bank whenever a sequence (system configuration) is selected, a parameter page must be selected by pressing any black button on the right end of the ESQ, before sending a parameter message.

Fortunately (sing Hallelujah!), Ensoniq has provided a means to remotely push any button on the ESQ's front panel via a short sysex message. This neatly solves the problem mentioned above, and adds some other interesting remote control possibilities. For example, I send a message at the start of each song that presses the TRACK SELECT button, followed by the soft button for whichever track I want to play from the keyboard. The appropriate codes for each button are listed in the Version 2.0 software update documentation. One catch here is that the ESQ-1 receives but doesn't transmit these messages, so they must be manually entered from your sequencer's edit screen; and this capability isn't found on every sequencer.

Figure 2 is a screen shot of Dr. T's Keyboard Controlled Sequencer for the ST. The sequence shown in the list on the left side of the screen performs most of the operations discussed in this article. For those who've never seen Dr. T's sequence listings before, all you really need to know is that PG stands for a program (patch) change, CC for a continuous controller message, and * for a single MIDI byte message. The TIME value in each line sets the amount of time before that line is sent over MIDI, and the rest of the data should make sense if you're familiar with the MIDI spec. In lines 1 and 2, a song select command for song 20 (sequence 1) is sent, followed, after a short delay, by volume and program settings for ESQ channels 2, 4, and 14.

Events 9 to 16 make up a system exclusive message that presses the ENV1 button on the ESQ, on channel 14. The significance of each byte should be clear if you've got the version 2.2 docs, except for one point that most MIDI manufacturers neglect to stress for musicians. The fourth byte of the message (event 12) is the ESQ's basic channel MINUS ONE. When you see a channel number mentioned in any synth's system exclusive documentation, this is usually the number they're talking about.

After the button is pressed, events 17 and 18 send a non-registered parameter message that selects the PEDAL control on the MASTER page, followed by a data slider message (event 19) that sets PEDAL to VOL. Finally, at the start of the second measure, the sequence itself starts to play.

So you see, total automation of the "non-musical" aspects of an ESQ based synth system is a realistic goal. If you're using an external sequencer with your ESQ, try some of these techniques. Performing musicians will be especially pleased at how much easier it is to manage a live MIDI system when all the trivia is delegated to the machine. After all, that's what it's for, right?

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. ■

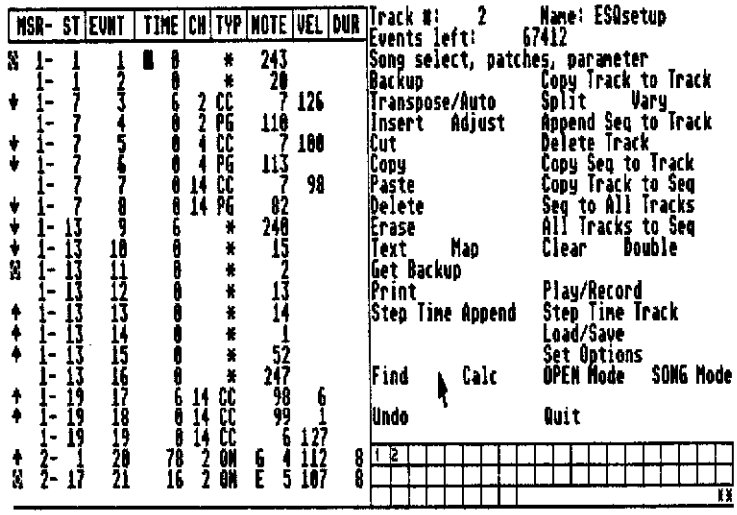


Figure 2.

NEW FEATURES IN SOUND LAB VERSION 1.12

By Clark Salisbury

FOR: Mirage.
PRODUCT: Sound Lab, V1.12.
PRICE: $299.00.
From: Blank Software, 1477 Folsom St., San Francisco, CA 94103.
(415) 863-9224.

I use a lot of software. And I mean a lot. I got software for writing, software for filing, software for graphics, software for outline processing, idea processing, food processing, software for keeping track of my appointments, software for keeping track of my software - and you know what revelation I've come to after using all this software? That most software bites the green weenie. That's right. Most if it just ain't what it's cracked up to be.

Now I use the Macintosh, mostly, so maybe that's jaundiced my view a bit; the Mac can be an awfully silly computer at times. But I don't think it's just the Mac, really. Because every once in a while a program comes along that's really useful, even professional. That's why when I was approached with an offer to do a brief review of Blank Software's latest version of Sound Lab for the Mirage, I just about fell over myself accepting. You see, I've become intimately acquainted with Sound Lab over the last year or so, and I've found it to be professional and elegant. And even though the program has been reviewed in these pages (and others) already, I more than welcome the chance to toss my two-yen's worth into the fray.

First things first. What's new about Sound Lab?

Sound Lab, of course, runs on any Macintosh with at least 512K of memory, and there are two things immediately obvious about what is now version 1.12 of Sound Lab - first, the price has been reduced from $399 to $299 (bravo!) making it very competitive with other Macintosh visual editors. Second, it is not copy-protected (double bravo!), a decision that's sure to receive much praise from the software-buying public at large.

Version 1.12 of Sound Lab adds three new features to the already feature-heavy program. A "normalize" function now shows up under the MASOS menu. "Normalize" is a simple but extremely useful utility that allows you to have the Mac scan through a wavesample looking for the loudest sample(s). If it finds that the loudest sample has a value of, say, +97, it will increase the value of all the samples by 30 points, thereby taking advantage of the entire dynamic range of the Mirage. Of course, gain changes could always be effected using the scale and add functions that the Mirage and Sound Lab have always provided, but the addition of the "normalize" function means that this operation can now be handled much more quickly and easily, eliminating the need for a bunch of trial-and-error trying to hit on the correct amount of scaling and adding needed. Nice touch.

Also included is a new "import/export" feature which allows wave data files to be freely transferred into and out of Digidesign's Sound Designer format. This is a particularly shrewd move on Blank's part; one of Digidesign's trump cards in the wavesample editing software marketplace has been its ability to read files developed for any sampler, as long as they are stored in Sound Designer format. This allows a Mirage owner to use wavedata originally sampled on an Emulator II or and Akai S-900, for example. Now you don't have to own Sound Designer to use Emulator samples on your Mirage!

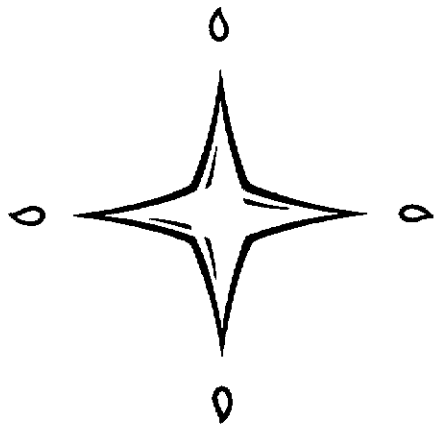
The other new addition to the program is a "cross-fade looping" function, and this one's a real winner. I've done a lot (and I mean a lot) of cross-fade looping using Sound Lab, and it was a tedious process at best. First, locate the point at which you want your loop to begin. If it's not at a zero crossing, then rotate the sample to the appropriate place. Then copy the wavesample into another location. Fade the first copy out, then fade the second copy in. Now, set up the correct markers in the overview window, and add the two wavesamples together. Now, choosing "Xfade Loop" from the menu presents you with a dialog box that will make the entire procedure more foolproof and less time consuming.

So these, briefly, are the new additions to Sound Lab. I'm not going to expend much energy detailing the use of the rest of the program here; that's already been done. But I would like to take a moment and talk about why Sound Lab has become my program of choice for Mirage Wavesample and program editing.

I particularly like the fact that an entire 64K keyboard half of Mirage memory can be displayed at one time, (actually, two 64K groups of wavesamples can be in memory at once), with a clear representation of where in memory, exactly, each wavesample is located. This can be invaluable for operations that involve multisampling or lots of wavesample copying. Admittedly, the method Sound Lab uses for cut, copy, and paste operations is not as Mac-like as some might want (to perform one of these operations you must position two cursors, one at a time, at either end of the data that you want to manipulate, rather than using the more familiar point-click-drag technique so elegantly implemented in Sound Designer), but this is more than made up for by the sheer power Sound Lab gives one for creating and editing samples and programs on the Mirage. Also, Sound Lab gets a solid huzzah from me for the "Show Page" function. From this single page display, one can easily move to and view any single page of Mirage data in memory, and from there draw new wavedata directly into Mirage memory, rotate wavedata manually or automatically (invaluable for lining up zero-crossings with page boundaries, but virtually impossible to use without some form of visual feedback), and perform interpolation on the wavedata. Also, I really like the fact that almost every change that one might make to wavedata is automatically sent to the Mirage for checking (unless you specifically suspend the communications link between your Mirage and the Mac).

I could go on about the ease of using Sound Lab for editing Mirage program parameters, the three-D waveform display, the sampling parameters setup page - but all that information is elsewhere. If you're thinking of plugging your Mirage into a Macintosh, though, you owe it to yourself to check out Sound Lab from Blank Software.

Bio: Clark Salisbury is a partner in the MIDI Connection, a Portland-based consulting firm. He has been actively involved in the composition, performance, and recording of electronic music for over 7 years and is now producing his own pop-oriented compositions. His favorite color is chrome. ■



Cesium Sound

The first and still the best
Presents

The Complete ESQ-1 Library

Also available specially adapted for SQ-80

160 Voice Cartridges	80 Voice Cartridge	40 Voice Volumes
I	A	1. Acoustic Keyboards 2. Electric Keyboards
	B	3. Guitars and Basses 4. Drums and Percussion
II	C	5. Lead Synths 6. Techno
	D	7. Space 8. Effects
III	E	9. New Age 1 10. New Age 2
	F	11. Pitched Percussion 12. Bells
IV	G	13. Plucked Strings 14. Voices
	H	15. Strings and Woodwinds 16. Brass and Saxes

	each	three	four
160 Voice Programmable Cartridges	$90	$240	$290
160 Voice Non-erasable Cartridges	$65	$170	$210
	each	**six**	**eight**
80 Voice Programmable Cartridges	$50	$270	$330
80 Voice Non-erasable Cartridges	$30	$160	$190

Save! Your choice of single volumes on data cassette, Mirage diskette, or SQ-80 diskette — $12.50 each

Half Price Special! All 640 sounds — $95.00
These formats: data cassette, Mirage diskette; ESQ-apade, Blank, Opcode librarians.
Also available on SQ-80 diskette
Sound list with descriptions $1.00. Complete manual $1.50. Demo cassette $5.00.

Please include $2.00 for shipping. CA residents add 7.0% tax. Send check or MO to:
Cesium Sound, 1640 Walnut St. #C, Berkeley, CA 94709 (415) 548-6193

ESQ-apade is as trademark of Dr. T's Music Software. Opcode is a trademark of Opcode Systems.
ESQ-1, Mirage, SQ-80, & Ensoniq are trademarks of Ensoniq Corp. Blank is as trademark of Blank Software.

Nick's Picks

Our hero selects his favorite sounds from our complete ESQ-1 Library (see other ad) for these special compilation cartridges.

5 from each 80 voice	10 from each 160 voice	10 from each 80 voice	20 from each 160 voice	20 from each 80 voice	
					1. Acoustic Keyboards 2. Electric Keyboards
				C4	
					3. Guitars and Basses 4. Drums and Percussion
		C2	CII	—	
					5. Lead Synths 6. Techno
				C5	
					7. Space 8. Effects
C1	CI	—	—	—	
					9. New Age 1 10. New Age 2
				C6	
					11. Pitched Percussion 12. Bells
		C3	CIII	—	
					13. Plucked Strings 14. Voices
				C7	
					15. Strings and Woodwinds 16. Brass and Saxes

160 Voice Programmable Cartridges	$90.00 each
80 Voice Programmable Cartridges	$50.00 each
80 Voice Non-erasable Cartridges	$40.00 each

Please include $2.00 for shipping. CA residents add 7.0% tax. Send check or MO to:
Cesium Sound, 1640 Walnut St. #C, Berkeley, CA 94709 (415) 548-6193

ESQ-1 and Ensoniq are trademarks of Ensoniq Corp.

Dear ESQ-1 and SQ-80 owners,

You may have seen my flyers before. You may have seen my ads in Keyboard, Electronic Musician, or Music Technology, or Transoniq Hacker. Now read these actual comments by customers who took a chance on ordering my sounds and were pleased enough to order more.

"I want to tell you how much I've enjoyed using your sounds. They're fabulous! Thank you for your time and talent."
JH Delmar, NY

"I am using your sounds a lot. I have others but I find yours are the most useful. Thank you for doing great work."
SW Worcester, NY

"I was very impressed with the various sounds you developed."
LL Des Plaines, IL

"The sounds are really great. I especially like the transparency of the keyboard sounds."
MS East Providence, RI

"Yes! Yes! Your sounds are the best on the market and I want em all."
JH Eastsound, WA

"I have bought ESQ-1 sounds from you twice before and I want to thank you for your latest sound list."
BR Los Angeles, CA

"Please send all six volumes of additional ESQ-1 sounds."
GS Garden Grove, CA

"I am very pleased with your sounds. They're terrific!!...your competitor's sounds are not your quality at all."
RZ Philadelphia, PA

"I love the sounds. The company I do most of my work for also likes them a lot."
SW Worcester, NY

"I now have over 300 of your sounds, and they're great."
TG Lee, MA

"I have found your patches to be musically useful, with very few sounding the same. The ones that are similar have subtle but important differences, not just a tweak here and there. Some of the patches are nothing short of stunning and are worth the price alone."
MZ Santa Cruz, CA

"I'm very pleased with the volumes I've ordered from you and I'd like to order more."
HD Houston, TX

"I have just received your cartridge 'D' voices, strings, etc. and I find it to be most satisfactory."
SP Syracuse, NY

"Nice sounds - send more!"
TD Hartford, CT

"I love your sounds."
JL Springfield, MO

"Thanks again for the <u>great</u> programming."
SW Worcester, NY

"I've heard your ESQ-1 voices and am impressed. I hope your TX81Z programs are as well."
TG W. Islip, NY

"I'd like to thank you again for your consistently high-quality sounds."
JH Eastsound, WA

Sincerely,

Nick Longo

PERFORMANCE TIPS

IMITATING OTHER INSTRUMENTS WITH YOUR SYNTH OR SAMPLER

By Chris Barth

One of the great benefits of owning a sampler or synth is the ability to mimic other instruments in a convincing manner. There's usually no problem in sounding like a piano; if you can play a real acoustic piano, the transition to a digital one should require only slight modifications to your technique.

But saxophones? strings? guitars? and what the hell is a koto?

No doubt about it, it's very frustrating to demonstrate a sax patch or disk for your friends and hear them say, "That doesn't sound anything like a sax!" So you listen to demo sequences using the same patch and wonder why it works for them and not you.

The answer is easy. Successful imitative performances get that way because the performer FORGETS piano technique. Not all of it, but most. The piano keyboard invites a certain type of playing which is totally alien to non-keyboard players. So the great performers sit back and figure out how to modify concepts and techniques which were developed for other instruments. It's really not very hard; it simply requires a little thought and practice. Thanks go to Bill McCutcheon of Ensoniq, who was kind enough to show this novice some tricks he's learned along the way. First stop: the sax section.

The **SAX** is a monophonic instrument. Since it can't play chords, don't play chords with your sax patches and disks! Instinct and practice tell most piano players to play full chords with both hands every time they sit down in front of the ivories. Sax players live on another planet entirely. For them, life is one long solo line, punctuated by short pauses to catch their breath and drink beer. If you want someone to say, "Wow! A sax!", play short phrases of a single mono melody instead of chords.

Set the pitch bend wheel to adjust the pitch one whole tone in each direction. On the ESQ-1, the proper setting is 2, representing the two semitones which make up one whole tone. Real sax players tend to bend up into the first note of a solo. Notice that saxes are usually flat and not sharp? Move the pitch bend wheel towards you, and hit the note as you release it. This will simulate the effect of a sax player bending up to reach the first note of a solo.

At the end of the solo, as you release the note, bend the note down slightly to duplicate the "end of breath" characteristic of sax players.

The vibrato setting of most synths is usually set by an LFO or two, controlled by the mod wheel. If the vibrato is too strong, reduce the depth until the effect is more subtle. Programmers often set vibrato way too deep so customers will notice an immediate effect from any mod wheel motion. Unfortunately, for imitative sounds, the effect is absolutely ridiculous, and this discourages any productive use of the wheel. The patch is still good; just tame the vibrato. Usually, an overbearing vibrato results from the LFO depth on the ESQ set at 5, or 7, which is too much; drop it down to 1 or 2 and it's easier to work with.

Finally, hit the first note loud, and use a volume pedal to bring down the volume for the rest. Just listen to any Bruce Springsteen album with Clarence Clemmons on sax and you'll hear lots of examples of what we're talking about.

If you're trying to imitate a group of two or three saxes, you'll have to lay off the pitch bending and vibrato. Since these effects are individual to the performer, it sounds phony to hear two or three all bending in unison with the same vibrato. If you're doing multitrack demos, record the first sax with as much expression as you like, and record the second and third relatively straight. This works great! Just remember that two or three saxes are more than enough; if you play five or seven parts, no one will swallow it.

To imitate other wind instruments, follow the same advice given for the sax. Remember that the natural range of these instruments is much more limited than the notes available on your keyboard. Don't play outside the instrument's natural range and expect to fool anyone. The orchestral charts that are supplied with some equalizers will superimpose the natural range of most acoustic instruments over a full length keyboard. If you don't have an equalizer, try your local music store which may have the chart in poster format.

GUITAR sounds can be really tough. The pitch bend wheel works for solos. The flatted third, so common in blues and rock can be found by setting the mod wheel to 3. Just don't overdo it. A few bends here and there are one thing; too many bends shout amateur-time.

The most common mistake is to play a chord without arpeggiating it. In other words, when you want a C major chord, don't hit each note simultaneously. Instead, play the notes rapidly from left to right. This is how the guitar pick strikes the guitar strings, so you'll have to do the same if you want to be convincing. Whether you'll play the arpeggio slow or fast depends on the music you're playing. Classical or nylon guitar pieces are not played with the same approach used by Twisted Sister. (I'm not sure if anything should be played with their approach!)

Remember that guitars have six strings, so six note arpeggiated chords are the limit. One easy way for keyboard players to copy guitar chord voicings on the keyboard is to purchase a jazz guitar chord book; the better ones include voicings in musical notation alongside the pictures of the fingers on the guitar fretboard. With this, you can load some bars of jazz guitar chords into your sequencer and solo on top of it.

VOICE sounds require lots of care. How many singers are you using? On the ESQ, each oscillator can produce one voice waveform, so with all of them turned on, you start with three voices, usually with a slight detuning. Think like a chorus! No fast runs or syncopated fills. Instead, use lots of sustained chords and slow changes. I like to think of a chorus as a human string section, with all the voices singing in unison.

To really create dramatic impact with your voice sounds for multi-track recording, mix in a human voice on the top of the machine voices. A single human voice singing "ahh" adds quite a bit in terms of realism to the AAHHS patch on the ESQ-1.

How about the **PIANO** itself? The most often neglected aspect of trying to sound like an acoustic piano on a digital synth or sampler is the use of the sustain pedal. If you don't like the little plastic one that came with your unit, you can try the Casio sustain pedal, which is much larger and more substantial for heavy use. In fact, the eight voice limitation can work in your favor. On an acoustic piano, it's always easier to keep the sustain pedal depressed rather than raise and lower it like your teacher always said. Trouble is, all those sustained tones tend to get in the way. Since the Ensoniq units are eight voice units, the older notes will be stolen instead of ringing on as they would on an acoustic piano.

STRING and **BRASS** performances usually suffer from too much clutter. Chord voicings which are easy on the piano often sound muddy when used for these sounds. The solution is to play simple intervals spaced widely apart. I like fifths for brass and thirds for strings. For example, if you're trying to sound like a horn section, don't play a tight C, E, and G for a C major chord. Instead play one C, and then a G above that, and then another C note or E note above that. By not squeezing lots of close intervals together, you avoid harmonic clutter which results when the harmonics for the C note fall over the harmonics for the E note only a few steps away. If you look at a chart of harmonics generated by fundamental notes, you'll see why the more space between your fundamental notes, the better you'll sound.

Don't forget that some patches or disks are designed to give you multiple instruments from one note. In other words, the C-1 Mirage disk for brass gives you a sax, trombone, and two trumpets for each note you play. If you play an eight note chord, you don't have the Tower of Power Horns, you have a marching brass band. If you want the former, play simple, widely spaced intervals.

I still haven't seen a **koto**, but with Bill McCutcheon at the keyboard, I now recognize the sound (sort of like a Japanese sitar). Play the patch straight and it's useless. But give the pitch bend wheel a slight push up with a quick release when you hit the note, and bingo! Pass the sushi!

Looking over what we've just discussed, a few simple rules become apparent. First, you'll have to develop the technique of playing the mod wheel and the pitch bend wheel. Keep the vibrato soft and slow, and use small ranges for the pitch bend. Second, remember that less is more. Fewer notes, larger intervals, shorter phrases. Third, listen to real performances of these instruments. Try to copy someone's solo (I play the theme from the Addams Family to demonstrate my harpsichord patches, and Duelling Banjos for banjo sounds).

One thought for all you sound designers out there - it's not always obvious how to imitate an acoustic sound with your patch or disk, so always include performance notes. Lots of us stopped using the mod wheel because of the crazy vibrato it often produces. If proper use of either wheel is necessary for maximum effect, tell us! It might be obvious to you, but not to everyone else.

And don't let anyone tell you that using a synth or sampler to imitate other sounds is wrong because it puts other musicians out of work. Music is evolutionary and should be judged by its aesthetic effect upon the audience, not by the means of its production which will always be changing over the years. Anyone can buy these instruments. Whether you choose to use a real sax, or imitate one on a keyboard should depend on many factors, except the employment rate of sax players. If the real sax player can do more or better than the digital imitator, he'll still be hired. Bands still hire drummers, even with all the drum machines available. But to claim that because I, working in a home studio, can now produce a product by myself which formerly required many people is to deny the benefits of progress for all for the temporary economic benefit of a few. Samplers and synths are responsible for more music, not less. Now if I could just get a recording contract!

Bio: Chris Barth writes and produces his own top 40 demos in his MIDI home studio using an ESQ-1, a Kawai R-100 drum machine, various guest musicians and signal processors. He played bass in nightclubs for 6 years before getting his law degree. Chris knows the words and music to all the songs recorded by Paul Revere and the Raiders. ▬

Soundprocess™ **Digital Sound Synthesizer For the Ensoniq Mirage**

- *NEW* Mirage Operating System! - No hardware mods
- Combines the power of *SAMPLING* with *SYNTHESIS*
- 48 internal sounds per Bank - 3 Banks per disk
- 4 independent oscillators per voice
- 72 user-loadable Waves and Wavesamples per Bank
- 16 channel *MULTI-TIMBRAL* sound control thru MIDI

Special introductory price thru 2/88

Soundprocess System Disk and User's Manual $175
Soundprocess Demo Disk and Instructions $5

Triton Box 395 Grand Island, NY 14072

Mirage and Ensoniq are trademarks of Ensoniq Corp.

ESQ ABC's: Doing Splits

By Sam S. Mims

Setting up the ESQ-1 as a split keyboard is an easy task (see pages 66-70 of the manual for explicit directions) and, as I'm sure most of you have discovered, quite a handy feature. Unlike some other synths, the ESQ does not restrict the number of voices available to each of the sounds. For example, some boards assign half the voices to the top sound, and half to the bottom. The ESQ, on the other hand, only cares that the total number of notes played at once does not exceed eight, regardless of where the notes are played on the keyboard.

It is also handy that splits can be saved as programs themselves. This works well for storing sounds normally used together. Note that you cannot split the keyboard twice, by selecting for one of the sounds a patch which is already a split. If this is done, the ESQ still uses the selected programs, but it ignores the split sound of one of them, just leaving you with the basic sound on that keyboard half.

There are several creative things that can be done with the split function that can make you life ultimately more fulfilling. For instance, if the split key is assigned to 36 or lower, or 97 or higher, the split program will actually be out of the range of the ESQ's keyboard. If you are playing the ESQ from a 88-note MIDI controller, however, you will be able to play the split program. This is handy if you need nearly the full 88 notes for piano, but can spare a few notes for bass on bottom. If the ESQ could not do this, you would lose well over an octave of the lower piano, as it would be wasted on bass notes.

This feature is also handy if you use a Voyce-4, or some other gadget that allows one keyboard to play another through MIDI and transpose up or down an octave at the same time. In this situation, you could have one sound available across the entire ESQ keyboard, and access another ESQ sound from a second synth by transposing down (or up) an octave, thus reaching the "hidden" split.

Another interesting trick, while you've got those MIDI cables plugged in, is to set up a split program where one of the halves is silent. Just do this by programming a sound with all three DCA's set to "OFF." Then, by layering this sound with another synth, only a specific portion of the keyboard will be layered, while the other portion will be the original sound.

You can also do this without having a second keyboard. Just use the ESQ in the SPLIT/LAYER mode. Set SPLIT to ON, but use the same program on both keyboard halves. At this point, the keyboard will seem like it is not in split mode, though it really is. Now, set SPLIT/LAYER to On, and select a program for LAYER. The new program will be layered only over the split portion of the keyboard.

Split mode can also help in a pinch when the ESQ's 61-note keyboard won't stretch far enough. Say you're trying to play a piano part, but run out of keys in the bass. Dropping the entire program an octave would eliminate the high notes that are needed. A possible solution - if the part allows it - is to split the piano program with a similar program an octave lower. Be careful positioning of the split key, you may be able to get away with this, thus keeping the needed high notes, but adding (via the split) those low bass notes.

Don't overlook the possibility of using a split program on just one key. Perhaps you need some bell "tings" throughout a song where all the "tings" are the same note. To avoid having to change patches just to get that bell part in, set up a split program which uses your main sound across all but the top key. By setting SPLIT-KEY=96, and the bell sound as the UPPER split, you will end up with the bell just on the top note of the keyboard. Then, tune the oscillators in the bell program so that it plays the correct pitch, even from the "C" key.

Finally, the split mode can actually save tracks when using the ESQ's sequencer, and if you do lots of sequencing, those eight tracks often aren't enough. Just take two of the tracks that would otherwise be LOCAL tracks (played on the ESQ, instead of through MIDI to an outside synth) and set up a split program. Record the bottom part on one track, then the top half on another. Since both these tracks play the same patch (the combination of two split sounds), they can then be merged onto one track. Of course, you are limiting the available range of each sound by combining them into a split, but remember that you can transpose beyond the actual keyboard range, since the sequencer is playing the notes, instead of your fingers. It may take a bit of tweaking in some cases to do this, but if that extra sequencer track is important, it's worth the effort.

The beloved split mode can get you out of many a jam, but don't forget one important thing. When you set up a split, the ESQ does not remember which sound is used as the split sound, it merely remembers its location in memory. So, if you move your sounds around, your split program may come up wacky. A bit of reprogramming may be necessary to rearrange sounds. It's a good idea to keep the two patches that are used together in the same bank of sounds (Internal, CART A, or CART B) so that you don't lose one of them (temporarily) when another bank is loaded with new sounds. But also be wary of copying from CART to Internal when using splits - a split set up on the cartridge will still look for its sound there, even though the sound has been moved to Internal.

Next time, we'll program some "digital delay" effects and we'll examine the "secret messages" found lurking amongst its buttons. Until then, stay limber enough to do splits! ▬

Sound Bank Series

Have you ever bought a voice cartridge or QDs?

ESQ-1/SQ-80	$ 60	80 voices
D-50	130	64 voices
S-10/MKS-100	50	5 samples

TX81Z cassette storage an unreliable hassle? Get SOUND BANK SERIES, the intelligent voice storage alternative. For less than the price of ONE cartridge, you get:

- **voice/sample storage on floppy or hard disks**
- **display/print of all voice parms or bank titles**
- **multiple banks in memory, and more...**

If you have an IBM PC w/MPU-401, rush $49.00 to:

SMS

Southern Music Systems
Box 112815
Carrollton, TX 75011

to order 214-418-6534

Atari ST and IBM Music Feature versions also!

THE WORX™ For The ESQ-1 **$99.00**

EMAX SOUND DISK LIBRARY ©SoftWorx

1600 Sounds (42 Banks) Available On Cassette Or Macintosh Disk (Blank Software)

Also available in invidividual sound sets or on 160 voice**RAM** cartridges.

"... Each of these sets was at least a few sounds that instantly impressed me as outstanding."
"... Some of these programs defy descriptions by a few measly printed words." Larry Church, May, 1987
Transonic Hacker Review
"... A tremendous amount of clever programming...", "The word which comes to me is "inspired"..." Chris Barth, Transoniq Hacker Review
"... The best value and best sounds available!" Numerous customers and library owners.
Libraries also available for the following: Roland JX3P, Roland TR505, Roland TR707, Yamaha DX100/21/27/27S and Ensoniq Mirage. Also 1000 Sound Cassette Sampler.

TR505, TR707, JX3P; ESQ-1 & Mirage; DX100/21/27/27S, Macintosh; EMAX; and The Worx are trademarks of Roland Corp.; Ensoniq Corp.; Yahama International Corp.; Apple Computer, Inc.; E-MU Systems, Inc.; and Softworx Midi Systems respectfully.

SoftWorx™ MIDI SYSTEMS

8402 Clover Hill Loop • Bayonet Point, FL 34667
Sound Dept.
(813) 862-6032

125 Disk Library For The EMAX Sampler

Individual Disks	$9.95 ea.
10 Disk Set	$74.95
50 Disk Set	$225.00
73 Disk Set	$299.00
100 Disk Set	$399.00
125 Disk Set	$469.00

"... I loved all of your disks in the library. Top quality." P.M.

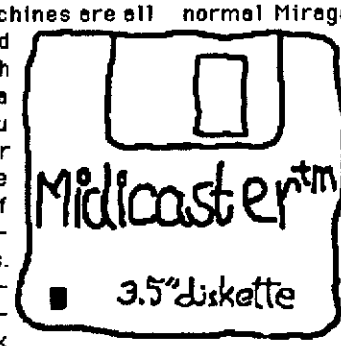
"... The best disks available..." Mark Purser, Rhythm City Music, Atlanta, GA

"...I've had calls from customers as far away as Sweden by purchaser's of your library, telling me how great the disks are..." Kelly Mittong, Thoroughbred Music, Tampa, FL.

Referrals available upon request.

Now how much would you pay?

Would you buy a disk drive that could quickly and easily store all of your sounds and sequences in one central location? Even if your synths, sequencers, and drum machines are all made by different manufacturers? What would you say if we told you that you could have such a device for only $39.95? Well, if you own a **Mirage, Mirage rack, or Mirage DSK**, you can! The **MIDICASTER** is a new product for the Ensoniq Mirage that can turn your Mirage into a powerful MIDI storage device capable of saving programs, sequences and drum machine data directly to normal Mirage disks. **MIDICASTER** works with most popular electronic instruments that support system exclusive data transfer, and is exceptionally quick and easy to use, making it ideal for live performance applications. And since **MIDICASTER** works from within the normal Mirage operating environment, there's no need to boot and re-boot operating systems before and after data transfer! Imagine having all of your sequence data on the same disk as your Mirage sounds, and being able to simply load up and go - only **MIDICASTER** makes it possible. **ESQ'1 owners, take note!** No longer will you have to boot up your MASOS disk to save or load ESQ'1 data! **MIDICASTER** will save you valuable time in performance settings, no matter what your data transfer needs are. NO OTHER PRODUCT CAN MAKE THIS CLAIM!



But wait, there's more!

SQ-80 Sounds Now Available!

You want ESQ'1 sounds, we got ESQ'1 sounds! Four big banks jam packed with the finest sounds available - (just ask Ensoniq - our sounds have been showing up on the factory cartridges with uncanny frequency). Our regular price is $39.95 for a bank of sounds, but if you act soon, you can receive volume 5, a fun-packed sampler containing 10 sounds from each of our 4 standard volumes - 40 sounds in all! Now how much would you pay? Would you believe this amazing collection of 40 of the MIDI CONNECTION'S finest sounds can be yours for only $10.95? We're not kidding around here - we really mean it!

☐ YES, I must have more information about the amazing MIDICASTER! YES OH YES OH GOODNESS YES! I've got to have my very own:
☐ MIDICASTER! Enclosed is my check or money order for $39.95.
☐ ESQ'1 SOUNDS, VOL 5. Enclosed is my check or money order for $10.95. (Please send them on ☐ Mirage disk ☐ cassette tape)
I'd be happy to allow 4-6 weeks for delivery. My name is:

My address is (please be specific):

the midi CONNECTION
7280 S.W. 104th, Beaverton, Oregon 97005

CREATE-A-DISK #2

Electric Piano and Drums

By David A. Caruso

If you liked the first create-a-disk, "Piano and Drums Practice Disk" (Issue 25), then you'll want to put this one on bank two of that same disk. The principle and work to be done is similar, and this one requires less wavesample juggling.

MATERIALS: Ensoniq disks A1, A2, and B1 (new numbering). MASOS.

PROCEDURE: Save to disk often to avoid kicking the dog in frustration. Also, keep in mind that some sounds won't be right until all steps are completed. Be patient.

1. Boot up with MASOS. Load upper bank two (UB2) of disk A2 (Electric Piano #1). In order to save enough memory for the drums, we can only use UW1 of the electric piano. That means we'll need to stretch UW1 over a broader range. (You're probably cringing at the thought, but as my dad used to say at the dinner table, "You don't have to eat it if you don't like it.") Be sure you're working on upper memory by pressing "Record Sequence," followed by "1."

2. Reset upper memory like this: W2: P60=80, P61=8F; W3: P60=90, P61=B5; W4: P60=B6, P61=C3; W5: P60-B6, P61=C3; W6: P60=D2, P61=F3; W7: P60=F4, P61=FF; W8: P60=F4, P61=FF. (Hint: Change all of your P61s first, then your P60s.)

3. Load lower half of disk B1, bank one (Electronic Drums). Call up LW1 (Kick Drum) and copy to UW2 using P18.

4. Load lower half of disk A1, bank one (Ambient Drums). Call up LW2 (Snare Drum) and copy to UW3.

5. Call up LW5 (CLosed Hi Hat) and copy to UW4. UW5 will play this same sound for fast Hi Hat rolls.

6. Call up LW7 (Open Hi Hat) and copy to UW6.

7. Leave W7 & 8 alone.

8. Call up upper program 1 and make these program changes: P42=26, P56=16.

9. Make these adjustments:

```
UW2:  67=02, 68=63, 72=57
UW3:  67=02, 68=AE, 70=99, 71=99, 72=58
UW4:  67=02, 68=7F, 69=10, 72=59
UW5:  67=02, 68=6B, 69=10, 72=60
UW6:  67=02, 68=6B, 69=11, 72=61
UW7:  72=61
UW8:  72=61
```

Upper W7 & 8 will be masked by UW6 unless you attempt what I described in C.A.D. #1, in the paragraph marked, "ABOUT WAVESAMPLE 8."

10. Load lower half of disk A2, bank two (Electric Piano #1).

11. Save upper and lower to disk.

EVALUATION: "Hello, Clicking!" It's not a pretty sound in the upper octave of electric piano, but as I explained in detail in Issue 25, MIDI-ing with another synth can mask this, and chords sound better than single notes. There is no sacrifice in the electric piano from keys 1 to 33 -- that is, the sound is as it originally sounded for these keys.

The drums also sound exactly as they did originally (reload the original sounds into lower memory for a side-by-side comparison). Remember, when making your drum sequences you must hold each drum key down until the sample is finished playing because the upper release is set for the electric piano. Also, since the drums reside in the last five keys, your sequences will be compatible with C.A.D. #1. (At this point, it is helpful to refer to Issue 25, p. 14, in the paragraphs marked, "Using the Disk," and "Variations.")

NOW IT'S YOUR TURN: I've continued my "keyboards and drums" experiments by doing a third create-a-disk for "Digital piano and Drums." The procedure is basically the same as for the electric piano, so if you give it a try you can use it to fill the third bank of your create-a-disk. Now all three keyboard sounds can use the same set of drums or you can choose your own by making allowances for memory requirements of your new samples. So how about an "Organ and Drums" disk? Now that you're getting the hang of this, you can start mixing sounds a bit more recklessly, which I intend to show with my next create-a-disk article.

DAVE CARUSO is keyboardist and primary songwriter and singer for the Midwest touring band, "Caruso." Caruso was nominated Entertainer of the Year for the past three years by the National Association of Campus Activities. He has taught keyboards for eleven years. ■

MIRAGE INSTRUCTIONAL VIDEO TAPES

G-4 PRODUCTIONS AND M.U.G. OFFER:

MIRAGE TECHNIQUES VIDEO VOL. 1

Basic operational functions, parameter functions, basic sampling, multi-sampling, basic MASOS functions, moving wavesamples, making performance disks, tips, and tricks all shown on this 70-minute video. Bonus!! Also hear demonstrations of M.U.G. sounds from the M.U.G. library.

MIRAGE PRODUCTS REVIEW VIDEO VOL. 2

A review of the following products on video:
Ensoniq *Visual Editing Systems* for Apple II+/E and Commodore 64/128.
Turtle Beach Softworks' *Vision* for IBM PC/XT,AT.
Blank Software's *Sound Lab* for Apple Macintosh.
Kaupass + Lemke *MUMEP/Oasis ST* for Atari ST.
Neo-Sync Lab's *Mirage-Aid* for Commodore 64/128 and Apple.
Black Squirrel Software's *MIDI Additive Software Synthesis* for Apple II.
Upward Concepts' *Multi-Temperament Disk* and *User Defined Micro-Tonal Scales.*
Ensoniq *Sound Libraries Vol. A and B.* Disks *100, 101, 102, FMT-2, C-1, and C-2.*
K-Muse Sound Libraries *Select Strings* and *Killer Comps.*

NON-MEMBERS: $29.95 each videotape.
M.U.G. MEMBERS: $19.95 each videotape.
Include $3.00 shipping and handling.
N.Y. State Residents add 8.25% Tax.

M.U.G., G-4 Productions, 622 Odell Avenue
Yonkers, NY 10710

All product names are registered by their respective companies.

Introducing Synfonix™

a digital synthesis tool for your Mirage.

The widest variety of synthesis techniques available :

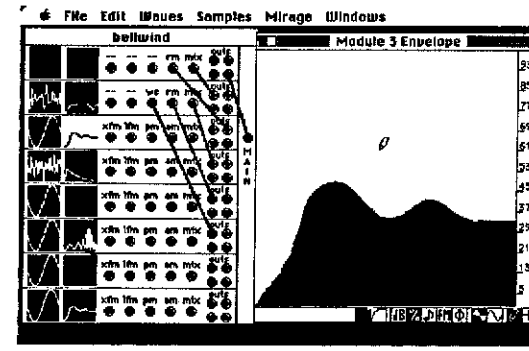
- wavetable synthesis
- frequency modulation
- phase modulation
- amplitude modulation
- ring modulation
- nonlinear waveshaping
- noise generation
- Karplus-Strong plucked string
- sampled sound modulations
- mixing waveforms
- edit Mirage parameters
- export files to Sound Designer™

Synthesize great sounds on the Macintosh, and send them via MIDI to your Mirage. Provides 8 switchable function modules that may be patched in any configuration. Each module has a user definable waveform and 256 point envelope. A two disk set including the Synfonix™ program, sample patches, and an illustrated manual. It's like getting another synthesizer.

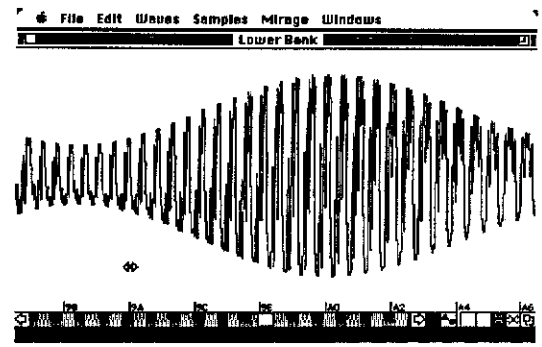
Only $119.95 in check or money order from :

(Texas residents add 8% sales tax)

SYNESTHESIA IMAGE & SOUND
3403 Dalton
Austin, Texas 78745
(512) 280-4617



Patch modules like an analog synthesizer.



Generate high quality synthesized sound.

Requires Macintosh 512K, 512KE, Plus, or SE and an external drive or hard disk. Mirage™ is a trade mark of Ensoniq Corp. Sound Designer™ is a trademark of Digidesign, Inc. Macintosh™ is a trademark of Apple Computer, Inc.

HEAVEN

80 voice ROM	$35.
80 voice EEPROM (RAM)	$45.
160 voice ROM	$55.
160 voice RAM/ROM	$65.
160 voice RAM	$85.
80 voice Data Cassette	$14.95
80 voice Data Book	$9.95
Demo Cassette	$FREE

Hot ESQ-1 Sounds

To Order: Send check or money order to the address below.
Add $3.00 Shipping/Handling. CA residents add 7% sales tax.
Heaven
P.O.Box 2550 Saratoga, CA 95070 C.O.D's call 408-554-2922 (24 hours)

A NEW SAMPLING TRICK

By Jack C. Loesch, "Mr. Wavesample"

Here's the problem: you need that sound effect from the intro of that hot new song for use with your band. On the lower bank you've set Parameter 73 at 99 for unity playback on Eb. You tried Parameter 60 at 00 and Parameter 61 from 7F all the way to FF but you can't fit the entire sound needed into the space the Mirage offers.

I've faced this problem over and over, but then I discovered the following technique that almost completely solves the problem.

The first thing you'll need is a multi-speed tape recorder that has standard and high speeds. Make a recording from your "Hit" record onto your tape deck which is set on standard speed. After you have the recording on tape, set your tape deck on high speed and run a line from the deck to your Mirage's input. You'll need special male and female jacks available at audio stores to make this hookup.

Now boot up your Mirage with a MASOS disk. We'll do our sample on the lower half of the keyboard.

Set up the following:

Push play then #1

Push Parameter 60-value and adjust to 00

Push Parameter 61-" " " " FF

Push Parameter 65-" " " " ON then OFF

Push Parameter 67-" " " " 03

Push Parameter 72-" " " " 04=Eb

Push Parameter 73-" " " " 99=Eb

Push Parameter 74-" " " " 80

Push Parameter 75-" " " " ON

Push Parameter 76-" " " " 08

Push Parameter 77-" " " " ON

Push sample lower and play your "Hit" as you watch the LED's in the Mirage for a reading. The yellow line in its middle should be solid while the lines above and below should be flickering. Once you have the LED set correctly, push Cancel, then push Parameter 76 - Value and adjust to 00. Push sample lower once again. Play the "Hit" and push Enter at the spot you want to capture it in the Mirage. It will probably take a couple of tries and adjustments of Parameter 76.

Once you have captured the segment you need, you might be able to use less memory than FF. First save it to disk, then push Eb and listen to the "Hit" as it is played back from your Mirage. If the entire segment is captured plus some stuff you don't want at the end, push Parameter 61 Value and decrease its value a few pages at a time. Then push Parameter 65 Value ON then OFF. Push Eb and listen once again. Continue this process until you get to the correct chunk of memory needed.

Now at this point you'll have to decide if you want the sample looped. Let's say that you do. Push Parameter 65 Value then ON. Push Parameter 62, then Value, then decrease it to the beginning of memory 00. Push Eb and listen to the hit and ask yourself if you want the entire sample looped or only part of it.

Let's do the last part.

Push Parameter 62 then Value then increase its value to 50. You might have to make small adjustments on Parameters 62 and 63 to get the sample flowing and sounding just right. Also remember that Parameter 64 can be used as a final very-fine adjustment.

To finish off our hit you'll need to adjust the Parameters for its envelope generator or program L1. Try different combinations. It's really easy to come up with a beautiful program. ▬

Attention all ESQ-1 & Mirage owners!

Now is the time to buy some hand-made keyboard protection. Covers for pre-Jan '87 ESQ-1s and Mirages are available for $17.25 while supplies last (free shipping and handling!) New ESQ-1 and Mirage covers are on sale at 20% off— Just $30.00 (free shipping and handling!) Act now because we will be deleting the old style covers from our catalog when supplies are gone.

Don't forget- Gotcha Covered also makes over 200 different covers for keyboards, drum machines and other audio equipment! Call or write for our new catalog.

Order today!
Call toll-free 1-800-822-1899
Visa and Master Card accepted.

GOTCHA COVERED
The Dust Cover Company

22N159 Pepper Road • Barrington, IL 60010
Phone 312-382-3210 • FAX 312-382-3250

ESQ-1, SQ-80 PATCH REVIEWS

By Rick Hall

STILL VOICE AUDIO "MIX and MATCH" VOICE LIBRARY

FOR: ESQ-1, SQ-80.
PRODUCT: Mix & Match Voice Library.
PRICE: $15, Cassette.
FROM: Still Voice Audio, 3041 Sumter Ave South, St. Louis Park, MN 55426. (612) 927-0451.

One of the biggest disadvantages of being a voice purchaser (as opposed to being a voice programmer) is the difficulty in knowing just exactly what you're in for when you send off a big wad of cash for the latest "Best, Hottest Sounds for the ESQ!" Normally, you can bet that a fair portion of the voices included in any given package are going to be of little or no immediate use to you, which is not to say that they won't come in handy someday, but... gee, why doesn't somebody have, like, a demo or something of all their sounds that I could listen to first, see, and then pick out and order only the ones I wanted! Why, indeed...

If you've ever asked yourself that question, it appears that you're not alone. Evidently, Alan Goldberg of Still Voice Audio once entertained the same notion, and being a sound programmer for the ESQ-1, found himself in a position to do something about it. Hence, the Still Voice Audio Mix and Match Voice Library for the ESQ-1.

Now I have to admit, right off the bat, that I am very partial to those soundware companies that display a genuine concern for the needs of the consumer. Going that little extra distance, perhaps by including programming notes, or conveniently packaging the product in a wide selection of formats (ROMS, RAMS, cassettes, disks, patch sheets, etc.) with a corresponding range in pricing, usually indicates the presence of a well-thought-out product put together by somebody who cares.

In the case of Still Voice Audio, a demo cassette is available for a nominal fee (3 bucks, to be exact) which contains a brief audio profile of, believe it or not, every sound in the Still Voice catalog. The order form for the patches lists them by name and number, along with a few descriptive words for each sound. You can therefore preview the sounds and, consulting the list, check off the voices you want, assembling your own banks of forty sounds. Your custom-made data sheets and/or cassette will then be shipped to you--at 15 bucks per bank!

I can't imagine a more accommodating arrangement, outside of the fact that the sounds are not available on cartridge, but then of course they would be considerably more expensive. At this point I should mention that Still Voice also offers for 75 dollars the S.O.S. Patch Librarian program for the Commodore 64 or 128 computer. I did not review this product, but it seems to be a fairly full-featured voice and sequence librarian, and you can order your sounds to come on a diskette formatted for this system if you so desire--same price as the cassette.

And what about the patches themselves? Well, like most collections there is pretty much something for everybody. I wasn't particularly knocked out by the basses, pianos, brasses, or solo flutes and violins, although somebody else might be... this is according to personal taste; it's not like the programming isn't competent, and I must confess that these sounds come off pretty well on the demo cassette. There are some nice ensemble strings, a couple of nifty sitars, and a very good selection of effects, including some really excellent percussion sounds and a startlingly realistic sleigh bell.

Mostly, though, I like this collection for its weirdos. Goldberg likes to play with time-delayed-entry effects, and he has some really ear-catching combinations that use this sort of pseudo "echo" effect. For example, the sound TINKL2, which sounds six successive tones from one key strike. Many of these are layered programs, and the resulting thickness of texture can be quite powerful, with waves of sound billowing outward, slowly changing timbre as the tones fade off into the distance. There are also some very slow, deep and rich atmospheric patches, my favorites being one called SUNDOG and another known as BREATH, appropriately enough -- it breathes!

One slight bone of contention: I was amused to note that Goldberg, like many ESQ programmers, seems quite enamored with the device of modulating the panning of the final output (ENV4) with a heavy-handed LFO, often to the point of sonic vertigo. While easy enough to dismantle or reduce in intensity, I never cease to wonder at the consistent lack of subtlety with which this much-favored effect is so often applied by otherwise tasteful programmers.

The best recommendation I can make, however, is for you to take advantage of the Mix and Match opportunity, i.e.: shell out the measly three dollars, get the demo tape and draw your own conclusions. It really is worth the effort, if only to hear the demonstration pieces themselves -- Goldberg is no peasant on the keys, and as "suggestions" on how to use the sounds these little creations are occasionally quite enlightening. And hey, the freedom to window-shop is a rare and wonderful thing... You may or may not find forty sounds that you like, but at least you're not dealing with a pig in a poke.

CESIUM SOUND: 10 VOLUME SAMPLER

FOR: ESQ-1, SQ-80.
PRODUCT: The Complete ESQ Library.
PRICE: 80 Voices: $15 Cassette, $40 EPROM, $60 EEPROM.
FROM: Cesium Sound, 1640 Walnut St, #C, Berkeley, CA 94709. (415) 548-6193.

There are those who claim that the bottom will eventually drop abruptly out of the market for ESQ-1 sounds due, as is evidently the case with the DX-7, to over-saturation of product. Although I find it hard to swallow the notion that we are going to somehow run out of creative ways to use an instrument as vastly capable as the ESQ-1, I must confess that I am beginning to get a little suspicious when a programmer offers some 400 sounds at a shot...

Well, this is what Cesium Sound's Nick Longo is doing, with his new 10-volume expanded library of ESQ sounds. And although my personal view is that there is no such thing as a "bad" sound, I still feel there is certainly such a thing as quality programming, which is the only kind of programming I am willing to spend my hard-earned bucks to get. I have yet to meet the Superman who can produce more than a handful of meaningful variations on the various types of sounds the ESQ can produce. That suits me fine since every programmer brings his own personal touch to his product (we speak of programming as an Art, don't we?), and I happen to like diversity.

In all fairness, Nick Longo might be that guy -- I don't know, because I was only given a representative sampling of eighty sounds, eight from each volume, to look at for this review. (Not that I'm complaining about that, mind you... It's enough work

to sift through eighty voices, let alone 400!) Assuming, however, that this group comprises the best of the best in each volume, I think it's safe to say that we're still waiting for the Messiah...

Which is not to say that there isn't some very good stuff here. If these eighty voices were The Set, I'd consider buying it. Specifically, I found the piano-oriented keyboards to be good, with the inevitable exception of the CLAV (I'm beginning to think that the ESQ just doesn't have one in it...) and, surprisingly, the LESLIE organ sound (I think it was supposed to be an organ sound...) which was, well, bizarre. Longo's strong suit seems to be the atmospheric voices -- these would be Vols. 7 and 8, by my reckoning -- of which I liked every one I heard, especially the one named GOLD. Many of the other quality sounds would be of great use to the Techno-pop synthesist -- check out Vols. 5 and 6, with titles such as OSMIUM and NOID4.

But don't forget that I heard only one fifth of each volume. These voices are to be marketed in 160-voice sets, I'm told, and there's a lot of room for filler in four banks of sounds. I can't say what is actually in those volumes, so don't blame me if you buy them and only get a few quality voices per bank. One thing I can do is suggest that if we, as consumers, spend our money selectively, perhaps we can encourage programmers to supply us with only what is truly their best efforts, thereby keeping the ESQ sound market alive and mutually beneficial for some time to come.

Bio: Rick Hall is a Philadelphia-based composer, musician, and all-around bon vivant. He spends considerable time "drowning in spaghetti" in his own chord-entangled home studio, and has recently had the audacity to form his own music publishing business. ■

Voice patches designed specifically for Modern Rock and New Age music.

SH-01

ROM CARTRIDGE FOR THE ESQ-1

80 VOICE ROM CARTRIDGE by

SOUND HOUND

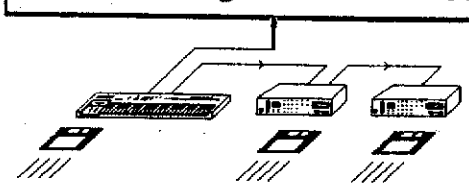
"Those of you still nosing around for quality craftsmanship at an affordable price, look no further."

RICK HALL
TRANSONIQ HACKER

$32.50
plus 2.50 for shipping and handling

5339 Prospect Rd. Suite 141
San Jose, CA 95129 408-866-0805

Turbo-Charge Your MIRAGE™



The Powerful New

MIRAGE™ Super-MIDI Disk

MIDI volume controllers for upper and lower
Assignable for each sound program and saved on disk
Use with the new MIDI wind instruments
Sostenuto pedal - MIDI or using sustain pedal
All controller inputs and outputs assignable
Separate MIDI transmit / receive channels
Single button program stepping "All notes off" PANIC button
Optional MIDI controllers to Local ±2 Octave pitch transpose
MIDI Overflow mode for 16 note polyphony

--- all this and more ---

SM-1 Super-MIDI Disk $39.95 + $2.50 Shpg.

The Mirage Disk that Electronic Musician raled five-star in their review

The Mirage Multi-Temperament Disk
14 Historic 12-tone Temperaments
24 Note Transpose

"I've never had so much fun with a single Mirage disk ever"
- Don Slepian, TRANSONIQ HACKER, March '87 #21

MT-1 Multi-Temperament Disk $29.95 + 2.50 shpg

Micro-Tonal Scales

Wendy Carlos' Alpha, Beta, Gamma
Create your own - Save them on disk
UD-1 for Mirage™ $39.95 +2.50 shpg.

Hack Your Own OS
Use your computer to make your own version
OS-1 Monitor Disk $39.95 +2.50 shpg

NEW versions of Ensoniq's 3.2 operating system from Dick Lord - UPWARD CONCEPTS

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

VALHALA

The USA's Premier Sound Developers!

Toll Free ORDER LINE ONLY! 1-800-648-6434

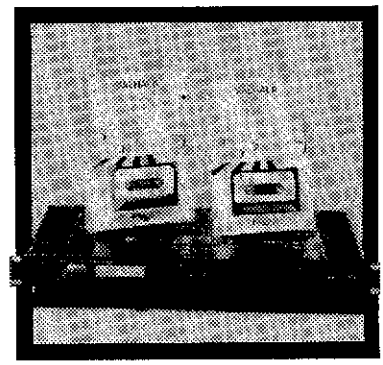
Information or Customer Service: 1-313-548-9360

"We were quite impressed with the quality of the sounds." (KEYBOARD magazine: July, 1987)

Our ROM's contain traditional sounds for use when playing live or recording, together with a collection of keyboard like sounds, such as Moog, OBX, Juno along with some classic sound effects. Whether your tastes are more 'traditional' or leans towards 'New Age' Valhala's the ultimate in sound support.

Orchestral • Bass Guitars
Percussion •Acoustic Pianos
Electric Pianos • Woodwinds
Brass • Sound Effects
Synth Sounds •Strings
and many more!

- 80-Voice ROM's **$37.95** *ea.*
- 160-Voice ROM's **$74.95** *ea.*
- 320-Voice ROM **$139.95**



- Volume 1 (380 voices) **$44.95**
- Volume 2 (380 voices) **$44.95**
- Both Volumes (757 voices) **$79.95**

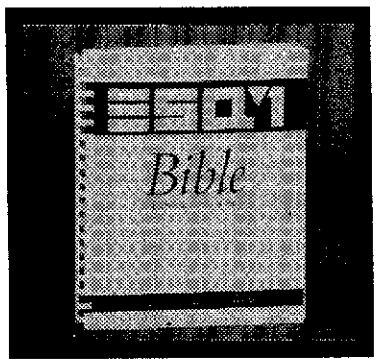
****NEW****

TX81Z Voices now available!

757 different voices on data tape for TX81Z, TX7, DX21, DX27 or DX100.

ESQ1 data tapes-40 voices each for only $16.95 per vol.

Drum Rhythm Patterns
Data tapes available for: RX21, RX15, RX11, RX5, TR505 and TR707. Only $29.95 per tape!



ESQ1 Bible (Prog Ref.)

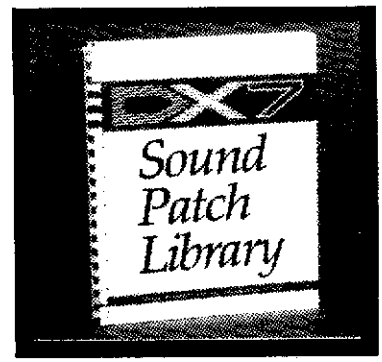
$24.95

- Enhance your programming skills.
- Learn acoustic sound programming.
- Includes 40 patches explained.

Unsurpassed C64 Storage Librarians!

$99.95 ea.

- Available for DX7,TX7,DX21, DX27,DX100,TX81Z & ESQ1*
- All programs complete with 757 new voices (*except ESQ1)
- Holds 12-Banks of sounds in memory for easy use.
- 100% SuperFast Machine Language.



DX7 Sound Patch Library

$39.95

- 757 different patches.
- Sound, algorithm & group indexes.
- 214 pages, spiral bound book.
- Compatible with the DX7II !

If not available thru your music dealer, order direct:

VALHALA Box 20157-TH Ferndale, MI 48220

320 voice ESQ-1 audio demo cassette tape $7.50 P/P
(Refundable towards any ROM Cartridge purchased directly from Valhala).

ESQ1™ of Ensoniq, Inc.
Specs/Prices subject to change without notice.

VISA

Continental USA add $3.00 Shipping/Handling. Mich. residents add 4% sales tax. Canada, Alaska and Hawaii add $7.50 S/H for surface, $12.00 for airmail. All other countries add $10.00 S/H for surface, $15.00 for airmail plus $3.00 for each additional item. Payments must be in USA Funds-drawn on a USA bank!

MasterCard

HACKERPATCH

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 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 in our "Hacking Part" and comments by Sam Mims (SM) - our resident patch analyst. If you send in a patch, *PLEASE* include your phone number.

THE HACKING PART...

PROGRAM: ZINER

This is one of a series of patches I came up with trying to duplicate a Stevie Winwood solo sound, at the request of Ensoniq. Of the 5 or 6 variations I programmed, my favorite is called Winwood3. Ensoniq chose ZINER. Just goes to show you everyone's taste is different.

I'm going to start with ZINER and lead you through the steps that got me to Winwood3. I felt the ZINER patch was too thin and reedy so I made the following changes to the OSCs:

```
OSC1; WAVE=FORM2 MODS1&2=OFF
OSC2; OCT=-1 SEMI=11 FINE=31 WAVE=SAW MODS1&2=OFF
OSC3; FINE=01 WAVE=SAW  MOD1=LFO1+1  MOD2=OFF
```

By reducing these MOD amounts we help create a more subtle sound.

The following changes give a rounder sound with less detune.

Set DCAs 1, 2, 3 to the following parameters:

```
LEVEL=40     OUTPUT=ON     MOD1=OFF     MOD2=VEL+50
```

I prefer these settings to my original ENV2 settings because they give more of a percussive immediate attack and give sensitive control through VEL (MOD2).

The changes to the filter again reflect my desire to create a full, pure tone with more control after you press a key.

```
FREQ=024 RES=06 KEYBD=23 MOD1=ENV3+30; MOD2=WHEEL+11
```

ENV3 is set so the changes to the filter are fairly minor and occur smoothly.

```
ENV3: L1=+3  L2=+45  L3=+17  LV=00  T1V=20  T1=03
T2=11  T3=63  T4=37  TK=09
```

By placing FILTER MOD2 under control of the wheel you gain more real-time expression.

The wheel is also controlling LFO1.

```
LFO1: FREQ=23  RESET=OFF  HUMAN=ON   WAV=TRI  L1=00
DELAY=01  L2=20   MOD=WHEEL
```

When you engage the wheel it creates a pleasant detuning by modulating OSC3 and opening the filter.

The final changes are to DCA4:

```
DCA4  FINAL VOLUME  PAN=08 MOD1=ENV4 63; MOD2= OFF
ENV4: L1=+63  L2=+63 L3=+63  LV=10  T1V=01  T1=00
T2=17  T3=63  T4=08  TK=09
```

These changes bring the sound in immediately keeping it BIG and FULL. It also adds a little more volume control to touch.

Finally, turn the GLIDE control off. After many listenings I prefer it without.

Well, again I hope you enjoyed this tour through my synthesis subconscious and, as always, I hope you find it helpful.

Erick Hailstone
The MIDI Connection

THE PATCHING PART...

PROGRAM: SNAREK

By Mario Lobo

The heart of this patch is on the split/layer page. OSC1 and OSC2 produce the sound of the snare. OSC3 is set with a sine wave to give pitch to the snare drum. The kick sound is layered on top of all these sounds to give the drum a proper "bang." This patch sounds best when played between B1 and E2 and if it's hooked with a good reverb the result is even better. A split kick is provided on the lowest note for convenience. Try experimenting with the ENV for different results.

[TH (SM) - Higher notes (than E2) produce an interesting electronic percussive effect. Try playing the snare with two notes at a time to get a bigger sound.]

PROGRAM: D-50

By Doug ("Fat Fifths") Fietsch

[TH - Doug is a man of few, if any, words.]

[TH (SM) - This is a very nice sound, almost in that "DX-7/Rhodes" category, yet with its own unique qualities. It IS reminiscent of Roland's new D-50 synthesizer. Oscillator 3 is not tuned, and adds a soft bell on top of the sound. OSC1 and OSC2 provide the sound bed, but I wonder why they're both tuned up to FINE=4. Try tuning OSC1 to FINE=0, and OSC2 to FINE=2 to reduce the sharpness of the pitch. This will give a slightly fatter in-tune sound. You might also try setting OSC3 to SYNTH2 for a slightly mellower sound. This patch has a barely noticeable "digital grit" in it. Overall, it's very nice.]

PROGRAM: POPCOR

By Joe Slater

This program is named after a sound existing in the piece "Popcorn," recorded about fifteen years ago by Hot Butter. It is a short, staccato, glass-like sound, which can be used to simulate wind chimes.

[TH (SM) - In addition to Joe's suggestion, you can use the top octaves like the sounding of an anvil. To increase POPCOR's range, try dropping all three OSCs an octave to OCT=1.]

ESQ-1 PROG: ZINER

BY: ERICK HAILSTONE - MIDI CONNECTION

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	PULSE	LFO1	3	OFF	-
OSC 2	0	0	0	REED	LFO1	3	ENV1	1
OSC 3	0	0	4	SAW	LFO1	4	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV2	63	OFF	-
DCA 2	0	ON	ENV2	63	OFF	-
DCA 3	0	ON	ENV2	63	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	17	2	0	ENV3	63	VEL	6

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	53	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	22	OFF	OFF	TRI	0	0	0	WHEEL
LFO 2	16	OFF	OFF	SQR	0	1	20	WHEEL
LFO 3	16	OFF	OFF	TRI	0	0	20	WHEEL

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	62	8	20	0	0	0	22	63	20	9
ENV 2	63	49	45	0	0	0	50	63	35	9
ENV 3	52	63	44	33	1	0	19	35	25	0
ENV 4	63	63	63	0	0	0	24	63	25	0

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	OFF	OFF	OFF	8	OFF	OFF	OFF	OFF

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

ESQ-1 PROG: SNAREK

BY: MARIO LOBO

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-3	8	0	NOI2	LFO3	63	LFO3	-63
OSC 2	-3	0	0	NOI2	LFO3	63	LFO3	-63
OSC 3	-2	6	4	SINE	OFF	0	OFF	0

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	42	ON	ENV4	40	OFF	0
DCA 2	42	ON	ENV4	40	OFF	0
DCA 3	0	ON	ENV1	63	ENV1	63

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	0	0	ENV4	63	OFF	0

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	54	8	OFF	-

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	0	-63	0	0	0	0	0	0	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	16	5	47	0	0	19	12	16	0

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

SPLIT/LAYER	S/L PRG	LAYER	LAYER PRG	SPLIT	SPLIT PRG	SPLIT KEY
OFF	-	ON	KICK	LOWER	KICK	37

ESQ-1 PROG: D-50

BY: DOUG FIETSCH

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	4	SINE	OFF	0	OFF	0
OSC 2	0	0	4	OCT+5	OFF	0	OFF	0
OSC 3	2	0	4	SYNTH1	KBD	63	VEL2	-1

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	46	ON	ENV2	49	OFF	0
DCA 2	63	ON	ENV2	35	OFF	0
DCA 3	20	ON	ENV3	38	KBD	18

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	0	62	VEL2	43	OFF	15

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	58	8	KBD2	63

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	63	38	0	0	0	0	13	25	38	0
ENV 3	63	30	-28	26	22	0	22	30	32	22
ENV 4	63	30	0	63	63	0	41	50	20	21

	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: POPCOR

BY: JOE SLATER

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	2	0	0	SINE	OFF	0	OFF	0
OSC 2	2	0	0	SINE	OFF	0	OFF	0
OSC 3	-	-	-	-	-	-	-	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV2	63	OFF	0
DCA 2	0	ON	ENV2	63	OFF	0
DCA 3	0	ON	ENV2	63	OFF	0

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	0	63	OFF	0	OFF	0

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	OFF	0

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

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	63	0	0	0	0	0	25	0	0	0
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	56	56	16	0	0	24	63	20	0

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

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

CLASSIFIEDS

USER GROUPS

Philadelphia area ESQ-1 user's group. Lots of public domain patches, programming info, sequencing and MIDI tips, and more. Contact Tom McCaffrey, ESQUPA, P.O. Box 427, Bensalem, PA 19020. (215) 750-0352.

SAMPLES

MIRAGE OWNERS New!!! Professionally Programed high quality Samples. Generated with Sampling Filter. Can also be used without. TOP 40 HITS - Arcade - Special Effects - Movies - Voices - Adult!! Too many to mention. $9.95 per disk. Demo Cassette and Listing: $2.00. ORBITAL ACTION MUSIC, PO Box 55191, Grand Junction, CO 81505.

MR WAVESAMPLE - Disks $9.95 - DX7, Prophet, Emax, Oberheim, Novelty, Special Effects, Animals, Hits, plus many more from one of the largest collections. Acclaimed by many as fine quality samples. Compatible with all Ensoniq samplers. Send $1.00 (applied to first purchase) for listings to: 162 Maple Place, Keyport, NJ 07735. (201) 264-3512 after 6 pm EST for details.

WOW! Novelty Disks - The Three Stooges, Johnny Wiesmeuller "Tarzans," Bugs Bunny, Johnny Carson Show Hits, Warner Cartoon Clips, etc. Top Quality! For free information send SASE to: Talance Recording, 906 E. Elmwood Ave., Burbank, CA 91501.

High quality samples for the Ensoniq Mirage. Orchestral instruments: string quartet, brass, timpani. Electric instruments: piano, organ, guitar. Ancient instruments: lute, viols, medieval harp, recorders, clavichord, harpsichord. Many more. Barry Carson, Minotaur Studios, 4 College St., Canton, NY 13617.

Wanted to buy: Good "rock" guitar samples for Mirage. Van Halen to Holdsworth - whatever! Quality counts. Call or write: Marq Andrew Speck, 313-485-7631. 2714 Washtenaw, #114, Ypsilanti, MI 48197.

EQUIPMENT

FOR SALE: ARP Odessey, Hohner Clavinet E7, Musser M44 Vibes. Call 201-264-3512 after 6 pm (EST). Jack.

For Sale: KORG RK-100 Remote Keyboard and EX-800 Polysynth Module. Excellent Condition. $695.00. TX-7 Module with over 5,000 Patches: $495.00. ORBITAL ACTION MUSIC, PO Box 55191, Grand Junction, CO 81505. 303-245-7639.

FOR SALE: Mirage keyboard (1 year old) with IVM Memory Expansion, 14 Ensoniq sound disks, case, keyboard cover, MASOS, & Advanced Samplers Guide. Absolutely perfect condition. $1050. Steve, 201-506-0285.

ESQ-1 for sale. $1095. Two voice cartridges, sequencer expander, nearly new. Philip Chenette, 241 S Ave. 57, #131, Los Angeles, CA 90042. (213) 258-9712.

Rack Mount Mirage. Mint condition. Includes input sampling filter, sound library, and visual editing software (Sound Designer for Mac or Ensoniq VES for Apple IIe). $1099.00 + shipping, or best offer. Contact: David Rogers, 7984 Chagrin Rd., Chagrin Falls, OH 44022. (216) 543-1931.

SOFTWARE

ESQ-O-MATIC!! Original Pro-quality ESQ-1 PATCH/SEQUENCE LIBRARIAN for ATARI ST, only $39.95!! Elegant, user-friendly system, handsome graphic display, 120 voices in RAM simultaneously! Create, name, reload Voice and Sequence Files, print Patch Sheets, Directories, MORE! Diskette includes 40 new patches and sequencer test-file. Include $2.50 P&H, and specify monitor type. ISLAND MIDI, PO Box 1102, Bayshore, Long Island, NY 11706.

For Sale: Original Copyrighted Sounds and Software from several Major Companies for the ESQ-1, TX81Z, and Mirage. ORIBITAL ACTION MUSIC, PO Box 55191, Grand Junction, CO 81505.

PATCHES

Exchange FREE patches on data cassettes and expand your ESQ-1 library. I have a variety of patches to share with hackers interested in swapping for fun, not for profit. Send a cassette (high quality, PLEASE - transferred and VERIFIED) to Mark Curran, GREAT SOUNDS PRODUCTIONS, 13120 Victory Blvd., #6, Van Nuys, CA 91401. Due to the many varieties of sounds available, I cannot correspond on what I have and do not have and what is located on each cassette - but I do promise that for each cassette of patches sent, I will return a set in response. Can exchange on data cassette ONLY.

500 NEW ESQ-1 Super Patches. We've carefully programmed each patch to its full capability that the ESQ-1 has to offer. Only $19.95/100 Patches (Cassette or Mirage Disk). Putting it simply, we feel that everyone should own our Creative Sounds. 5,000 DX7IIFD/DX7/TX Patches. Excellent Sounds. No duplicates. Most formats. $49.95. 1,024 NEW TX81Z/FB01/DX100/21/27 Professional Patches. High Quality. No fillers. $19.95/256 patches. Add $2.00 P&H. Music World, 617 Panorama Dr., Grand Junction, CO 81503.

ENSONIQ ESQ-1 PATCHES 160 Original, realistic studio quality sounds. **NO FACTORY EDITS.** Designed for composing, recording, or live performance. **Songwriters Series: Volume #1:** Pianos, Grands, Steinways, Rhodes, Comp Keyboards, Funk synths, Basses, Fenders, thumbed basses, Fat Brasses, reverbed and echoed synths, Top 40 synths, DX/FM synths, breathtaking woodwinds, rich bell pads, lush voices, Fairlight sound-alikes, crisp violins, violas, cellos, orchestras, percussion & kits, our unique Glassy collection, classical instruments, Techno Pop, sound effects & more. All patches programmed by songwriters & performers for songwriters and performers. **Volume #1**, 160 patches on data cassette for $24.95. **DEMO CASSETTE** for $5.00, credited toward purchase. Included is information about how to join **"THE MONTHLY ESQ-1 SOUNDBANK CLUB."** Send check or money order to De Rio Productions, 26 Bradfield Ave., Toronto, ONT Canada M8Z-2A3.

I'd like to find anyone to trade ESQ-1 Song Data with; also Disk Data that utilizes both the ESQ-1/Mirage thru MIDI. Call or write: Kevin Muse, P.O. Box 512, Vinita, OK 74301. (918) 256-7060 evenings.

Help! Needed - Good guitar patches (and others). I'll trade percussion/unusual ESQ-1 patches via cassette or Mirage diskette. Also exchanges of effects, percussion... samples (even sequences) for Mirage/ESQ-1. L. Benny Sanders, 40 Falstaff Ave., #812, Toronto, ONT M6L-2E1 Canada.

ESQ-1 Owners: VOICE CRYSTAL X, Blank 80-voice RAM cartridge, CRYSTAL CLEAR, for only $50.00. VOICE CRYSTAL 1, 80-voice E2PROM is DEEP BLUE and filled with 80 voices featuring BANK A; natural instruments: Steinway, tack piano, Rhodes, clav, Taj Mahal flute, trumpet, french horn, bassoon, upright bass, Tomita whistle, fiddle, strings, percussion and... BANK B; electronic instruments: FM piano, FM organ, digital pianos, bell pianos, Moog patches, chorus bass, slap bass, adjustable gated drums/claps. VOICE CRYSTAL 2 is MAGNIFICENT RED featuring BANK A; organs, harmonica, woodwinds, horn section, classical guitar, sitar, bagpipes, steel drum, belltree, cowbell, congas, and... BANK B; studio grand, fusion, fat OBX, electric guitars w/chorus, polymoog, mellow, voice sync, glass bells, bass Moog, techo drumset. VOICE CRYSTAL 3 is here and it's... MELLOW YELLOW featuring all new synth, symphonic and new age sounds... only $63.00 per cartridge. All Voice Crystals are made of transparent high-impact resistant polycarbonate and are FULLY PROGRAMMABLE. DATA CASSETTES available for $16.00 per bank of 40 voices. Specify Crystal and Bank. Mail check or money order to: EYE AND I PRODUCTIONS, INC., 2151 Old Oakland Rd., #224, San Jose, CA 95131. For COD orders and more info, call (408) 943-0139. We pay shipping for COD orders over $45.00. We've often found ways to improve our voices and want to share them with our customers, so we also feature VOICE CRYSTAL UPGRADES published in this classified section. Watch for them!

40 ORIGINAL PATCHES FOR THE ESQ-1. We don't claim that these will be the only patches you will ever need, but these carefully crafted programs sound better! Data cassette and notes only $20.00 postpaid (CA residents please add 6.5% sales tax). Mescal Music, P.O. Box 5372, Hercules, CA 94547.

ESQ-1 -- At last! Percussion that won't disappoint you...DRUM KIT including: "punchy" acoustic and electronic TOM TOMS, complete HI-HAT sound (open & closed), acoustic and electronic SNARE drum, RIM SHOT/WOOD BLOCK, CYMBAL, and the popular CLAP/CLAP sound. PLUS... natural and realistic sounding acoustic instruments including: FLUTE (metal and bamboo), TRUMPET, GUITAR, SAX, CLARINET, HARPSICHORD, ROCK PIANO, UPRIGHT STRING BASS, BRASS section (3 horns & a sax), and some incredibly "real" string patches that'll make you think you're surrounded by a symphony orchestra. PLUS...usable electronic sounds including: HAMMOND and VOX organ sounds, a copy of a popular OBERHEIM synth sound, an ANALOG BRASS variation that's exceptional, and several other novel electronic sounds you'll find useful. "The MusicBank set is a very good starter set for home demos and club gigs...It's rich and warm and provides an excellent analog contrast to the Ensoniq cartridges which are very digital synth-sounding... there are two tom patches which capture the atomic Simmons sound better than any I've ever heard...the brass and reed patches are also exceptional. They are very realistic and quickly became my favorites." - Chris Barth, Transoniq Hacker, September issue. Songwriter Series 1 is available on: RAM programmable CARTRIDGE (Bank A--blank for program storage, Bank B--loaded with Songwriter Series 1 sound set) for $55.95 + $2.00 shipping and handling, or DATA CASSETTE for just $19.95 + $2.00 shipping & handling. To order, CALL: (408) 353-5040, or WRITE to: The MusicBank, 18522 Mt. View Avenue, Los Gatos, CA 95030. Include check or money order (Calif. residents add 6.5% sales tax). Visa and MasterCard accepted. Good luck with your ESQ-1.

SEQUENCES

For the ESQ-1 with expanded memory: Classical music sequences from piano and organ scores. Patches to go with the sequences using SOS software and

Commodore 64. Send for a free list. Four volumes now available at $14.95 each. Also supplied on data cassette. Don Pribble, 6810 Highway 55, Minneapolis, MN 55427.

SERVICES

THE SEQUENCE PREVIEWER... Newsletter highlighting YOUR Sequences... Your listings published each issue. Complete lists sent to buyers. Send SASE for 'PREVIEWER News brief-information. TSP, PO Box 720635, Orlando, FL 32872.

If you need many different sounds instantaneously, and can't afford $269 to $400 for a memory expansion, and you don't have the time or patience for customizing your disks, then give me a call and for as low as $2 per wavesample I'll do the job! Need a sound? I'll sample it for you. I can also add loops to your samples. Call or write: Jack C. Loesch. 201-264-3512 after 6 pm Eastern time. 162 Maple Pl., Keyport, NJ 07735.

OUT-OF-PRINT BACK ISSUES

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

I would be happy to accomodate requests for copies of no longer available back issues of the Hacker. 5 cents per page plus postage. Pat Finnigan, 4606 E 17th St., Indianapolis, IN 46218. 317-357-3225.

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

FREE CLASSFIEDS!

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.

What they're saying about the Q-SPECTRUM

"In the **Q-SPECTRUM** group, I like plenty...both volumes contain gorgeous acoustic/electric piano hybrids, some of the best I've heard...these keyboards compare favorably with my DX-7...I like the organ and vibe sounds very much...My favorite sounds were the exotic instruments, which often had a curiously high-tech flavor... I'd say a lot of careful hours of hard work went into these patches. They are, to my ears, noticably richer than many popular collections currently on the market. As I listened through the sounds, I noticed myself frequently muttering, 'Wow, I didn't know my ESQ could do THAT' ... Suffice to say that many of these sounds made it into my performance and recording banks, which for me is ***the ultimate recommendation.***" -- Reviewed by Rick Hall, TRANSONIQ HACKER 10/87

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

Programming synthesizers is an ***ART*** as well as a science. Now you can have the same artistic edge as some of the top New York recording studios -- Patches by renowned programmer Jed Weaver. His artistic vision 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** -- Awesome, new sounds that will take your ESQ to new plateaus of performance. Each ***80-voice Volume*** is full of ***all*** types of instruments -- **acoustic *and* synthetic** -- with emphasis on keyboards. Great basses. Super strings. Real kick and snare. Fat analogs. Digital bells. And much, much more... Like having a $100,000 recording studio in a cartridge!

80-voice ROM Cartridge	-- Volume 1 *or* 2	**-- $44.95**
80-voice RAM (E²) Cartridge	-- Volume 1 *or* 2 (programmable)	**-- $69.95**
160-voice ROM Cartridge	-- Contains ***both*** Volume 1 and 2	**-- $79.95**
160-voice RAM (E²) Cartridge	-- Volume 1 ***and*** 2 (programmable)	**-- $129.95**

Data Cassette -- Volume 1 or 2 -or- **Disk** (ST/Dr. T) -- **$29.95** **Demo tape - $5**
Blank **80-voice RAM (E²) - $49.95** Blank **160-voice RAM (E²) - $94.95**

Coming soon... the SQ-80 Q-SPECTRUM series!

AVAILABLE AT YOUR ENSONIQ DEALER OR DIRECT

To Order: send check or money order (faster). Call for COD. Specify product and volume. Please add $2.50 shipping. Foreign (US$ only) add $4.50. NY State residents, add sales tax..Write for complete voice lists. ESQ ™ Ensoniq.

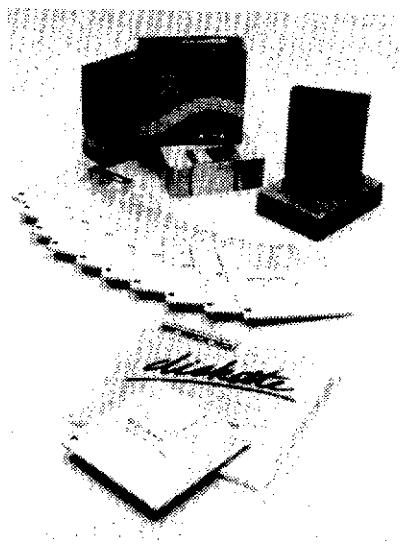
Patch/Works
MUSIC SOFTWARE

P.O. Box 450 New York, NY 10024 (212) 873-2390

Get

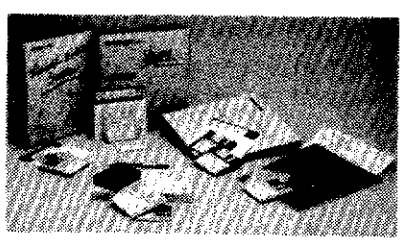
MORE PERFORMANCE

From Your Ensoniq Keyboards



Mirage Accessories

SLD—*Mirage Sound Libraries (10 Pack).* SLD-A, SLD-B. *Compatible with the EPS.*
SND—*Individual Mirage Sound Disks.* SND 100, 101, 102, C-1, C-2, C-3. *Compatible with the EPS.*
FMT-2—*Disk Formatting Program.* Utility program for formatting disks on the Mirage.
SQX-1—*Sequencer Expander Cartridge.* 1,024 Note Sequencer Expander for the DSK-8 or DMS-8.

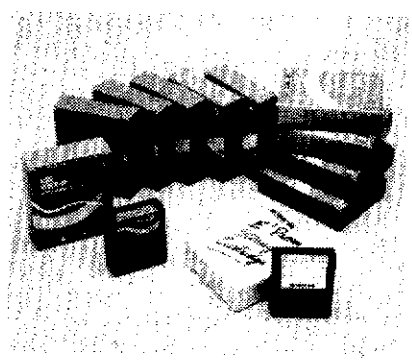


CSP-1—*Commodore 64 Visual Editing System.* Sampling and Waveform Design Package for the Mirage.
ISP-1—*IBM PC Vision.* Program and Waveform Design Package for the Mirage.
ASP-1—*Apple IIe Visual Editing System.* Sampling and Waveform Design Package for the Mirage.
ASG-1—*Advanced Sampler's Guide.* Includes Mirage Advanced Sampling Operating System (MASOS) Software.
MAS-1—*MASOS Disk.* Mirage Advanced Sampling Operating System (MASOS) Software.
PRC-1—*Mirage Parameter Reference Card.*
MM-1—*Mirage Musician's Manual.*
MM-2—*Mirage-DSK Musician's Manual.*

EPS Accessories

ESD—*EPS Sound Disks.* ESD-1, ESD-2.
OEX-8—*Output Expander.* Adds 8 solo outs to the EPS.
ME-1—*2x Memory Expander.* Increases EPS Memory to 896k Bytes
ME-2—*4x Memory Expander.* Increases EPS Memory to 2.1 Megabytes.
ME-3—*4x PLUS Memory Expander.* Increases EPS Memory to 2.1 Megabytes and adds a SCSI part.
MM-20—*EPS Musician's Manual.*

**All Mirage Sound Disks are compatible with the EPS.*



ESQ Accessories

VPC—*Voice-80 Program Cartridges—Volumes 1-10.* 80 sounds per cartridge for the ESQ-1 or ESQ-M. Volumes 1, 2, 4, 5, 7, 8 & 10 each contain 16 Keyboard, 8 Brass Ana Lead, 8 Bass, 8 Percussive, 16 Acoustic, 16 Electronic and 8 Special Effect sounds.
Volumes 3, 6 & 9 each contain layered sounds. *Compatible with SQ-80.*

ensoniq

THE TECHNOLOGY THAT PERFORMS

STC-8—*E²Prom Storage Cartridge.* 80 program storage cartridge for the ESQ-1, ESQ-M or SQ-80.
SQX-20—*Sequencer Expander Cartridge.* 20,000 Note Sequencer Expander Cartridge for the ESQ-1.
ILP-1—*ESQ. Manager.* Sound Sequence Librarian for the IBM PC or compatible and the ESQ-1, ESQ-M or SQ-80.
MM-10—*ESQ-1 Musician's Manual.*
MM-11—*ESQ-M Musician's Manual.*

SQ-80 Accessories

VSD—*SQ-80 Voice Data Disks.* 40 sounds per disk. VSD-1, VSD-2.
MM-15—*SQ-80 Musician's Manual.*

**All VPC cartridges are compatible with the SQ-80.*

Piano Accessories

MST-5—*ENSONIQ Piano Music Stand.*
MM-5—*ENSONIQ Piano Musician's Manual.*
MM-6—*ENSONIQ Piano Module Musician's Manual.*

Pedals

SW-1—*Sustain Pedal.* Sustain Pedal and Foot Switch for the DSK-8, DSK-1, EPS, ESQ-1 or SQ-80.
SW-5—*Sustain/Sostenuto Pedal.* Sustain Pedal/Foot Switch for the SDP-1 or EPS.
CVP-1—*Control Voltage Pedal.* Voice modulation or volume control for the ESQ-1, SQ-80 or EPS.

Stop in today and pick up your Ensoniq accessories from your Authorized Ensoniq Dealer. For the name of your nearest Authorized Ensoniq Dealer or a *free* Accessory Brochure, call 1-800-553-5151.

Ensoniq Corp
155 Great Valley Parkway
Malvern, PA 19355

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 TH,

This summer, I purchased an ESQ-1, and I was amazed at the number of capabilities it has and its ease of programming. However, I would like to address a problem that I'm sure other owners have experienced beside me; glitches in the software. Several times the pitch bend range has jumped from 0 - 12 to 48 - 60. This can be easily fixed by re-initializing the keyboard, but that gets to be tiring after a while when a cassette player is the only means of storage one has. Sometimes when in straight synth mode the pitch of any note played fluctuates randomly, as if some unseen force was playing with my pitch bend (this can be fixed by setting the bend range to 0). The worst mishap to happen with my software happened one day when I turned on my ESQ-1, only to find all of my beloved sequences erased. (Now I know to make back-ups).

I discussed these problems with my local Ensoniq dealer, who told me that I was not alone in my troubles, and as a result of numerous complaints from other ESQ-1 owners, that particular dealer has stopped carrying Ensoniq equipment. When I asked him if my 2.00 version might have something to do with it, he told me that systems prior to 2.00 are more reliable than the newer systems.

The ESQ-1 is otherwise a great keyboard, but the software problems are really quite annoying. Does TH have any suggestions?

Incidentally, your magazine is great, and has proved itself quite useful to me in many ways. Thanks, and keep up the good work.

Sincerely,
James R. Lantzy
Coraopolis, PA

[Ensoniq's response - The phenomenon you describe was identified as a bug in the version 2.0 ESQ-1 software and was corrected in later versions. You can see your local Authorized Ensoniq Service Center for the latest upgrade.

It is Ensoniq's policy to continually upgrade its products and make the upgrades available as soon as possible. This policy ensures improved performance and extended life of our products. "Reliability" of the software is by definition improved with each upgrade.]

Dear TH:

Ok, so I got a Mirage because it can do "anything." By the time I realized that it couldn't, it was too late, I was already in love. But I'm willing to compromise my pride for my Mirage, MIDI, and my Commodore 64. (You know, the one I swore was only for video games). My question is; which sample editor is the best? I'm looking for features at a reasonable price, but I suppose I could sacrifice my munching habit for a rather expensive program. (Might as well have it all, right?) The "salesman" suggested VES, but does it have all the groovy stuff like Turtle Beach's Vision? The "leaf-lett" I received was about as vague as they get. Please fill me in, I need some help.

Thanks,
Scot St. John

[Ensoniq's response - In addition to our own VES software package for the Mirage, we are aware of C-64 editors from Dr. T's Music Software, Neo-Sync Labs, Sonus Corp and Steinberg (distributed by Russ Jones Marketing).

Because it only has 64 K of internal memory, the C-64 cannot by definition perform some of the functions that a Macintosh or IBM can. There is not enough room, for example, to transfer the contents of an entire Mirage memory half into the C-64. The C-64 can, however, be a very useful tool for viewing and editing wavedata.]

[TH - Since you already own a C-64 and you probably don't want to buy a PC just for the editor, your best bet is to check out the reviews on Neo-Sync (Issue 27) & Steinberg (Issue 26).]

Dear Hacker,

I just acquired the ESQ-1 and must tell you that in addition to being pleased with the possibilities, I am also a bit overwhelmed by them as well.

Specifically with regard to the multitude sounds available from various sources: are there some which over a period of time have proven to be especially reliable? It's awfully hard to learn from ads.

Also, I have a Roland MSQ 700 and a Drumulator. Any tips on how best to utilize the three in combinations?

Thanks for putting out a straight-talking helpful newsletter. I look forward to the next issue.

Sincerely,
Rodger French
Decatur, GA

[TH - We can't even begin to keep up with all the sounds coming out for the ESQ-1. All we can say is to keep watching the reviews. A lot depends on your application. Give us a call and with a little more info maybe we can at least point out who seems to specialize in what. Regarding the Roland and the Drumulator - Jim Johnson has written a few articles on using the ESQ-1 in a system (there may even be one in this issue). Check 'em out. Sorry, but we can't devote too much time and space to really specific combinations of gear. Maybe a reader with the same set-up will send in some specific tips...]

Dear Hacker,

Your newsletter looks really good. I am overseas and would like to get in touch with anyone else in Saudi Arabia with an ESQ-1 to share patches, etc. My phone number here is 878-2857 in Dhahran. I also have an Amiga with MIDI and am looking for an ESQ-1 patch editor for it. Can anyone help?

Thanks,
John J Lindberg
c/o ARAMCO Box 6325
Dhahran 31311 Saudi Arabia

[Ensoniq's response - We are not aware of any patch editors for the Amiga and the ESQ-1.]

[TH - Ditto. So far, our Saudi Arabian circulation seems to be hanging around one (1).]

Dear Transoniq Hacker,

First of all let me thank you for putting out such a fine publication. I subscribed a couple of years ago (Issue 5) and would not dream of missing an issue. I would also like to point out that I am the very proud owner of both a Mirage and an ESQ-1. I'm always amazed at what these two keyboards can do (especially MIDIed together). I would like to take this chance to thank Ensoniq for putting out such a great product and for being so courteous and helpful with any problems I have called them about in the past. Anyway, enough of the praise (though it is well earned).

EYE AND I PRESENTS . . .

Voice™ Crystal and ESQ1

THE PERFECT COMBINATION

NOW AVAILABLE AT YOUR ENSONIQ DEALER

Voice Crystal 1 . . . . . $62.95
Deep Blue 80 Voice E² PROM

Voice Crystal 2 . . . . . $62.95
Magnificent Red 80 Voice E² PROM

Voice Crystal X $49.95
Crystal Clear Blank 80 Voice RAM

VOICE CRYSTAL 3 AND 4 WILL SOON BE RELEASED. WATCH FOR OTHER NEW PRODUCTS.

EYE AND I PRODUCTIONS, INC.
2151 OLD OAKLAND RD. #224
SAN JOSE, CA 95131
PH: (408) 943-0139

MONSTER DAN is still surviving sequencing madness, and now

OVER 100 Top 40

sequences for ESQ-1* or SQ-80* are available. Get sequences, patches, drum patterns, and programmed mix for all the songs you need to keep your act current.

SUBSCRIPTION DISCOUNTS are now happening! For more info., catalog listings, and order forms **call any time 24** hrs. a day, or write

DANLAR MUSIC
PO Box 973
Tualatin, OR 97062 USA
(503) 692-3663

ESQ-1 and SQ-80 are trademarks of ENSONIQ CORP.

I have a few questions that need answering.

1) Is there a MASOS disk with a version 3 operating system? When I play live I use the ESQ-1's program change function to reset all my slave synths including the Mirage. With a normal Ensoniq sound disk, version 3.2, I have no problem because I'm offered the four function setting on parameter 84. But on my MASOS disk it is only an on/off switch (version 2). And since I need the Mirage booted with MASOS to reload sequences into the ESQ-1, I'm stuckk with having to manually change Mirage programs. If a MASOS version 3 (or higher) is available how can I obtain one? (Please don't tell me I have to buy another Advanced Sampler's Guide. I went through the agony of seeing all the items I bought separately - the Advanced Sampler's Guide, foot pedal, every one of the sound disks, etc.- end up being included with the new Mirages or being sold in sets at a fraction of the cost.)

2) How come every time I put a sequence into the ESQ-1 and I leave a track unused, the next time I go back to that sequence I get all kinds of settings on the MIDI/mix page? For example I left a couple of tracks unused, set it at MIDI channel 1, and set for Both. When I go to another sequence and then return to the previous sequence, the tracks I left blank read -Local,MIDI channel 2 or some other combination which I know I didn't leave it at. This is frustrating because I have to edit and erase each track I wanted blank every time I leave that sequence because I don't want to save those tracks on my Mirage disk that way. Do you follow? Is there any way to stop that from happening?

3) I bought Blank Software's Sound File for the Commodore 64/128. I own a 128 but obviously this program was written for the 64. Too bad. I seem to be having difficulty loading and saving songs in the song mode. One song I saved and then loaded back was fine for the first 36 measures and then all of a sudden I get like a leader tone, then a drop out for two measures, and then the sequences return and finish perfectly. I tried saving it at least twenty times on at least five different floppy disks but it has always happened exactly the same way. (The song played fine on the ESQ-1 originally and I even reloaded the sequences from my Mirage disk into the ESQ just in case something did happen to them but the problem was in the transferring to the computer. I need a program like this to load sequences separately, but it just doesn't work the way it's supposed to. The saving of sounds and editing them works great, but not the song mode. I also had another problem with this program. I had 8 sequences and 1 song in the ESQ-1's memory (I just put in the SQX-20 so I had plenty of free memory) and when I tried to load a song (that I know I saved okay) from the sound file everything proceeded okay and then the screen on the computer went blank, nothing loaded into the ESQ-1, and the disk drive would have kept spinning forever if I hadn't turned it off. Any ideas? How about from the people at Blank Software? Are there perhaps bugs in the program that have since been corrected? I'm very disappointed (especially since Ensoniq distributes this product).

4) Not a question but a tip, for those who might be using Sonus's Super Sequencer program for the 128. I do most of my sequencing with this program and then append all the sequences into the form of the song. This way I can dump the appended sequence right into an open sequence on the ESQ-1. One problem, though. If you are using a drum machine with the sequence you must take off three pulses per quarter note to sync the two correctly. So add a blank measure at the beginning of the sequence and take off 3 ppqn.

5) Last but not least. When I dump sequences from my computer into the ESQ from what I understand I should be able to dump all the tracks and different MIDI channel information at once using the Multi mode. Whenever I try that I only receive one track at a time (or all the tracks that are assigned to the same MIDI channel). Is it possible to dump everything at once? And if so, how?

Thanks in advance for the help.

Keep up the great job.
David Foerschner
Wantagh, New York

[Ensoniq's response - Question 1: The Mirage OS version 3.2 and MASOS are designed to perform different functions. While OS version 3.2 is used to maximize the Mirage's performance capabilities, the MASOS software is designed to utilize advanced sampling functions (wavedata transfer, etc.). The Mirage operating system is not large enough to accommodate all these functions at once, so it is necessary to have several different systems optimized for different functions.

Because of numerous requests like yours, Ensoniq recently began offering the MASOS software separately. You can purchase the disk (model MAS-1) for $9.95.

Question #2: We would need further clarification of your question in order to give you an accurate answer.

Question #3: As a point of fact,

Ensoniq no longer distributes Blank Software products. There are now distributed by Dr. T's Music Software.

Question #5: In MULTI mode, the tracks can all receive notes, controllers, etc. in real time and each on its own MIDI channel. The ESQ-1 sequencer, however, can only RECORD on one track at a time. If you wish to record an entire sequence into the ESQ-1 from another sequencer, you must do it one track at a time. See page 23 of the ESQ-1 Musician's Manual for further information about MULTI mode.]

Fellow Hackers,

I just bought a Mirage DSK about a month ago and with it I received a copy of your magazine. I have but one thing to say. Wow! I've been missing out on a lot of the information on the Ensoniq products I own. My only complaint is that your magazine did not come with the ESQ I bought one year ago!! In closing I have a question regarding Ensoniq's choice of Authorized Dealerships. Is there a place I can complain to regarding the lousy service of mine! These guys are terrible. I bought a MASOS disk for Ensoniq's price of $19.95 and received no Advanced Samplers Guide to go with it. Also their service department leaves something to be desired. If I had it my way I'd like to see their dealership taken away! The company is Thoroughbred Music, headquartered in Tampa, Fl. And I am referring mainly to their Sarasota branch. If Ensoniq really cares about their customers feelings, rather than just gross sales, I would request that they check into the lousy treatment of their product-users by so-called salesmen. At this time I can't even go looking at the new Ensoniq products because I refuse to deal with these idiots!! I am very pleased with the Ensoniq products. They rank right up there with the big boys. Also, I am pleased with the Hacker (my check is the result of that.)

Thanks for a place to learn and bitch,
Jason E. Johnson
Nokomis, FL

[Ensoniq's response - While we certainly appreciate any and all customer feedback regarding our authorized dealerships, we are surprised that you have had trouble with Thoroughbred Music, as this is the first customer complaint we have received regarding their overall performance.

We are particularly surprised at your comments regarding customer service, as Thoroughbred Music's Service Department was awarded "Best Service and Repair Department" by Music and Sound Output for the last 2 years running.

While we trust that your experiences represent isolated incidents, we certainly encourage any additional feedback at any time.]

[TH - Ensoniq assures us that they pack a sample issue with every ESQ-1 that goes out the door. Unfortunately, we get a LOT of comments like yours. We suspect that some of the dealers or salespeople like to "borrow" copies out of some of the packages.]

Dear Transoniq Hacker,

I echo the praises of others for the ESQ-1 (ESQ-I) and your publication. I purchased the ESQ-1 because of its impressive programming flexibility. Nothing even close to its price gives such free assignability of modulators, the ability to apply two modulators to a parameter, three LFO's, four envelopes...I couldn't believe it! Primarily, I use the ESQ-1 in a contemporary/ experimental electronic music context creating gestures by linking programmed sounds through the sequencer. I try to take the instrument to the extremes of what it can do and discover its limits. I would be interested in trading tapes with anyone out there working in the same area. That said, it's also great to rock out with the sequencer!

I would like to propose to TH readers, writers, and reviewers that when attempting to describe a type of programmed sound (new age, lead synth, string, etc.) that the term "effects" or "special effects" be reserved for helicopters, telephones, wind, and other imitative programs. For sounds that are "gestures," "sound events," or just plain weird let's use the term experimental. Chris Barth does well without using the term experimental in his 10/87 review by creating a context for "space" and "electronic" sounds, but many other writers are less articulate. These terms are fine for describing sounds within the realm of experimental, but to keep things clear it would be nice to reserve "effects" for imitative sounds and "experimental" for others and let the more detailed descriptions follow from there.

So much for the petty semantics. I have complaint and wish lists like everybody else, so here goes. It amazes me that everyone always has a complaint about some sequencer feature but never about any sound aspect of the ESQ-1. I find the DCA's noisy when controlled by LFO's. The peaks of the triangle, saw, and leading edge of the square waves

Presenting...

Livewire Sample Library

Great samples for the NEW Ensoniq EPS, the Ensoniq Mirage, and the Casio FZ-1. All of our sampling is done in a recording studio. We use only the best mic's & digital equipment for a clean, quiet sound. AND our prices are very affordable, at $8.95 & up for Mirage disks.

We now do "custom" Mirage disks for only $5 more per disk. Custom disks available soon for the Ensoniq EPS. Order the Library Index (SE) for a complete listing, or order a demo cassette for $5 (refundable). Please specify which sampler(s) you own.

Livewire Audio also has the synth sounds you want at affordable prices. Top-notch patches for Yamaha, Korg, Roland, Casio, & Ensoniq from $15.95 a set. Demo tapes are available for most synths for $5. For details, send a stamped self-addressed envelope - please specify your synth(s). Add $2 for complete DX, CZ, DW8000, Mirage, EPS, or FZ-1 listing. We stock MIDI software & TRITON utility disks too. TRY US!!

Livewire Audio

Dept. TH
PO Box 561
Oceanport, NJ 07757
(201) 870-3115

STILL VOICE AUDIO

We Can Choose?

YES.

Our 160 voice (and expanding) **ESQ-1** Mix and Match Voice Library is **Quality.**

Write or call us. Load up the free samples, listen to our $3.00 demo tape, then CHOOSE the ESQ-1 sounds you want from the Library. Each set of 40 sounds is just $15.00 on cassette, patch sheets, or SOS C-64/128 Librarian diskette.

Got some great sounds?

Send them to us. If approved for inclusion in the library we will pay you each time your sounds are sold - guaranteed. Ask for details.

STILL VOICE AUDIO
3041 Sumter Ave. So.
St. Louis Park, MN 55426
(612) 927-0451

ESQ-1 and ENSONIQ are trademarks of ENSONIQ Corp

CYBERSONIQ PRESENTS:

THE SYNTHBANK DISK, VOL. 1

Digital Wave Synthesis for the Mirage - with 48 waveforms.

BANK 1: 16 FM/Additive Waveforms
BANK 2: 16 PD Synthesis Waveforms
BANK 3: 8 Acoustic Source & 8 Analog Synth Waveforms

PACKAGE COMES WITH:

2 Disk versions - **Whole**: Sounds spread across the entire keyboard, and **Split**: Different sounds on upper/lower keyboard

User guide with Mirage Synthesis tips and techniques.

Patch card listing 192 Synthbank sounds.

Disk compatible with all Mirages.

Send $29.95 plus $3 for handling to:

CYBERSONIQ, P.O. Box 1771
Madison Square Station
New York, NY 10159

New York State residents add 8.25% tax.

create clicks that are very obvious at low dynamic levels. I have run into factory patches that need T1 tweaked from 00 to 02 to eliminate clicks caused by envelopes. I find that some amplitude modulation patches seem to produce random clicks that require the T1 to be set to 06 or 07 on the ENV 4 page (this is with oscillator restart set to ON, a wide open filter with no modulators, no modulation of the OSC's, LV and T1V both set to 00 for ENV 4, and I'm sure that I'm underneath a point where aliasing begins). Using the filter to remove the clicks does not work. About amplitude modulation: re-routing the final amplitude modulated signal through the unused DCA 1 would have made so much sense that I have to think that a designer at Ensoniq thought of it, but found it impossible to accomplish in software. If not that, why not try sending OSC 1 through DCA 1 before performing the amplitude modulation on DCA 2, thereby giving control over the modulation index? Did Ensoniq provide the capability for updates in the synthesizer portion of the operating system, or only for the sequencer portion? I'm curious about: at what rates does the ESQ-1 read its wave tables? Is circuitry or software to remove very high frequency components just before the point of aliasing a practical wish for the ESQ-1?

Aliasing is not a huge problem, but it becomes more noticeable when using a pitch envelope or the pitch bend wheel in the upper ranges of the instrument. (The factory gave great practical advice about aliasing problems, "Don't play so high." Quit playing high? . . . no comment.) The manual says that the LFO square wave is positive going only, yet its effect on panning makes me think that it is offset before going to the ENV 4 page. I don't get what I expect when modulating from a PAN=00 or 15.

The October issue of the Hacker has a Q-Spectrum ad that quotes at length a review of their sounds that appears in the same issue! Recent political events have taught a lot about what even the appearance of impropriety can do to one's reputation. The Hacker is respected in many quarters for its independent stance. I'd like to think that advertisers see review copy only in its final form (?) the way we readers do.

Now for the wish list: 1) The ability to modulate LFO frequency, 2) the AM capabilities mentioned above, 3) third party software to dump sequencer data into a computer for more sophisticated editing before dumping it back into the ESQ-1, 4) an index in the manual, 5) The acceptance of negative modulation for LFO depth, and 7) a mod that provides 8 outputs from the sequencer to allow processing of individual tracks.

Now that all is said I must reiterate that I think the ESQ-1 is an incredible machine and that the Hacker is a fantastic publication. I'm always digging up an old issue for some information. Its steady expansion is great and I hope it will continue with the addition of Ensoniq's new line. The large letters section is a credit to your attitude about the exchange of information and interaction between users. Please don't let this feature dwindle as the page count grows! Keep up the good work.

John McDaniel
Cincinnati, OH

[TH - Regarding the early quote in the ad; this has actually happened more than once. Very often a vendor knows that we're working on a review of their product and will ask to see a copy of it when it's done. Oft' times a regular reader (pardon the expression) will also ask us about a particular product and if we happen to have a review in the works we'll send off a copy. The way we keep this fair is by not playing favorites. The information isn't secret or anything (and, as far as the actual words go, it's "final form"). Of course, if there gets to be too much of this then we won't be sending off any copies - we don't want to end up "mailing off the issue" before we Mail Off The Issue.]

[Ensoniq's response - First of all, thank you for all your praise of the ESQ-1. It is always gratifying to learn of yet another satisfied customer.

In our effort to produce what we at Ensoniq feel are instruments of un-matched quality of sound, features and dollar value, certain compromises are obviously necessary. With this philosophy guiding the development of our products, implementation of many of the items on your "wish list" are simply not practical. We of course appreciate this input, as it plays an important role in the design and development of new products.

Now on to some of your specific observations and questions...

The low level noises you experience are the result of the dynamic updating of the various voice circuits. This noise is normally inaudible, although it is possible to adjust the parameters on any synthesizer to produce "noisy" sounds. It is assumed that if you don't like a particular aspect of a sound, you will edit it to your liking.

There seems to be much confusion about the rarely used amplitude modulation feature of the ESQ-1, so an explanation is in order. AM mode simply routes the waveform data of OSC 1 into the volume control of OSC 2. Manual volume control and modulation are lost

as there is only one volume source possible. DCA 2 is not inoperative, it is being controlled by OSC 1. It is assumed that DCA 4 will be used for volume modulation. There is no way to "re-route" signal paths in the Q chip.

With thousands of available sounds in the field, making major changes to the ESQ-1 voice architecture is not a practical option. The ESQ-1 reads its wave tables at 40 KHz. The sound generation circuitry of the ESQ-1 is completely in hardware and set by the Q chip, so there is no "circuitry or software to remove very high frequency components just before the point of aliasing."

In regards to your comments about aliasing, we reiterate that it is possible to make any musical instrument sound bad when it is pushed beyond its intended limits. Finally, the LFO square wave only goes from zero to positive, which is half the range of the other LFO shapes. That is why it can only modulate the pan from full left to center, or from center to full right, etc.]

Dear Loopers:

As one of the earliest (#14) subscribers to the Hacker (great new trademark/ letterhead), I would like to offer my services to your company and all of the readers who subscribe to such an immensely useful, affordable and necessary magazine for Ensoniq products.

If any readers would like copies of back issues, I would be happy to accommodate requests at $.05 a page plus postage. I have all issues except #1 and #2. Let's face it, Aftertouch, Roland User Group, etc., are out in left field to you guys.

Your articles are informative, objective, clear and concise "real world" examples so sorely needed for instruments of this calibre; your effort gets my applause. This magazine keeps the "just purchased" euphoria from leaving. Refreshing...

Sorry I waited 2 1/2 years to write, but #28 noted 1-8, 11, 13-18 were NLA. I'd like to make those available for any interested parties; it's all important information at any level. As an ex-teacher (biology) turned professional, I'd just like to help.

Thanks for yours.

Sincerely,
Pat Finnigan
4606 E. 17th St.
Indpls., IN 46218
1-317-357-3225 anytime

[TH - Starting with Issue 3, you certainly are one of the early ones. However, (and this has thrown a number of people), the #14 that appeared on your label indicated when your first subscription was going to expire - not what number subscriber you were. We've added your name to the list of people offering out-of-print issues. Thanks!]

Dear Hacker, Ensoniq, and developers:

Here's an idea: how about a breath controller which could be plugged into the ESQ's CV input jack? I realize Yamaha probably has a patent, but since their breath controller doesn't work in this manner (I tried it, with several adaptors) it seems as though the design would be different enough, and, I suspect, simpler. Short of that, could someone at least come up with a DIY version, or a mod for the Yamaha controller? I don't plan to buy a Yamaha keyboard or MIDI control station just for this feature, but it would be great on the ESQ.

Sincerely,
Wayne Dooley
Winchester, VA

[Ensoniq's response - All the relevant specs for the ESQ-1 CV port are in the ESQ-1 Musician's Manual. This sounds like a good project for an industrious third party developer.]

Dear TH Readers,

I knew from past issues of the Hacker that there were at least three other volumes of the Voice-80 cartridges available from Ensoniq besides the one I received with my new ESQ-1, but for some reason my local dealer could never get any of them. So, on a recent trip to another city I looked up an Ensoniq dealer there and found out that there are TEN volumes available. In a subsequent phone call to the Hacker I learned that very few people knew much about these, so I thought I'd pass a few of my thoughts on to you.

My time at the store was limited so I only had time to play through each cartridge briefly, but my general impression was that they were all quite good. Because I am a victim of the very common disease "lack-of-money," I was only able to purchase one cartridge (my choice was based on about 10 sounds I just couldn't live without) but I would certainly like to have them all.

MULTIPLE OUTPUTS FOR THE MIRAGE

$350.00

- 8 Channels
- 2 Channels Stereo
- All Channels Polyphonic
- Sounds Assignable to Any Channel
- Reduces Noise
- Additional Operating System Enhancements
- Dealer Inquiries Welcomed

C. L. Brandin
1502 East Pikes Peak Ave
Colorado Springs, CO 80909
(303) 634-8655

All the cartridges are laid out the same as Volume I (keyboards, percussive, effects, etc.). A lot of the sound were programmed by third party individuals, many of whom advertise their patches in Transoniq - I have no idea whether or not the sounds on the cartridges are the same as the ones they sell on their own. Overall, I think Ensoniq has chosen some first-rate patches for their cartridges.

A request for Ensoniq: how about offering these sounds on a data cassette? At $50 a shot I really can't afford to buy too many cartridges. Several companies are now offering their patches at extremely low prices and, although I think Ensoniq's are among the best, if I can buy 400 patches for the same price as a cartridge with 80 patches, chances are my pocketbook will take precedence over my aesthetic values. Many of you may cringe at that statement, but we all have to make our compromises. I suspect that if we all had the money, most of us would own Synclaviers.

Keep those mod wheels rotating!
Bryce Inman
Waco, TX

[Ensoniq's response - For the information of all Hackers, here is a list of available 80-sound VPC ROM cartridges for the ESQ-1. There are each $59.95.

VPC-1 Classic Mix 1
VPC-2 Classic Mix 2
VPC-3 Layers 1
VPC-4 Classic Mix 3
VPC-5 Studio Mix 1
VPC-6 Layers 2
VPC-7 Studio Mix 2
VPC-8 Contemporary Mix 1
VPC-9 Layers 3
VPC-10 Contemporary Mix 2

Under the terms of our Sound Development Program, third party sounds included on our software become the property of ENSONIQ and the developer relinquishes all rights to sell or distribute the sounds.

We have no current plans to offer these sounds on data cassette.]

[TH - Some of the sounds from third party developers that end up in Ensoniq's collection may start out being offered directly by the developer. However, once it's sold to Ensoniq the developer is supposed to eliminate it from their offers. One side effect from this is that today's Acme Sounds Volume One may be a slightly different collection than last week's Acme Sounds Volume One. This helps make things REAL interesting.]

Dear Transoniq Hacker

I would first like to say that I enjoy your newsletter very much, and that I recently purchased an ESQ-1 with version 2.3 software. I have made a few discoveries that aren't documented in the ESQ-1 manual. I found them after I was told by my dealer that the Record and Softkey #0 buttons would reinitialize everything and how the Record and filter buttons would retune the filters. I have found that the Record and Master buttons and the Record and Softkey #5 will produce the initial copyright display, and that the Record and Modes buttons will display who designed the hardware and software. One other discovery is that the Record and Compare buttons display an analog test function. From here you can test the values of various controls. Every time Softkey #9 is pressed, a reading is taken. KNOB is the data slider and ranges from 0 - 255. PED is the CV pedal and has the same range. PTCH is the pitch wheel, which is centered between 131 - 136. MOD is the modulation wheel with the same range. I have noticed that when the mod wheel is pushed all the way up the pitch wheel value jumps to 150. Is this a hardware or software bug?

If these features have not been published in your newsletter please publish them! I don't know if they have because I only have issues 24, 28 and 29, and none of them mentioned it. Now that I think about it the new SQ-80 probably has identical undocumented features. Once again, I enjoy reading your newsletter and the information provided with it!

Sincerely,
Dave Roper
Toledo, OH

[Ensoniq's response - Congratulations on your discovery of the ESQ-1's hidden functions. A few clarifications are in order, however. RECORD plus soft key #6 (not 5) actually causes a soft reset of the instrument (the equivalent of turning the power OFF and then ON) and this is why the wake-up page is displayed. To read the values on the Analog Test Page, you must press soft key #10 (not 9). Adjusting the MOD wheel should have no significant effect on the pitch wheel values. You may want to have your unit checked by an Authorized Service Center.

Some additional words about the Analog Test function of the ESQ-1. This page was designed for use by service personnel and is used to read the levels of analog inputs. If you want to poke around on this hidden page, we extend to you one word of warning. Before you exit the page, make sure you press the READ button one last time WITHOUT

ESQ-1 really delivers PERCUSSION

"Songwriter Series 1"
from The MusicBank

GREAT PERCUSSION AND MUCH MORE !

DRUMS

*Toms ("Punchy" Acoustic & Electronic)
*Kick & Snare (Acoustic and Electronic)
*Hi-hat, complete (Open and Closed)
*Rim-shot/Wood Block & Cymbal
*Clap/Slap Sound

PLUS

Natural and realistic sounding acoustic instruments including: Flutes, Guitar, Trumpets, Sax, Clarinet, Harpsichord, Rock Piano, Upright String Bass, Brass Section, and featuring incredibly "real" Strings that'll make you think you're surrounded by a symphony orchestra.

PLUS

Electronic sounds including: Hammond and Vox Organs, an Oberheim synth sound, an Analog Brass variation that's exceptional, and several other novel sounds you'll find useful.

"The MusicBank set is a good starter set for home demos and club gigs...it's rich and warm and provides an excellent analog contrast to the Ensoniq cartridges which are very digital sounding...there are two tom patches which capture the atomic Simmons sound better than any I've ever heard...the brass and reed are also exceptional...they are very realistic and quickly became my favorites."— Chris Barth, Transoniq Hacker---September issue.

RAM Programmable Cartridge $55.95
Data Cassette $19.95

To Order: Call (408) 353-5040 or Write to: The MusicBank, 18522 Mt. View Avenue, Los Gatos, CA 95030. Please include check or money order (add $2.00 shipping and handling. California residents add 6-1/2% sales tax)
We also accept Visa and MasterCard by phone.

touching the PITCH or MOD wheel or any of the buttons on the machine. Failure to do so can result in an offset in some of these values.]

Dear Sirs:

Do you know if there is Atari ST software available which will print music scores directly from the ESQ-1 sequencer without having to first transfer the data to someone else's software sequencer?

Thank you,
Keith Hammond, M.D.
Cape May, New Jersey

[Ensoniq's response - We are not aware of any Atari ST software that will print music directly from ESQ-1 sequencer data.]

[TH - We just found out about Mu-Script 1 ($99.95) from Quiet Lion (818) 765-6224 that will probably do the job and there are a couple of programs from Dr. T that will probably do this in combination - but we haven't personally tried them out. You should give the Doctor a call to find out for sure. We suspect that 6 months from now there will be several.]

Hi:

After reading and rereading Persis Ensor's review of MINOTAUR STUDIOS Disks 1 and 2, I was left with such an uneasy feeling that I felt compelled to express my opinion.

First let me say that I am not familiar with some of the instruments sampled and am therefore unfamiliar with what they sound like. However, I am familiar with what a "good" sample should sound like. Take, for example, the vielle sample. Since I am not familiar with the actual instrument, I can't attest to it being an accurate picture of a vielle. But I did find it to be a good, technically speaking, sample of a unique bowed instrument.

This sample, like a number of Barry Carson's other samples, is of a high quality with good loops. Any limitations that one may find are in the Mirage - not the samples. The Mirage is unable to make an accurate picture of some sounds. Also, there are times when each octave of a sample does produce a different sound. Again, this is caused by the sampler - not the samplist.

As for Ms. Ensor's other objections - simple adjustments to the filter parameters by a few values can bring a sample more to your own personal liking. Also, the range of a sampled instrument can be fixed, at times, by moving sample 1 to sample 2 and adjusting the top key. Then, by returning to sample 1, adjusting its top key to about 15 and parameter 69 to 0, you may have the same range of each instrument sampled.

Have a LEAP year.

THE IGUANA $39.95

New and improved! (V1.5) Turn your Mirage into a generic MIDI system exclusive librarian. **THE IGUANA** allows you to store all your MIDI SysEx data on ordinary Mirage formatted disks. Any type or combination of SysEx data can be recorded. Store up to three 128k files on a disk. Each file can contain up to 99 seperate banks of SysEx data. Create and send up to 50 different SysEx request messages. Features include MIDI delay, delete any bank, and the ability to play your patches from the Mirage keyboard, or another keyboard. You will find **THE IGUANA** out performs all the dedicated MIDI disk drives, which cost hundreds of dollars more! Compared to some similar software for the Mirage, **THE IGUANA** stands out with more features, it is compatible with more MIDI devices, and it is faster and easier to use. See the review in this months KEYBOARD magazine.

LLDU-1 $24.95

Copy any operating system. Format a disk in 30 seconds. Copy an entire disk in three minutes or less. Now you can format a disk and place the operating system of your choice on the disk in one quick step. Now you can back-up your previously un-copyable "boot" disks. Make quick and foolproof back-ups of your library disks. Now you can verify the disk format and pinpoint disk errors. Find out why people who already own another "disk utility" keep telling us they'll never use anything but **LLDU-1** again.

O.S. 3.d $24.95

Turn your Mirage into the ultimate controller keyboard! **O.S. 3.d** is an update to Ensoniq's O.S. 3.2 which adds new performance enhancements to the Mirage while retaining all of O.S. 3.2's features (except sampling): Receive and transmit over seperate, selectable MIDI channels. Re-define the modulation wheel to transmit other MIDI controller data, in real time, such as breath control, volume, portamento time, data entry, etc. Re-define the footswitch to transmit other MIDI switch information other than sustain. Transpose the keyboard by semi-tones to give the Mirage keyboard an effective range of 128 notes. Transposing affects the Mirage's internal voices as well as the voices of any connected instruments. A MIDI "panic button" sends an all notes off message to the Mirage and to any connected instruments. Parameter changes (using the on/off keys) are now more than three times faster. **You'll never want to go back to O.S. 3.2, ever.**

DIAGNOS $24.95

A diagnostic operating system for your Mirage which allows you to check all the mechanical connections on your Mirage using the Mirage's LED display. If you have suspected that your Mirage isn't working correctly, here's your chance to find out for sure. Common faults are: a sticky keypad, a pitch wheel that doesn't center, a modulation wheel that doesn't span it's entire range, keys that don't sound, or a key that sounds louder or softer than the other keys. **DIAGNOS** finds these and other problems quickly and easily.

MIRAGE MONITOR V1.0 $39.95

This is not a visual editor! This program allows the software programmer to disassemble & assemble the entire 160k of Mirage memory in 6809 assembly language. **MIRAGE MONITOR V1.0** gives you direct access to the operating system memory, sequencer memory, sample memory, disk drive, VIA, ROM, MIDI UART, Q-chip, etc., entirely from the Commodore. **MIRAGE MONITOR V1.0** was used to develop all of Leaping Lizards' new operating systems and is currently being used by several other companies to develop new operating systems. The features and options included with **MIRAGE MONITOR V1.0** are too numerous to mention, please write for more details. Now that you can customize your Mirage to do what you want it to do, the possibilities are endless...

SOUND DISKS

Our ever popular sound disks, **LL-1, LL-2, & LL-3** are now cheaper than ever! Buy any one disk for only **$13.95**, or buy all three disks for only **$34.95**.

ALL OF OUR SOFTWARE AND SOUNDS WORK WITH ANY MIRAGE, DSK, OR RACK-MOUNT. PLEASE INCLUDE $2.50 SHIPPING WITH YOUR ORDER.

LEAPING Lizard

COD'S AND FOREIGN ORDERS PLEASE INCLUDE $5.00. SEND FOR OUR FREE, FUN FILLED CATALOG. DEALER ENQUIRIES WELCOME.

10026 36th Ave NE, Seattle, WA 98125 (206) 527-3431

I feel that these adjustments are a small price to pay for such fine quality samples.

Mr. Wavesample
Jack C. Loesch
Keyport, New Jersey

[TH - Thanks for the second opinion. Some like to tweak - some like to know what they get when they pop it in and run with it.]

Dear Hacker,

As always, I look forward each month to receiving your publication. In fact, it was through the Hacker that I discovered Danlar Music's Monster Dan sequences. It was somewhat disappointing to read Rick Hall's review in the November issue, since I have been delighted with the more than 50 sequences and drum material I've purchased from Danlar. It seems that Rick missed the point a bit. The majority of his article (the first two thirds) was mostly critical of the concept of delivering Dan Bergstroms' original sequence material into the hands of the masses or the use of top 40 cover tunes in a stage performance environment. When he did finally focus on the real issue at hand, the quality of the sequences, Rick was right on the money. It never crossed my mind that a working musician would really need to pre-program the music sets based on the use of ESQ patch and sequence data downloaded in a live stage environment. Rather, a better use for the material would be as a rehearsal tool when the other members of the band may not be available. Or a composition tool for those of us who might wish to modify parts of the sequence material to inspire original compositions that have the "flavor" of a contemporary commercial sound. My business (radio and television advertising) has a constant need to supply clients with presentation material with a "contemporary accent" but, unfortunately, I don't always have the money or the time to pull musicians into the studio for a speculation demo to present to the client. It is in this particular application that the services of Danlar Music have been invaluable. I hope that those reading the Hacker understand the impact the Ensoniq products have had on other aspects of the music industry besides live performance, and aren't discouraged from creating their own original sequences.

Frank Kelly
Spot Productions
San Jose, CA

[TH - When introducing a product that also introduces a new concept, the various new aspects of the concept and its validity are also certainly subject to examination.]

Dear Hacker,

In Rick Hall's review of the Monster Dan sequences (p. 11, #29) he makes what I think is a rather judgmental supposition, namely that Monster Dan is using the sequencer to get his music out "to the people." Hall knocks this and suggests that "obtaining a record contract would be, shall we say, a more realistic alternative." Rick, if you can think for Monster Dan, I suppose I can, too. And I would guess that he's not using Mirages and ESQ-1's to replace the concept of a record contract at all. Let's face it, many Mirages and ESQ-1's end up in recording studios or in the hands of people who use them commercially to make - well, commercials. I would guess that Monster Dan's ulterior motive would be that some of his music would find its way to a sharp-eared producer or production house via his sequences and THAT would get him a lot more attention than trying to get a record contract. And, by the way, having released five albums as well as having considerable experience - first and second hand - with the record business, I can assure Rick Hall that: 1) record contracts are not that easy to get, despite evidence to the contrary and 2) even though more people buy records than sequences, your chances of having an album reach thousands - let alone millions - of listeners is less than remote in many cases. Let's leave the editorializing out of the reviews and just supply the facts: does the product do what it's supposed to? How well? What are its drawbacks?

Yours,
C.W. Vrtacek
New Milford, CT

[TH - Gee, if we didn't let them editorialize in a review, then where could they?]

Dear Hacker,

I've been told that it is possible to save an ESQ-1 dump plus the Mirage sounds all in the SAME upper and lower spaces on disk. Is this possible to do without overwriting data? Can ESQ-1 dumps and Mirage sounds co-exist in the same upper and lower keyboard spaces on disk? Any suggestions for efficient storage?

I am very happy with the 2.3 update on the ESQ-1. This is the kind of stuff which makes me a satisfied customer.

A note to quality control. I was at a music store where the ESQ- 1 cartridge slot got heavy use. It broke and fell through. This is understandable. My question is, will it be fixable? Is it cheaply made and nonrepairable? I was embarrassed to see it break so easily.

J.W. Adams
Elmhurst, IL

[Ensoniq's response - It is possible for ESQ-1 sequencer data and Mirage sound data to co-exist on a Mirage disk, but doing so successfully requires a bit of trial and error and depends on both the amount of sequencer data being transferred and the location of wavesamples in memory. Some sequencer dumps, for example, may cause you to loose your lower Mirage sound data. Others may appear to leave the Mirage sound intact.

The ESQ-1 cartridge slot is designed to withstand a considerable amount of abuse, but in the event that it does break, it can be easily fixed by an Authorized Service Center.]

Dear TH -

Suggestions:

New operating systems for performance and data manipulation (MASOS), to hopefully include:

1. Keyboard tracking for parameter 33 (detune)- low notes need for less chorusing!

2. A chart that relates the various filter and amplitude parameters (i.e. lowering filter keyboard tracking from 4 to 2 means a certain change needs to be made in either [36], [41+43], or [46+48], not to mention [47]. I have always run short on time trying to standardize these relationships - beyond starting from scratch with my most successful values, and tweaking them from there. Also, what is the maximum amplitude output - it seems like a level is where increases in [51, 53] or [56, 58] have no effect. Is there an Ensoniq sample that can be used as an optimum reference? It doesn't seem as though distortion is produced by going beyond the point of no control, but I have always tried to balance my sample levels (with the exception of the grand piano sample, which seems to lose its feel if amplitude values are raised - I can't get a good balance between velocity and its constant parameters).

3. Is it at all possible to allow the passive oscillator to retain active relative parameters? Mix mode is so often not possible due to tuning differences (likewise the add function, which is probably more involved). Mix mode should not default most of the oscillator 2 relative parameters!

4. How about allowing a topkey value of zero for lower samples?! It's often a drag to waste that low C when using full keyboard upper samples.

5. Is a short-term battery back-up for on-board memory reasonable?

6. Portamento is always nice...

7. How about MIDI volume control? Come on...

Ahh, I feel better now. I'll stick this in the mail before I rewrite the whole thing. Keep on hacking!!!

Pete Wacker
Phoenix, AZ

[Ensoniq's response - Thank you for all your suggestions regarding upgraded operating systems. While we currently are unable to dedicate our engineering resources to such projects, there may be many third party developers who have already implemented many of these features. We obviously encourage this third party interest in our products as it can only serve to enhance the value of our equipment.]

Transoniq Hacker,

In the Transoniq Hacker (6/87 p.24, and 9/87 p.13) it said ESQ-1 filters should be tuned (Press: "Record" and "Filter") after re-initializing, presumably before voice data is entered. Why are filter tuning readings different for each voice patch location after the voices have been entered? Should this be?

Regarding the Analog Test Page (press: "Record" and "Compare"), what is the effect of pressing the "Read" button, which changes all the readings each time "read" is pushed? If the "read" button is pushed too often, will something be out of order internally, since it changes some of the readings, although the ESQ-1 still sounds the same?

Finally, is there a way to transfer a track from one existing sequence to an empty track in another existing sequence?

Gerald Jaeger
Washington, Mo

[Ensoniq's response - The ESQ-1 has eight filters, one for each voice. They are tuned at the factory and don't need to be bothered with unless you have re-initialized the unit. The filter tuning procedure lets the software test the filters one at at time and then sets the Cutoff Frequency for each one so that they will all behave the same. Again, the eight readings are for the eight filters and have nothing to do with ESQ-1 patches.

Pressing READ on the Analog Test Page simply reads the values of analog inputs at any given point in time. Because this function is merely reading values, there is no way for you to adjust or manipulate these settings. See letter #11 for further information about the Analog Test Page.

Finally, there is no way to transfer a track from one existing sequence to an empty track in another existing sequence.]

Dear Transoniq Hacker

I am just getting started with a Mirage and I want to sample organ sounds in the churches where I play. What kind of microphone should I use? How many samples should I take up and down the keyboard for each timbre? How close to the pipes should the samples be taken? Is there any difference in methods for getting samples of low pitched pipes rather than high pitched ones? What are considerations for taking samples with a tape recorder rather than directly with the sampler in the churches? And finally, would organ pipe sounds be relatively easy to loop? I have the Vision VES. One more, are there geographic area groups of sample takers to interact with?

Sincerely,
Jim VerLee
1205 Vinsetta
Royal Oak, Michigan

[Ensoniq's response - Unfortunately, you have chosen a particularly difficult instrument to use for your first sampling project. A church organ is a rather complex sound that requires multi-sampling, is difficult to loop and is a healthy consumer of memory. With that in mind, here are a couple of tips to get you started:

1. Place the microphone near where the organist actually sits so that you can capture the sound as the organist actually hears it.

2. Record one note at a time onto tape and then sample from the tape.

Good luck!]

Dear Hacker,

I would like to respond to Mary Ann Harbar's inquiry in Interface, Issue #30 on how to move wavesamples in the Mirage. M.U.G.'s Mirage Basic Instructions Video, Volume 1 has an excellent section and example on how to move wavesamples. It is $29.95 for non-members and $19.95 for M.U.G. members.

In response to Pete Wacker's comment "Are you listening, M.U.G.?" about companies having demo cassettes of sound libraries and prices of disks. M.U.G. has a 90 minute demo cassette of our library for $10. We have another demo cassette, Vol. 2, coming out in January. I, personally, sent Pete a free demo cassette. Our disks are $12 each for members. Each bank is chosen and are custom made to make a complete disk. We also sell disks in collections at a substantial discount. M.U.G. is listening!!

Sincerely,
Gordon G.G. Gebert
M.U.G.
G-4 Productions
Yonkers, NY

For **IBM-PC** and **ESQ-1** owners...

ESQLIB
Librarian for ESQ-1

* Load and save ALL-SEQUENCES, SEQUENCES BANKS and PROGRAMS.
* Edit BANKS and SETS.
* Performance-oriented SET loader.
* Easy menu-driven operation.
* Requires DOS 3.0 or higher and MPU-401 MIDI interface.

Send $69.00 *check or money order to:*
S.N.Musser 619 N. Park St, Allentown, PA, 18102
(215) 432-3292 24 hrs.

TRANSONIQ HACKER

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

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

SUBSCRIPTION MATERIAL

FORWARDING AND RETURN POSTAGE GUARANTEED

DATED MATERIAL - TIME VALUE

Publisher: Eric Geislinger
Editor: Jane Tallsman

Our (somewhat regular) illustrious bevy of writers includes: Chris Barth, Richard Boulanger, Dave Caruso, Larry Church, Walter Daniel, Steven Fox, Rick Hall, Erick Hallstone, Jim Johnson, Duane King, Dick Lord, Sam Mims, Joseph Palmer, Clark Salisbury, Jordan Scott, and Don Slepian.

Copyright 1987, Transoniq Hacker, 1402 SW Upland Drive, Portland, OR 97221. (503) 227-6848 (8 a.m. to 9 p.m. Pacific Time).

Printed in the United States.

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

Subscriptions: 12 monthly issues. US: $20/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 affilated 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.

How would you like a Remote Control for your ESQ-1?

C&M Research Group Presents: **Remote Control: ESQ-1**

Features:

- Transmit and receive banks
- On-screen editing of any patch
- Up to 26 banks in memory at once
- Built-in help
- Easy to use macroing system
- **FAST!**
- **NOT COPY PROTECTED!**
- $89.95 suggested retail
- Mouse support
- Works with SQ-80
- Print any bank or patch
- Sequence support
- Available on 5.25" & 3.5" disks
- One key commands

Requires:

- MPU-401 (or compatible)
- IBM PC/XT/AT (or compatible)
- 256k of RAM
- At least one disk drive

For more information contact:

C&M Research Group
302 Ridgehaven Place
San Antonio, Texas 78209
(512) 826-0721 [voice]
(512) 826-0659 [data]

ESQ-1 is a registered trademark of Ensoniq Corporation. IBM is a registered trademark of International Business Corporation. ***DEALER INQUIRIES INVITED.***