# TRANSONIQ HACKER

*The Independent News Magazine for Ensoniq Users*


## Seventeen Things To Do With Envelopes

*by Gary Dinsmore*

How about a fun project exploring envelopes in the EPS? Here's a chance to follow along step-by-step as we try some tricks with envelopes and the many tasks they can be used for.

We will start out by creating the EPS's own little square-wave loop sample. Then we will build envelopes for the amplitude, pitch, and filter. Finally as we get deeper into the EPS, we will use envelopes to modulate the LFO and the wavesamples themselves.

If you are ready, let's begin. Fire up your EPS, and let's create a new instrument. Press the "Command" button followed by "Instrument" and "0" buttons to bring up the "Create instrument" page. Press "Enter-Yes", select an instrument and press "Enter-Yes" again. We now have an instrument named "UNNAMED INST". Next we create a layer to put the wavesample in. Press "Command - Layer - 0" in quick succession and you will be displaying the "Create Layer" page. Press "Enter-Yes" and the EPS immediately displays "Layer 1 Created. Now we can create the square wave. Press "Command - Wave - 0" and we will be at the "Create New Wavesample" page. Press "Enter-Yes" and the EPS responds with "Wavesample 1 Created". Play a few notes and savor the buzzing bee sound.

At this point we have created an instrument and a layer in that instrument. We have created a very short square-wave sample that was automatically looped by the EPS. A square wave, incidentally, is very rich in harmonics. It is a combination of the tonic or fundamental tone and all of the even numbered overtones of the fundamental pitch. This, along with the sawtooth wave form, which is the odd numbered overtones, have been the basis of a good many voices in organs and synths over the years.

We'll work with the amplitude or volume envelope first. This is "ENV 3", and to me it is the easiest to visualize. First, let's clone this layer so that we can compare what we have at any time with the original sound. Press "Command - Layer - 1" to call up the "Copy Layer" page. Press "Enter-Yes" and the EPS will ask "TO INST=UNNAMED INST" and we will respond "Enter-Yes". Next we get to choose "PARAMS ONLY" or "PARAMS+ DATA". Choose the parameters only option, since we will not be changing the data in any way throughout this exercise. Pressing "Enter-Yes" will create layer two. Now we must set the patch select buttons so that we only work on layer 1, yet we can compare it to layer 2. Press "Edit - Instrument" and use the right, left and down buttons to turn off layers 2 and 3. This sets the no buttons down mode to layer 1. Check the left and right patch buttons and see that the left button calls up layer 2 and the right button calls layer 1. Both buttons should call layers 1 and 2.

We will begin by editing the hard-wired amplitude envelope, "ENV 3". Press "Edit", and select layer 1 (LYR=1). The space to the right of "WS" will display "ALL" even though we have only one wavesample in this layer. That is the best way to do the initial setting of envelopes, since all of the envelopes in the layer will change together as we move the parameters. Now press "ENV 3 - 0" quickly to enter the "Envelope=" page. There are sixteen names of envelope types that can be set here. Work your way through these to see what they sound like. Fourteen of these are preset, and will always be the same whether you call them in "ENV 1", "ENV 2" or "ENV 3". Once you have selected an envelope that is close to what you want, you may change any of the parameters to suit your needs. As soon as you do, the name in the "Envelope=" page changes to "CURRENT VALUE". In other words, the current value envelope can be anything. The final envelope name is "SAVED". This is where

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an envelope that has been saved by pressing "Enter-Yes" can be brought to another wavesample, layer or instrument. This is the only time you press "Enter- Yes" when working with the parameters. Just changing the parameter value with the up and down buttons or the data slider will change the parameter. When you are editing these parameters, it is important to realize that using the up and down buttons will change all selected wavesample parameters by the same relative amount. Changing them with the data slider changes them all to the same value.

Continuing with this exercise; I wish to set the envelope for "ENV 3" to "Ramp Up". Play a note and observe that the volume slowly builds. This is our first use of an envelope to control volume.

Now we don't want give up too soon on volume control, however. Press "Edit - Amp - 7" for the "Volume Mod=" page. From this selection of modulators select "ENV 1". Set the amount to 99. Now select "ENV 1 - 0" and set this envelope to "Ramp Down". Play the keyboard and note that the volume ramps up, peaks and then ramps back down. Oh sure, we could have done that all on envelope 3, but this way I get to count two envelopes.

The third envelope combination is similar. Back to the "Volume Mod" page under "Edit Amp" and change the modulation device to "ENV 2" and the amount to 60. Press "ENV2 - 0" and change this envelope to a "REPEAT TRIANG". Now when you play the keyboard you get a repeat strum, but the volume gradually increases at the same time. How about a marimba roll where the first stroke or two are hit hard and the roll continues at a softer volume? Ah ha! using two envelopes is not so far fetched now, is it?

Let's turn our attention to the pitch envelope now. Press "Pitch 3" to bring up the envelope 1 amount page. Experiment with plus and minus amounts. Notice with either positive or negative amounts the final pitch is the same as if there is none. Take a look at envelope 1. It is still "Ramp Down". Scroll with the "right" button through the hard and soft velocities and you will note the first level only is used, the others are all zeros. Now change the envelope to "Ramp Up". The volumes start at 0, rise to a maximum and then slowly decay back part way. At the same time the pitch rises then falls with positive amount of envelope 1 or starts high falls to a low and rises again with a negative amount.

Now we are going to get real strange. Go back to the pitch page and set the envelope 1 amount at -15.7. Press "Pitch - 7" to move to the "Pitch Mod=" page. Select "ENV 2" as the modulator, and set the amount to +60. Doesn't that sound a bit like being buzzed by a spinning flying saucer. Well, that's five envelopes now!

For number 6 we simply change this same modulator to "ENV 1" as you probably have guessed. Set the amount to -99 and you get a double depth pitch sweep, and set it to +99 and you exactly counter balance the -15.7 of the envelope 1 amount we set above. Notice that the pitch is steady, but almost an octave high. Let's change the modulator back to "ENV 2" and set the amount to +20 before we continue with envelope 7.

We will use exactly the same technique for the filters. There are two sets of parameters here, however. One complete set for filter 1 and a completely independent set for filter 2. We can, for example, set filter 1 to follow envelope 1 and filter 2 to follow envelope 2. In addition both "F1 Mod=" and "F2 Mod=" can be set to either envelope 1 or 2. If you are still keeping count that is six more uses for envelopes, bringing us to twelve.

Let's set some values here so we are listening to the same instrument sound. Press "Filter - 0" and select "F1=2/LP F2=2/HP". This gives us a two pole low pass filter on filter 1 and a two pole high pass filter on filter 2. Scroll to the next page and set F1 cutoff at 60 and F2 cutoff to 60 also. Scroll to the "Env 2 Amt" page and set "F1=" to +20 and "F2=" to 0. On the next page set both keyboard amounts to zero. The next page is the "F1 MOD=" page. Here we select "ENV 1" to be our modulator and set its amount to +20. On the next page set the "F2 MOD=" to "ENV 2" and an amount of +50. What we have created is a sound that gets louder and goes down in pitch and gets brighter. It then fades away as it rises in pitch and looses its brilliance, all controlled by envelope 1. Within this envelope the sound has a choppy sawtooth volume tremolo, pitch flutter and filter sweep controlled by envelope 2.

To play with the LFO envelope, let us change to the layer two sample. Press "Edit - Instrument" and while holding down the left patch key tap the instrument key you selected for this instrument. When you release the patch select key notice that layer two remains selected. Now press "Edit" and scroll to "LYR" with the right and left buttons, and select layer 2 with the up and down buttons. Leave "WS=ALL", and press "LFO - 7" to bring up the "LFO Mod" page. We want to select "ENV 1" as the modulator. Now this doesn't have to make sense, but let us just suppose that we wanted the voice to be hard and solid when we play with vigor on rapid passages, yet we want an immediate and sustained vibrato when we play slow legato passages. One way to do this is to put a delay on the vibrato with LFO delay. That way the rapid passages hit right on pitch and don't start vibrato for a tenth of a second or so. Our envelope method will use the soft velocity curve to bring in a strong immediate vibrato, and the hard velocity curve to bring in a much lighter and delayed vibrato.

Start by calling up the "Edit ENV 1" page 0 and set the envelope to "Ramp Up". This will be our starting point. Scroll to the hard velocity page and set in the following velocities: 0, 0, 20, 20, 20. Now set the "Soft Velocities" to: 0, 99, 99, 99, 99. Finally set the times to: 30, 30, 30, 30, 0. The rest of the parameters are are fine the way the "Ramp Up" envelope set them. Now play the voice and notice that playing with a hard attack gives a light vibrato after about half a second, where a slow attack gives an immediate deep sustained vibrato.

The sixteenth envelope is a little trickier. We will need to create another sample, because this little square-wave sample is too short to manipulate, only 128 bytes long. For this demonstration create a new instrument and layer like before. Hook up a microphone to the "Audio In" port and press "sample". Pick this new instrument when the EPS asks you to pick a sample instrument. The display should change to "UNNAMED I LYR=1 WS=NEW". Press "Enter-Yes" and the display will change to the level indication display. Scroll right 4 times and set the input level to "MIC". Two more scrolls will return you to the input level display. Practice saying "heeeaaaoooow" as a one second continuous sound close to the clipping level where the "AMP" light comes on. Now press "enter-yes" and pronounce it exactly the same and then press "Enter-Yes" again. Press middle C as the root key when directed, and you should hear a nifty rendition of your yelp. The length of my wavesample was about 40,000 bytes.

You are automatically set to "Wave" page zero when you come out of the sampling function. Change the "Mode=" to "Loop Forward". Leave the start and end points where they are at 0 and 99% respectively. Find a short loop in the "eee" portion of the sound. My loop start and end points were 3 and 6 percent. Don't worry about getting a real clean loop for this exercise. Scroll forward to the "MOD=" page and select "LOOP" and source to "ENV 1". On the next page set the "Amount" to +99 and the "Range" can be left at 32K for now. This value, incidentally, is the amount the modulator can move the loop at full travel, and should be consistent with the length of the sample. The little 128-byte sample we were working with before would use the 128-byte or 64-byte option perhaps. This sample will be 30,000 to 60,000 bytes long and will use 32k-byte or 64k-byte length.

(Continued on page 6.)

# Front Panel

## RND (♪♪♪)

Ensoniq sends us the following regarding EPS expanders:

*Ensoniq has approved the 4X expander from PA Decoder. However, the design of their product may increase RF emissions and possibly cause undue interference with radios, televisions, etc. It may also make the system more susceptible to power glitch crashes.*

*To date, the only third-party expanders for the EPS that have been approved are from PA Decoder and PS Systems. Use of these products may cause the EPS to not always start up the first time when powered on. While there is no danger of damaging the EPS, it may be necessary for the customer to turn the EPS off and on again if it doesn't come up the first time.*

*The EPS memory expander offered by Digital Concepts International (DCI, France) has been officially rejected.*

*The Ensoniq SCSI kit is not compatible with any third-party EPS memory expander and there have been no third-party SCSI kits submitted for approval.*

* * *

Long-time Hacker writer Clark Salisbury has an EPS Clinic coming up in a future issue of *Keyboard*. Speaking of *Keyboard*... We've gotten a few calls asking about their infamous "sampler issue" - check out the article by Bill Lewis elsewhere in this issue for one journalist's opinion on how the facts were presented.

* * *

Our VFX article in last month's issue also seems to have triggered a lot of interest. Mostly, "How do I get my hands on one?" Latest word is shipping will start sometime in late Spring. We'll keep you posted.

* * *

Triton, one of the very first third-party supporters of Ensoniq gear, has switched seaboards. Their new west-coast address is PO Box 160493, Cupertino, CA 95016. They can be reached at 408-253-8547.

* * *

It's been over a year now and we still haven't seen any alternative operating systems out there for the EPS! Come on folks, it can't be that perfect! Let's see some action.

* * *

Transoniq Hacker is typically on a 4-week, 4-week, 5-week schedule. You should receive the next issue (#47) in approximately 4 weeks.

* * *

## TRANSONIQ-NET

### HELP WITH QUESTIONS

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

**MIRAGE 24-HOUR HOTLINE:** M.U.G. 914-963-1768.

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

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

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

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

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

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

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

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

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

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

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

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

## CHANGE OF ADDRESS

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

## BACK ISSUES

Back issues are $2.50 each. (Overseas: $3 each.) Issues 1-9, 11, 13-23, 27, 29, 30, 38, and 38 are no longer available. Subscriptions will be extended an equal number of issues for any issues ordered that are not available at the time we receive your order. ESQ-1 coverage started with Issue Number 13. SQ-80 coverage started with Number 29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage started with Number 30. (But didn't really get going till Number 35.) 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

**Patch/Works** is pleased to announce *Q-SPECTRUM II* - 160 more new studio-quality professionally programmed sounds for the Ensoniq ESQ-1/ESQ-M, and SQ-80 synthesizers. Created by the well-known New York programmer Jed Weaver, *Q-SPECTRUM II* (containing Volumes 3 & 4) is the long-awaited follow-up to the acclaimed *Q-SPECTRUM* (Volumes 1 & 2) sound cartridge. The new Volumes 3 and 4 both contain complete assortments of all types of instruments with both emulative acoustic and synthesized sounds arranged in a logical order, emphasizing keyboards as well as fantastic new bass sounds, plus percussion, analog, "D-50-ish" sounds and many others. Especially designed to unleash the SQ's full potential, they're used in many top recording studios in New York City and elsewhere. In addition, Patch/Works has announced new lower prices and a revised product line: 160 sound ROM cartridge (V 1 & 2 or V 3 & 4): $69.95. (RAM: $109.05.) Data cassette or ST disk: $44.95 ($79.95 for all 320). For more information: Patch/Works Music Software, PO Box 450, New York, NY 10024. (212) 873-2390.

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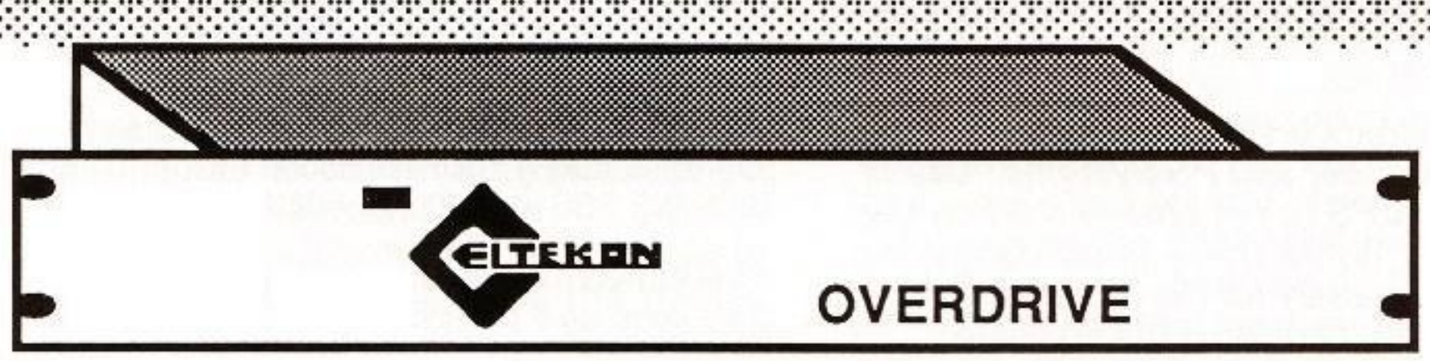


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# Using the ESQ-(80) With A Drum Machine

*BY C. R. Fischer, Mescal Music*

When our favorite synthesizer/sequencer (the ESQ-1 or SQ-80) is teamed up with the MIDI'ed drum box, the two form a unit capable of serious musical results. Getting the most out of the pair requires a little thought and experimentation, so I thought I'd share some of my efforts with you.

There are two basic schemes for using the two beasts as a team. The first uses the beat boxes internal patterns, and syncing the two via MIDI; the other uses the ESQ's internal sequencer to send notes to the drum machine using MIDI. Each mode has its own strong points and drawbacks, which I've summarized in the chart below:

**MIDI SYNC**

**Advantages**

* Does not use any sequencer tracks

* Drum machine only needs to receive start, clock, and stop commands, which are sent via MIDI regardless of channel or track status.

* Saves RAM and sequencer tracks.

**Disadvantages**

* Drum machine programming must be done on box itself, which means the user must learn to program TWO machines.

* Many drum machines have limited editing capabilities compared to the trusty ESQ's sequencer.

**SEQUENCER CONTROL**

**Advantages**

* You are able to use your ESQ's sequencer editing tricks to control your beat box.

* Many rhythm boxes have limited rhythmic and velocity resolution, so your sequencer can GREATLY improve on your drum boxes 'feel'.

**Disadvantages**

* Uses up sequencer tracks and memory.

* If you have a lot of other MIDI'ed equipment to control, the new notes could slow down the MIDI stream.

When you look at the pluses and minuses, you can see that your choice depends on the capabilities of your chosen drum machine. After working with both, I've come to use the sequencer to control my machines exclusively.

Right now, I'm working with two machines, a Roland TR-505 and my new Alesis HR-16 (Wow!). Because the 505 is limited to maximum of 16 steps per pattern, its ability to quantize rhythms leaves it a bit "stiff." And because it can only memorize two volume levels (regular and accent), controlling it from a velocity-sensitive keyboard greatly improves the realism.

When putting downing drum tracks, I begin by creating 3 or 4 tracks dedicated to the beast. Some folks would pale at the thought of tying up this many tracks, but it's a simple matter to then merge them into 1 or 2 tracks and regain the other tracks for new stuff. First, be sure that your drum machine has been enabled to receive note data, and that it's set to receive on a particular channel (I use #2). Going to your ESQ's MIX/MIDI page, put a track on the desired channel and set it for MIDI track status -- no need to tie up any internal voices here.

Now we can assign this to 4 channels to give us a little room. I usually start with a kick or snare, and I make sure I put each on a separate track. While this might appear excessive, it gives us room to edit each drum separately. I can quantize each drum according to need -- the kick always gets quantized, while the snare might be fine as recorded. And if you wish to substitute a rim shot for the snare, it's a lot easier to transpose the track using the transpose command than it is to re-cut a track.

I suggest putting fills on a track of their own, as these always seem to need a little extra work for best results. I love Latin percussion instruments, so I put them on a separate track, too. To get the feel of a drummer and percussionist playing together (as opposed to one drum machine), I always quantize the perc track a little different from the drums.

Once the drum tracks are complete, and you have them the way you want them, it's time to merge them down to 1 or 2 tracks. Even though everything could go on one track, I still put some sounds on a second track. This allows me to play different sounds from different drum boxes by simply changing the channel of any particular track.

I hope you try some of these tricks next time you're in the mood, and check out how the ESQ sequencer can add a lot of realism and feel to even a cheap beat box like the TR-505.

*Bio: Charles R. Fischer is a professional keyboardist, synthesizer programmer, writer, and electronic designer. He runs Mescal Music, an electronic music consulting and design firm. He has also gigged everything from C/W to Rap.* ▬

# Panning for Gold on the EPS

*by Bryce Inman*

One of the things I love about my ESQ-1 is the ability to apply any of its modulation sources to the pan, allowing for all kinds of neato panning effects. I must say that although I am astounded by my new EPS, I am a bit disappointed that Ensoniq was not able to incorporate this function into its design.

All is not lost, however. With a little tinkering I discovered a few tricks that produce some very effective panning effects on the EPS. These effects are achieved by making use of the cross fade and amplitude modulation functions on the EPS. The one drawback to this method is that it requires the use of two layers, thereby reducing the number of available voices. Bearing that in mind, let's give these effects a try.

Let's begin with a simple configuration that allows the LFO to control panning. (Forgive me for saying the obvious, but you won't be able to hear the effect of these experiments if you're not running your EPS in stereo.)

For the sake of simplicity, let's work with a sound that uses only one layer - Layer 1. If there is a Layer 2, delete it, then make a copy of Layer 1 in Layer 2 (to conserve memory, copy PARAMS ONLY). Now set up a patch that will play Layers 1 and 2.

Now for the adjustments that really make this thing work. Press EDIT and make sure that Layer 1 is underlined. Press Amp and set the parameters as follows:

VOLUME = whatever is already there
PAN = X
A-B FADE IN = 0 0
C-D FADE OUT = 0 127
VOLUME MOD = LFO * 99

Go back to the EDIT page and make sure that Layer 2 is underlined. Press Amp and set the parameters as follow:

VOLUME = whatever is already there
PAN = X (hard right)
A-B FADE IN = 0 127
C-D FADE OUT = 127 127
VOLUME MOD = LFO * 99

Now that we've set up the volume of each layer to be modulated by its LFO, we need to whip the LFOs into shape. (Keep in mind that if the LFO is already assigned to modulate something else, such as vibrato, this is going to effect that modulation also.)

Press EDIT and underline Layer 1. Press LFO and set the parameters like this:

WAVE = TRIANGLE
SPEED = 18
DEPTH = 99
DELAY = 0
LFO MODE = Reset on
LFO MOD = OFF

Now go to Layer 2 and set the LFO parameters to the same values as Layer 1. Play a few notes and listen to your handi-work. Ah, what an aural delight to hear your sound gently wafting to and fro through space and time! Isn't that just the bee's knees?

Adjusting the speed of the LFO will obviously adjust the speed of the panning effect. Just remember to set the LFO speed of both layers to the same value or the panning effect will go out of sync.

A couple of minor adjustments will let you control the panning with the Mod wheel. Once again, if the Mod wheel is assigned to modulate something else, you're going to be affecting that modulation also. Go the Amp section of both of the layers and change the VOLUME MOD assignment form LFO to WHEEL. Now play a few notes and move the Mod wheel back and forth. Isn't it exhilarating to be in complete control of your own little world?

This set up also works wonderfully for using the mod wheel to move back and forth between two complete different sounds. To do this, set up everything exactly as we have for Mod wheel panning, but, instead of having Layer 2 be a copy of Layer 1, copy a different sound into Layer 2. You may want to set the pan position of both layers back to the center for this type of function (and then again, you might not). Now when you play a few notes and move the Mod wheel back and forth you'll hear either Layer 1, Layer 2, or a mixture of both.

Well, that's a start. Try experimenting with some of the other modulation sources (RNDM, VEL, PRESS, etc.) to create the type of effects that tend to confirm the general consensus that synthesists are a rather odd lot. I'm relatively certain that none of the things you try will have any effect of the ozone layer.

*Bio: For eight years Bryce Inman traveled with a gospel music team called Sound Investment and taught music in Indiana (where the winters are too cold). Now he works as a free-lance music editor for Word, Inc. in Irving, TX (where the summers are too hot).* ▬

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## 17 Envelope Tricks

(Continued from page 2.)

Move to the "ENV 1" page 0 and this time lets start with the "Full On" envelope. Scroll right to the "Hard Velocities" page and set a gradient like 0, 20, 40, 60, 80. Skip the "Soft Velocities page, and set the times all to 50. What we have done is create a way to slowly scroll through the tonality of a wavesample by moving the loop point gradually from its 3% position toward the end of the wavesample. This way we can make a 1-second wavesample sound like a 10-second or even five-minute sample. The sample has to be pretty consistent in pitch and volume for this to work, otherwise the loop sounds pretty ratty.

You will want to experiment with the "Mod Range" parameter back on the "Wave" page. If you have a small number like 8K in this parameter the loop point may only move as far as the "aaa" part of the loop. If, instead, you put in a large value like "1 M" the sample will play out at normal speed as though there were no loop at all and loop only at the extreme end of the sample, probably in silence.

"So!", you say, "Where is the seventeenth envelope?" Well, that envelope is the postal envelope you put your comments, ideas, requests and findings into and send off the Transoniq Hacker. That is how we all find out more about this fantastic instrument. Those ideas will inspire others to try even more fantastic sounds, and we will all benefit in the end.

*Bio: Gary Dinsmore took up the organ with a vengeance about 10 years ago, but finally sold it, leaving the pedalboard to people who can walk and chew gum at the same time. He's strictly an amateur musician - although he and a buddy did a couple gigs back in college and formed a little country-western group called the Selkirk Mountain Boys. They did so well that they decided their best bet was to finish college and get "real jobs."* ▬

Guest Editorial:

# Guilt by Accusation and Trial by Headline

*by Bill Lewis*

## Media Rules!

What we see on television and read in print is all too often accepted as gospel. More often than not, what the press presents are a smattering of facts woven into a chronicle which *proves* the opinion of the writer.

An example of this phenomenon in the music business is a recent issue of *Keyboard*, wherein they bare the facts and tell nothing but the *truth* about the current crop of samplers. Based on a few conversations I've had following its general distribution, my hat is off to the folks at GPI, they're in control of their readership. I'll paraphrase the comments: " Gee, I was going to buy an Ensoniq sampler, but after I read the Keyboard report..." In case you haven't read the magazine in question, I'll take the liberty of paraphrasing it too. In a comparison of 15 of the top selling samplers, the Mirage came in dead last, and the EPS was very near the bottom. But that's only if you read the charts! In the opinion of this writer, there are a number of problems with this expose'.

Post industrial society has led us into the age of information, and there's a lot of it. For the minority who don't receive all their information from the tube, it usually goes like this:

A periodical shows up in the mail box and on the first go-around, you flip through every page, checking out the ads and article titles, maybe even reading a piece or two that happens to catch your eye. Then, at some future point, you go back and read items of interest, giving the remainder a cursory glance. Even if you read it all, NOBODY can absorb everything; there's just too much to know.

This relates to the "Sampler Issue" on two levels. First, *everybody* had to look at the charts, they were easy. But they're not the story. One very big comparison the charts left out was the price/performance ratio. On page 30, 32, 33, 34 and 35 the "charts" compare the Mirage with a Synclavier. I can turn this *fact* on a dime: "The Mirage is such an incredible sampler that *Keyboard* compared it to the Synclavier." Just call it editorial license and please, quote me. (Actually, how many samplers that are six years old and still being sold are even on the list?)

Hidden way back on page 140 is the following: *"Naturally, you'll want to take a number of things into consideration when purchasing a sampler: features, library, manufacturer support, operating system user-friendliness, and of course, price. Only by combining all of these factors can you get a clear picture of the sampler that's right for your needs."* Now that's responsible journalism and an honest appraisal. How many of you made it to page 140?

The second level of information overload relates to the writers. How could any three people hope to learn enough about the operating systems of 15 samplers, especially under the constraints of editorial deadlines, in order to write the definitive treatise? I've had an EPS since November 1988 and I'm intimately familiar with *most* of it, but I still don't clearly understand the LFO structure. There's so much depth that the only intelligent way to absorb the OS is to set priorities; sequencing and sampling took precedent. I can regurgitate those commands verbatim now, so there's room in my grey matter to add another level of complexity, without information overload. But, even if I could read a manual one time and quote chapter and verse, the level of cognitive dissonance in learning 15 systems simultaneously would be an order of magnitude higher.

Information is fine, but *knowledge* is something else. Knowledge comes about when cognitive levels of thought concatenate individual pieces of information to form a relationship. We are not *knowledgeable* because we're well read or can rattle off the tech specs of a piece of gear. We're knowledgeable because we use the higher functions of our brain to associate information and gain new insight. And isn't insight what we're looking for when we read a product review?

The problem is one of perception. Due to *Keyboard's* place in the market, their word is perceived by some as gospel. It is an excellent magazine, but even they will admit they're not the last word. You have the final vote.

*Bio.: Bill Lewis is Contributing Editor of* Music, Computers and Software Magazine, *as well as Wizard Sysop on the Compuserve MIDI Forum where you can reach him at 76701,35.*

## Current Ensoniq Operating Systems

| INST | OS | DISK | EPROMS |
|---|---|---|---|
| EPS | 2.35 | X | |
| EPS-M | 2.35 | X | |
| MASOS | 2.0 | X | |
| MIRAGE | 3.2 | X | |
| ESQ | 3.5 | | X |
| ESQ-M | 1.2 | | X |
| SQ-80 | 1.8 | | X |



## Tested and Approved Hard Drives for the EPS

| Manufacturer | Model |
|---|---|
| Jasmine | Direct Drive 45, 70 100, 140 |
| Rodime | 45plus, 60plus, 100plus, 140plus |
| CMS | 43SD, 20SD, 30SC, SDU30 |
| Microtek | Nova40 |
| Eltekon | OVD-20, 30, 40, 50, 60, 80, 90, 120 |
| General Computer | Hyperdrive FX/20 |
| Mass Micro | Mass 30e<br>Datapack 45 |
| Supra Drive | MacPlus 20 |

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| F | 11.Gongs, Jars, and Glass<br>12. Space |
| G | 13. New Age 1<br>14. New Age 2 |
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|---|---|---|---|
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|---|---|---|---|
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# Cathedral Echoes

*by Tim Edwards*

As a member of the Duke University Chapel Choir, I spend many a day in Duke's massive cathedral listening to the great pneumatic pipe organ blasting out Bach and Buxtehude, the sound reverberating off the high stone walls and stained-glass windows. This is the mighty Benjamin Duke memorial Flentrop organ, and it has 5000 pipes. It makes quite a racket.

So I put some thought into how to make the ESQ-1 imitate the Flentrop with all stops open. Pipe organ sounds that I have heard on the ESQ-1 (ICYORG, DRWBAR, etc.) all have organ-like qualities to them, but they're not the sounds you'll hear in Lizst's "Fantasy and Fugue on B.A.C.H." or Mannheim Stemroller's "Tocatta in G." No, if you want those, you need to take some things into consideration.

I wanted a full-diapason bass, so I put together a REED stop and a 4 OCT5 for a little weight, and brought in an ORGAN wave on the third oscillator at two octaves higher for the 4' and 8' flute stops. The organ pipes give a very flat tone, thus very little fine tuning and no LFO modulation was warranted.

A pneumatic tracker organ like the Flentrop is mechanically controlled; some pipes are 32' which means there is a fairly long delay between the time a key is pressed and the time the wind begins to cause the large pipe to resonate. What is needed, then, is "keyboard attack scaling," which is important in making sure the high notes on piano-like sounds fall off more quickly than the low notes. All that the keyboard decay scaling ("TK" on the envelope pages) does is to take the time value "T2" and decrement it as you go up the keyboard. So all that is required for keyboard attack scaling is a nonstandard ADSR envelope where T2 represents the attack time. This is done in my patch on ENV3 by setting L1 = O, T1 = 4, L2 = 8, and TK = 15. With these values, the lowest note will take a time of 12 (i.e., T1 + T2 or 4 + 8) before the envelope turns up the volume to +63. (Note that ENV3 modulates the DCAs, and therefore volume.) But with the attack scaling, the highest notes will sound almost instantaneously, because T2 will have a effective value of zero. Now the ORGAN wave represents a higher-pitched set of pipes, which have a fast attack, so I didn't put any keyboard attack scaling on that oscillator. So when you play the low notes, you will hear the ORGAN wave before the other two waves kick in, just like a real cathedral organ.

My value of T4 on ENV4 is low for this reason - because the tracker organ is a valve-action machine, the pipe quits sounding in roughly the same time which it took to start up. All the release time is taken up by reverb effects of the cathedral. If you have a reverb box, tune it until the sound is to your taste. If you have an SQ-80, then let T4 = 8R (for simulated reverb). If you have neither, then turn up the release time to T4 = 30 or whichever value you like best. Or go immediately to you nearest music store and buy a reverb effects box. It can improve the sound of the ESQ-1 100 percent.

See? Now you can sound like E. Power Biggs without even knowing what "Diapason 32'" and "Swell to Great" mean. But you really should come down to Duke anyway and listen to Dr. Parkins play the Real Thing. ▬

**ESQ-1 PROG: FLNTRP** BY: TIM EDWARDS

| | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|---|
| OSC 1 | -1 | 0 | 0 | 4OCT5 | OFF | - | OFF | - |
| OSC 2 | -1 | 0 | 0 | REED | OFF | - | OFF | - |
| OSC 3 | 1 | 7 | 2 | ORGAN | OFF | - | OFF | - |

| | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|
| DCA 1 | 0 | ON | ENV3 | 63 | PEDAL | -25 |
| DCA 2 | 0 | ON | ENV3 | 63 | PEDAL | -20 |
| DCA 3 | 0 | ON | PEDAL | -25 | ENV1 | 63 |

| | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|
| FILTER | 52 | 5 | 25 | LFO1 | -13 | PEDAL | -7 |

| | FINAL VOL | PAN | PAN MOD | DEPTH |
|---|---|---|---|---|
| DCA 4 | 48 | 8 | OFF | - |

| | FREQ | RESET | HUMAN | WAV | L1 | DELAY | L2 | MOD |
|---|---|---|---|---|---|---|---|---|
| LFO 1 | 22 | OFF | ON | TRI | 0 | 1 | 20 | WHEEL |
| LFO 2 | - | - | - | - | - | - | - | - |
| LFO 3 | - | - | - | - | - | - | - | - |

| | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK |
|---|---|---|---|---|---|---|---|---|---|---|
| ENV 1 | 63 | 63 | 23 | 0 | 0 | 4 | 47 | 63 | 63 | 32 |
| ENV 2 | - | - | - | - | - | - | - | - | - | - |
| ENV 3 | 0 | 63 | 63 | 0 | 20 | 4 | 8 | 42 | 63 | 15 |
| ENV 4 | 0 | 63 | 63 | 0 | 0 | 0 | 3 | 26 | 8 | 15 |

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

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

# The SQ-80/ESQ Guitar Connection

*by Kenn Lowy*

First of all, why would a guitarist (such as myself) who can play keyboards enough to get by (barely) want to go to the trouble of using his guitar to drive the synths he has? Because I've spent close to half my life playing guitar, and I play it a lot better than I play any keyboard. Also, after a while you begin to think in terms of where notes are on a guitar, you just know where your fingers are supposed to go next. And synthesizers are not really keyboard specific instruments, the keyboard is simply used as an on/off switch. As all of us Ensoniq fans know, some keyboards (SQ-80, EPS, etc) also have things like aftertouch.

Up until a few years ago, it was pretty pointless to even try to use a guitar to drive a synth. Every guitarist has heard about the problem with "tracking". Simply explained, you play a few quick notes, and get to listen to garbage. Or you hit a note and for some unexplained reason, you still hear garbage. Yes, MIDI guitar has come a long way, and it is usable, but it hasn't quite been perfected yet.

First, let's discuss equipment. For the purposes of this article we'll keep things simple. I am currently using a Roland guitar (synth) and an ESQ-M and the Roland GM-70 MIDI Converter module. We'll assume you know about the ESQ-M (it's the rack mounted version of the ESQ, the one Ensoniq has stopped making). The guitar could really be any guitar at this stage of the game. Roland makes a special pickup that can be attached to any electric guitar. Luckily I'm left handed, and you have to be Elliot Easton of the Cars to get Roland to make you a left-handed guitar. If you are left handed, you can still use it, you just flip it upside down and let all the knobs get in your way. (If anyone from Roland reads this, I really would like a left handed guitar, and I'd even be willing to pay for it.)

Next comes the GM-70 module. This single-spaced unit is the real workhorse of the group because it enables you to really use your guitar and synth together! The GM-70 has over a hundred user-definable presets. The presets can be programmed for various things like different synth settings, sounds, transposing etc. For me, the best part of the GM-70 is the "Control Assign" page. Here you can actually decide how you'll control things like pitch bend, aftertouch, chorusing, volume, etc. So, with the GM-70 you can really use all of the MIDI/synth functions that you're used to using on a keyboard. By adding a few foot pedals, and can also leave your hands free to "just" play guitar.

A few months ago I read a letter that someone had sent in to the Hacker about MIDI guitar. There was a complaint that some sounds on the ESQ didn't sound right, while others were fine. This is one of the big problems with MIDI guitar. What sounds good on a keyboard will not necessarily sound good on a guitar without a few pushes of the data control slider. And even then it may not work quite right... But why? For one, a keyboard player can play several notes at the same time. A guitarist tends to strum a guitar. That can be a problem with some sounds. And you can just about forget finger picking. It can be done, but not easily. Bending notes can also be a problem. The GM-70 does have a few controllers to help make bending easier, and I have found that I can actually add vibrato to a note by doing the usual guitar vibrato techniques. But as to sliding up to a note (at least using the GM-70), or hammering on, it's almost impossible. But again, what works for some sounds, may sound like garbage on another sound.

What all this really means is that MIDI guitar is not for everyone. It requires you to learn a new way to play, but it is not impossible at all.

The key to playing MIDI guitar is playing CLEAN!!! You cannot be sloppy and expect to get anything worthwhile out. I thought my playing style was pretty clean until I started playing with synths. It's kind of like thinking you're a really good baseball pitcher until you see Dwight Gooden in person. You may have to alter your style while playing the synths, but so far it hasn't interfered with my normal playing style at all.

Unfortunately, there are no miracle words to make it happen for you. You have to sit down and do it (preferably a lot to get it right). One bit of advice I can send forward - on the ESQ, if a sound works very well, then make note of the envelope settings. If a different sound doesn't work, try tweaking the envelope settings to be more like the other sound you found that did work. Make sense? Also - the Mirage and EPS work quite well with guitars (again depending on the sample).

Feel free to write in to the Hacker with any MIDI guitar questions. Until then, have fun.

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

# The Processor Mirage

*By Don Slepian*

This simple modification to either keyboard or rackmount Mirages can be done in an hour, requires less than $5 in parts, and gives the instrument new capabilities and several interesting new applications. This is a follow up to the Stereo Mirage article that appeared in the January 1987 issue of Electronic Musician (back issues are $3 from Mix Publications).

We will be adding two new input jacks to the Mirage. These inputs will bring external audio to the synthesizer section of the Mirage. Other than the jacks, the only parts required are eight low-wattage 10k resistors.

The Mirage when modified in this way becomes an interesting MIDI controlled audio processor. Its eight VCF's and eight envelope generators can instantly be changed to any of four program variations by MIDI program change command. It doesn't change any of the Mirage's existing capabilities, it simply widens the creative possibilities of the hardware.

I'll cover what this is good for first, then describe the mod.

These first applications involve using the Mirage as a processor. The first step is to create a silent sample, so that only the external audio is heard. Boot up with OS 3.2 and load a sound that has four interesting variations in filter and envelope settings. Insert a blank formatted diskette into the drive. Set parameter 76, Sampling Threshold, to zero for both keyboard halves, and set parameter 75 to line level input for minimum input noise. With no signal connected to the input jack, sample in the normal way to create a silent sample. Create an upper and a lower silent sample and save them to disk for future use. These silent samples will have the filter and envelope settings from the previous sound.

**1. Analog processing of digital sounds.**

The Mirage is placed in a MIDI network downstream of a digital synth whose stereo audio outputs are independently processed by the Mirage. I use both the Yamaha TX-81Z Tone Generator and the Yamaha DX-7IIFD Keyboard, and find that patches from either instrument can be enhanced or transformed when filtered and resonated. The Mirage envelope generators are being triggered with every note played on the digital synth or master keyboard, so it is as if these instruments had an analog filter section built into them.

**2. Processing external audio without MIDI control.**

If you take external audio from a multi-track, for example the output of an echo device echoing a vocal, and run it through the Mirage processor, you can add a variety of filtering and enveloping effects by hand and record the result on synchronous tracks. When parameter #37, Filter Resonance, is set to zero, the VCF's can sound like VCA's and give all manners of gating and re-enveloping effects. Parameter 37 set high yields the most dramatic filtering effects. If parameter #38, Keyboard Filter Tracking, is set to 4, and parameters 46 and 48, velocity sensitivity are set high, then you have both touch and position sensitive filters under your fingertips. Try controlling the filter processing by playing polyrhymically against the music being processed. You might have to take parameter 36, the cutoff frequency, all the way to zero to get the filters operating in the optimum ranges.

**3. MIDI controlled processing.**

This is the most significant application of the mod. You can now write a filter processing track as part of your MIDI sequencer. Since there isn't a MIDI-controlled filter box on the marketplace yet, you will be in new territory. Most of the newest high-end graphic equalizers now feature MIDI control of presets, and this is a very powerful and useful new tool. With the processor Mirage, you can use MIDI program change commands to instantly choose one of four presets (each with independent settings for each keyboard half) or you can have the Mirage load up a new bank of silent samples with different filter and envelope presets from disk.

My main interest in the processor Mirage is not calling presets. First, I find one good preset that works will with the program material to be processed. Then I use the MIDI sequencer to send to the Mirage MIDI note-on and note-off commands. These MIDI note commands along with velocity data interact with the envelope generator settings to give a much finer and continuous style of control over the filters and the processed sound. This is a step-up in computer-controlled filtering. Those of you who have a MIDI sequencer synched to a multi-track recorder should produce some very interesting results.

**4. Mixing external audio with the Mirage's sounds.**

This produces a different sound than mixing the output of the Mirage with another synth. When the sounds are mixed before filtering the blending effect is quite different. With the right external sound, many Mirage sounds which may sound weak or false at the extreme ranges of the keyboard are strengthened, and new hybrid sounds and effects are possible. If the external synth has one silent patch saved in its memory, you can use MIDI program change commands to switch between Mirage only (synth silent), processed synth only (Mirage playing silent sample), and Mirage plus synth mixed and then filtered.

The Mirage's filter cut-off frequencies are determined by the sum of seven different program parameters. When I use my Mirage for processing, I tend to set parameters 36, 70, 41, and 43 all to zero. That way the filters are controlled only by parameter #38, keyboard tracking, and high values for parameters 46 and 48, velocity modulation of the filter envelope. Once I get past the novelty of extreme filter resonance settings, I tend to leave parameter 37 at a low or moderate setting.

A mono signal sent to both inputs of the Processor Mirage will be available in an unusual form of stereo at the Mirage's outputs.

**The mod**

Performing the mod is very simple for a technician or a technically inclined musician. Most of the 30,000 Mirages out there are long out of warranty, so suffice it to say that this is done at your own risk and you take the standard precautions for working on delicate, static sensitive, emotionally sensitive, temperamental, ideosyncratic computer music instruments. Don't even look at this board funny, and don't rub it on the living room rug.

The idea here is to introduce external audio into pin five of each of the filters. Obtain two switching type female phone plugs and eight low-wattage (I use 1/8 watt) 10k resistors. With the front of the board facing you, find the eight filters chips on the right hand side marked CEM 3328. On the far right-hand side of the board, the resistors are labelled by number. Find the resistor labelled R123. Take one of the 10k resistors and shorten one lead to about half an inch. With a needle-nose pliers make a little hook on the end of the short resistor lead. Slide the hooked end under the exposed left side of R123, the side that is closest to the CEM 3328 filter chip. You might have to raise the resistor off the circuit board just a touch. Mechanically tighten the connection so that the 10k resistor is connected only to R123. Solder the resistor into place, making sure it does not short against any of the adjacent resistors.

Since all eight filters are identical, you will repeat this operation seven more times. Attach the 10k resistors to the left exposed leads of R95, R102, R109, R116, R123, R130, R137, and R144. Now you have eight 10k resistors sticking straight up from the board, and you have checked to make sure there are no shorts.

Choose any four of the 10k input resistors, and connect them together with one wire that leads to the hot terminal of one of the jacks. Since R95, R102, R109, and R116 are all in a row they make a natural choice. Do the same for the other four resistors and the other jack. Connect the ground lugs of the two jacks to the analog ground of the Mirage (the ground for the Mirage's digital electronics and the metal case are both independent of this ground). The right hand side of R127 is an easy place to locate and fasten a wire from analog ground. Be sure not to connect the ground of the input jacks to the Mirage's case. If you are going to mount the input jacks on the case, fasten them into a small panel of non-conductive material, such as lucite, plastic, or wood, and mount the panel onto the case. Wire the switching terminal of each jack to the hot terminal of the other. This way if only one input is used it will be sent to all eight filters.

If you have not already done so, this is a good time to install my stereo mod. Take eight more small 10k resistors and fasten them to the left side of R98, R112, R119, R126, R133, R140, and R147. Buss four of the resistors to one jack and four of them to another jack, and connect the ground lugs of the jack to analog ground.

These new outputs should be mounted on the same non-conductive panel with the Processor Mirage inputs. I find the resultant stereo a much more powerful, dramatic, and useful effect than the standard Mirage stereo. If a single Mirage is played alone in isolation with no ambience the factory stereo is preferable, because the random extreme panning is objectionable. In most any normal recording or performing context where the Mirage is combined with other instruments and ambience in a stereo mix, the extreme stereo movement is greatly moderated. The standard Mirage stereo can be imitated by panning the new outputs more to center.

Rather than combining the outputs of the CEM3328 VCF's with resistors internally, you can bring the outputs to eight channels of your mixer separately for individual processing. For a great pipe organ effect, route each of the eight separate outputs to an amplifier and speaker. The voices mix naturally in the air and sound wonderful.

If any of the filters whistle or oscillate increase the value of the resistors to 20k or add an op amp mixer inside the instrument.

I have checked the "Processor Mirage" idea with Doug Curtis of Curtis Electromusic Specialties, who designed and manufactures the DEM 3328 filters, and he found no fault in the design. The Curtis company will soon have a new distributor for small quantities of their parts for hobbyists and musicians wanting to stock spares. They can be reached at (408) 395-3350, ask for a referral to the new "low volume" distributor.

I have found the processor Mirage to be fun and useful. Beyond that I make no further claims.

There are better ways to do this mod, but they all involve much more work. For instance, you could pull the filters off of the Mirage board and use 14-pin dip jumpers to run the signals to another small circuit board. This way you can increase the quality of the processing by completely disconnecting the filter inputs, pins 5 and 6, from the digital part of the Mirage. You could build high-quality op amp mixers and actively control the mix of external and Mirage sampled audio for each filter.

If you find this mod useful, and would like a copy of my music catalog, please write to me: Don Slepian, Box 836, Edison, N.J. 08818 and send a S.A.S.E. Even though I can't answer all of your letters, your feedback is important to me. ■

# Leister Productions

*Patch Review by Chris Barth*

For: ESQ-1, ESQ-M, SQ-80.
Product: Leister Sounds.
Price: $29 ($3 s/h) for 240 sounds on cassette tape or ST disk.
From: Leister Productions, 14 Hill Blvd., Mechanicsburg, PA 17055. 717-697-1378.

Just off the Pennsylvania Turnpike near the Harrisburg state capital is the home of Leister Productions, one of the most prolific sources of synthesizer sounds in the business today. If you've got a D50, or FB01, or MT32, or Poly 800, or even one of the new Kawai synths, this outfit has very reasonably priced sounds for you. However, I'm still plugging away with my ESQ-1 and Baby M (wish I'd thought of that pun when it was more topical), so their ad for 240 new sounds for only $29 really sparked my interest. So without even listening to the $5.00 demo tape, let's look for the keepers and weepers in this collection.

The first 120 patches were offered for sale during 1987. In 1988, the second bunch of 120 were added to complete the package being sold today. They were programmed by Jim Welch and John Fitzgerald, who included sketchy liner notes that are more descriptive than instructional (GEST - a metallic hollow patch with autopan; TMBUZZ - a buzzy power chord sound; and so on). The package is nicely assembled with only a few typos and misplaced entries. I had no problem loading the sounds from a TEAC cassette deck with the tape output plugged directly into the ESQ. With some other data cassettes, it's sometimes necessary to route the tape output through a mixer to add sufficient gain to the signal so the ESQ will respond to it properly.

There are a few programming techniques which appear consistently throughout the package which I felt detracted from the true value of the set. To be more specific, many of the patches have all three oscillator volumes and the overall volume set at the maximum setting of 63. This introduces some distortion or grunge which more often than not is not suitable for the patch. I reduced the volume settings to the lower 50's across the board for these patches and this reduced lots of the offending noise or distortion.

Some of the LFO vibrato settings are way off in looney land. Again, if you cut back on the depth and the speed of the vibrato to accommodate the song you're using the patch in, the effect is improved greatly. The January, 1989 issue of Keyboard includes lots of tips for editing store-bought patches, and some of those techniques could be put to good use here. (By the way, the same Keyboard issue lists all available patch and sample suppliers for Ensoniq keyboards; you may want to staple that article to an issue of the Hacker.)

Finally, some of the patches have a shrill or piercing high end, or the high end is simply too loud. I made the mistake of playing some of them through my Aphex Aural Exciter and cracked the glass on my velvet Elvis picture frame. There are three solutions here: (1) don't run the ESQ direct through an Aural Exciter, since any exciter works by adding lots of mid- and high-frequency information to the signal and the ESQ is already dominant in this area (what it needs is a boost in the bass instead); (2) go to the filter page and cut back on the high end; and (3), my favorite - go the DCA page for each oscillator and modulate it using KBD or KBD2 with a small negative amount, like -4 or -5. Once you master this last technique, you can tone down any offending high end without affecting the overall sound of the patch in the other ranges.

With that aside, let's move to the sounds themselves. The best sounds by far are the ambient pads, many of which use voice waveforms. BACKVO fades in nicely, while TMBUZZ makes itself heard right away. STRPAD is a very warm and fat synth pad; I also liked FMPAD for chord progressions. Some of these pads are very soft and low-key kinds of sounds, like what you hear as filler in some movie soundtracks.

TAURUS is a simulation of the Taurus floor bass pedals. This is very good on the low register of the keyboard - lots of deep bottom in this patch.

Almost a quarter of the sounds are percussion. As percussion patches go, these are very electronic in their presentation. By themselves, there's no deep fundamental to establish them, so they're not going to move a lot of air when you play them. However, if you layer them over something, preferably a drum machine (or maybe a bass patch with a very short sustain), they can add a lot of new color to your percussion arrangements. The tom and snare sounds are the best, but there is a wide assortment from which to choose. In addition to the usual items, there are interesting simulations of a tabla drum with declining pitch called TABLA, and a tabla drum with inclining pitch called TABLA2.

My favorite percussion sound in the whole set is 3WISHS, a percussive wood sound with a small amount of noise mixed in. This, along with many others in this collection, are best realized when played by means of MIDI percussion controllers such as Roland Octapads.

As you might expect, there are lots of keyboard sounds to choose from. Standouts include OPERAS, a majestic pipe organ which would fill any cathedral, and MELODI, which is similar to the Rhodes electric piano but with a more prominent bell overtone. I wonder why everyone is so interested in imitating the Rhodes electric piano when no one wants to buy them anymore.

Where the set really breaks down is in the attempt to include a few standard analog sounds like guitar, sax, harmonica, french horn, etc. There aren't more than a dozen out of the whole 240, but they pale besides those available from other patch vendors like the Voice Crystal or the Music Bank. In my opinion, this set is a very good value for the money if you already have the basic sounds you need, and you're looking for a wide selection of fills, background pads, electronic percussion, and more exotic synth sounds to add some color or interest to your basic arrangements. If you can handle some of the basic edits described earlier, you'll easily find more than $30 worth of sounds here. And it's much cheaper than buying another synth!

*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.*

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# CV Pedal Adds Dimension To ESQ-1/SQ-80/EPS

*by Mik Adams*

### The Under-$30-No-Hands-Controller

The Control-Voltage or CV Pedal (Ensoniq model CVP-1) has been available since the introduction of the ESQ-1 in 1986, but there does not appear to be many people using them. What's the problem? $29.95 seems quite reasonable for another way to control 11 of the 15 modulation sources available on the ESQ-1 and SQ-80. Aside from the MOD WHEEL, the only other sources of real-time modulation control that come stock with the units are keyboard VELocity and, if you are lucky enough to have the SQ-80 with its "Poly-Key" polyphonic pressure-sensitive keyboard, key PRESSure (aftertouch). Granted, a linear controller does not give you the control some of the other types of controllers give, but we are talking less than thirty bucks. So let's see what we can do with this simple and effective device.

If you already have a CV Pedal, hopefully this article will turn you on to a couple more ways to use it. If you don't have one, read this article and you decide if you want to rush out and buy it.

The EPS sampling keyboard and the ESQ-1 and SQ-80 digital waveform synthesizers all have a "CV/Pedal" jack. This article deals with the ESQ-1 and SQ-80 (but much also applies to the EPS) and assumes that you have a basic knowledge of your instrument. For those of you who want to learn more about the stereo capabilities of the ESQ-1 or SQ-80, I recommend reading Clark Salisbury's "Stereo and the ESQ'1/SQ-80" in the February, 1988 issue of the *Transoniq Hacker*.

Basically, the CV Pedal regulates a control-voltage much like the Mod wheel. The obvious main advantage the CV Pedal has is that it doesn't require the removal of either hand from the keyboard to operate. It can be used to change the pitch of the three OSCillators, modify the gain of the four DCAs (Digitally-Controlled Amplifiers), control the cutoff frequency of the low pass FILTER and/or govern the intensity of the three LFOs (Low-Frequency Oscillators). Make sure that PEDAL="MOD" on the MASTER page. If it's set to "VOL", the CV Pedal will act only as a volume control.

One of the most effective uses of the CV Pedal is to control the stereo PAN function available on the ESQ-1/SQ-80. It is definitely worth the hassle of hooking up both channels for stereo, if you haven't already. Also, if you don't have your monitors placed on both sides of you, use headphones. They work great for monitoring the panning of the sound across the stereo field. And lest we forget, make sure you have backup copies of any patches you use for experimentation.

The simplest method of controlling the PAN of the stereo outputs of the ESQ-1/SQ-80 is to use the CV Pedal to vary the placement of the sound in the stereo field. I call this "hard" pan. This is accomplished by going to the DCA4 page of a patch of your choice and selecting "PEDAL" as the PAN MODulation source. If you want the sound to be to the far left in the stereo field when the CV Pedal is all the way back, set PAN to "4" and PAN MODulation depth to "+63". If we want the sound to the far right side when the CV Pedal is back, set PAN to "12" and PAN MODulation depth to "-63". This type of panning works well when layered with other keyboards and/or sound modules. We can make the pedal-controlled sounds "dance" around the other sounds that are stationary in the stereo field.

You can also layer two ESQ-1/SQ-80 sounds and PAN them to opposite sides. For example, select a good low or middle tom-tom patch. Go to the DCA4 page, set PAN to "4" and PAN MOD to "PEDAL" * "+63". Save this edited version by WRITEing it to a spare location. Now select another higher pitched tom-tom patch. Again go to the DCA4 page, but this time set PAN to "12" and PAN MOD to "PEDAL" * "-63". From here we go to the SPLIT/LAYER page. Set SPLIT to the name of the lower pitched tom-tom we modified and saved and set it to play on the "LOWER" half of the keyboard. Set the SPLIT-KEY to "60". This puts the split at C4, the beginning of the third octave. Position the CV Pedal at one of its extremes and play a rhythm pattern using the two-tom sounds. One tom will be on one side and the other will be on the opposite side of the stereo field. As we change the position of the CV Pedal from one extreme to the other, the toms change sides crossing in the middle as we pass through the CV Pedal's center position. Now let's hear a little "In-A-Gadda-Da-Vida" drum solo.

Another method of controlling the stereo PAN function on the ESQ-1/SQ-80 is to use an LFO to PAN the sound. This I call an "automatic" pan. To demonstrate this, pick out a nice string ensemble patch and go to the DCA4 page. Set PAN to "8" and PAN MOD to "LFO3" * "+63". This puts LFO3 in control of panning, but we could have used any one of the three LFOs. Now we turn to the LFO3 page to set up our automatic PAN. To start out we will set FREQuency to "6" and WAVeform to "TRI" (TRIangle). This will produce a smooth slow PAN. We also need to set MOD to "PEDAL" and L1, DELAY and L2 all to "00". This gives the CV Pedal exclusive control over the range ("width") of the panning effect. With the CV Pedal all the way back the sound appears in the center of the stereo field and no panning effect is generated. As we move the pedal forward, the panning effect becomes more and more pronounced until finally the sound is sweeping slowly from extreme left to extreme right. This method is also very effective for simulating the Leslie revolving speaker in organ patches. Use a FREQuency around "12" for LFO3, then use a different LFO with FREQuency set to about "34" and MODulated by the Mod "WHEEL" to simulate the fast spinning horn tweeter in a Leslie. Experiment! Try layering sounds that PAN independently of each other.

Let's see what we can do using the CV Pedal to control the low pass FILTER in the ESQ-1/SQ-80. The two MODulators on the FILTer page control the FILTer cutoff FREQuency. If we set one of the MODulators to "PEDAL" we can use the CV Pedal to control anything from subtle tone changes to radical "wah-wah" effects. The trick here is to get the FREQuency, RESonance (Q), KEYBoard tracking and MODulation depth parameters working together to produce the desired effect. Pick a patch you think will sound good with the "wah-wah" effect. A full-bodied synthesizer, an electric guitar or some other full sounding patch works well. Now go to the FILTer page and set FREQ = "36", RES(Q) = "22", KEYBD = "+14", MOD1 = "PEDAL" * "+23" and MOD2 = "OFF" * "00". Play something and listen to the effect the CV Pedal has on the sound. If we wish to make the filter sweep less pronounced, we can lower the value of RESonance (Q). This makes the CV

Pedal act more like a brightness or tone control.

If you want to adjust the low end of the filter sweep, one way is to bring the CV Pedal all the way back and adjust the FREQuency parameter, while repeatedly striking a note, until the desired tone characteristic is achieved. Another way is by increasing or decreasing the value of the KEYBD parameter on the FILTer page. The highest frequency the CV Pedal will pass can be adjusted by increasing or decreasing the depth value on the MODulator assigned to "PEDAL". All the various parameters on the FILTer page interact with each other, so like I said...experiment.

This last technique uses the CV Pedal to control the loudness or pitch of an OSCillator used to produce a harmonic or some pitch one or two octaves above the other two OSCillators. Rather than try to find a patch that already meets this criteria, let's modify a brass patch and utilize the CV Pedal to blend in some high brass. After selecting a patch, go to the OSC1 page and raise its pitch one then two octaves by increasing the value of OCTave. Listen to whether it sounds like high brass. If not, reset it to its original value (use the COMPARE button if you forget) and go to OSC2, then OSC3 and try again. If none of them work, try another patch. When we find the OSCillator that sounds best, switch to its respective DCA. To give the CV Pedal total control over the loudness of this OSCillator, adjust the LEVEL of its DCA down to "00" and assign one of the MODS to "PEDAL" * "+63". Now the CV Pedal can be used to blend in the high brass whenever we wish. The pitch can be controlled by using the CV Pedal to MODulate the OSCillator instead of its DCA. A MODulation depth of 24 or 25 produces a one-octave change in pitch.

One last word, if you need to use your foot for some other function like sustain on a piano or strings, just use the CV Pedal like you would your Mod wheel....set it and forget it. You don't have to keep your foot on the pedal constantly. It's not a gas pedal, it's a "cruise control".

We went through all of this pretty fast, but if you pick one of the effects and work with it, you will get a feel for it in no time. Then you can try one of the other effects. As you can see there is much that can be done with the CV Pedal. There are probably several more ways to utilize it, but I leave that up to your imagination. The ESQ-1, SQ-80, and EPS are very powerful instruments and the only way to learn what they can do is to experiment on your own. If you don't have a CV Pedal, try the effects using the Mod wheel. Then go out and get the "under-thirty-dollar-no-hands-controller" so you can use your Mod wheel for vibrato again. ■

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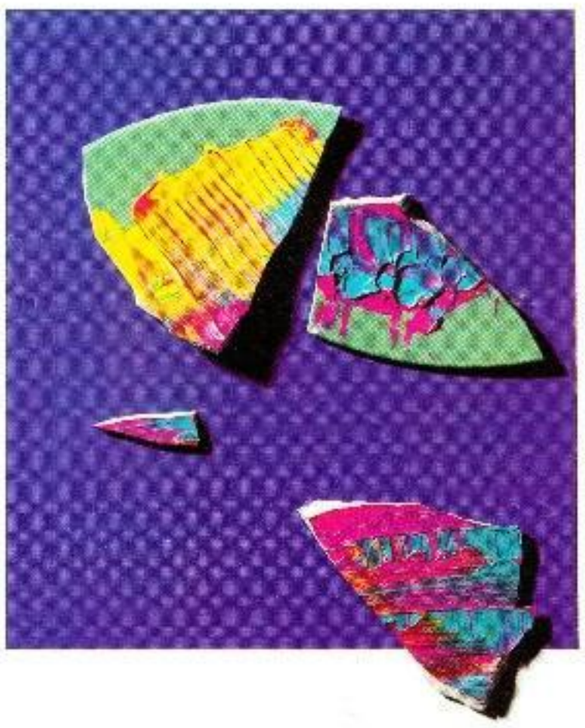

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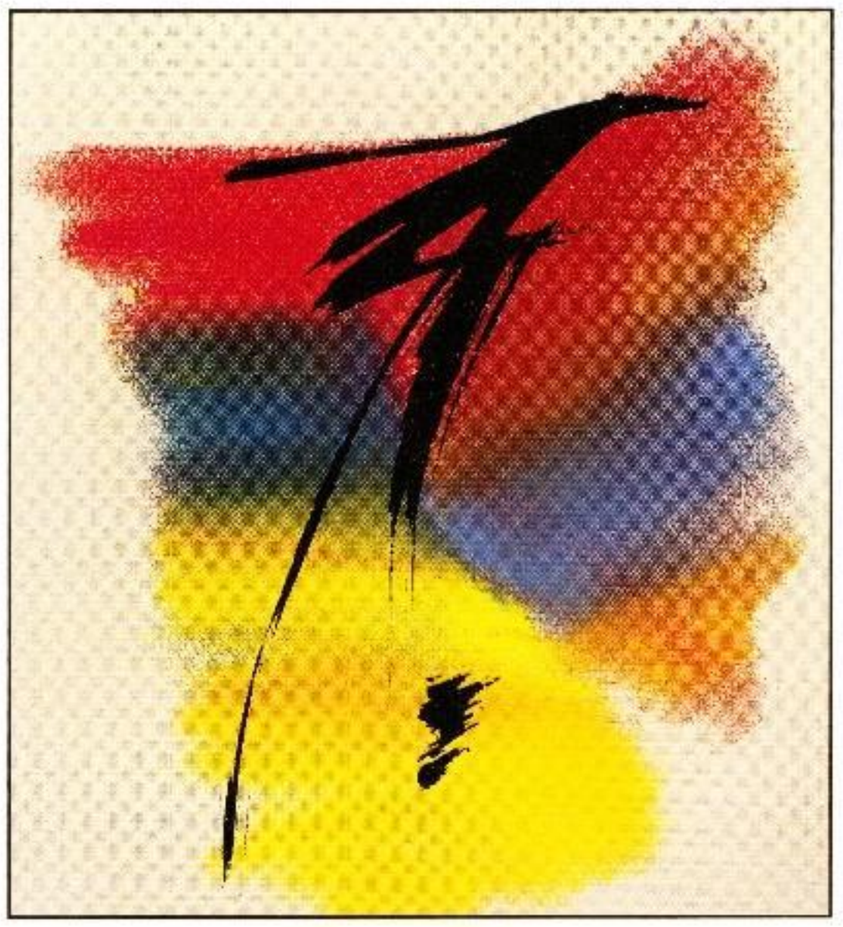

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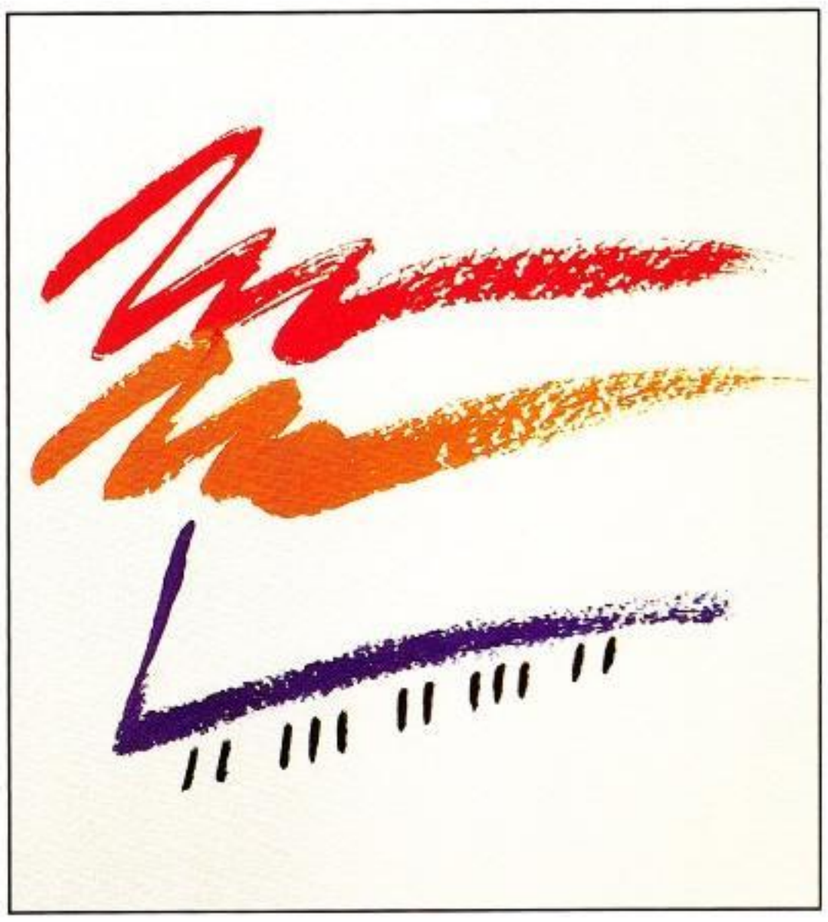

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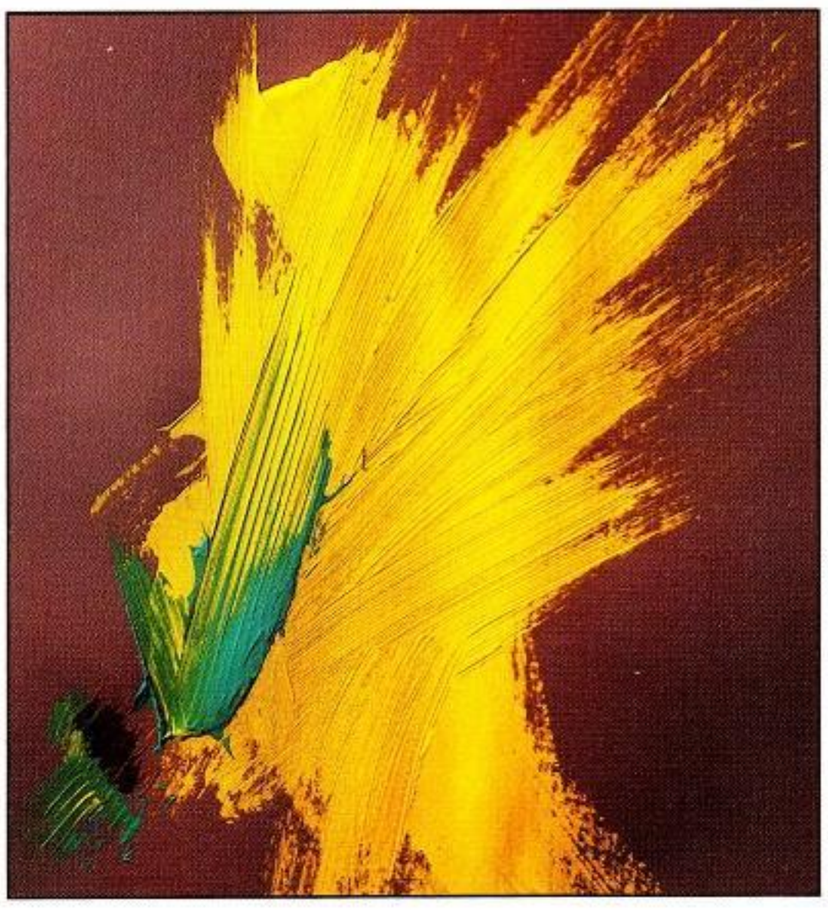

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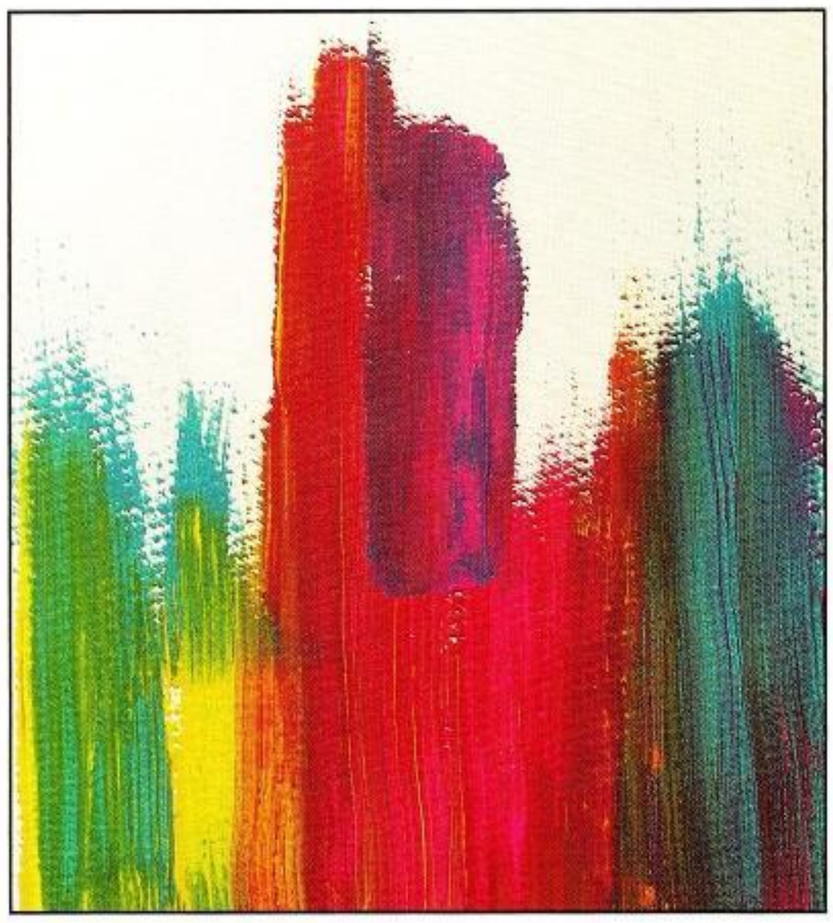

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# Mescal Music - Patches for the SQ-80

*Reviewed by Mike Sales*

For: SQ-80
Product: 40 Sounds for the SQ-80
Price: $12.95 for 40 sounds and demo sequence on disk.
From: Mescal Music, P.O. Box 5372, Hercules, CA 94547, (415) 724-0804

Like many other SQ-80 owners, my initial group of patches were designed originally for the ESQ-1. Like other working musicians, the need to build up a collection of "working" sounds gave precedence to approaching the instrument creatively. As time went on, I learned about the instrument and started to develop my own set of sounds, and tossed the ESQ sounds one at a time. Still, the need for alternate programming ideas are essential, even for an experienced programmer. Unfortunately, there has been a slight drought in SQ-80-specific patches, as most developers remain conscious of "backward compatibility", or just offer barely rehashed ESQ patches. Because of this, SQ-80 owners are faced with unnecessary expense (cartridges), hassle (cassettes), or software that doesn't fully realize the potential of our hard-earned $1895 machine.

With this in mind, it is refreshing to see a new set of patches designed just for the SQ-80. And these 40 sounds, offered by Charles R. Fischer of Mescal Music, provide new owners with a collection of "ready to work" patches, as well as giving the veterans an SQ-80-specific approach to the meat-and-potatoes programs that help us pay the rent.

This volume contains organs, strings, pianos, clavinets, analog sounds, sound effects, some FM-types, and some very nice original concepts. Also included on the disk is a sequence to show off some of the sounds. I received very sparse documentation with the disk, so the sounds that weren't immediately identifiable were sometimes tough to categorize. An example of this is a sound called MONSTR, which I thought at first was a punchy bass sound. After playing with after-touch, I came to the conclusion that this is really a solo guitar sound - I think.

Up front, I can say that I disliked only a few of these sounds. WURLTZ, while emulating the basic timbre of an old Wurlitzer electric piano, has very unpiano-like envelopes. It does, however, have a great stereo tremolo.

Let's run down the sounds on this volume. There are two standouts in the percussive keyboard category; MESCAL, a mallet sound with a great stereo vibrato, and PURITA a very realistic kalimba. Other keyboard patches are: CLKPNO (piano with a chirpy-click" on the attack), MMEP3, and THPNO2, both members of the "Obligatory DX-7 Pseudo-Electric Piano Emulation Brigade". There are three sensational Hammond Organ patches, JAZORG, B3+, and BIGB_3, and one compact sound, SFTORG. Although most of the sounds are optimized for stereo, I liked the organ patches better in mono.

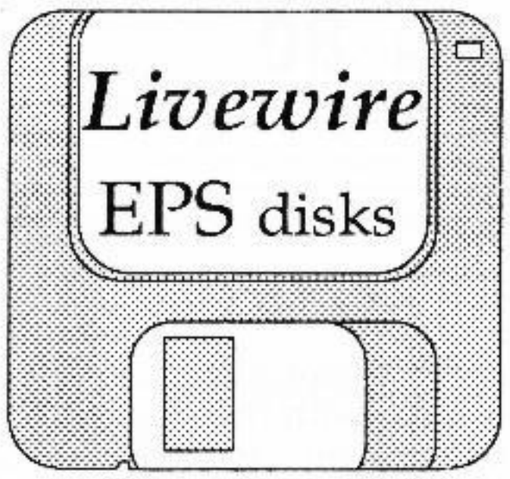
There are 2 clavinets and 1 harpsichord on the disk. These are among the best emulations that I have heard from any synth, let alone the SQ-80. I found FLCLAY to be my favorite; it is a very rich and full sound, but can be "chorused" by way of the mod wheel, which allows it to blend with other instruments in the band. There are three very good, full brass patches that, while somewhat analog sounding (not a bad feature, mind you), they entice you to experiment with their parameters. This volume also feature three bass sounds, FRETLS, SQBASS, and ARP BS. The first two make use of the BASS waveforms in the SQ-80, and are bright and punchy without too much bottom end. ARP BS, on the other hand, is a fat and full analog bass patch that will cut through. While I'm on the subject of analog, PRO-5 and SYN6 are two good lead patches with a lot of room to experiment. On PRO-5, only two oscillators are used, so you can use OSC 3 to add any kind of character you want. I found using SYNTH3 gives it a digital edge, while FORMINT3 fattens it up nicely.

JUNGLE is a nice flute sound that seems like it's taken right from the pages of *National Geographic,* while STEEL is a mellow steel drum. There are two good string patches, a DX-7 style harmonica, and a decent nylon string guitar. If you're into scoring soundtracks, you'll find uses for TOM and TIM, a sweeping layered combo, COSMOS, an echo effect, and MMAGIC, a koto-type patch. There's also MMPAD, a synth pad with a percussive attack, KICKER, a bass drum with punch, powerful gated tom toms, and a TR808 snare drum. Rounding it out, you'll also find WATER, BOMBS, WIND (Which used aftertouch to control the howling), and GHOSTS.

All in all, this is a very useful set of tweakable patches. If you're not the tweaking type, Charles offers free custom editing suggestions to all who could afford a self-addressed stamped envelope. I personally find this an exercise in masochism, but a bold move, and an extremely helpful service to those who need or want the help, as well as the first step in developing your own synth programming capabilities.

If you're a gigging musician with a brand new SQ-80, or a seasoned owner looking for fresh insight into the basic sounds, this is a collection for you. And, at $12.95, you owe it to yourself to at least put it in your library.

*Bio.: Mike Sales is a software designer and part-time MIDI consultant. He is well versed in electronic musical technology, and has been programming synthesizers for the last 10 years. His single claim to fame is shaking hands with Joe Jackson once at the Bottom Line in New York City.* ▬

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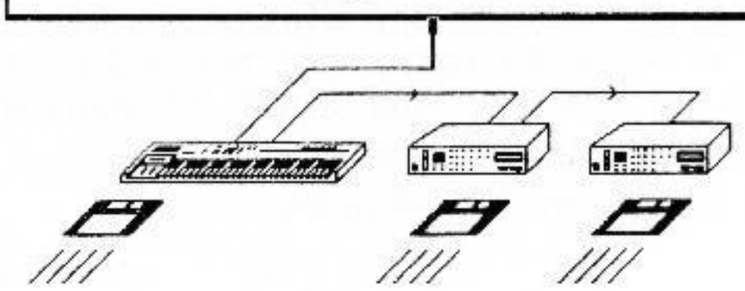

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# The EPS Users Guide

*Reviewed by Kenn Lowy*

For: EPS.
Product: "The EPS Users Guide" by Gary Dinsmore.
Price: $20.
From: Gary Dinsmore, 32695 Daisy Lane, Warren, OR 97053.

Since the introduction of the EPS last year, the manuals that explain the operating system and sampling capabilities of the machine have been slow to arrive. And these are the manuals that Ensoniq was supposed to have released with the machine. All of us EPS owners waited with baited breath to get our hands on the Final Manual (which arrived only a few months ago). Maybe this has happened before with other synths (and if so, I'd like to know about it, if only for historical reasons), but it still strikes me as an absurd situation.

Now that Ensoniq has released/published three manuals, at last count, and an outline booklet, Gary Dinsmore has come along with his vision of what an EPS manual should look like.

Dinsmore's book is not so much a manual as a reference guide. The book takes you through every system page and function available on the EPS, explaining in detail what every function/page does. The book is impressively thorough. You might think that Ensoniq has already done something like this with their manuals, but alas, there are quite a few things missing in the Ensoniq books, which will make this reference manual that much more appealing to EPS owners.

For example, did you know that pressing Command envelope 1 then the number 2 will get you system information? Scrolling through this page (using the arrow keys) you'll find some useful stuff about the RAM (disk-based) version of the O/S, the ROM version (useful if you ever have a problem and have to call Ensoniq customer support), keyboard version, etc. I couldn't find any place in any of the Ensoniq manuals that described how to find out what system version I was using. Maybe it's hidden there somewhere, but it's not easily found. It is easily found in Dinsmore's book, partially because this reference manual also comes with an excellent table of contents and index. So finding any function is easy and more important, FAST.

The table of contents lists every possible parameter you'd want or need to know about. To give you an example of what's covered in just one section of the book:

COMMAND AMP
0 Normalize Gain
1 Volume Smoothing
2 Mix Waves
3 Splice Wavesamples
4 Fade In
5 Fade Out

Each section, for example Fade Out, gives a blow by blow description of what this function really does, and how to use it. It is written in a clear step-by-step, cookbook manner. Fade Out is "used to create a zone where the volume decreases from full volume to 0." After that simple explanation there are six steps which are clearly explained, ending with your selected wave fading out.

As I mentioned above, this is not really a "how to" book - it is straight information as to what each page will do. It is well written and thought out, and Dinsmore is only asking $20 for a book that I feel is essential for any serious EPS user/owner. I used the book extensively while recording my album over the past month. I was doing a lot of sampling and tweaking, and hadn't done any programming/sampling on the EPS in about four months, so Dinsmore's book (along with Ensoniq's Advanced Applications Guide) was a huge help. I admit that Ensoniq's book was used about half of the time, but Dinsmore's book helped me save a lot of time when looking for a specific function.

The version of the book that I have is in a loose leaf binder format and is a pre-release version. Each page is one sided so it takes up a bit more room than is necessary (70 single sided pages), but the final version may be in a different format. It really doesn't matter much because the information within will remain the same.

The opening page contains a message from the author which is worth repeating here. "My intention is to create a reference manual that will provide a logical format for exploring and understanding a very complex piece of equipment...I will update the manual from time to time. The first update will come a couple of months after the 4x expander becomes available, and is included in the purchase price of the original manual." Sounds good to me!

There really isn't much more I can write about this. As far as I'm concerned, if you can scrape up the twenty bucks, go out and get it. I doubt if any of the hackers readers will regret the purchase.

*Bio: Kenn Lowy has finally finished recording his 1st lp/cd and can now concentrate on the upcoming triathlon season, getting the record out to the public, and sampling weird sounds into his EPS.* ▬

# Hackerpatch

*By Sam Mims*

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

## The Patch: PACMAN

*by Gregory M. Brettell, The Patch Well*

*Have you ever wanted one of your songs to sound like an arcade? Here it is. Create a sequence with eight tracks of random rhythm with this patch and you'll go bizoyk! For a "randomized quasi-automatic run" turn the AM (MODES page) on. This patch may cause brain damage.*

### The Hack

Well, okay, you won't use this patch in every tune, but it won't really cause drain damage. If you're waiting on stage for the guitarist to change a string, it might be devious fun to act bored and play this "video game." The sound rises in pitch quickly, and ends in an apparent bell hit. But wait - there's more. There's a pseudo-echo that sneaks in a second later and glides downward. Play many notes quickly. Have fun. Drive the band wacko.

## The Patch: WICKED

*by Jim Grote, Cincinnati, OH*

*Here is a very powerful sound with a harsh and complex attack. The sound uses one of my favorite features of the ESQ-1, the ability to sync the second oscillator, thus creating very complex waveforms and unique timbres. For the attack, the pitch of OSC2 is quickly swung down, remaining in sync, but creating the harsh sound.*

*Playing the upper half of the keyboard with this patch gives a good biting lead sound, while the low end is a blasting full bass sound. One last word: always try layering new sounds with the ones you already have. You can create some fascinating timbres this way.*

### The Hack

This sound is big, mean, and nasty. It may make your ears bleed. This patch packs plenty of punch.

Wimpier programmers may be bothered that the low end sounds out of tune sometimes. It's not really. The harshness of the sync makes it seem that way though, so here are some ways to tame the sound a bit. The harshness is caused by ENV1 sweeping OSC2's pitch; but since OSC2 is synced to OSC1, only its * waveform * sweeps, and not the pitch. By decreasing the DEPTH of MOD1, this second oscillator is toned down. A different way to tame WICKED, with a somewhat smoother result, is to simply turn down the LEVEL of DCA2. The tough guys and gals, though, won't want to change a thing.

## The Patch: CONGA

*by Tim Edwards, Durham, NC*

*The name is self-explanatory. I chose SQR2 for OSC1 because it produced the sound I liked the best. However, most people will probably prefer NOISE1 here because the sound is more realistic. In that case, put the mod depth of the pedal on the FILTER page to 0. The pedal is optional, but it gives a nice "thwack" sound when on.*

### The Hack

As far as OSC1 goes, I actually prefer NOISE3 as the waveform. The wave of OSC2 is something to experiment with as well. For a thinner sound, try BELL here, and for more tone, try SQR2 or OCTAVE. In these latter cases, you may want to adjust the FILTER FREQuency downward.

The use of the pedal is a nice touch; use it very subtly to add different sounding hits during a pattern, as if the hand were hitting more of the drum rim. The lack of dynamic touch bothered me though, so I zipped over to the ENV4 page and changed LV from 00 to the other extreme (63). Overall, this is a nice conga imitation that will complement drum machines lacking in Latin percussion sounds. In addition, you get a good bongo sound in the middle register of the keyboard.

## The Patch: MOBASS

*by Charles Fischer, Mescal Music*

*MOBASS is the best bass sound that I've been able to pull out the SQ-80 so far. Punchy, mellow and with a lot of sustain, MOBASS should work with many types of music.*

### The Hack

This patch is pretty much like a bass guitar, but with a hint of synth flavor. OSC2 adds the attack with the PICK2 waveform, while OSCs 1 and 3 carry the main portion of the sound. To make the sound a bit less static, it's easy to add a slight bit of detuning by changing FINE of OSC2 to 2. I also like to have control of vibrato, so I used LFO1 and the mod wheel to add some wiggle to OSCs 1 and 3. (Set up LFO1 with FREQ+22, WAVE=TRI, and MOD=WHEEL; for OSCs 1 and 3, set MOD2= LFO1 and DEPTH=+03.)

For some bass variations, try turning FREQ=00 on the FILTER page, for a poppy dance bass. To add more synth flavor, turn RES=15.

To modify the sound for ESQ use, change VELX to VEL, and set the WAVE of OSC2 to whatever pleases you. Try all the waveforms here; there are some interesting variations. KICK, BASS and NOISE3 are all possibilities.

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

## ESQ-1 PROG: PACMAN

BY: GREGORY BRETTELL

| | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|---|
| OSC 1 | -3 | 0 | 3 | BELL | ENV2 | 63 | ENV2 | 63 |
| OSC 2 | - | - | - | - | - | - | - | - |
| OSC 3 | - | - | - | - | - | - | - | - |

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

| | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|
| FILTER | 102 | 0 | 0 | OFF | - | OFF | - |

| | FINAL VOL | PAN | PAN MOD | DEPTH |
|---|---|---|---|---|
| DCA 4 | 63 | 8 | LFO3 | 63 |

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

| | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK |
|---|---|---|---|---|---|---|---|---|---|---|
| ENV 1 | 63 | 28 | 63 | 0 | 0 | 0 | 38 | 38 | 63 | 0 |
| ENV 2 | 57 | 63 | 0 | 0 | 0 | 20 | 26 | 50 | 20 | 0 |
| ENV 3 | - | - | - | - | - | - | - | - | - | - |
| ENV 4 | 63 | -63 | 26 | 0 | 0 | 0 | 40 | 0 | 35 | 0 |

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

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

## ESQ-1 PROG: WICKED

BY: JIM GROTE

| | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|---|
| OSC 1 | -1 | 0 | 0 | VOICE1 | LFO3 | 2 | OFF | - |
| OSC 2 | -1 | 0 | 2 | SAW | ENV1 | 63 | OFF | - |
| OSC 3 | -1 | 0 | 5 | VOICE1 | LFO2 | 2 | OFF | - |

| | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|
| DCA 1 | 49 | ON | OFF | - | OFF | - |
| DCA 2 | 63 | ON | OFF | - | OFF | - |
| DCA 3 | 48 | ON | OFF | - | OFF | - |

| | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|
| FILTER | 107 | 0 | 10 | OFF | - | OFF | - |

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

| | FREQ | RESET | HUMAN | WAV | L1 | DELAY | L2 | MOD |
|---|---|---|---|---|---|---|---|---|
| LFO 1 | - | - | - | - | - | - | - | - |
| LFO 2 | 11 | OFF | ON | TRI | 18 | 52 | 19 | OFF |
| LFO 3 | 22 | OFF | ON | TRI | 0 | 0 | 10 | WHEEL |

| | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK |
|---|---|---|---|---|---|---|---|---|---|---|
| ENV 1 | 50 | 6 | 59 | 23 | 24 | 8 | 23 | 41 | 13 | 0 |
| ENV 2 | - | - | - | - | - | - | - | - | - | - |
| ENV 3 | - | - | - | - | - | - | - | - | - | - |
| ENV 4 | 63 | 63 | 63 | 10 | 63 | 05 | 0 | 0 | 22 | 63 |

| | SYNC | AM | MONO | GLIDE | VC | ENV | OSC | CYC |
|---|---|---|---|---|---|---|---|---|
| MODES | ON | OFF | OFF | 3 | OFF | ON | OFF | OFF |

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

## ESQ-1 PROG: CONGA

BY: TIM EDWARDS

| | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|---|
| OSC 1 | 0 | 4 | 11 | SQR2 | ENV1 | 20 | OFF | - |
| OSC 2 | 0 | 0 | 0 | SINE | OFF | - | LFO1 | 31 |
| OSC 3 | 3 | 0 | 0 | NOISE1 | ENV1 | 20 | LFO2 | -63 |

| | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|
| DCA 1 | 0 | ON | ENV2 | 63 | KBD2 | -11 |
| DCA 2 | 0 | ON | ENV2 | 63 | PEDAL | -63 |
| DCA 3 | 0 | ON | ENV2 | 63 | OFF | - |

| | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|
| FILTER | 10 | 2 | 20 | ENV3 | 50 | PEDAL | 12 |

| | FINAL VOL | PAN | PAN MOD | DEPTH |
|---|---|---|---|---|
| DCA 4 | 55 | 8 | OFF | - |

| | FREQ | RESET | HUMAN | WAV | L1 | DELAY | L2 | MOD |
|---|---|---|---|---|---|---|---|---|
| LFO 1 | 6 | ON | OFF | TRI | 0 | 0 | 39 | WHEEL |
| LFO 2 | 0 | ON | OFF | TRI | 63 | 63 | 0 | OFF |
| LFO 3 | - | - | - | - | - | - | - | - |

| | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK |
|---|---|---|---|---|---|---|---|---|---|---|
| ENV 1 | -15 | -15 | -30 | 0 | 0 | 0 | 1 | 2 | 63 | 0 |
| ENV 2 | 63 | 63 | 14 | 0 | 0 | 3 | 10 | 10 | 30 | 0 |
| ENV 3 | 63 | 25 | 0 | 0 | 0 | 0 | 0 | 63 | 30 | 0 |
| ENV 4 | 63 | 33 | 5 | 0 | 0 | 1 | 17 | 16 | 17 | 23 |

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

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

## SQ-80 PROG: MOBASS

BY: CHARLES FISCHER

| | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|---|
| OSC 1 | -1 | 0 | 0 | BASS | ENV2 | 2 | OFF | - |
| OSC 2 | -3 | 0 | 0 | PICK2 | VELX | 1 | ENV2 | 3 |
| OSC 3 | -1 | 0 | 0 | BASS | OFF | - | OFF | - |

| | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|
| DCA 1 | 56 | ON | OFF | - | OFF | - |
| DCA 2 | 28 | ON | VELX | 21 | KBD2 | -12 |
| DCA 3 | 56 | ON | OFF | - | OFF | - |

| | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH |
|---|---|---|---|---|---|---|---|
| FILTER | 16 | 2 | 18 | ENV3 | 47 | ENV2 | 29 |

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

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

| | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK |
|---|---|---|---|---|---|---|---|---|---|---|
| ENV 1 | - | - | - | - | - | - | - | - | - | - |
| ENV 2 | 63 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| ENV 3 | 63 | 30 | 1 | 29L | 22 | 0 | 28 | 47 | 37 | 15 |
| ENV 4 | 63 | 55 | 0 | 15L | 0 | 0 | 4 | 52 | 22 | 12 |

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

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

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Mirage DSK-8 sampling keyboard. Great condition with disk library, MASOS and manuals. $650. J.D.W. 205-878-7177 after 5 pm CST.

Passport MIDI interface for Apple IIe & compatibles, w/tape sync & MIDI/8+ sequencing software, $175. Mirage VES for C-64, $50. Soundprocess, $100. Pat Finnigan, 317-357-3225.

For Sale: Mirage, $800; ESQ-M, $600; Opcode Studio Plus Interface, $100; Fostex 450 8ch Mixer, Fostex 80 8tr deck, Fostex 4050 Autolocator & cable, $2600 for all three; (2) Alesis Midiverb 11's, $425; 100's of factory Mirage disks @ $4 ea; TH issues 11, 20-43, $40 set; MOTU Performer $275; MOTU Composer $300; Opcode ESQ Ed/Lib $100; SoundDesigner (Mirage) $250; 3 ESQ carts @ $15 ea. Call Ed, 704-464-4179 between 7 pm - 10 pm EST.

### SOFTWARE

Used SoundProcess. 2 Masters, manuals, and 4 sound disks: $200. Dr. T VDS: $50. Echo+: $30. 201-736-7160, Evenings EST.

SoundProcess package for sale. Complete system 1.3, with Instruction Manual, Tutorial Guide, Waveform Sheets, and 3 Factory provided disks (and box). New $245, must sell quick, $100 includes shipping. Call Mike Castronovo, 815-398-4477, Sudio "B", Rockford, Ill.

**C-64** Software: Sonus Visual Editor for Mirage $30, Dr. T's Keyboard Controlled Sequencer $25, Dr. T's DX/TX-7 Patch Librarian $25, Dr. T's Echo-Plus $15, Passport Interface or Sequential Sequencer/Interface $25. Call Jeff: 419-385-5745.

For Sale: Dr. T's ESQAPADE $75, 1500 ESQ1/ESQM/SQ80 PD sounds $25, Dr. T's MRS Sequencer $25, Transoniq Hacker (1 through 38) $55, or everything for $150. Giorgio, 602-395-5076 (Office hours).

**Just Intonation Calculator**, by Robert Rich. Macintosh Hypercard stack makes JI easy: shows scales to 48 notes/octave; calculates transpositions; reduces fractions; converts between ratios, cents, DX711, TX81Z units; internal sound. Only $10.00. Soundscape Productions, Box 8891, Stanford, CA 94309.

PASSPORT (Master Tracks) 16-track Sequencer Pro, C-64, $75.00. MUSIC DESIGN X-Lib for all DX/TX Synths, C-64, $15.00. ELTEKON PRODUCTIONS ESQ-1 640 Voice Cassette, $25.00. ORBITAL ACTION MUSIC, PO Box 55191, Grand Junction, CO 81505.

MSCI - IBM VES for Mirage and MPU-401. Reviewed in Issue #38 of TH. Program: $55.00, Demo: $10.00. Add $5 S/H. Send check to: Jeffrey Richter/Donna Murray, 3502 Village Bridge Apts, Lindenwold, NJ 08021. Phone: 609-346-0943.

### WANTED

**Wanted: Church Handbell Patches.** Small church with ESQ-1 wants to have electronic handbell choir. $100 for best patch received before April 30. Send entries to Nursing Home Ministries, c/o 537 North Ave., Westfield, NJ 07090. Thanks for your interest and support.

### PATCHES

Yes! I'll prove the ESQ can play SAX! Real! Crisp! Growling! Like you've never heard! More? Take the Real Tremolo and Distortion Guitar! They'll fool anyone! Incredible Concert Strings, True Harmonica (wailing blues harp), Accordian, Marimba, Harpsichord, Piccolo, Digital Delays, Chopper, more. These are my "Top 40" of over 3000 sounds. One bank of the BEST. No K-Mart sounds! $14.95 data cassette plus $2.50 shipping and handling. Guaranteed! Jim Symonds, 4 Kenwood St., Portland, Maine 04102.

Introducing the first release of 80 alternative patches for the ESQ-1/SQ-80 for the musician who has every patch except... The "Goosebump" Series. $20/data cassette, Demo=Free (+ $1.50 p/h). From: The Patch Well, 1826 E Indianola, Phoenix, AZ 85016. "Quality Not Quantity."

ESQ-1/SQ-80 840 Sparkling Sounds!! Professionally Programmed. Super Synth, Bass, Brass, Thick Strings, and many unusual sounds. 280/$19.95 or all 840 for only $39.95. P/H $2.50. Music World, 617 Panorama Dr., Grand Junction, CO 81503.

**SOUND LOGIC** ESQ-1/SQ-80 "Modular Voice System". 120 Stereo Voices - 80 Fundamental and 40 Unique. Extensive implementation of CV Pedal and Poly-pressure. 64-page Owner's Manual with program sheets and performance notes. SysEx, Mirage disk and all other standard formats supported. $39.95. FREE Shipping & Handling. For brochure or to order: SOUND LOGIC, 1125 Eleventh Street, Ramona, CA 92065. 619-789-6558.

### SERVICES

Custom EPS Sampling and Mod Service. Expert sampling - custom orders. Can do - will do. Rubber Chicken Software, Box 428, Renton, WA 98057. 206-242-9220.

### SEQUENCES

For the ESQ1 with expanded memory: classical music sequences for organ and piano scores, including patches for the proper sounds. 10 volumes available. Supplied on high quality data cassette and individually made at $14.95 each or audio cassette at $6.00 each, plus $2.00 S/H. Send for free list. Newest volume - The Piano Music of Scott Joplin. Don Pribble, 6810 Hwy 55, Minneapolis, MN 55427.

### PUBLICATIONS

"The EPS Users Guide," 75-page reference manual for Ensoniq EPS. Price includes shipping in the continental US and free SCSI drive section update in late 1989. Send $20.00 check or MO to Gary Dinsmore, 32695 Daisy Lane, Warren, OR 97053.

### OUT-OF-PRINT BACK ISSUES

M.U.G. will provide Out-of-Print issues for cost of materials and postage. M.U.G. Hotline: 914-963-1768 or write: G-4 Productions, 622 Odell Ave., Yonkers, NY 10710.

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

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

### FREE CLASSIFIEDS!

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

# The Interface

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

Dear Hacker,

I purchased an EPS with the 2X expansion. On the box for the memory expander it says that the memory will be increased to 896k. I thought that this would take the machine to 1 meg. When I check free blocks on the EPS I get 2041 which is just under 1 meg. I have also seen literature that says the EPS comes with 480k and can be upgraded to 896k. It seems to me that the machine starts with 512k and can be upgraded to 1 meg. Why the 2 different figures?

Tom Green
Urbana, IL

*[Ensoniq's response - You need to understand the difference between bytes and words. Each EPS sample is stored as a 13-bit word. It actually takes a little over 1.5 bytes to store a simple sample. Only in an 8-bit system would the number of bytes and the number of samples in memory be the same. The basic EPS has 480k bytes of RAM which provides 256k words of sample memory.*

*On the EPS keyboard, the 2X expander adds 416k bytes, giving a total of 512k words of sample memory. The 4X expander adds 1.66M bytes for a total of 2.1M bytes. This provides 1M word of sample memory and 256k words of sequence memory.*

*The EPS-M on the other hand, has 1M word built-in which is shared by the sample memory and the sequence memory.]*

Dear Transoniq Hacker:

I recently purchased an SQ-80. I have been having a problem with the APPEND function of the sequencer. Every once in a while when I try to append a sequence to itself, after the operation, it will show the correct new length for the sequence, but when I play the sequence back, it stops after it reaches the original length as if I never appended it to itself. For example, if I try to append a 4 bar sequence to itself, it will show that the new sequence is 8 bars long; but when I play the sequence, it stops after the 4th bar (or starts at bar 1 again if the loop function is on). This only happens once in a while, and not any specific sequence location.

Is this just a small bug in the system or is there something wrong with my keyboard?

Sincerely,
Anthony Botta
Valley Cottage, New York

[Ensoniq's response - We haven't encountered this problem with the SQ-80. Possibly the sequencer RAM has somehow become corrupted, in which case you need to reinitialize the SQ-80. (See page 16 of the Musicians' Manual.) Also, check that you have the most current software version which is 1.8.]

Dear TH:

I apologize for having to do this, but I can no longer offer my services for back issues. I keep getting requests for issues 13-41 inclusive. I tell these people that I'm doing the out-of-print issues only, but they want them all (because of the price, I'm sure). So I hope no one takes it personally as I have, since a bad coupla apples...

Anyway, corrections to #43. Dick Lord was a contributing writer/editor to the AAG being bundled with new EPS's. At least he's listed as an "additional material" contributor. Regarding the new EPS rackmount (and its hefty price) - I don't think it'll work, but then again, Kurzweil wrote red ink until Bob Moog pushed them into rackmounts. Am trying to obtain PS's 4X w/SCSI for evaluation. Ensoniq shipped me an update kit with a ribbon connector way too short to reach the auxiliary expansion buss. Not a major problem till the 3rd or 4th EPS comes in for the upgrade. Niggling details...

Unfounded rumor department: Music dealer claims he talked to Ensoniq rep and the Mirage is adieu for 1989 with ESQ to follow suit; claims not-so-brisk SQ-80 sales and drying-up Mirage market not profitable enough. Local dealer no longer stocks either item; will order for customer. Mind you, not even a demo ESQ or DSK. No one is talking. Hmmmm...

Backup software for EPS hard drives still not available. Waiting list grows longer and longer. Monochrome IBM clone w/40M HD now $200 cheaper than proposed 4X Ensoniq expander (projected $1095 mid-late summer 1989), so Japanese/Korean balance further inequitable. Korg selling 4DRAM masquerading as M1, rackmount prototype to be in dealers showroom mid-late January. Korg dealers still waiting for aforementioned M1 rack. Election year; perhaps no administration will relax import sanctions...

P.S. Tell Steve to keep whipping that dead horse!

P.P.S. When do we see Dick Lord's "Inside the EPS Part II"?

Pat Finnigan
Indianapolis, IN

*[TH - Ensoniq informs us that they have indeed stopped shipping the Mirage and the ESQ-1. Well, it had to happen... The end of an era.*

*We keep bugging Dick Lord. Very busy person.]*

*[Ensoniq's response - (We do not send SCSI kits to end users; Pat does some work for IRC Music in Indianapolis, Indiana.)*

*If you add up the cost of an EPS keyboard with the 4X expander, SCSI, and the OEX-8 output expander, the EPS-M is actually less expensive.*

*The back-up software for the EPS is planned for a future OS version; there is no release date at this time.*

*Concerning the price of the 4X expander, the price of personal computers has little to do with the price and availability of DRAM's, hard disks, etc., for small markets such as musical instruments (which, compared to the computer industry, is a very small market).]*

Hello Fanatiks!

Yes it does exist! A 32-new-waveforms (ROM) has been released here into France since October '88 by a West German firm, P.A. Decoder. It's a ROM that must be sold after an authorized technician has opened your sweet ESQ-1. And that's it!! 64 waveforms onboard for 1290 French Francs (nearly $200).

Unfortunately I don't know their address; but the product is released in France by "J.C.D. MIDI Soft 63 Rue Francois, Villon BP22, 95430 Auvers / oise - France.

P.S. The waveforms included are the D50, DX7, PPG, EMU, etc. It's great..

So long,
M. Frederic Vanni
Haute Savoie, France

*[TH - P.A. Decoder's US distributor is located at: 1801 N. Curson Ave., Los Angeles, CA 90046. Phone: 213-850-6901. (But, they never seem to return our calls.) Latest word that we heard (second hand) is that the new waveforms don't work with the newer operating systems and that P.A. has stopped selling them.]*

*[Ensoniq's response - The waveform ROM you are referring to has not been submitted for evaluation. Installation will void the ESQ-1 warranty.]*

Dear Ensoniq:

I am using an SDP-1 (MIDIed) as a master controller to control my brand new EPS. I'm having no problems with the two keyboards responding to the SDP-1's sustain pedal. However, I can't seem to get the SDP-1's sostenudo pedal to work with the factory "Grand Piano" sample on the EPS. I've set the 4 MIDI Controllers (ON/OFF) to ON and 8 MIDI XCTRL number to 66 which corresponds to the sostenudo pedal. How do I accomplish this so that when I pedal the SDP-1, the sampled piano is also sostenudoed?

Perhaps MIDI controller "memory mapping" would be a nice feature to add to the new O.S. for the EPS.

Also, I have a version 1.6 ROM in it. I understand that any ROM version 1.5 and above enables the SDP-1 to respond to 88 notes. My question is this: You now have a version 1.7 ROM in the SDP-1's.. What features does the V 1.7 ROM have/have not? I would like to upgrade my piano and would like to know.

When I first got my SDP-1, I noticed that certain keys on the keyboard were harder to push down than others. I pulled the cover off

the piano and noticed a set of turn screws corresponding to each note of the keyboard. I took a chance and turned the screws corresponding to the sticky notes. This fixed everything. Turning the screw counter-clockwise loosened the key and clock/wise tightened it. No mention is made of this in the owners manual. This is a wonderful feature of this keyboard and is bragged about on Korg's instruments. I think you are missing the boat here!

James Rosand
Port Angeles, WA

*[Ensoniq's response - The EPS does not implement a sostenuto function. Few electronic keyboards (with the exception of electronic pianos) have sostenuto.*

*ROM version 1.7 fixed an intermittent bug which allowed random notes to play when the SDP-1 was being controlled by an external instrument or sequencer.*

*The screws in the keyboard assembly are used to adjust the keyboard response by the company that manufactures the assembly. Opening the case of the SDP-1 will violate the warranty and expose the user to potentially lethal voltages. We cannot advocate anyone but an Ensoniq authorized technician opening the case.]*

Dear Hacker,

I am the proud owner of an SQ-80, and I think your magazine is tops.

When I checked my software version it says version 1.7-150. (1) I know the operating system resides on Eproms, and the latest version is 1.8. What was upgraded between versions 1.7 and 1.8? Is it worth it for me to upgrade? Is it even possible? What would it cost? I just want to know what I'm missing.

(2) I really enjoy your product reviews, but I wish you would do a top ten summary some day. I'd like to know what you think are the best ten acoustic piano patches you've heard. I've heard a few but none come really close to a real live piano. I know it's a matter of personal taste, but a survey would be nice. I'd do it for you if I had access to all the patches out in the market place.

(3) Does Ensoniq have any plans to build a keyboard that feels more like a piano keyboard? I find I have a better touch on a nice, even piano keyboard. It requires more muscle, but it also seems to allow better control of dynamics. I've experimented with the different playing touches available on the SQ-80, but I still miss the weightiness and feel of a good old acoustic piano.

Thanks once again for a technically advanced, yet readable and fun magazine.

Mike Orlikoff
Chicago, IL

*[TH - We encourage our reviewers to make comparisons wherever it seems appropriate - but it's more "on the fly." Aside from occasionally comparing some fairly expensive software packages, the space, time, and effort that would be necessary to figure out "OK, which one has the best sax? Now, which one has the best strings, etc.?" is really way beyond what's justified - in addition to being terribly subjective. Our letters column is certainly always open to anyone whose got an opinion on whose "whatever" is best.]*

*[Ensoniq's response - 1) OS version 1.8 corrected the EPNO2 waveform which was altered in previous versions of the software. Unless you listened to two SQ-80's side-by-side you wouldn't notice the difference.*

*If you want to upgrade your SQ-80 to 1.8, the work can be done at your closest Ensoniq Authorized Service Facility. The software is free; you are only required to pay the installation fee.*

*3) It is unlikely that we would offer a piano feel keyboard on a synthesizer since many synthesizer players feel the slow action of a piano keyboard limits their flexibility. A MIDI controller with a weighted action is a good alternative.*

*You may want to look into the Ensoniq Acoustic Wave Piano with sound by BOSE. The AWP has the feel and sound of an actual acoustic piano (see Random Notes Issue #42, Dec. '88).]*

Dear Transoniq Hacker:

This is a follow-up to my letter in the December '88 Hacker and Ensoniq's response. My problem was that I was unable to send sequence files to my ESQ using the SYSEX feature of master tracks Pro for the ST. Ensoniq stated that there needed to be a pause of 80 ms or more between the two messages when the dump is sent to the ESQ. That turned out to indeed be the problem. I was able to make the files work after using an editor to insert 320 bytes of 00 between the 2 messages. This amounted to a delay of approximately 100 ms. The editor I used was "Byte Mechanic" that came with the disk for *START* magazine 1988 Special Issue #4.

Thanks for the tip, Ensoniq.

Sincerely,
Andy Pederson
Crystal, MN

Dear TH,

I must compliment Scott Musser who sells the ESQLIB librarian. He called me in Israel in response to a letter about an installation problem I encountered. He has earned my unlimited respect for supplying a bug-free, useful product and for standing behind it.

Also, thanks to Jim Johnson for manning the hotline. He was able to straighten me out on a not-so-obvious point of recording sequences onto the onboard Ensoniq sequencer from a PC-based sequencer. It would have taken me forever to guess the correct sequence of events necessary. I still don't understand how it works, but it does work.

Muchas gracias for all the support.

Benny Lebovits
Jerusalem, Israel

Dear TH,

My musical experience dates back to the 1960's. My first keyboard was a Farfisa, and I

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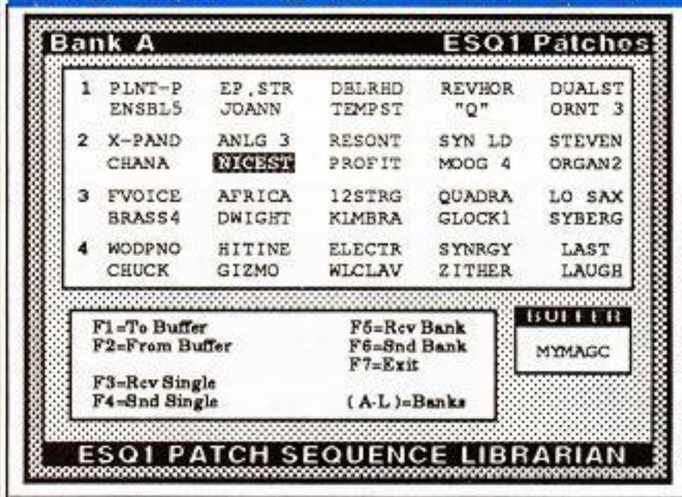


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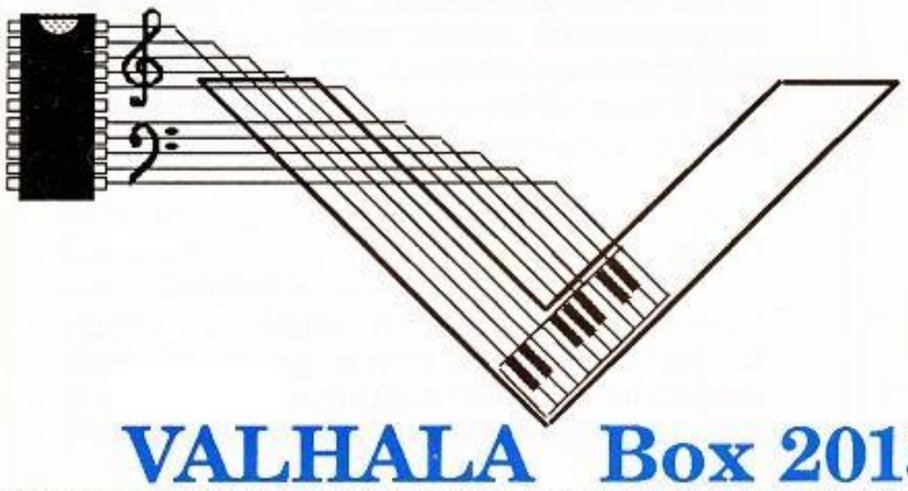

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# VALHALA Box 20157-TH Ferndale, Michigan 48220

later bought a Vox organ which I sold in 1970. About 10 months ago I purchased the first EPS to arrive in my city. I have had a difficult time trying to master the tremendous capabilities of the instrument. I waited patiently for 8 months for the Advanced Applications Guide. To say the least, the advanced manual is quite lacking in detail to help the novice. Does Ensoniq plan to print another manual with more information to help musicians in my situation?

I have the 2X memory expander in my EPS, but I find this inadequate to meet my needs. I hope the 4X expander will be available soon from Ensoniq at a more reasonable price! The independent company's 4X expanders are not approved by Ensoniq and $900 is a lot of money considering I paid $250 for the 2X.

I have had one small, but confusing problem with my EPS that I hope you may be able to help me with. I have noticed that the Grand Piano and Drums sound disks that are included in the Essential Sound Library, have a small bug in them. When these are loaded into the EPS, the following problem arises. When the instrument track button is pushed to play the instrument, the small yellow LED comes on. If another instrument button is pushed, its yellow LED comes on, but the yellow-LED for the Grand Piano (or Drums) stays on, too. It should go out so that only the newly activated instrument's LED is on. Since both LED's stay on it's difficult to tell which instrument is on without looking at the display. It's also a real problem when stacking instruments. These are the only two disks that exhibit this bug.

I consulted my local music store, and they discovered that all the EPS keyboards in the store had the same bug. The service tech feels that it is a software bug. However, none of the advanced O.S. disks have corrected the problem, not even the 2.2 version! Is it possible that bug is actually on the Grand Piano and Drums sound disks, since they are the only ones that do this?

I called Ensoniq and discussed the problem with one of the service techs. They were totally unaware that a bug existed! He said that he would check into the problem and let my local music store tech know. But it has been almost 3 months since I called, and I have not received any information yet. I would like to know if any other EPS owners have had this problem. I hope that it can be solved since I use these sound disks quite often.

I enjoy reading your publication, and I have learned a lot about keyboards from the articles in the TH. Keep up the good work!

Sincerely,
Sam Giglio, D.D.S.
Beaumont, Texas

*[TH - Sam, check out Kenn Lowy's review of Gary Dinsmore's EPS Guide elsewhere in this issue - it might be a little closer to what you're looking for.]*

*[Ensoniq's response - Much of the depth of the EPS involves complicated subject matter requiring knowledge of acoustics and physics. The AAG is designed to explain the functions of the EPS, but it is beyond the scope of such a manual to try and explain all the "why's and how's" of certain functions.*

*A synthesizer manual doesn't usually explain how to create sounds, it only explains what the features do. It's up to the user to learn when and how to use the features. This is based more on experience and trial and error than anything else.*

*The status of the selected LED's depends on the range of the sounds. The piano and drums are set to cover a wider key range than is available on the keyboard (for control over MIDI, for example) while other sounds you load in may not be. You can confirm this on the SET KEYBOARD RANGE page. You can also set the range of these two sounds to C2 to C7 and resave them if you wish. This would solve your problem.*

*It is perfectly normal for different instruments to be active on different ranges of the keyboard (refer to pages 14-16 in the Musicians' Manual).]*

Dear TH,

I have a few comments and a suggestion for Ensoniq, if I may. First the comments:

The SQ-80 is a great synth! I bought it as a companion for my other great synth, the Chroma Polaris, which, by the way, does have the selective pitch-bend feature found on the SQ-80 and ESQ-1. It also was one of the first synths to have Dynamic Voice allocation and multi-timbral capabilities. The SQ-80 and Polaris sound great together.

The suggestion for Ensoniq is: why not include the ability to edit specific controllers with the EDIT page? It could be set-up as follows:

After selecting 'REMOVE CONTRS', this page would appear:

-Remove contrl type- Pitch - Mod - Sus - Press - All

Or an alternative could be:

'Erase this contrl from trk(#)- with a cursor and the increment/decrement button and the data entry slider used to select one of the five choices mentioned above.

To me this is the only major edit missing from the SQ-80/ESQ-1 sequencers.

How about it, Ensoniq?
Leonard Crockett
Kensington, CT

*[Ensoniq's response - Thank you for your suggestion, however, there are no plans to update the SQ-80 software to allow the ability to edit specific controllers. We do consider all suggestions for current product updates or to include those features in future products. If you are an EPS owner, you'll find that the EPS does implement this function.]*

Howdy,

I guess it has become The Interface tradition to start every letter with a "golly gee, your magazine is great" statement. So here it goes: golly gee, your magazine is great. I

mean really, I haven't seen any other magazine offer such an open forum. Everybody and his second cousin-in-law has written in about everything from A to Z (except about a MIDI refrigerator and a MIDI kitchen sink).

Now, to the second reason that I'm writing this thing - I need help. I'm a MIDI illiterate who owns the MIDITERM 4.0 Librarian for my C-64. I'm sure some (or many) of you out there also have acquired it through public domain software. The thing is, I don't know how to set up a template for it. And I DESPERATELY need to know how to do it to use it. I'm even willing to give some $$ to anybody who can help me out. I'm sure it's one of those things: it's easy if you know how to do it.

Well, thanks for the space in your magazine. And thanks for reading this letter.

Paul Jeong
25731 125 Via Lomas
Laguna Hills, CA 92653

*[TH - Actually, it's not really a tradition - it's more of a spontaneous out-pouring of eternal gratitude. Anyway, we've never played with MIDITERM. We've included your address in case one of our readers can help.]*

*[Ensoniq's response - Sorry, we have no idea, either.]*

Dear TH,

Here is a trick I use with the Alesis HR-16 when my sequences are transposed within a song on my SQ-80.

I assign the 16 percussion pads to all the Cs, Es, and G#s on the keyboard. If for example, my song requires a sequence to transpose up a semitone, I first copy the drum track down a half step. (You can merge and erase if you wish.)

The process may be repeated if other transposition intervals are also required of the same sequence. Just transpose the original drum track in the opposite direction of the interval you wish to transpose. However, one can not transpose a Major 3rd up or down or a Minor 6th up or down with this method as the percussion pads are assigned to notes in Major 3rd intervals. But, if adjacent pads are assigned drum sounds with the same voice, tune, and mix parameters, you can transpose up a Major 3rd by performing the drum track on pads 1-15 odd, or transpose down a Major 3rd by performing on pads 2-16 even. One should not transpose and copy a drum track in this instance. You can configure a double 8 drum kit to facilitate the Minor 6th transposition: 1-3 2-4 5-7 6-8 9-11 10-12 13-15 14-16 as pairs of pads with the same sounds.

Record drum track on 1, 2, 5, 6, 9, 10, 13, 14 to transpose a Minor 6th up. Transpose the original track a Minor 6th up and when the sequence is played a Minor 6th lower it will sound correctly.

Many thanks,
David Davis
North Brunswick, NJ

Dear Hacker:

This letter is primarily addressed to Ensoniq, but before I begin, I would like to commend all the folks responsible for turning out the Hacker every month. Ensoniq users are very lucky to have such an excellent, informative publication at their disposal. Being an ex-journalist (my family runs 2 weekly newspapers), I know what it's like to churn a publication out time after time. Thanks, Hacker, for providing us such an invaluable service, with hopes for much future success!

By the time this letter is printed, the world should know about Ensoniq's new keyboard synth, the VFX. Readers of *Musician Magazine* knew in January from Alan di Perna's "A NAMM Sneak Review" story in the Feb. '89 issue. The VFX, according to the story, is "an integrated sound production keyboard" with ROM-based tone generation and a digital effects processor. Sounds like a keyboard along the lines of the Roland D-50 and Korg M-1 with perhaps, according to my local dealer, an on-board sequencer (any Ensoniq product just wouldn't be right without a sequencer). A new techno-keyboard from Ensoniq is always cause for excitement, and knowing the wizards at Ensoniq, the VFX will be a dandy, the perfect antidote for us with aging ESQ-1's and SQ-80's.

My interest in the VFX is primarily with its sequencer (if it has one; if not, the following suggestions could be applied possibly to the EPS and future products). If the operating system of the VFX is software-based, there are several sequencer features which are not presently included in the ESQ/SQ-80 sequencer (and EPS), that could be added in the future if they don't already exist in the VFX sequencer. These features presently reside in such hardware units as the Alesis MMT-8 sequencer and the Korg M-1. (Ensoniq, please treat these suggestions like a product warranty card - I have purchased several Ensoniq products, but there wasn't enough room for all these items.)

They are:

1. Tempo changes within a song or sequence, via possibly an additional "tempo" track.

2. The ability to record and store data on multiple MIDI channels per track.

3. Recording resolution of at least 96 ppqn.

4. Unrestricted track copying and merging (copying or merging any track in any sequence to another track in the same sequence or a different sequence). Also, an unmerge tracks function.

5. Event editing like on the MMT-8 (notes, controllers, velocity, MIDI channel, start time and duration in beats and sub-beats, pitch bend, after touch and sys-ex data).

6. Event insertion of notes, pitch bends, after touch, controllers and program changes into tracks and the ability to copy tracks with only this specific MIDI information to other tracks in any sequence.

7. Track time shifting (like on the EPS).

8. Fast forward and Rewind buttons like on the MMT-8.

The EPS has implemented a few of these

features, and if the VFX includes the majority of them (especially tempo-mapping, multi-MIDI channel tracks and MIDI event track editing and copying), it would easily be at the head of its class. Since so many of these convenient features are being included in hardware units these days (especially at such a low cost in the Alesis unit), I figure it's time Ensoniq revamped its sequencer design to include them. Granted, there's only so much a VLSI chip can do, and an add-on keyboard sequencer can't be everything to everybody, but I, for one, would be willing to shell out a little extra to get these features. As an intense user of the SQ-80 sequencer for live purposes (Monster Dan and I could swap stories for hours), I really believe in the "all-in-one" concept, mainly for convenience sake. A logical answer for me would be to MIDI up an MMT-8 with my SQ-80 and go for it. But for live use, it means extra headaches, worries, gear and, God forbid, breakdowns. I'm still considering adding the Alesis piece, but I'm hoping the VFX will "deliver some of the goods."

My wish list aside, I would like to thank Ensoniq for making products that, although might not be the most fashionable, are user friendly, comprehensive, dependable and fun! As the music technology scenario continues to unfold, Ensoniq continues to be at the forefront, especially for the "working musician." Good luck, Ensoniq, and go for it!

Sincerely,
Todd E. Henseler
Omaha, NE

*[Ensoniq's response - We appreciate and pay close attention to all product suggestions; we will keep yours in mind for the development of future products. There isn't enough room in the OS to include them as features in the ESQ-1, SQ-80, or the EPS. The VFX will not have a disk drive or a sequencer. (Refer to last month's cover story.)]*

Dear TH,

I have a few questions about my EPS that hopefully can be answered by a helpful hacker or by Ensoniq...

1) Can I get listings in Hz for the filter cutoffs, 0-127 for HP and LP?

2) Similarly, can I get a listing of the error codes?

3) Is there a self-diagnostic routine that is accessible to the user?

4) I found the DC offset trim and other routines that I could initialize, is there more info in these?

5) Why can't the sequencer record a note down for more than 21 bars? This makes using loops as rhythmic tracks next to impossible.

6) Why does the "BAR" LED light for no apparent reason when I'm in sample mode? Is this due to spikes on the AC line? I have three MOV's on my power strip.

7) What are the asterisks next to certain sample rates for?

8) What is the level at which the "AMP" LED comes on? Does the meter function like a VU meter with a peak indicator?

9) When I'm monitoring in sample mode, what stage os the circuitry am I listening to?

10) Why do you give out the SYSEX implementation chart to third party software developers only?

11) Are there any plans to make it possible to load from the disk drive while the internal sequencer is running? Since I work in musique concrete this would enable me to call in new sounds during a composition without being overly dependant on memory to store all the sounds I use.

12) When is the V 2.3 O.S. coming out and will it take care of any of the problems that I've mentioned?

I'd like to say that the EPS is an amazing machine but the documentation (AAG) is severely lacking in certain parts. I wish somebody would write an EPS "bible" that exposes all the power under the hood for those of us who use this instrument for unusual styles of music. Also, I'd like to say that the Transoniq Hacker is a wonderful source of information and contacts. I would like to hear from anybody who is using the EPS for non-standard types of music such as electronic, ambient, industrial, musique concrete, collage etc. I think there are too many articles about the EPS pertaining to beat oriented and instrumental music...let's see a few articles about some avant-garde usages.

Kim Casone
540 Alabama St., #315
San Francisco, CA

*[TH - Check out the review on Gary Dinsmore's EPS Guide.]*

*[Ensoniq's response - 1) The filter cutoff frequency for the EPS is from 15 Hz to 15 kHz in 128 semitone steps at default (20 voice) mode.*

*2) The error codes are not of much use to the end user. They provided information to the software programmers during the development of the EPS.*

*3) There is a diagnostic program strictly for factory service use.*

*4) These are meant only for factory service and require precision audio test equipment for proper use. Without such test equipment, all these routines will do is crash the EPS.*

*5) Twenty-one bars is the limit of the sequence structure. To allow more would have made the sequencer memory usage much less efficient.*

*6) Make sure you are using the latest OS (2.35). This did occur in very early versions of the software.*

*7) The sample rates with a star next to the number are "optimized rates" for which there is an ideally matching Filter Cutoff frequency (refer to Musicians' Manual page 24).*

*8) The AMP LED indicates clipping. (Digital systems either clip or don't clip, there is no slow build-up to clipping.)*

*9) You are listening to the signal after it has*

*been processed by the input filter.*

*10) The SYSEX implementation is a complex document that many users would not understand. We don't have the resources to support everyone who might want to use the information.*

*11) No, the memory management problem is too complex. For example, what if the sequencer calls for a sound that needs the memory that the sequence is in?*

*12) The purpose of the AAG is not to teach theory. We consider it a complete document that describes the FUNCTIONS of the EPS.]*

Dear TH -

On the Mirage, if you want to change a patch variation to be the "default patch," once a sample is loaded into the Mirage, it is "no problem," with either parameter 15 or 16 (if my memory serves me correctly!).

Is there a way to do the same thing on the EPS, and if so what is the best method?

P.S. At the risk of sounding like Tommy Lasorda (What the heck's wrong with that anyway!), thank you, Ensoniq, for the great keyboards, thank you, TH, for the great magazine, and thank you Mick Seeley of Livewire Audio for the great Mirage and EPS Libraries!!!!

George Finizio
Redlands, CA

*[Ensoniq's response - Patch selects can be "latched" by holding down the desired patch select button(s) and pressing the selected INSTRUMENT/TRACK button. You can make any set of layers become the default patch select by pressing EDIT/INSTRUMENT, then duplicating the enabled and disabled layers of the desired patch select into the "OO" patch. You can then save the instrument to disk in this configuration.]*

Dear TH,

I would like to take this opportunity to offer a very belated thanks to the guys at "Caruso Music" in Conn., namely Larry, Rich, Rick and John.

During an episode when my Mirage needed repair and Ensoniq fell short of their promises, Caruso's came through with more than talk (like Ensoniq) and made a bad situation turn good. Their professional service and attitude has gained them my undying respect and I continue to endorse them whole heartedly.

To Ensoniq I would like to ask;

I consider my EPS the ultimate keyboard except for one problem. With all the great features of the EPS I find that the Audio Output is not very strong and some of my other boards are more powerful. This has required me to use a Pre-Amp with the EPS to keep up with the others during live performances. I called Ensoniq and was told that all Ensoniq products are like this (not enough of an answer). So I ask again, what gives, Ensoniq? Are there plans to correct this? I know I'm not alone because others I've spoken with have the same complaint. Thanks for any help you can give. And thanks for some great keyboards.

Sincerely,
Roger Fontaine
North Smithfield, RI

*[Ensoniq's response - The EPS operates in 12, 16, and 20 voice mode. In order to allow sufficient headroom for all modes to avoid distortion, it is necessary to run the 20 voice mode at a lower level than you may be used to on 8 or 16 voice instruments.*

*You can increase the output level by selecting fewer voices with the "SET NUMBER OF VOICES" command.*

*There will be an update kit in the near future to enhance the EPS' output signal. Keep in touch with the Ensoniq Customer Service Department for future availability. As with all Ensoniq updates, the work must be done at an Ensoniq Authorized Service Facility.]*

Gentlemen:

In the year and half I have had my ESQ-1 I have had various problems with saving data to, and loading data from, tape. Then, most recently, the sequencer would just take off on its own when I hit PLAY in TAPE SYNCH node... even with nothing (not even audio out cables) plugged into the back. Needless to say none of these things would happen at the repair shop.

The Ensoniq Technical support person I talked to by phone suggested I check for low line voltage (I do have a lot of other equipment plugged into the same outlet), but likewise no dice.

In desperation, I unplugged everything but the ESQ and cassette deck..and no problem! Drum machine, reel-to-reel 9" both turned off, no problem. Power amp (off): AHA! Unplugged that and plugged in the guitar amp (off): AHA indeed! A subtle pattern began tc emerge.

All I can figure is that equipment with power transformers must cause some phase shift in line power, even with one side of the transformer disconnected (the usual way for a power switch to work). I haven't had a single problem in the month since I discovered this trick, so I am convinced I've found the cause. I also notice the ESQ seems a lot less picky about Load and Save volume levels than it used to be. I know it sounds like b.s. but it works like magic.

That aside...does anyone know of a cheap way to use a Franklin Ace 1000 (Apple II+ clone without a cassette interface) as a patch librarian? What is this IVM MIDI disk mentioned in J.O.'s letter of a couple of months ago?

Good luck, and thanks for the great magazine.

Glenn Evans
Seattle, WA

*[TH - See the IVM (now marketed by Millennium Music Products) ad this issue. They've been away for a few months (adwise). Their disk drive was reviewed in Issue # 37.]*

*[Ensoniq's response - You may have a ground loop which would put a constant 60 Hz hum on the tape input that you wouldn't necessarily hear (digital and analog grounds on the ESQ-1 are separate).]*

Transoniq Hacker:

I've just had a very strange experience and would like to get some feedback from other ESQ-1 owners to see if this type of phenomenon is unique to my case or if it's happened to others also.

Back in July of 1986 I purchased an ESQ-1 and have been using it fairly regularly ever since. I have never had one single problem with the unit until two months ago. In late December I pulled the machine out to play it and noticed that four keys in the second octave from the right would occasionally not sound when played. At first I thought that this was some spurious activity caused by sun spots or something. However, after several successive nights, the keys would not play no matter what happened. I was truly shocked an horrified at this since I've never had a problem like this. At first I thought that something may have fallen inside the keyboard since only those four keys would not work. So I took the machine apart and carefully looked inside. I could not see anything obvious.

So the next day I decided to take the unit to my Local Authorized Ensoniq Repair Facility. I described the problem and left the keyboard to be repaired. About two weeks later the repairman called and told me that I had to get a new keyboard since he called Ensoniq and that "is what they told him had to be done." Well, I was further shocked at this since a new keyboard is $250.00.

So I questioned the repairman as to why the whole board had to be replaced when only four keys didn't work and he told me that there is no way to repair just four keys since the "gold plating had gone bad on the contacts" and you can't replace just four keys.

Since I am not entirely conversant with the internal technology of the ESQ-1, I reluctantly took his word for this and had the board replaced. Now I am trying to find out if this is something that has happened to other ESQ-1 owners or was I led down the pathway of relieving my wallet????

Why would just four neighboring keys stop working instead of any other four? Why would this so-called gold plating go bad in such a non-random fashion? Why would the keys fail in such a short period of time? Can I expect this to happen every two years? Why have I had other keyboards for ten years that are still working perfectly? Why am I $250.00 poorer? Why, why, oh why?????

Is there anyone out there who can help me understand what has happened? Has anyone else had this kind of problem?

I've also had another problem occasionally with the sequencer clock which I thought was most unusual. (This happened many months before the keyboard went.) Every once in a while I noticed that after I recorded a piece with three or four tracks that the clock which notes the passage of bars would run at five and six times normal speed. For example, if the piece had 16 bars, the clock would run up to 128 at extremely fast speed and certain other parts of the display would blank out like the time of the piece. Yet the piece would play back perfectly.

If I moved the piece to another location the error would persist. I even reinitialized the unit and the problem still persisted. What is the world gives here?? Instead of a repairman do I need an exorcist?

Has anyone seen anything like this??????

I've recently gone to the local monastery and got some blessed holy water with which I made signs of the cross on the instrument to help rid it of internal demons. Does anyone else have any suggestions?

P.S. I've just had my old OS 1.70 updated to 3.5. Maybe this will help.

Sincerely yours,
Peter D. Gulch
Camden, NJ

*[Ensoniq's response - It's hard to say without actually seeing the keyboard. We purchase our keyboard assemblies from one of Europe's leading keyboard manufacturers. Generally, we do not stock individual replacement parts for the keyboard, and service may require that the keyboard be replaced as the individual contacts are not readily replaced.*

*Depending on labor rates charged by your*

*local service facility, it quite possibly could have cost less to replace the keyboard than to repair the keys. Your experience is definitely not typical.*

*If your sequence data has somehow gotten garbled, reinitializing or updating the OS will not correct the problem. If you continue to reload the garbled data, you will continue to have the problem.]*

Dear TH,

A number of questions follow: I am interested to know about all the devices that are/were around which plug into the expansion port on the back of the Mirage and addresses where I can seek more information. I currently have the sampling filter and have seen the sequencer expansion cartridge (what's the biggest available?). Is there anything that will increase the size of the sampling RAM? I suppose if such a device does exist it would need a special operating system so the sounds could be manipulated and stored. Your help will be greatly appreciated.

Yours sincerely,
Scott Fisher
Nedlands, W.A.
Australia

*[Ensoniq's response - The only sequencer expander for the Mirage was 6k bytes in size. There were companies producing sound memory expanders at one time, but these didn't give you more contiguous sampling RAM, just more banks of 2.2 seconds each.]*

*[TH - Every so often one of these bank-switchers shows up in our Classified ads. However, it's usually with a Mirage attached...]*

Hey Guys,

And now, for your reading enjoyment, some unfixed EPS bugs (OS 2.35).

You can't sustain a note more than 21 bars (4/4) with the sequencer. Or, put more technically, the maximum note length between corresponding note on's/off's is 4095 clocks. Try this: create a sequence, hold a note for 30 bars recording it in, and hear what happens.

The EPS has a nasty habit of erasing notes when you edit within a sequence, in particular, notes on a first clock of a bar. Try this: load a drum kit, create a sequence, record a simple pattern on for 8 bars (KICK on 1 and 3, SNARE on 2 and 4, HI-HAT eighth notes). Now, transpose the HI-HAT in bar 3 a half-step (+1). Play it back. Now KICK on 1 in bar 4! This is not limited to the transpose function, though. Generally, ANYTIME you edit WITHIN a sequence (not the whole thing), you can kiss one of the proceeding bars good-bye.

Anyone have the OEX-8? Avoid using output #2. It pops whenever you perform an internal function. Ensoniq has related to me that this is due to the OEX-8 hardware. My poor speakers! The click is pretty loud. My cat (Fang) is absolutely scared of it.

By the way, Ensoniq is aware of these bugs. I just want everyone else to be aware of them. Hopefully, they'll be addressed quickly.

I hope Ensoniq is aware of the cans of worms they sometimes open when they respond to letters. In TH #45, they state an 8X is impossible because the EPS "can only address a maximum of a 4X expander." PS Systems advertises an 8X port on their 4X expander (TH #44). There's even a picture of it (wow!) and that new French company (DCI) even advertises one as being available. Please elaborate.

I got to hate my 1-foot, 9-pin cable Ensoniq provides so I got a ten-foot, 9-pin cable. Unfortunately, this is too long. It only created noise. So I guess I'm stuck with the short one (that always jiggles and makes funny high-pitched noises). Consider this a complaint.

I read with great interest Alan Smith's article (TH #45), and wanted to expand a point. The "fragmentation" he refers to is very applicable to floppies as well. I murder my samples. I move 'em, increase 'em, decrease 'em. I jam my 1585 blocks to the limit. My floppy disks get very fragmented, even to the point of getting "FILE OPERATION ERROR" and "WRITE VERIFY ERROR". So, every so often, I load all my data in RAM, erase and reformat the disk, and resave it. It streamlines operation and saves wear and tear on the drive.

No more room in the OS? Too bad! There goes all our great ideas. But I still don't understand. If we have to reload the OS for specific functions (sampling, SYS-EX, sequencing) doesn't that make the OS without limits? If sampling isn't contained in the "base OS," why can't it be replaced/added by some of the stuff we're asking for? And even if not, I would gladly replace the ability to format disks without erasing memory for something else. (In other words, making the formatting program a subroutine.)

One more thing. If you can operate/load the EPS disk drive externally while the EPS sequencer is playing, why can't it be done internally? I don't care if the EPS sequencer automatically loads it, or if I manually do it. I just don't understand why it can't be done on the EPS and can be done externally.

Garth Hjelte
Rubber Chicken Software
Seattle, WA

*[Ensoniq's response - Twenty-one bars is the limit of the sequence structure.*

*Thank you for the information concerning editing within a sequence; we are currently looking into the problem.*

*The problem with the OEX-8 is not in the hardware. When the system shuts down to perform an internal function, it selects output #2. Since the OEX-8 is designed for playback use, there is no need to keep the level of channel 2 up when performing internal functions.*

*There are no companies which actually offer or have built an 8X expander. This would require modifications to the OS software as well as an external power supply, otherwise, there is no way that EPS would be able to support it.*

*The DCI (France) 4X expander has been officially rejected due to design flaws. Use of this product could damage or cause unreliable operation of the EPS.*

*A longer cable for the OEX-8 is not possible due to drive limitations. The OEX-8 was intended to be mounted on the EPS.*

*There is a limit to the number of overlays (such as sampling, sysex, and DSP functions) which can be contained in the disk operating system. We can't remove functions that other users count on.]*

*[TH - Of course, some enterprising third-party might make alternative disk-based O.S.'s available.]*

While it's been our policy to NOT rent out our mailing list, a somewhat special case has come up. An old friend who helped the Hacker get off the ground would like to rent our list for a one-time test mailing for a new music venture.

If you would prefer that your name NOT be rented out in this manner, please let us know, and we will delete your name from the list.

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