



TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

The Ensoniq Performance - Synthesizer?!?

by Craig Anderton

And you thought that EPS stood for Ensoniq Performance Sampler! Well, sample it does--but the EPS is also a great synthesizer. Let me explain.

Some of you may recall an article I wrote in the May '86 issue of *Electronic Musician* entitled "Sampanalog Synthesis." This explained how sampling analog synths could give the synth qualities it never had before--for example, you could sample a Casio CZ-101 into a sampler and play *real-size* keys with velocity, splits, and layers (assuming, of course, that the sampler could do velocity, splits, and layers; most can). Since writing that article, I've continued to refine the process of sampling older instruments; now with the arrival of the EPS--which is incredibly well-suited to this technique--I'm spending most of my EPS time sampling synthesizers. In the process, I've discovered a bunch of tips on how to optimize synth samples. Here are four of the most important ones:

1. Work carefully with the EPS envelopes and filter to economize on memory. In theory, sampling synths is easier than sampling acoustic instruments, but this is true only if you're easily satisfied and don't care about packing lots of sounds on a disk. By using a combination of EPS and synth patch tweaking (and being very patient), it's often possible to stuff lots of synth sounds (20 or more) on a sound disk. For example, sampling a chorused synth patch will generally eat up a lot of memory since you need to sample at least one period of the chorus rate; as an alternative, use the EPS layering capabilities to copy the sample to another layer, then detune the second layer a bit.

A synth's filter is often the single most important element in creating a distinctive sound. Unfortunately, sampling an entire filter sweep can eat up memory pretty fast. Whenever possible, sample an unfiltered waveform, and use the EPS filters to modify the timbre of the sound. Although the lack of a resonance control on the EPS is irksome, for many sampling situations resonance is not necessary, so you can simply leave the synth's filter envelope on full sustain (which makes looping easier anyway) and use the EPS filter to modify the timbre.

Regarding envelopes, as with filters there's no point in wasting memory on sampling a decaying sound when you can set the synth's VCA envelope sustain on full (again, this simplifies looping), and use the EPS amplitude envelope to do your shaping.

2. Multi-sampling may not be necessary. If you record at a very high sample rate (at least 44 kHz) and sample a sound within an octave or so above middle C on the keyboard, that may be the only sample you need--especially if you use the EPS filters to control timbre. The ability of the EPS to interpolate samples when transposing down means you can get away with huge downward transpositions, but still, try to record with a lot of high frequencies so that the lower part of the keyboard sounds reasonably bright. This may create an excessively bright high end, though. To compensate, use the EPS filter tracking option to tame the upper reaches of the keyboard.

3. Use the EPS envelope hold feature when necessary. Like Emax, the EPS can be programmed for an envelope hold function where the envelope stays at a consistent level for a specified period of time. This is very useful when sampling percussive sounds from FM synths, since much of the action in an FM sound happens during the first couple hundred milliseconds, and this is an effect that cannot be faked by using the EPS filters/VCA's. To sample these sounds, keep the FM synth's attack (or initial decay) as is, and set the synth's envelopes to sustain as soon as the attack/initial decay component is complete. On the EPS, sample the attack/initial decay, and loop when the

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sustain kicks in. Now set your EPS amplitude envelope parameters so that the amplitude remains constant during the initial attack, then decays once the loop kicks in. The only limitation here is that if you're stretching one sample across the keyboard, the attack time of the sample will vary from the low to the high end. Generally, though, I've had no trouble finding a compromise setting on the EPS amplitude VCA that works across the whole keyboard. This usually involves accepting an attack that's a little shorter than desired at the low end, and at the high end, letting a bit of the loop through before the decay kicks in.

4. Make good use of layering. So you bought an EPS and don't have any money left over to buy a D-50. Well, there is hope! Use the layering capability to sample "real" instruments into one layer, synthesized sustains into another layer, and use the EPS amplitude envelopes to crossfade between the two. I used this approach to create a string patch that was fantastic, and only took up a couple hundred blocks. (The sustain loop, by the way, was a nice rich OB-8 string pad that worked in a very complementary fashion.)

And now, a few words of caution. In Issue 35 of the *Hacker*, Ensoniq stated that producing factory disks of synth samples was a low priority because sampling synths doesn't require as much effort as sampling acoustic instruments. Certainly, the setup time and techniques required to sample acoustic instruments are well beyond the means of the average musician, so in that respect, I'm very glad Ensoniq is concentrating on sampling acoustic instruments. But while sampling synths may not present the same logistic problems as sampling, say, a string section, it can still be a very tedious and time-consuming proposition. First, you have to come up with a patch worth sampling (with very few exceptions, I prefer not to sample factory patches). Next, you have to tweak the synth patch so that it can be easily sampled, and use up a minimal amount of memory. This usually requires resetting all the filter and envelope parameters, as well as turning off

chorusing, LFO effects, and other features that can be added in the EPS. Finally, you have to tweak--and tweak--and tweak--the EPS parameters to whip the sampled sound into shape and duplicate the original synth functions, especially since you'll probably want to take full advantage of the poly aftertouch and velocity sensitivity. I guess what I'm trying to say is that while sampling a synth can be simple, if you want to maximize use of memory and have a sound that plays expressively, it takes as much time--and sometimes more--than sampling acoustic instruments. I've found Blank Software's *Alchemy* (a very imaginative and artistic program, by the way) to be tremendously helpful, not so much during the initial part of working with the sound, but for the final polish that turns a sound from "okay" to "wow." I highly recommend this program if you have a Mac and an EPS. It is extremely well suited to working with synth samples.

Oh yes, one more thing. Another advantage of sampling synths is that many older synths are not multi-timbral. Since synth samples can be very memory-efficient, it's possible to load eight of 'em into the EPS, and sequence eight rich-sounding OB-8 parts with velocity, poly aftertouch, and all the other neat kinds of effects that the EPS offers. Are we having fun yet? You bet!



BIO: Craig Anderton is the editor-in-chief of Electronic Musician magazine. He plays with the group Transmitter, produces/mixes albums, and has written several books and hundreds of articles on musical electronics. His latest book, "The Electronic Musician's Dictionary," is slated for release in early June. His series of Classic Synth Disks for the EPS will be available commercially in the near future.

WARNING: Use of the Sonus SQ-80/ESQ DESIGN may result in GREAT SOUNDS and HUGE time savings.

If you've already tried to edit the ENSONIQ SQ-80, ESQ-1 or ESQ-M, you've already realized the wealth of parameters and depth of their settings. HOWEVER, you've also realized how impractical and time consuming it is to edit these synthesizers on their own--You need an editor/librarian package.

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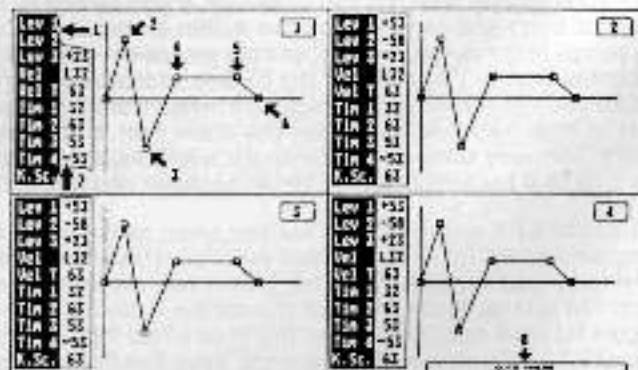
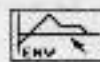
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Ensoniq SQ-80, ESQ-1 or ESQ-M synthesizer



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Front Panel

RND (♫♫♫)

In case you passed over **Craig Anderton's** bio info following his cover article, Craig is presently hacking away creating killer samples for the EPS - primarily analog and digital synth sounds. We expect to see and hear a lot more from Craig and his EPS.

VIDEO INDUSTRY ADOPTS EPS! Well, actually what has happened is they've instituted a new rating system for video tape content and one of the new ratings is EPS - "Explicitly Sexual." Make of this what you will.

We're presently in the market for some **SQ-80 patch reviewers**. If you're intested, please give us a call. We're also looking for more patches for **Hackerpatch** - ESQ-1 or SQ-80. Instant fame & fortune - send 'em in!

Non-U.S. subscribers managed to avoid the recent increase in subscription rates because we use a private "overseas mailing service" which avoided the recent rate increase by the Postal Monopoly. One of the little side effects - we're now using this same service for our **Canadian subscriptions**. Canadian subscription rates will also stay the same as before but subscribers will be getting their issues about five days later because they go by way of England. (!)

Leaping Lizards has asked us to pass on the following: "YIKES!! An imposter!! Leaping Lizards has just discovered another Leaping Lizards in Seattle - a sportswear company. If you've called directory assistance you will have gotten THEIR number. The number you want for Leaping Lizards, the SOFTWARE company is 1-800-367-0333. (Which is what you get if you call TOLL-FREE directory assistance.) Outside the US, call 206-527-3431"

The MIDI Connection has announced a price increase for their **MIDICASTER** (reviewed here last month). Orders received before June 15 can still get one for \$39.95. After that, it's going to be \$49.95.

Ensoniq has announced that their 8-out expander, the **OEX-8**, will be available in early June. List price is \$249.95. The OEX-8 provides the EPS with eight additional solo outputs for a total of 10. Each output is 20-voice polyphonic. Which brings us to...

Information and Precautions Regarding The EPS Output Expander Connector

The 9-pin Output Expander connector on the rear panel of the EPS should only be used to connect to the OEX-8 Output Expander. This connector does not simply supply audio outputs and signal ground, it cannot be used to generate separate outputs without the OEX-8.

The EPS generates a multiplexed audio waveform which must be distributed and filtered externally. The signals present on this connector include differential multiplexed audio, de-multiplexing control signals and +/- 12 volts DC. Improper connections to these signals could easily damage the EPS or any external device being connected (for example: mixing boards, speakers, etc.)

Ensoniq has a special deal going whereby previous owners of Ensoniq gear (that's you) can get an **ANVIL** case (\$250 list price) for only \$95 when they buy an EPS or an SQ-80. This offer was going to expire April 30 but it has just been extended to Sept. 30. Call Ensoniq for details (1-800-553-5151).

Don't forget to mention to your favorite music store that they should contact us regarding **newsstand sales**. We've heard back from some of the brave souls who have risked their all to carry our little rag - and they're pleasantly surprised! Sales are brisk, orders are increasing.

TRANSONIQ-NET HELP WITH QUESTIONS

MIRAGE 24-HOUR HOTLINE - M.U.G., 914-963-1788.

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

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

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

MIRAGE HARDWARE & FIRMWARE - Scott D. Willingham, Pacific Time (CA). Weekdays: 8-9 p.m., Weekends: 12-9 p.m. (213) 397-4812.

MIRAGE OPERATING SYSTEM - Mark Cecys, Eastern Time (NY). Days. (716) 779-4065.

MASOS - Pete Wacker, Whenever. (802) 937-1177.

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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!)

BACK ISSUES

Back issues are \$2.50 each. (Overseas: \$3 each.) Issues 1-9, 11, 13-19, 21, 22, and 27 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.

HYPERSONIQ

NEW PRODUCT RELEASES

SOUND LOGIC of San Diego has introduced a fundamental voice system for the ESQ-1/ESQ-M and SQ-80. The 120 unique voices cover a complete spectrum of musical instruments and basic sounds. All voices have been designed to make full use of stereo capabilities with extensive utilization of the Ensoniq CV (control voltage) pedal. Program sheets and performance notes show how each voice was designed and how it can be played. The voice systems are available on Mirage disk or cassette for \$39.95 each. Shipping is free within the U.S. and phone support is provided. For complete information or to order, write: **SOUND LOGIC**, 1125 Eleventh St., Ramona, CA 92065.

The people at **FRED'S MUSIC SHOP** in Shillington, PA, have released their "SOUNDBANK" voice disk for the SQ-80. The disk contains over 1000 totally new voices arranged in master instrument banks for the low price of \$39.95. These voices all use the poly pressure and many are compatible with the ESQ-1. For further info or to order: **Fred's Music Shop**, 212 W. Lancaster Ave., Shillington, PA 19607. Phone: 215-777-FRED (3733).

SOUNSCAPE PRODUCTIONS of Stanford, Calif. has developed the *Just Intonation Calculator* for the Macintosh. The calculator is a shareware Hypercard stack designed to

take the tedium out of composing in just intonation as well as provide a learning tool for those curious about the mathematics of just tuning systems. It performs a wide range of calculations based on ratios, as well as exponential and logarithmic conversions, and provides four-voice sound output from the Mac for instant evaluation of ratios. Price: \$10. **Soundscape Productions**, PO Box 8891, Stanford, CA 94309.

ELTEKON PRODUCTIONS is introducing new sounds for the SQ-80 in both book and cartridge form. The book, *The SQ-80 Book of Patches*, contains 320 patches in data sheet form and includes an audio tape so you can preview the sound before entering the patch. \$15.95. The same sounds can also be found on *The Platinum Cartridge* for \$64.95 or on disk for \$39.95. An additional 640 sounds, designed for the ESQ-1, are included in *The SQ-80 Journal*, 960 sounds for \$39.95. These additional 640 ESQ-1 sounds are also available on *The Gold Cartridge* for \$99.95.

SUBSCRIPTION INFORMATION

12 MONTHLY ISSUES

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

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KORG • DDD-1, DDD-5, DS-8, EX-800, DW-8000, & more
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ENSONIQ • ESQ-1, ESQ-m

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De Rio Productions ESQ80 Patches

Reviewed by Chris Barth

For: ESQ, SQ-80
Product: Songwriters Series 1
Price: \$24.95, demo tape \$5.
From: De Rio Productions, 26 Bradfield Ave., Toronto, Ontario,
M8Z-2A3 Canada

For a while in the Classifieds section of the Hacker, we saw advertisements for the ESQ Monthly Soundbank Club from De Rio Productions. The rigors of producing quality output each and every month have forced an abandonment of the original concept, which has been replaced by a more traditional offering of patches for the ESQ and the SQ-80. This month we're auditioning 160 ESQ patches offered as the Songwriter Series. These ESQ patches should be playable on the SQ-80, although SQ-80 patches may not be suitable for the ESQ.

I experienced difficulty in loading the patches into my ESQ from the data cassette. The instructions refer to "stereo loading" of the data, and this was a new concept to me. A quick phone call revealed that the "stereo" is just the recording of mono data on both the left and right tracks of the data cassette. Although it's not mentioned in the instructions, the idea was to use a Y connector to combine the stereo outputs of the tape deck into the mono tape input of the ESQ. I couldn't load any patches at all unless I used the Y connector. The real problem is that the data is not recorded at a sufficiently high level on the tape. I used a patch bay to route the tape deck output into the MIC inputs of my mixer, and after applying gain to the signal, I sent the amplified output into the ESQ. I had no difficulty in loading the patches after increasing the level of the incoming signal this way.

The 160 patches are loaded in four groups of 40 patches. There are no notes regarding split-layer assignments, so if you audition the groups one at a time in the ESQ internal memory, the assignments are wrong. It would really help if these assignments and some performance notes were included with the patches.

There are some very good sounds in this collection, with enough genuine treasures to inspire this reviewer to keep his ESQ. There are a lot of different approaches and different things going on; enough that for \$25, this set is a very good buy. But be forewarned: the programming varies in quality, with some odd or questionable results. For instance, some of the modulation wheel effects just don't seem right; the sounds in some cases are only suitable at one wheel setting; in other cases, any wheel setting at all produces garbage. The stereo panning is often overdone. If you know how to edit the more common parameters (pan and wheel settings, LFO assignments, etc.) you'll find lots of usable sounds, more than enough to justify the modest investment. If you buy a blank RAM cartridge (the Voice Crystal is the sturdiest I've seen), you should have no trouble filling it up with Songwriter sounds.

Having written the above, I now turn to my own RAM cartridge to see what I've actually added to my collection after two months of listening to these patches.

The percussion sounds are very good. I particularly like the snares and kick drums. My drummer friend tells me the snares are "loose", while the kick drums are "tight". There is a Simmons atomic tom patch along with a more traditional tom sound; the latter is unique in that the most useful range of the

patch is in the top two octaves of the keyboard. The tom patches are the only decent ones I've heard besides the ones offered by the Music Bank, which are still the best if you're picky about your tom patches. There is a closed hi-hat but no cymbal.

GRANDS is a great piano patch, but here's an example of some questionable programming. The wheel is used to simulate chorusing, but the wheel depth is set at 11. A few of the other pianos had the same treatment. I couldn't find any wheel setting where the sound was usable. I then changed the wheel depth to 1 instead of 11, and presto! This is now one of my favorite piano patches. Many of the Songwriter patches are just one or two edits away from really powerhouse sounds; again, if you know what you're doing, a little tweaking can really improve the value of this set. There are lots of acoustic and electric pianos, with RHODES a standout.

The bass sounds include an acoustic string bass which is really hits the mark. It's similar to the one on the first Ensoniq cartridge. WIZBAS, WOOBAS, and PLUCK2 are fresh bass sounds featuring sine/noise combinations.

The clarinet suffers from the lack of a Formant 3 waveform (the secret to Jim Johnson's masterpiece clarinet) but SAX and SAXFON are welcome additions to my patch collection. The reed waveforms have produced generally poor imitation sax sounds, but these two patches prove it can be done. The saxes are more rock and roll/motown than jazz. The brass patches are mostly pulse waveforms with a very buzzy sound which is a little too noisy and messy for my tastes. On the other hand, WINDFL is dynamite: a heavy square wave flute with enough noise mixed in to give it a very breathy flavor.

The award for "best ESQ oriental patch" goes to CHINA. I played this for a few non-musicians and each one instantly said "China" or "Japan". I'm amazed how effectively this one patch can evoke the whole oriental mystique. I hear it as a more mellow koto/harp sound than the usual Far East style patches. Definitely a winner here.

There are lots of space, new age and electronic sounds, which make up about half the package with varying degrees of success. I especially liked DREAMS and WINDOW, but some of the other sounds are filler or of questionable value. I will say that there is very little duplication here so you should be able to find something in this assortment to add to your collection. In total, I felt that forty or fifty of the patches were worth keeping, and half of that bunch were outstanding. Not bad for the price!

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. Working hours are spent pension consulting for a firm whose clients include several famous jazz musicians. Chris knows the words and music to all the songs recorded by Paul Revere and the Raiders. ■

Easy Patch Changing With The Mirage

By Steven Fox

In my small studio at home I use the Steinberg PRO-16 sequencer in my computer hooked up to a Yamaha TX81Z, an Alesis HR-16, a Midiverb, and a Mirage keyboard. Until recently I had a DX-7 which I used as my controller keyboard. Having finally gotten rid of the thing (it seems you can't even GIVE the old DX-7's away these days) I am now using my Mirage running O.S. 3.2 as my controller keyboard.

A new problem recently arose when I found I needed to send some patch changes from the sequencer to my other gear during a song. One of the drawbacks of my sequencer is that it doesn't allow me to directly type in MIDI data such as patch changes or control changes. When I was still using my DX-7 I simply would have pressed the appropriate patch button on the front panel while recording the track and that would work fine. Now working with the Mirage I discovered that I had a serious problem.

Having a look through the Mirage manual I found that transmitting patch changes is not at all simple, in fact it is quite frustrating. For example, let's say I want to transmit patch change 8. First I look up the correct procedure from the chart in the Mirage manual. Then I enter on the Mirage keypad: "LOAD UPPER", "LOAD LOWER", "2", "3", "ENTER". Since this causes the Mirage to load some new sounds off the disk I now will need to reload the sounds I originally had in memory!

Another example, let's say I want to transmit patch change 30. Again I look it up in the chart, and I enter "0/PROG" (either once or twice so that Lower memory is selected), then "2". Fine, but if the UPPER/LOWER LINK (parameter 25) was set to "ON" I will have instead just transmitted patch change 14!

Soon frustrated by this situation, I sat down with my Mirage monitor program and wrote a small software modification for the Mirage which makes it much easier to transmit patch changes. Now the Mirage will transmit any patch change from 1 to 128, and it will do so without having any effect on the current sounds in the Mirage.

After following the instructions below about entering the code into your Mirage, simply boot up with the modified operating system whenever you will need to send patch changes.

You will notice that the operating system will work the same as before except that sampling has been removed. The SAMPLE LOWER button is disabled but the SAMPLE UPPER button has a new function. When you press SAMPLE UPPER the Mirage display will show "PC". The next three buttons you press will transmit the appropriate patch change.

For example, to transmit patch change 58 press "SAMPLE UPPER", "0", "5", "8". To transmit patch change 122 press "SAMPLE UPPER", "1", "2", "2". To transmit patch change 7 press "SAMPLE UPPER", "0", "0", "7". You WON'T see the numbers you press echoed on the LED display. In each case as soon as you press the last digit the patch change will be transmitted.

Be sure to add zeros to the beginning of a number if it is less than 100, for instance '20' will become '020', '5' will become '005', etc. Entering any out of range values (greater than 128) or non-number keys will abort the patch change function.

This simple software modification has certainly made changing patches a lot less bother. It's too bad though that I'll only be using my Mirage as a controller keyboard for only a short while longer. I'm one of the thousands on the EPS waiting list at my

local music store. I like the feel of the EPS's keyboard, and as soon as I have it I'll be using it to take full advantage of its aftertouch.

How to enter the code using *Leaping Lizards'* Mirage Monitor V1.0:

With the monitor program running insert a disk with an unmodified version of Ensoniq's O.S. 3.2. Enter "N" on the Commodore to load it into the Mirage. Enter the lines exactly as they are listed below. When finished, enter "S" to save the modified operating system to the same disk.

How to enter the code using *Upward Concepts* Monitor Disk:

With the monitor program running insert a disk with an unmodified version of Ensoniq's O.S. 3.2. Press "N" to load it into the Mirage. Enter the hex bytes one at a time using the "M" command. When finished enter the following to save the code to disk:

```
X 8000 8400 1000
W 00 00 Y
```

```
X 8011 8411 1000
W 0B 05 Y
```

```
X 9000 9400 1000
W 00 04 Y
```

```
X 9400 9600 1000
W 00 05 Y
```

```
X 9E00 A200 1000
W 01 02 Y
```

THE CODE:

```
:8017 00 00 00 00 00 01 01 01
:90E9 7E 94 9E 12 12 12 12 12
:949B 7E 95 2D 96 17 26 2C 96
:94A3 AE 81 12 27 0A 81 0A 10
:94AB 24 FC 45 BD 92 58 39 CC
:94B3 CE 9C DD B3 BD 9D 4B 8D
:94BB 20 97 18 86 01 97 17 39
:94C3 12 8D 1D 97 19 86 02 97
:94CB 17 39 12 44 27 F3 8D 22
:94D3 97 1A 0F 17 20 40 12 12
:94DB 12 96 AE 81 01 22 31 39
:94E3 96 18 27 07 96 AE 81 02
:94EB 22 26 39 96 AE 81 09 22
:94F3 1F 39 96 18 27 0D 96 19
:94FB 81 02 26 EF 96 AE 81 08
:9503 22 0E 39 96 19 26 E4 96
:950B AE 27 05 81 09 22 01 39
:9513 0F 17 32 62 20 8F 96 19
:951B C6 0A 3D DB 1A 96 16 27
:9523 02 CB 64 5A 7E A0 FE 12
:952B 12 12 96 AE 81 14 10 25
:A03C 00 00 00 00 00 09 09 09
```

BIO: Steven Fox is 23, programs software as a hobby, and sells it to make a living. He is currently looking for a proper job (anywhere in the world except Seattle) either in the recording industry or as a programmer. Any offers??? ■



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Transcribing ESQ-1 and SQ-80 Sequences

by Jim Johnson

One question that continually pops up in the Interface section of the Hacker concerns the transcription of ESQ-1 sequences to standard musical notation. For studio musicians who want a permanent record of their work, or for composers who want to transcribe their synth horn lines so that human trumpeters can breathe life into the part, a program that could perform this task would be worth its weight in gold. On this score, I've got bad news, good news, and even better news.

The bad news is that there are currently no programs available that will directly convert ESQ sequences to standard notation. The reason for this is simple: Ensoniq has not released the information that describes how the ESQ-1 stores sequence data. Without this information, it is awfully difficult (nearly impossible, in fact) to convert ESQ sequences to notated music. Fortunately, this situation will be changing soon (I'll have details at the end of the article), but if you have to transcribe a part today, you're out of luck.

Or are you? While it's impossible to directly transcribe sequences from the ESQ, it is possible to do this in a sort of roundabout fashion, using any commercial sequencer package that has a compatible scoring program. There are a number of such programs available for just about every 16 bit music computer on the market, some of which are ridiculously expensive, and some of which are more reasonable. For Atari ST owners, an entry level sequencing/transcription package can be created using two programs from Dr.T's Music Software, for less than \$150! Dr.T's MIDI Recording Studio is an eight-track sequencer that sells for \$49.95, and the Doctor's scoring program, the Copyist, is now available in a beginner's version for \$99. In this article, I'll discuss the process of transferring the ESQ's sequences to the MIDI Recording Studio (MRS for short) and then transcribing them with the Copyist. Note that the techniques discussed here should hold for any sequencer/transcription program combination on any computer, though of course specific details may vary; the reason I chose the Doctor's products for this article is simply because that's what I'm most familiar with.

Transcribing a part with the MRS and the Copyist is a two step process. First, the ESQ-1 sequence or song is transferred to the MRS via MIDI, and then the resulting MRS sequence file is "imported" to the Copyist. Transferring the sequence to the MRS may be a bit mysterious to some, but it's really quite simple. Essentially, all you do is play the ESQ-1's sequencer into the MRS. First, connect the output of the ESQ to the ST's MIDI in, and set the MRS to synchronize to an external MIDI clock. On the ESQ, set the clock source to INTERNAL, and set looping OFF. Since the MRS can not split multi-channel recordings into separate tracks, as many sequencers can, you'll need to record each track on the ESQ separately. Set the Track Status for track 1 on the ESQ to BOTH, and set all other tracks to LOCAL. (You should also set each track to a separate MIDI channel, if you haven't already done so.) Now simply press PLAY on the ESQ, and the recording process will begin. Repeat the process for all eight tracks, and you'll be done with the first step.

Once you've got the tracks in the MRS, it may be necessary to do some editing of the sequence before moving on to the Copyist. In particular, drum parts will generally need to be heavily processed before they can be transcribed properly. The Copyist has a fixed drum-to-MIDI note number assignment, which is described in the manual; before your ESQ drum parts will make any sense to the Copyist, you'll need to re-assign

each drum hit to the corresponding "standard" assignment. Note that if you do tom rolls made up of 16 different drums, or if you use percussive noise voices across the entire keyboard, you may not be able to transcribe them properly with the Copyist (or any transcription program), simply because traditional music notation has no way to deal with such things. For normal instrumental voices, you probably won't need to do much editing other than occasional auto-correction. If you use a split patch on the ESQ to save tracks (for example, bass guitar in the left hand and trumpets in the right), you may want to split them to separate tracks in the MRS, so that they can be transcribed independently in the Copyist.

Once you've saved your MRS sequence file, it's time to boot the Copyist. When the main menu appears, select Convert, followed by Import, and then select the .ALL file (which is the file extension used by the MRS) that you saved your sequence in. The program will convert the .ALL file to a Copyist .STR file, which you can then read into a new score using the Copyist's "page read" command. All of this is covered in the Copyist's manual, so there's no point in going into it in detail here; but there are a number of restrictions that the Level I Copyist imposes on the final score that you will need to be careful of. (These restrictions don't apply to the pricier Level II and Level III versions of the program.) First and foremost, the Copyist Level I has a maximum score length of eight pages. If you're creating separate lead sheets for different instruments, this probably won't be a problem, since you can simply transcribe one instrument at a time. If you want to create a full score, the best thing to do is probably to save each individual ESQ sequence as a separate .ALL file, and transcribe the song section by section. Another point to watch for is that many instruments require transposed scores - on the trumpet, for instance, a C in the score is equivalent to B flat on the keyboard - and since Level I doesn't have a transpose feature, you'll need to transpose such parts within the MRS before transcribing. And finally, while the Copyist's dot-matrix output is far superior to any handwritten score, some folks will want to print their scores on a laser printer, which means you'll need one of the fancier versions of the program.

The following diagram shows the first four measures of a transcription of one of the demo songs included with the ESQ-1. This is a straight screen shot of the Copyist itself; the output from a dot matrix printer has roughly the same quality, and laser output is far superior.

If you've been holding your breath waiting for an ESQ transcription program, you can let it out now - the stuff you need to do the job is sitting on your music dealer's shelf. In fairness to other manufacturers, Hybrid Arts also has a pair of programs for the ST, called EZ-Tracks and EZ-Score, which can do roughly the same thing, and fall in about the same price range. For IBM owners, there is a version of the Copyist available that interfaces to Texture, Sequencer Plus, Mastertracks Pro, and Cakewalk, or if you're made of money, you could check out Passport's SCORE program. Mac users have already been inundated with hype about the many wonderful scoring programs available for that machine, so there's no need to repeat it here. An Amiga version of the Copyist is in the works; I don't know if the MRS is being ported to the Amiga, but Dr. T's KCS will perform the same functions, and a lot more, at a higher price. One side benefit of using a software sequencer to transcribe is that you can also use the program to do micro-editing on your ESQ sequences. Even if you swear by Ensoniq's sequencers, it's handy to be able to tweak the velocities of individual notes, or transpose single notes, or to double only the first note of each measure on a different channel, or any of the other things you can do with a good software sequencer.

For those who don't care to deal with another sequencer, there is good news from Ensoniq. As a result of the many requests that have arrived at the offices of the Hacker, Ensoniq is preparing their sequencer file formats for publication. At press time, Ensoniq still had not decided whether this information would be made available to one and all (possibly through the Hacker), or whether this would only be made available to legitimate developers. In either case, this is

the missing link needed to create all kinds of sequence processing programs for the ESQ-1 and SQ-80 - scoring programs, MIDI file conversion programs, ad infinitum. If this is what you crave, start holding your breath again - and, of course, keep your eyes on the Hacker for future developments.

[TH - Latest word from Jim is that Ensoniq will be releasing this information in the form of a 14-page document, but not through the Hacker and not to the general public. The document is being reviewed and will be available to selected developers. Interested parties should contact Ensoniq.]



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.

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A New Choir

by Don Slepian

I use a lot of voice sound in my music, often as a wash of sound that fades up and down like strings. One of my favorite Mirage sounds are the choirs which are found on factory disk #7. I've made a few adjustments to the samples which I'll describe step by step.

I've made several changes to the Mirage choirs. I've put Choir #3 on the lower half of the keyboard and Choir1/Choir2 on the top half. I've copied program variation #2, with its longer release time, onto program variation #1, so that it will be the way the sound appears when it is loaded. I've increased the overall amplitude and filter touch sensitivity to enhance accents, create the effective illusion of distant soft voices at low velocity values, and to bring out voice leading in contrapuntal passages.

The necessary ingredients are Ensoniq Sound Disk #7, a copy of MASOS, and a blank formatted "work" diskette. Boot up with MASOS and load the Choir samples.

First let's move the Choirs around so that the basses and tenors join Choir #3 and the altos and sopranos shift over to Choirs #1 and #2. Men to the left, Ladies to the right. Persuading them to do so in the Mirage involves swapping the contents of the two 64K Ram memory banks that make up the Mirage's Upper and Lower keyboard halves.

On page 26 of the Ensoniq Advanced Sampler's Guide is a description of MASOS Parameters 17 and 18 which are used to move sounds between the upper and lower keyboard halves. This is complicated by the necessity of discovering which wavesample or wavesamples out of a possible 8 per keyboard half (16 total) is producing the sound we wish to change or move. Many full-featured Visual Editing Systems make this very easy. The Mirage alone without a friendly external translating computer is often quite a bit more inscrutable. For help here we dive into Clark Salisbury's groundbreaking series, MASOS FOR THE MASSES, that ran in these pages back in the antiquity of 1986. Clark's method is to use Parameter 67, which changes the wavesample's pitch by octaves, as a very obvious audible change that can be used as a test of where we are in the Mirage's memory.

Select the Lower keyboard half program variation one (display reads L1). Select Parameter 67 and press the adjacent Value button (display reads 0.4). While holding down a key in the lower keyboard half, change the value of Parameter 67. Nothing happens! This means that we are not altering the wavesample that is producing the sound we are playing. Go to Wavesample Select Parameter 26. Its value should be 0.1, telling us that we are working with wavesample #1 on the lower keyboard half. Advance this parameter to value 0.2, go back to Parameter 67, and see if changing its value effects the sound. Still no effect. Fortunately, there are only eight possibilities on each keyboard half. Advance Parameter 26 to 0.3, and you will find Parameter 67 suddenly becomes very powerful, changing the pitch of the entire lower half by octaves. We have now determined through this test that the sound of the lower keyboard half is being produced entirely by lower wavesample #3.

Now that Parameter 26 is set to 0.3, the correct place in the Mirage's memory, we can now move that sound to the upper half of the keyboard. Select Parameter 18, Copy Current Wavesample to Upper. The display will read UC with the C flashing. Press button 1, and then press Enter. We have

moved lower wavesample #3 to upper wavesample #1, so that the sound of the lower keyboard half will now be repeated on the upper half. Take the blank formatted diskette and insert it into the Mirage's drive. Use Parameter 12 to save the upper keyboard half to the blank "work" diskette. Check the work diskette to make sure the save was successful.

Reload the Choruses back from Factory Disk #7. Now we are going to move Chorus #3 that occupies the top half of the keyboard down to the bottom half. First we need to find which wavesample is doing the singing. Select Upper program variation #1. Changing the value of Parameter 67 does effect the entire upper keyboard, so we are already in the right place, Upper Wavesample #1. Let's use MASOS Parameter 17 to move Upper Wavesample #1 to Lower Wavesample #4. Select Parameter 17, then press 4 and then Enter. The Upper Keyboard sound is now copied to the lower half. The pitch has shifted up a major third in the move, so let's now correct that. Select the Lower Half program variation #1. Change Parameter 26 to value 0.3, so we are at Lower Wavesample #3, and you will find by testing Parameter 67 that we are now in the right place in memory to make changes to the lower keyboard sound. Change the value of Parameter 67 from 0.4 to 0.3, dropping the pitch one octave. Select Parameter 68, Fine Tune, and change the value from 0.4 to 0.6, raising the pitch a minor 6th. Now the bottom keyboard half is in proper tune. Use Parameter 11 to save the bottom keyboard half to the same work diskette.

Load Upper and Lower halves from the work disk. All of this button pushing we've done so far has managed to switch the sounds from the factory diskette so that Choir #3 is on the bottom and Choirs #1 & #2 are on top. I find that the sample is already much more usable, but we aren't finished yet.

Since I find program variation #2 to be the most realistic and usable sound, let's copy that program over program variation #1 so that it will be preset when the sound is loaded. This procedure is shown on page 17 of the Mirage Musician's Manual. Select Upper program #2, and then Parameter 16/Copy Program To Upper. The display will read UC. Press 1, (U1 displayed) and then Enter (.16 displayed). Select Lower program #2, and then Parameter 15/Copy Program To Lower. The display will read LC. Press 1, (L1 displayed) and then Enter (.15 displayed). Select Upper and Lower programs #1, and check to see that they both have the longer release times copied from program variation #2. Use Parameter 13 to save this change to the work diskette.

Now it is time to modify the program to taste. On the upper program, I reduced amplitude Parameters 51 and 53 from 0.8 to 0.0, and increased amplitude Parameters 56 and 58 from 1.4 to 2.1. Parameter 36, the filter cutoff frequency, I reduced from 2.5 to 0.0, and I also reduced the wavesample relative filter cutoff Parameter 70 from 2.9 to 0.0. Filter Parameters 46 and 48 I increased from 0.2 to 1.2. All of these changes make this sound far more touch responsive, changing from a soft, very muted choir to a loud bright fortissimo at a finger's touch. I made similar changes on the lower half. First I used Parameter 67 to make sure Parameter 26 was set to the correct wavesample so that changes that are made would have some effect. I made the same amplitude changes, and I also brought filter Parameters #36 and #70 both down to zero. This makes the lower half too muted. I set Parameters 41 and 43 to 0.8 to set a filter setting for softest touch, and Parameters 46 and 48 to 0.8 to give a good velocity sensitive brightness. I found

myself liking the top notes of the lower half, so I extended the range of the lower half up a minor third by raising Parameter 72, Top Key, from 29 to 32.

All of these refinements make up a single program variation. With 4 variations per half there is a lot of room for experimentation. The touch sensitivity adjustments I've described may be too extreme for ensemble work. It all is a matter of taste. Learning how to alter and customize Mirage sound will greatly increase your enjoyment of the instrument.



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

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Mirage to EPS Sound Conversion: Simple, or What?

by Clark Salisbury

So you're one of the lucky few to actually have Ensoniq's brand new, shiny (well, not that shiny, I guess) EPS in your quaking little hands. By now you've probably taken it out of its beautiful mother-of-cardboard box, plugged it in, and checked out the sounds that it came with. If you have, you've probably run into the burning problem that the owner of any new sampling machine runs into within the first few minutes of owning that new machine. And that is, of course, "How do I get more sounds?" Or more precisely, "How do I get my hands on hundreds and hundreds of new sounds RIGHT NOW?!"

Glad you asked. You see, there aren't very many sounds for the EPS. At least not yet. Ensoniq, however, has embarked on a rather aggressive quest to develop new sounds for the new machine ASAP. So you should be seeing gobs of new EPS sounds within the next few months. So what do you do in the meantime, now that you've exhausted every possible musical application for the "Ice spinner" and "Pingz" disk that came with your EPS?

How about using some Mirage sounds? There are hundreds of Mirage sounds out there just waiting to be converted to the EPS format, arranged into presets, tweaked up for performance, and saved back to an EPS disk for future use. So where does one get all these great Mirage sounds? A good place to start looking might be the dealer where you purchased your EPS.

Now, I know that the "Musician's Manual" doesn't really give you a lot of advice about what to do with those Mirage sounds once they've been converted to the EPS format, so let's take a little time and try to figure out some of the ways that we can make those Mirage sounds work for the EPS.

Okay. To do this effectively, you'll need some Mirage sounds, so go get some. I'll still be here when you get back, so go get some right now. If you can, get the Upright Bass/Sax disk (Mirage Sound Disk #3, if I'm not mistaken), 'cause we'll be doing some work with that disk in a minute.

Back already? Good. Now the first thing we want to do is convert our new Mirage disks to EPS disks. This is the easy part. Simply press the "COMMAND" button on your EPS and use the LEFT/RIGHT arrow buttons to select the "LOAD MIRAGE - DSK SOUND" command. At this point you will need to make sure that you have an EPS Operating System disk inserted into your disk drive. If you don't, the EPS will happily remind you to put one in. Press "EPS". At this point you'll have a choice as to which Mirage sound and program you wish to load. If you aren't familiar with the Mirage, a brief explanation may be in order here.

Because of the way in which Mirage memory is allocated, each Mirage disk will have a total of three "upper" and three "lower" keyboard sounds. Sometimes the upper and lower keyboard sounds will be similar - treble piano and bass piano, for example. In other cases, the two sounds may be different - flute and vibes, maybe. You will have a choice as to whether you wish to load either an upper sound, a lower sound, or both at once. For now, we'll load both the upper and lower sounds, and we'll select the first sound on our Mirage "Bass/Sax" disk. Make sure the EPS display reads "DSK SOUND 1 UP+LOWER". If it doesn't, use the LEFT/RIGHT arrow buttons to position the dotted line underneath the setting you need to change, and use the UP/DOWN arrow buttons to select the correct setting.

Now put in your "Bass/Sax" Mirage disk and press "ENTER". Press "ENTER" again to accept the "MUST ERASE MEMORY,

OK?" prompt, and finally, press "ENTER" one more time in response to the "INSERT DISK, HIT ENTER" prompt. In a few seconds you should have the "Bass/Sax" sound loaded. Nothing to it, eh? So save this sound to a formatted disk (you do have a formatted disk, don't you?), and let's move on.

OK. So now you've got your Mirage sound into the EPS, and you've saved it to a disk. Simple enough, n'est-ce pas? You will find, however, that most Mirage sounds only require 500 to 540 blocks of EPS memory. And if you've read your manual, an EPS without any memory expansion has 1024 blocks of memory available (actually, this figure is more like 1018 blocks. Six blocks are reserved for housekeeping-type functions). So it seems a shame that there's not quite enough memory to load two different Mirage sounds into EPS memory at one time. But there's something we can do about that.

One thing we could do would be to convert the sample rates used by the samples that make up a particular preset to lower values, thereby using less memory for each individual sample. This operation is straightforward enough. Let's try it out with our new "Bass/Sax" preset.

First, make sure you have a disk with an EPS Operating System in the EPS's disk drive (by the way, current Operating System is version 1.40, if you didn't already know). Now we'll need to know how many individual samples make up the preset that we're using (for now, we'll just be dealing with the upright bass sample that should be occupying the lower two octaves of your EPS keyboard).

Locating the individual samples within an EPS preset couldn't be easier. Simply hit the "EDIT" button, and make sure (using the LEFT/RIGHT arrow buttons) that the number to the right of "WS" ("wavesample") is underlined. Now play a few notes on the EPS keyboard. You should see the number next to "WS" change occasionally. The number showing in the display is the number of the wavesample that you are currently playing. This is also one of the methods used to select a particular wave-sample for editing. In other words, whichever number showing in the display is the number of the wavesample currently selected for editing. Play a key in the first octave. You should see the number "1" in the display. This indicates that the first wavesample is selected. Let's convert its sample rate.

Press the "COMMAND" button, then the "WAVE" button. You can now use the LEFT/RIGHT arrow buttons to select "CONVERT SAMPLE RATE". When you've arrived at this display, simply hit "ENTER". The display will show you the sample rate currently being used, and the UP/DOWN buttons will allow you to select the sample rate you wish to convert the current sample to. Oddly enough, pressing the UP button lowers the sample rate, and pressing the DOWN button raises it. Anyway, once you've arrived at the sample rate you wish to use, press "ENTER" - the EPS will do the rest.

The amount of memory that you will regain by converting the sample rate down will depend, of course, on the amount of memory that the original sample occupies, and how far down you convert the sample rate. If you halve the sample rate, for example, you'll also halve the amount of memory that that sample uses. The trade-off, of course, is that you can lose some of the fidelity of the original sample by converting the rate down. This effect can be more noticeable on some sounds than on others, so some experimentation may be in order. Just remember to work on copy of your sample, and keep an original, unaltered version of the sound backed up on a disk somewhere.

Another method for winning back some memory is a bit more involved. It involves deleting un-needed samples, truncating samples, and possibly re-looping some samples.

First off, you'll need to know that the Mirage always has a total of 16 wavesamples, regardless of whether or not all those wavesamples are used. When the EPS converts a Mirage disk to EPS format, it converts all those samples, many of which may not be needed for anything. If you'll head back over to your EPS and hit the "EDIT" button, (assuming that you still have the "Bass/Sax" preset loaded), then run a finger up the keyboard (watching the wavesample numbers change as you do so) you'll see the numbers that indicate which wavesamples are actually being used to make up the "Bass/Sax" preset.

Now this may strike you as odd, (it did me at first), but you'll find that the "Bass" preset uses two wavesamples (number 1 and number 3) and the "Sax" preset takes four wavesamples (numbers 17, 19, 21, and 23). Now, with the number to the right of "WS" still underlined, press the UP/DOWN cursor buttons. You'll discover that there are a whole bunch of other wavesamples in the EPS that aren't being used for anything in this preset. And, for some reason, they are all assigned odd numbers. These unassigned wavesamples represent (along with the wavesamples assigned to this preset) the sixteen wavesamples from the Mirage. Why they are odd-numbered, I don't know. But I do know that any Mirage disk that is converted to EPS format will end up having sixteen odd-numbered wavesamples, 1 through 31. Any wavesample not used in the current EPS preset can be safely deleted (by selecting it using the UP/DOWN buttons from the "EDIT" menu, then using "COMMAND" button "WAVE", and cursoring to the "DELETE WAVESAMPLE" selection), thereby freeing up a small amount of memory. Also, a converted Mirage sound seems to create a "phantom" second layer in the EPS which can also be safely deleted (my guess is that this has something to do with the fact that the Mirage always samples into two "oscillators" to allow for the detuning and mix mode effects that we've all come to know and love).

Anyway, now that we've deleted all the extraneous samples and layers from the EPS, (and saved our work to disk), it's time to take a look at truncating (shortening) our samples to open up a bit more memory. Let's go to work on the "Bass" sound first.

Press the "EDIT" button, and select wavesample 1 (by playing in the low octave of the keyboard or by using the UP/DOWN buttons). Now press the "WAVE" button (remember, we're still in the "EDIT" mode). Use the LEFT/RIGHT arrow buttons to cursor over to the "SMPL START=" display. You'll find that the sample start point for this wavesample is set to 512 bytes, and (00) percent of the way in. That's fine - no need to truncate the start of the wavesample. Now use the LEFT/RIGHT arrow buttons to cursor over to the "SAMPLE END=" display. Here you'll notice that the sample end point is set only 43 percent of the way into the wave - in other words the second 57 percent of the wave isn't being used. This looks like it might be a real good place to truncate the wavesample (and free up over half of the memory currently being used by this wavesample). So hit the "COMMAND" button, press the "WAVE" button, and use the LEFT/RIGHT arrow buttons to cursor over to the "TRUNCATE WAVESAMPLE" display (by the way, you'll need your Operating System disk in the drive, if it isn't already there).

When you reach "TRUNCATE WAVESAMPLE", simply press the "ENTER" button, and the wavesample will automatically be truncated at the end point previously set. At least, normally the wavesample would be truncated. Except in this case, it isn't. Go ahead and check it out. Take a look at the sample end point - it's still set to 43 percent. Weird, huh? Well, as it turns out, this will happen with certain Mirage sounds, specifically those sounds that use the same wavedata for more than one wavesample. The basic idea is this: EPS wavesample 1 and wavesample 3 are sharing the same wavedata - they just have slightly different starting points. The

problem, though, is that the EPS won't let you truncate a wavesample that is shared in this fashion. However, if you delete wavesample 3, truncation can then be performed on wavesample 1. Let's try it.

Select wavesample 3. Delete it by pressing "COMMAND", then "WAVE", and using the LEFT/RIGHT arrow buttons to select "DELETE WAVESAMPLE". Press "ENTER" twice. Wavesample 3 is now history. Now wavesample 1 can be truncated. Go ahead and truncate it. If you still have trouble truncating, make sure that wavesamples 5, 7, 9, 11, 13, and 15 have all been deleted, as well as the phantom layer 2.

Only one problem remains now that wavesample 3 has been deleted - now there's nothing playing in the second octave of the keyboard. No problem - simply select wavesample 1, press the "SET KEYBOARD RANGE" button, play the low C on the keyboard, then the B flat an octave and an 11th above that, and you're set! Wavesample 1 now plays on the entire lower two octaves of the keyboard, and you've won back a bunch of memory, into which you can load new sounds to use along with your new EPS preset. If you take enough time and pay enough attention to detail when converting Mirage samples to EPS format, you should be able to save enough memory to create some pretty nice presets, taking advantage of the extensive splitting and layering capabilities of the EPS.

Happy converting!

I would like to thank Roy Elkins, headmaster at Ensoniq's Dealer School. His assistance in the preparation of this article was invaluable.

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. ■

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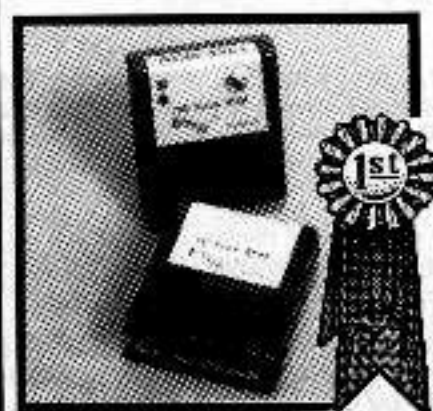
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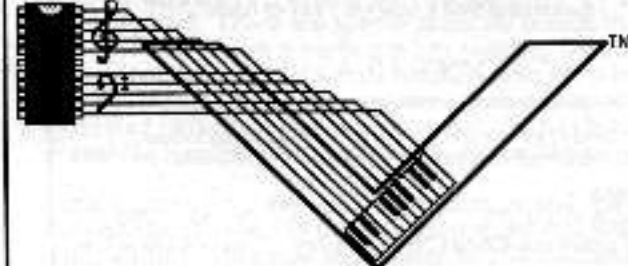
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Making The SQ-80 Disk Drive Musical

By Alan Goldberg

Let there be no doubt. Within their power and their budget, Ensoniq listened to the masses while designing the SQ-80. Of all the features added to the SQ-80; more waveforms, improved sound, improved sequencer, MIDI thru, etc., I think that the disk drive improves the FLEXIBILITY of the instrument the most.

If you don't have a sequencer/librarian program fired up and waiting in your computer at all times during your creative moments, then the built-in disk drive is just what you needed. Having talked to many ESQ-1 owners, I've found a rampant ailment I'll call "Memory Inhibition Fr. Freezeup" (MIFF) which occurs when you, A) start worrying that you are going to run out of memory while playing your best take, or B) you use up all but 14 bytes of your sequencer memory and then leave it there for 3 months for fear you'll lose it. Both of these are mortal creative sins and the SQ-80 drive can effectively eliminate them.

First, get a whole bunch of the 3.5" microfloppy disks, put labels on them with numbers maybe, and then FORMAT ALL OF THEM. This is not a musical process, so having to stop to format a disk while you're cooking with some Hot Stuff is a bother. Then you employ the Golden Sequencer Rule: Record, SAVE DATA, finish the piece, SAVE DATA, Erase!, then move on to the next masterpiece. Treat the disk drive as an extension of sequencer memory. Use up a whole disk or two to finish one piece if you must.

Having said this, let me give a couple of tips and observations I have gained from close contact with the SQ-80 and its disk drive.

One thing that you notice right away is how intimate and adept you become with the infamous Data Entry Slider. You get more room to name things and there are more things to name, so you spend more time watching letters and numbers whiz by. Maybe we should have slider-writing contests to see who can spell out tough words the fastest. Don't let this process take too much time. Use the Numbers, symbols and letters at either end of the slider to speed up writing when possible.

(A design note may be appropriate here. Dear Ensoniq: the lower right hand soft button is the "Right" cursor movement button when you are writing program names to save a new sound, but it is the "NO" button when you are writing any names in the disk storage mode. This automatically kicks you out of the disk mode.)

As you start filling up disks, remembering where you put something may become a problem without a decent index system. Most people figure out their own way of naming and remembering things for storage, or else they spend a lot of time hunting. One difficulty with the SQ-80 Index is that it does not tell you what the name of the current sequencer or patch bank is while it is loaded in the machine. This fact, coupled with the fact that it won't stop you from writing over anything (unless the location is EMPTY - ??) when updating an old file, adds an element of risk when you have many versions on the same disk and you want to update. I've found a simple solution for this: Index your banks (using the Data Entry Slider, of course) by naming the SOUND in, say, Bank 1, position 1, with a keyword that you use when you save the bank to disk.

You can do the same thing with sequencer data by naming a SONG in the same manner. Then, when it comes time to resave that data, (or remember what it was), you can punch up the sound or song name for your additional information. A date works well. For example, naming sound or song 1: "4/15/A" and then storing bank/sequence data to disk using this name creates a link between what is currently loaded and the disk drive. The file position number that the SQ-80 assigns also works well.

The designers of the SQ-80 gave us a neat little storage space for the 3.5" diskettes on the left-hand side. Well, if you use a keyboard stand for your SQ-80 and, as is common, you tilt the keyboard forward so that the keys are sloping towards you, when you are playing hard you will end up with diskettes falling on the floor. Solution: Tape (or velcro) a matchbook cover to the bottom of the storage area, or use any wedge-shaped object if you don't want to be that tacky. This will bring the diskettes back up to the level, and you can keep using the nice space.

Using the disk drive effectively can help you to create, save and retrieve your music and sounds more efficiently. It is a powerful tool (I didn't even mention sys-ex storage). It is a prime example of a company responding to user requests (complaints?) and creating a better product because of it. ■

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My Spring Break

by Erick Hailstone

I was born in Northeast Pennsylvania, about two and half hours from the Ensoniq factory. I hadn't been back in 14 years, so when the opportunity came about to visit Ensoniq I jumped at the chance.

Here's a little-known fact about Erick Hailstone. Flying scares the living *%\$ out of me and the worse part is taking off and landing. This plane took off and landed many, many times before they carried me off in a body bag in Philadelphia. By the time I arrived at Ensoniq, I had regained a bit of composure but, frankly, between my sinuses and jet lag I was washed out. Ensoniq was just the tonic I needed.

The Ensoniq factory is located in an industrial park in Malvern, Pa., a beautiful area of light woods and hills. My first reaction was to the physical size of Ensoniq. The thing is that my wife works for a shoe manufacturer in the credit department. If you exclude the area of Ensoniq that is used for manufacturing, my wife's credit department is about the same size as Ensoniq. When I think of the impact Ensoniq has had on the keyboard market, I find this amazing.

Hey, I know this is gonna sound like a whitewash but I had a great time. The people I met were interesting, dedicated, and enjoyable to be with. The place is spotless. These folks work hard and have a lot of pride attached at every level. If this gets too flowery, just stop and gag for awhile.

I met with Marketing Director Rob Weber and we set an agenda. First stop: Ensoniq School.

Ensoniq School is a training ground for retail salespeople. I don't know how often I've visited a music store to find keyboard salespeople who KNEW NOTHING! Well, Ensoniq is making sure this doesn't happen with their products. This is a three or four day session and it is a valuable experience. I have been to a few of these schools by other manufacturers and this is by far the best. The school is headed by Roy Elkin who's thought out and organized this training very well. If you are new to this technology he is more than willing to meet you at the ground level and bring you up to snuff. If you're a complete wirehead like me he's got plenty of upscale information as well. I spent five hours in Ensoniq school just working on the EPS.

That night I met a college business student. He was writing a senior paper on small corporations and decided to write his paper on Ensoniq. He called them up, talked to their head of finance and was invited to the factory. At Ensoniq he was allowed to attend the school and given all the financial information necessary for his study. Somehow I just can't imagine many other companies ever going out of their way to do something like this.

The next day I was given a tour of the production facilities. Again, spotless. Much of the loading of boards is computerized. There are special areas for boards that must be hand loaded. When a keyboard has reached final assembly it is hand tested and then left on for a 24-hour burn-in period. If a keyboard returns with a problem, there is a special section dedicated to testing, analysis and repair. This is hands-on stuff -- real-life humans checking for real-life problems.

I spent part of my day with Steve Coscia and the Customer Service Department. In the beginning there was Steve Coscia. That's right - one guy was doing all the customer service

chores. Now there are six. Good time to introduce these folks because they each handle a different section of the country and can kind of get to know the people they're talking with. Alan Blake handles the North Central states, Jim Boggia the Mid-Southwest. If you're in the Northwest and have a problem call Rob Bonanno; New England, call Dan Gallagher. Steve Mash handles the Southeast (and is the Hacker liaison) and Dave Zeltner does Southwest and Mid-Atlantic. If there's a problem with an Ensoniq product, the combination of Customer Service and Manufacturing is there to help. They can, and regularly do, have parts delivered in 24 hours to help an ailing keyboard. If you're experiencing long delays in service, let Customer Service know. By dividing up the country into regions, the people assigned to these areas can get personally acquainted with the dealers and salespeople.

These Customer Service folks are all product specialists in their own right, having had real-life performance experiences. In fact, one of them, Dave Zeltner, was playing in the lounge at my hotel. (Sounded good, Dave. Next time I'll bring my guitar.) These guys have the same gear we all have, including some of the competition's products, so don't be afraid to ask about interfacing the Macenblank whosiwat with Dx-10,015. But aside from knowledge these guys talk plainly - they can tell you what you need to know in a way you can understand.

The most common questions these days relate to new products; the SQ-80 and the EPS. Next are MIDI specific questions. Some common questions regard updates. For instance, after the ESQ-1 was updated to allow the C.V. pedal to control volume folks were calling in wanting to get the pedal modified not realizing that it only required changing a single parameter on the ESQ. (Here's a hot tip from Customer Service: If you're playing in a Steak House don't set up next to the kitchen. After a few months of fumes the inside of your instrument will look like a beehive oozing with honey.) Last, but not least, questions of a technical nature should be submitted in writing. This allows Customer Service to refer questions that might best be handled by the engineering staff.

I spent the rest of my time with people from Engineering, Sound Development, and Software. Space is running out, but maybe in future issues I can mention some of the other things I learned at Ensoniq.

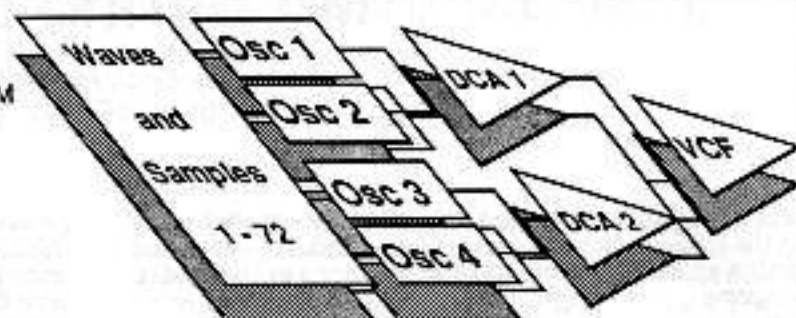
Needless to say, I had a great time.

Bio: Erick Hailstone is a partner in The MIDI Connection - a Portland based consulting company. He studied composition at Berklee College of Music in Boston.

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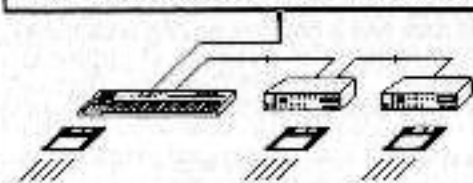


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Neurotic Art: Sampling Schizophrenia

by John Epperson

How many times have you sat down to read Transonic Hacker to find that, whatever it is, it always seems to start out with that oh-so famous line "...more noise out of your Mirage without killing more memory"? Well, if I use this line on you, would you believe me? Well, I will, you can, and it can be done without sacrificing that ever-so-precious memory! The only thing that you will lose is a couple of samples, so compromise and make the samples that you take long ones. (In other words, this is not an ideal setup when sampling drums.)

Let's start by booting up with MASOS. Load upper and lower Sound #2 for four wavesamples per half. Turn P75 and P77 on and sample a sound of your choice onto Wavesample #1. I suggest using a sample that can easily be looped. (Since this tutorial is useful for about any sound, it can be just about anything your sick mind can get into the keyboard. I used a nuclear bomb blast.) Once you have the sound edited as you like, use P26 and select Wavesample #2. Choose P60 and have sample #2 begin at the same place that sample #1 began, which is usually located in hex page number 00. Do the same for P61. Turn P28 (Mix Mode) on. Now, select P32 and change its value to 01, so that the modulation on the Mod wheel is off. Using P35, change its value to 00 so that moving from one sample to the next can be controlled from the Mod wheel. Finally, select P33 (Oscillator Detune) and select a value that you are comfortable with.

Now for some very unique sampling tricks that make this article shine. Move to Wavesample #1 via P26. Loop sample

one by setting P65's value to On. Then select a starting point with P62 and an end point with P63. Select P26 and choose Wavesample #2. Loop it as above but change the loop points so that they are set about a page apart at the beginning and at the end of the sample. This gives the sample a constantly changing sound and creates quite an unusual effect. CAUTION: This has been known to sound REAL nasty, so please be tasteful.

If you are into out-of-the-norm samples, you might consider seriously detuning Oscillator #2 by using P33. Excessively playing with the filters can also be a great effect. It creates a clear yet dull ambience without a lot of background noise, but it does sacrifice some of the high ends (a la Emulator II samples) so I would not suggest using this for synthesizer sounds. To do this, lower the values of P70 and P71.

Remember, this application is best suited for "unique" samples and I do not suggest that you do this unless you have an ear for the unusual and a strong stomach. Also, the end effect may not be quite right the first time around, so you may need to experiment to make things work out. If you try it a dozen times and it still sounds horrible and you hate it, it's not like I didn't warn you! [See title.]

Bio: John Epperson is an 18-year-old nutcase from Southern California who doesn't do much of anything. He is also having a heck of a time putting together a techno-punk-art rock band together a la Coil.

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Chris Barth, Transonic Hacker Review

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The Hacking Part...

PROGRAM: TENSAX (by Jim Johnson)

Jim's comments for this patch are, "This a sound that I designed with a tenor sax in mind. No one else seems to think it sounds like a sax, though everyone seems to agree that it is a nice sound nonetheless."

Well, Jim, I agree. Getting a group of people to describe a sax is kind of like the blind men and the elephant. Depending on the type and variety of music you listen to, eight people could come up with eight different descriptions. You've got your Guy Lombardo Sax, your Jr Walker Sax, your Coltrane Sax, your legit Sax, etc. When I'm trying to synthesize a sax, I'm lucky if I get a couple of characteristics from one particular bag. Half the folks recognize it and the other half scratch their heads. Well, folks, let me take a stab at it.

First off, I'm going for a more aggressive sound - something with an edge to it. Jim's sax is pretty mellow, like a guy blowing real quietly, with a bit of air slipping out of the mouthpiece. Select OSC1 and change WAVE to REED. Change OCT to -1. Select OSC2 and change OCT to -2. Jim's sound has a very soft attack that gets harder with greater velocities. I like this approach but maybe with a stronger, quicker attack. Select ENV4 and change T1 to 10. Select FILTER and change MOD1 to WHEEL, DEPTH = 17. Now, when you use the wheel things will get brighter as well as intensify the vibrato.

SQ-80 Modifications

All the above applies to the SQ-80 as well. Additionally, try selecting LFO3 and changing it to WAV= TRI, MOD = PRESS. LFO3 is modulating OSC1 very slightly. If you apply pressure you can sound just like a third grade horn section with a slight dramatic intonation. Select OSC1 and change MOD2 to = LFO3, DEPTH = 3. With enough pressure you can bend a half step. Select FREQ and change it to 30. Change L1, DELAY, and L2 all to 0. Select DCA1 and change MOD2 to = LFO, DEPTH = 3. Now, when you apply pressure a fast vibrato will occur. It's kind of like a growl. If you want to really emphasize the growl make the following changes to the FILTER. Change MOD1 to = PRESS, DEPTH = 08.

Select OSC2 and try the following WAVEFORMS: DIGIT1, DIGIT2, and LOGDRUM.

Well, if you HACKERS care to write, we can find out if you think any of these sound like a SAX.

Erick Hallstone
The MIDI Connection

The Patching Part...

PROGRAM: PHASED

by Scott O'Hare, Island MIDI

This is an unusual chorused keyboard sound with a sitar-like drone in the lower register and an interesting oscillating noise in the upper. Notwithstanding all that, it's still a rather musical sort of sound. I recommend tweaking Q a bit, and playing with the T2 parameter of ENV 1.

[Sam Mims: As Scott suggested, PHASED can be varied considerably by changing Q on the filter page, and all settings from 0 to the maximum 31 sound good. The drone and oscillating noise sounds are produced by the KICK waveform of OSC 3; raising the octave of this increases these effects, lowering the octave decreases them.]

PROGRAM: BMBOO

by David Libby

This SQ-80 flute patch takes advantage of the SQ-80's unique waveforms to produce a breathy sound that cuts through even a crowded mix. Although the vibrato could be routed to pressure or the mod wheel, I prefer to hardwire it, leaving the left hand free for pitch bending.

PROGRAM: LDNSTR (London Strings)

by Michael Duhaime, Softworx MIDI Systems

This is an analog-type string patch developed completely from sawtooth waves - what many would refer to as "Hollywood dream strings." I recommend setting the value of LV on the ENV 4 page to suit your own tastes for the string attack. You might wish to alter T4 of the same envelope, especially if using reverb. The global assignment of velocity on the MASTER page will also affect the performance of this sound, depending on your personal touch.

[Sam Mims - I wouldn't change a thing. This is a rather standard type of sound, but it sure is a nice one.]

PROGRAM: TENSAX

by Jim Johnson, JAMOS Music

This is a sound that I designed with a tenor sax in mind. No one else seems to think it sounds like a sax, though they seem to agree that it is a nice sound nonetheless. The "chiff" is provided by the NOISE2 waveform on OSC 3. The sync on OSC 2 provides a "bite" which doesn't overpower the mellow sound from OSC 1. LFO 3 adds a slight random pitch waver and LFO1 provides a delayed vibrato/tremolo which can be enhanced with the wheel. The tenor sax illusion is best when played in the two lowest octaves of the keyboard.

[Sam Mims - This is an interesting sound, more of a mellow sax than a gritty, biting one. Don't disregard the top octaves where it takes on a flute-like quality. What's unusual is that this sound was created without using the REED waveform. You can try changing OSC 2 to REED for a more biting sound.]

ESQ-1 PROG: PHASED

BY: SCOTT O'HARE, ISLAND MIDI

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	3	PIANO	OFF	-	OFF	-
OSC 2	-1	0	0	FORM1	OFF	-	OFF	-
OSC 3	1	7	6	KICK	LFO1	3	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	63	ON	OFF	-	OFF	-
DCA 3	42	ON	ENV1	63	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	54	4	0	ENV3	39	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	58	8	LFO2	63

	FREQ	REBET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	11	OFF	ON	TR1	0	21	8	WHEEL
LFO 2	22	OFF	ON	TR1	24	6	47	OFF
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	TIV	T1	T2	T3	T4	TK
ENV 1	63	3	28	63	31	0	2	36	0	1
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	48	30	1	41	22	5	4	61	37	15
ENV 4	63	47	0	36	63	0	47	63	19	9

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

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

SQ-80 PROG: BMBOO

BY: DAVID LEBBY

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	BREAT	LFO1	1	OFF	-
OSC 2	-1	11	0	SQR2	LFO2	2	ENV4	2
OSC 3	-2	11	20	CHIT	OFF	-	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	32	OS	ENV1	14	OFF	-
DCA 3	63	OS	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	79	0	2	LFO1	16	KNO2	5

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

	FREQ	REBET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	21	OFF	ON	TR1	48	1	34	OFF
LFO 2	20	OFF	ON	TR1	39	1	20	OFF
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	TIV	T1	T2	T3	T4	TK
ENV 1	63	63	63	001	63	34	0	0	0	0
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	63	63	001	10	15	0	0	13R	0

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

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

ESQ-1 PROG: LDNSTR

BY: MICHAEL DUHAIME, SOFTWORK

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	KAR	OFF	-	LFO1	3
OSC 2	0	0	2	KAR	OFF	-	LFO2	3
OSC 3	0	0	4	KAR	OFF	-	OFF	-

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

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	36	1	28	ENV3	48	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	6	LFO1	9

	FREQ	REBET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	31	OFF	OFF	TR1	11	0	11	OFF
LFO 2	24	OFF	OFF	TR1	11	0	11	OFF
LFO 3	24	OFF	OFF	TR1	11	0	11	OFF

	L1	L2	L3	LV	TIV	T1	T2	T3	T4	TK
ENV 1	1	1	0	0	0	21	23	38	20	3
ENV 2	63	63	63	0	0	63	58	63	20	3
ENV 3	63	10	63	8	0	8	19	63	44	3
ENV 4	41	53	67	0	0	21	30	63	39	3

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

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

ESQ-1 PROG: TENSAX

BY: JIM JOHNSON, JAMOS

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	DC	LFO1	1	LFO3	1
OSC 2	-1	8	0	DC	OFF	-	ENV2	2
OSC 3	-3	0	0	DC	OFF	-	ENV3	24

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	58	OS	LFO1	-14	OFF	-
DCA 2	31	OS	ENV1	33	ENV2	-4
DCA 3	0	OS	ENV2	5	ENV2	2

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	32	2	28	VR12	1	ENV1	45

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

	FREQ	REBET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	22	ON	ON	TR1	11	3	25	WHEEL
LFO 2	-	-	-	-	-	-	-	-
LFO 3	0	OFF	ON	NOI	32	34	32	OFF

	L1	L2	L3	LV	TIV	T1	T2	T3	T4	TK
ENV 1	63	14	28	48	4	14	17	7	33	10
ENV 2	3	63	0	3	1	3	3	37	0	0
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	56	63	61	50	13	23	18	16	16	32

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

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

The Interface

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

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

Electronic mail - GENIE Network: TRANSONIQ, CompuServe: 73280,3353, or PAN: TRANSONIQ.

This is probably one of the most open forums in the music industry. Letter writers are asked to please keep the vitriol to a minimum. Readers are reminded to take everything with a grain of salt.

Dear Hacker:

I've been reading TH for almost two years now and have learned a lot about Ensoniq products. I've also noticed that many people are unhappy without "state of the art" equipment. Why do some people think that they are owed a new piece of equipment each time the manufacturer comes out with a newer model? Do these people go to their car dealers every year and demand another car because next year's models are better? Some may say it's planned obsolescence; I call it technological advancement. Sure it's a blow to one's ego not to have the very latest gear, but that doesn't mean the less attractive, older models won't do the job. My ESQ-1 and my Mirage still get the job done quite well, in spite of the fact that neither one is no longer the newest keyboard on the market. Even my good ol' DX-7 has been one-upped by the Mark II line. So come on, let's devote some energy into making some good music and killer sounds, and remember, someday something will appear that outperforms the SQ-80 and the EPS.

Now, about that PolyMoog to Fairlight upgrade....

Sincerely,
David Kallas
Villa Park, IL
GENIE: Dakall

[TH - Most of our readers wallow in technological advancement. Those who are upset by such things have some rough times ahead. When AI, nanotechnology, self-replicating assemblers and the like make it possible to go from concept to store shelf (if there are still store shelves) in DAYS instead of months or years, people will have to get more used to "cha-cha-changes".]

Dear Hacker,

Anyone out there who has obtained a used rack-mount Mirage in the last few months, especially if you live in the southeast, PLEASE check your serial number. If it happens to be DNG-13855, it's part of \$7000 worth of gear stolen from my studio last November. If you have it, please contact me. You can keep the Mirage (my new EPS will be in any day now). It would be worth the Mirage just to locate and prosecute the slime ball who stole it.

I have a problem with my ESQ/TX 81-Z combination. When sequencing on the ESQ and working on a track assigned to the 81-Z, everything goes fine until I select another track on the sequencer.

When I do that, the 81-Z will not respond to note data. (It will still respond to patch change commands.) Nothing will sound until I go into utility, change the 81-Z's receive channel to any other channel and then back to the original channel. This gets to be a pain, especially since I use two 81-Z's and when in performance mode that can add up to several times having to go through this procedure. Any ideas or solutions? Will I have this same problem with the EPS/81-Z combination?

Thanks for listening. Keep up the good work.

Sincerely,
Ron Mashburn
2923 Airport Dr.
Panama City, FL

[Ensoniq's response - There were initially a number of problems reported by people using the TX-81Z with an ESQ-1. It seems that the TX interpreted MIDI Foot Pedal (Controller #4) as MIDI Volume (Controller #7). This has the effect of silencing the TX whenever Controller #4 gets reset to 0, which the ESQ does each time you select a new sequence. Also there was a problem with the TX missing volume instructions after a program change was received.

It is our understanding that both of these problems have been fixed in software upgrades for the TX-81Z. You should contact Yamaha Customer Service or your dealer for information about getting the latest software.]

Dear Hacker (and Readership),

Does anyone out there have REAL sounding ACOUSTIC drum samples available? Specifically:

1) A drum kit consisting of cymbals, snare, toms, hi-hat played with brushes and muted hits?

2) An 'old time' (circa 1960) rockabilly/blues drum kit with live and somewhat 'cheesy' period sounds?

3) Parade drums sounds with big, open bass and snares, triangle, glockenspiel?

Not all of us want to sound like Phil Collins, a rap record, or a rhythm box.

Armando Davis
Box 2032
New Preston, CT 06777

Dear Hacker,

I'm a singer/songwriter in San Francisco. I've had an SQ-80 for a couple of

months and really dig the overall operation, sounds, action, etc. The Hacker mag is as essential to Ensoniq users as an AC cord to the synth.

Why is it however, that there are so many individuals writing into your publication whining about getting the sequencer out of the SQ-80, turning the SQ-80 into a rack mount, etc... I guess the requests are valid to a point, but I am reasonably sure that Ensoniq is in biz to make \$\$\$\$. What they have offered our industry is great and I know there is more and more to come. I get the feeling that there is an undercurrent of cultism and a vast group not dealing in the reality of musical instruments, reading your publication. Let's be adult, if you're into keys it's gonna cost and things are going to revolve around the planned obsolescence bred into all technology. It's not what you've got, but how you use it...okay, that's off my chest.

Also, to Dan Hobson of McPherson, KS., inquiring about "test recording" costs with his "landed record contract" - GO TO JAIL - DO NOT PASS GO, do not invest any money at all into any musical equipment, etc., until you invest \$100.00 into a good lawyer. His situation is a definite scam. I know, I've been through a couple... Dan, Dan, Dan, get some advice, some guidelines for goodness sakes, and don't sign anything!

If you don't know where to go for legal/music advice, contact CALA (California Lawyers for the Arts) in San Francisco, CA (415) 775-7200. They can refer musicians (or artists in general, for that matter) to a group similar to them or an individual arts oriented lawyer in their area. The bottom line is learn your business or get off the bus and stop taking up space.

With all due respect Hacker, you guys are doing a great job and I really thank you, but did I stumble into a Tech Mag or a support publication for a godsend of a product made for artists?

Gina A Del Vecchio
San Mateo, CA

[TH - We're trying to be both. Where else could the Engineers and Artists be on the same wavelength? We're always open for more "performance" type articles, but it's the hackers who seem much more interested in sharing their triumphs and woes. Anyway, the techie material is what builds the foundation for the artists and third-party support.]

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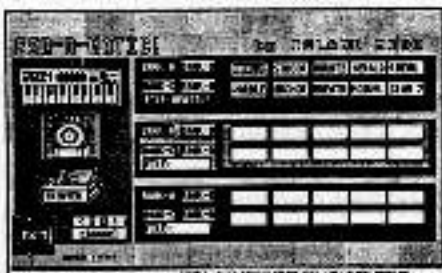
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Dear Hackers,

From the MIDI/MIX pages, I should be able to mix down tracks directed to other MIDI instruments, right? I have the ESQ connected to a TR-505 Roland Drum Machine, which accepts velocity info. When I play the keyboard, the TR-505 responds to velocity changes. But, changing the level on the mixing page has no effect on the overall track volume, even when pulled down to "OFF". Only the mute feature cuts off the drum track. What's the story? The ESQ has the 3.4 version O.S. Is there a bug? Thanks for the support.

Bill Crozier
Mount Royal, NJ

[Ensoniq's response - Velocity and Volume are two completely different things. If the TR-505 doesn't respond to MIDI Volume information, the MIX page will have no effect. The TR-505 will simply ignore the MIX info being sent by the ESQ-1.]

As with any instrument which doesn't respond to MIDI Volume, you will have to mix the level of the TR-505 manually, from its front panel.]

Dear Hacker,

Rumor has it that somewhere in the depths of Ensoniq there lies an ESQ-M that has been modified to include the SQ-80 waveforms. If this is true, a rack-mount SQ-80 could be realized in one of the following ways:

1. The engineers at Ensoniq could publish the modifications in the Hacker. Ensoniq probably would not want to deal with customers directly, this could be done through a third party - possibly the engineer who made the modifications or the Hacker or myself.

2. Since the modifications are extensive (and void the warranty on the ESQ-M), many musicians might want to have the mods done by a third party - the musician could send his ESQ-M to the party who would modify it and return it C.O.D. I would be willing to perform this service, possibly even including a warranty on the modifications.

When I decided to purchase an SQ-80, I was proud that I was purchasing an American product. So often, especially in the music industry, we are forced to purchase foreign products. It is the responsibility and obligation of the American manufacturers to provide what the customer needs. The customer couldn't be blamed if the only product to meet his needs is manufactured in Japan. I refer specifically to the Roland MT-32 and D-110 and the Yamaha FB-01. These are the products that will be purchased if musicians can't add a rack-mount SQ-80 to their racks. What good is an overflow mode on an SQ-80 if you can't overflow to an SQ-80 sound? Come on, Ensoniq, if the above

mentioned ESQ-M exists, help us work out a method to turn those thousands of ESQ-M's into useful SQ-80's. There is definitely a need as displayed in the past several issues of this magazine. Let's work together on this.

Gary Giebler
Giebler Enterprises
(315) 652-5741

[Ensoniq's response - Obviously, such a modification is possible. However, as we've stated before, it requires extensive software and hardware modifications such as a non-released operating system that we are not in a position to sell and therefore support with upgrades. Since the ESQ-M is out of production and the installed base is relatively small, it doesn't make sense for us to support this modification.]

The reality is, large companies like Roland and Yamaha will always be able to make products like those you listed and amortize them over a large product line. With our limited resources, we must stick to what we do well and unfortunately, rack-mount modules are not in our plans at this time.]

[TH - We try to keep the Hacker a haven free of politics and other distasteful topics, but every so often someone will hit one of our buttons. What's all this about "forced," "blamed," and "obligation"? There's a world of needs and wants out there, and there's a world of people doing their various shticks trying to make their livings by filling some subset of those needs. The system's optimized by doing one's best to fill some particular need (i.e. "make a buck") and by "voting" with your dollars (i.e. shopping wisely) - independently of any invisible lines sketched on the globe. No one should be "blamed" for buying something that happens to be produced on "the other side of the line" (horrors!) - and you're certainly not "forced" to either. And we're certainly glad that things haven't gone so far (yet) that anyone's "obligated" to produce product X because customers A, B, and C think that they need it. (Now, of course a rack SQ-80 might be a great way to "make a buck" - but then you and we aren't the ones that have to bet our success on making that decision.)

Whew! Now that THAT's over - we are pursuing getting some info on the modified rack that you mention. If it works out, there may be an article or maybe even enough info for some hackers or third-party type folks to follow up.]

Dear T.H.,

I recently purchased an ESQ-M, which came with Operating System 1.0. A recent Hacker stated that the latest OS for the ESQ-M was 1.2. My questions are: what is the difference between 1.0 and 1.2, and how come my ESQ-M came with the old system if I just bought it? Is

the upgrade to the new system a freebie repair? Thank you, and don't forget to keep supporting the ESQ-M!

David Anderman
Solana Beach, CA

[Ensoniq's response - As soon as a new operating system is released, it is incorporated into all newly built products. Your ESQ-M either came from dealer stock or warehouse stock. All OS EPROMS are free of charge and must be installed by an Ensoniq Authorized Service Facility; the customer is only responsible for the installation charge. Call Ensoniq Customer Service for details.]

Dear TH,

I need information on the disk format used by Ensoniq on their Mirage and EPS disks. Also looking for information on disk formats used by others (i.e. Korg, Casio, E-mu). Reward offered.

Thanks,
Tom Doyle
5222 Big Bow Road
Madison, Wisconsin, 53711

[Ensoniq's response - Unfortunately, this information is not available from Ensoniq in a form suitable for public release. You may want to contact Mark Cecys who is listed in the Transoniq-Net.]

Dear Sirs:

I am writing this letter in regard to Jordan Scott's review of Mr. Wavesample's sounds for the Ensoniq Mirage.

I have purchased samples from Mr. Wavesample. I like them and I use them at my gigs. He has customized a disk for me, to my specifications within the limitations of the Mirage. He knows how to use the memory of the Mirage to its fullest. I have heard many of Mr. Wavesample's samples, and to me they sound very good.

I am a graduate of the Manhattan School Of Music, and I think that I have a good ear. Mr. Wavesample has been very helpful to me by explaining how to move wavesamples on the Mirage, as well as in the use of its other parameters. I would recommend his samples and services to any Mirage owner.

Sincerely,
Bruce Habermann
Howell, N.J.

Dear Transoniq Hacker,

I want to share with you some discoveries I have made on my SQ-80. First, the good news - try pressing RECORD and WRITE. Interesting, eh? Now more boring, RECORD and MODE. Try experiments like this on your own.

Make sure, though, that what you have is saved on your disk first.

Now the bad news - a bug you probably know about. According to the Owners Manual, the SQ-80 is supposed to remember the changes you make on the MASTER page, (i.e. from Both to Local.) Boy, did this screw me up once. Also, the trackmutes don't change when you change sequences. It stays the same.

Thank you,
David Neuheim

[Ensoniq's response - When the SQ-80 is powered up, the straight synth status defaults to KBD=BOTH. It was done this way to prevent people from accidentally leaving it set to MIDI and then turning the unit on the next day to find the keyboard apparently "dead". If you want a status other than BOTH, you must manually select it.

If you mute a track, it will stay that way until you un-mute it. It was designed to work that way to allow you to listen to muted versions of sequences in Song Mode.]

Dear Hacker,

I am a subscriber to the Hacker and would like to see comments/reviews about the EPS sound quality and whether or not the EPS has significant digital multiplexer distortion (excessive high frequency brightness/glare) as reported on page 60 of the March '88 issue of Music Technology magazine. The MT review implied that the EPS was not as transparent-sounding as it could have been. Can such sound quality shortcomings be corrected in future updates to the system? How does the EPS sound quality compare to the Prophet, or the Roland S50 and S550, for example?

Thank You,
William Donnelly
Boonton, NJ

[Ensoniq's response - Most reviews have praised the sound quality of the EPS. We have compared it to various other systems and are quite satisfied that it compares favorably. We're flattered that you are comparing it to systems which cost much more than the EPS.

All Roland samplers also use a multiplexed oscillator and are therefore subject to the limitations of this scheme; the Prophet 2000 is no longer in production.

We feel the sound quality as well as other benefits (such as 20-voice capability, dynamic digital filters, digital processing, etc.) make the EPS an instrument of superior value in its price range.]

[TH - We'll be covering more and more on all aspects of the EPS as more of



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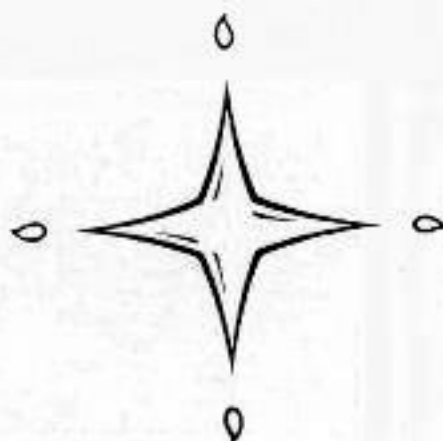
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them get into the hands of our writers (and readers.)

Dear Transoniq Hacker,

I am writing regarding a company who placed an ad in the Hacker for a patch librarian software program. The name of the company is Music Direct, Inc., and they're located at P.O. Box 226-B, Hazel Park, MI. I ordered the program, never got it, and have since sent two letters to them, both unanswered. They no longer have any ads in the Hacker, but I'm writing this to warn others just in case. I would also like to have anybody who has had a similar problem contact me, as I am starting mail fraud proceedings against them, and I believe there is strength in numbers.

Also, would it be possible to get some information, either in an article or a letter back, about these computer networks that I've read about in the Hacker? I own a Commodore 64 and I would like to use it in this capacity, but, unfortunately, I am the equivalent of a moron in such matter (I know where the power switches are, and I can sometimes understand part of the software user's guide).

I thank you in advance for any help you can give me with these requests.

Sincerely,
William Jordan
Lawrence, MA

[TH - For info on computer networks and the like it would be better to look through the computer magazines. If nothing else, you should see ads for CompuServe and GEnie. Send for info. They're set up to lead you step-by-step to get you on-line. Once you're there and you get familiar with them, you'll find music, and MIDI, (and C64) groups and all sorts of other stuff.]

Dear Editor,

I enjoy the TRANSONIQ HACKER, but I think more emphasis should be placed on real world experience and less doing it by the book. When sampling, I don't always use MASOS, for the simple reason that the dealer, Daddy's Junky Music, never got an Advanced Sampler's Guide off the truck. They took my kilobuck and then let me go scratch over a \$20 manual. Real service. And there aren't other Ensoniq dealers this side of the miracle mile. I even waste memory and use big 200-page loops, which can make loop clicking less of a problem. It's my memory and I can do what I want with it.

I bought a Mirage since it is, to my knowledge, the only sampler with microtonal capability -- not a Kurzweil, nor a Synclavier. When the octaves get stretched, stretched, stretched, a single octave of 53 equal will take up nearly

the entire keyboard, multi-sampling becomes a burden. I wonder why there aren't good multi-samples available of violins. Take a note and go up a fourth and it should have a noticeably different timbre - since a different string is being bowed. Somebody ought to fix up a disk with OSC 1 playing a string bowed to the right and then throw up the mod wheel and OSC 2 kicks in and the wavesample is a string being bowed to the left. There is a difference.

It is my personal opinion that people who sample pianos ought to be exported to Japan as dolphin bait.

Sincerely yours,
Buzz Kimball
Contoocook, NH

[TH - Well, that was different.]

Hello Transoniq Hacker Interface--

I must say that I missed the close-out of the ESQ-M and I am a little miffed. Some of us don't live around the corner from our dealer and this sale certainly caught me by surprise too late. It seems to me that we should have gotten the scoop on this sale from TH and that Ensoniq would have had the courtesy to scoop us Hackers first--after all, we are the loyal legions, are we not? That was inconsiderate. If the Mirage rack is closed out, could you please give us Hackers an announcement?

So to Ensoniq I ask -- now that you have the SQ-80, the EPS, and the ESQ-1 with all the sequencers built in, will you please pay closer attention to your line-up of rack units? I read in last month's Interface Ensoniq's response about racking the new synths (impossible, they say!). But hey, from our point of view, who wants to carry all these keyboards around to gigs? I would appreciate a return of the ESQ-M, perhaps in a version 2. Perhaps Ensoniq has more up their sleeves with all-purpose-sequenced-workstation keyboards in the future and we haven't even begun to imagine where this line of thinking can lead. (Watch out Synclavier, Kurzweil, and Fairlight.) But, oh, my back is going to suffer. One controller keyboard on stage and at home is enough - and Ensoniq will find a lot of us think this way. Please watch your marketing scheme. I like Ensoniq's equipment very much, but I just can't see carrying three sequencer keyboards around, all the more so because I play guitar synth on stage. Got it?

Anyone got an ESQ-M to sell?
Roman Orest
Starbuck, MN

[TH - See Ensoniq's response to Gary Giebler's letter above. Actually, the problem's not just Ensoniq's. Even the Rolands and Yamahas of the world have hundreds of projects that they'd love to do and people would love to buy.

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To the Hacker,

Consider this: I have thought it over, and a pox on the techno people who are merely the bread and butter readers of the Hacker upon whom everything depends. It just keeps nagging at me that there is something deeply musical missing in the Hacker. I just can't reconcile a totally technoid discussion of musical instruments, as if they were computers that just happen to make sounds. I'm sorry, but a discussion of "programming standards" for synthesizers tends to turn my stomach. Now someone is going to tell me that I should always modulate the filter with ENV3 if I'm using an envelope on it. Listen, friends, these instruments are MUSIC machines that just happen to employ modern technology as the means of sound creation. But Al, you say, these are complex machines and we must disseminate all of the technical information we can so people are ABLE to make music with them. Agreed. Which brings me to an essential discussion about the nature of our relationship to something like an SQ-80 or EPS.

A musician always has a relationship with his/her instrument that is deep and fundamental and helps define the music that is produced from it. When someone says "I love my piano," or "I love THE piano," we have an instant understanding that the person is not talking about the great harmonics produced by the C#2 string pair, but about their relationship with the piano and a sense of gratitude that it allows them to produce the music they feel. When someone says "I love the SQ-80," we sense a much more complex love affair. I know I am dangerously generalizing, but I have talked to many synth owners, and when I ask them WHY they love this or that synth, very often (especially from the younger owners) I hear: "It's fun to program," or "The disk drive is cool." Well, there's nothing really wrong with these responses, it's just that, in my own mind, I must always separate "techno-love" from the Muse.

For example, let me ask you this: is step editing a sequencer track a musical process or a technical one? Some would say, "Musical - because I know what musical result I am after and that is why I am step-editing." Others might say, "Technical - because the process deals with steps, clocks, punch-in/out, etc." Still others would say that it is both a musical AND technical process, and that the fusion of the two is what really defines the music. AH-HA! Here is an insight into our relationship with these high-tech instruments. The successful synthesist (samplist?) balances the musical and technical relationship to their instrument. The musical side provides the direction, energy, and

"soul" needed to create the music we feel. The technical side provides the MEANS of expression.

This is no different from any virtuoso on his/her instrument. Whereas B.S. (before synths) the ability to express depended on finger-speed, control, breath-control, hand-eye coordination and such, today the ability to express depends on manual-reading ability, bit-wisdom, and an almost intuitive understanding of what the micro-processors are DOING in there. Long hours of practice can be replaced by programming prowess. Well, fine, but what happens all too often is that the technical side wins out over the musical side. The result is uninspired music that may be technically very interesting but leaves me cold.

Why does the technical side win out so often? Well, I think in part because there is a sexiness to all of this technology that is very appealing. But a deeper reason may be that "technical music" is less personally risky. You don't need to use as much soul. You go through a "process" to create music instead of digging deep for inspiration. So what? There is no right or wrong way to make music AS LONG AS YOU ARE SAYING WHAT YOU WANT TO SAY. The best way to measure if this is happening is the "chill index." If you never get goose bumps listening to your music, ask yourself who is in control - your soul or the soul of the machine.

So, what to do. On a daily basis, as you play, program, get inspired, frustrated, (hungry), make a mental note of what you are doing and the amount of time you are spending doing it. If you find yourself spending a great deal of time truncating bits, moving data around, making minute variations on program/track/song where even YOU can't tell if it makes a difference, then you may be on the road to techno-burnout. Just watch yourself, and make sure your music comes out.

Thanks,
Al Goldberg
Still Voice Audio
St Louis Park, MN

[TH - We REALLY wish we could allocate the space here to respond as deeply and articulately to your comments as they deserve. First, to get it out of the way - in the Hacker's defense, there are lots of magazines out there covering both ends of the techno/creative spectrum. We CAN be what we are because there ARE magazines like Piano Quarterly and Clavier to cover the theoretical-artistic end of the spectrum, and magazines like Electronic Musician to bridge the gap between that and the circuit board. The Hacker is simply, at this time, a user's

support magazine.

Regarding the Programming Standards article - essentially, what the writer was saying was that careful notation eliminates a lot of wheel spinning. Unless we missed something, we're not sure why you found this distressing.

We understand what you're saying about the uneasiness you feel with the apparent technical preoccupation you see here - "The technical side seems to win out over the musical side." We wonder if perhaps with the advent of ANY new, readily available technology the "tinkerers" are the first ones out there with their stuff. It's available and it's fun.

It almost seems, with the extensive use of synths and such, that music making has become more of a two-part function - the actual sweaty, creative activity of articulation of feeling through music and the second part, the movie-director part where you get to assign roles and design strange-effective lighting schemes, etc. The first part is more apparently creative than the second, but maybe not totally so.]

Dear Hacker,

We would like to thank Walter Daniel and the Hacker for the review of the MIDICASTER. There have been a few changes to MIDICASTER since that review appeared. We would appreciate the opportunity to let your readers know about them.

Regarding the manual, Clark says he's corrected all my third-grade typing and spelling. The MIDICASTER will now format disks, copy most operating systems from one disk to another, and it will now work with CASIO CZ series synths. The new version speeds up many Mirage functions.

With the ability to add features as sequence modules we hope to make Walter Daniel's dream of needing just one O.S. (The MIDICASTER) come true.

In addition, we want to thank Chris Barth for the review of Vol. 5 sounds for the ESQ-1. While not the warmest review we have ever received, we understand and appreciate the time taken. If we have learned anything about sounds in this business, it is that one person's Heavenly Choir is another's finger-nails-on-the-black-board. Because of this we offer a money back guarantee on any of our products.

Thanks again,
Erick Hailstone
The MIDI Connection

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