

TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

Crescendo Pedal for the EPS

by Gary Dinsmore

The great theater organ has an interesting pedal called a crescendo pedal. The pipe organ uses two methods to control volume for expression. One is to enclose the pipes in a "swell box" and open and close the shutters on the box. Large theater organs may have two or three swell boxes and a corresponding swell pedal for each. The second method is to "pull on more stops." Each stop controls a rank of pipes, and when more stops are pulled out, more pipes sound at the same time. The additional pipes may sound the same pitch with a different timbre or sound related pitches at octave or other related intervals.

The crescendo pedal provides a convenient way to pull out the stops of increasingly loud and brilliant voices of the organ and thus create a crescendo and when closed a decrescendo of both volume and richness of sound.

I had a public domain disk of organ sounds, and I set out to combine them in a crescendo instrument. I am not sure who the originator of the disk was, but there were eight organ sounds ranging from Light Organ, Flute Organ, and Old Hammond to Tonyz Pipes. They were all similar, with a stereo pair of layers pulled all the way left and right. The left patch gave you the left layer, the right patch gave you the right layer, and both patch buttons gave you both layers plus a third layer that was centered. Layer one was also three cents flat, layer two was three cents sharp and layer three on pitch.

I started my project by copying layer three of the lightest organ sound, "New Organ," to a new instrument. Create the new instrument by pressing "Command" and "Instrument" and scrolling to the "Create Instrument" option. Press "Enter-Yes," select an empty instrument position and then "Enter-Yes" again. Now save this new instrument under an

appropriate name. I chose "CRESC ORGAN."

I had several of the organ sounds loaded in the other seven instrument positions. Select the instrument you wish to copy. Press the "Edit" button, scroll to the "Layer" position, and select the layer you wish to copy with the up and down keys. In these instruments, I chose to copy layer three each time since they were centered and on pitch.

I copied a layer from each of three other sounds to successive layers making layer four "Tonyz Pipes," the richest loudest organ sound.

I made patch 1 (no buttons down) sound all four layers, the left patch button sounded layers 1 and 2, and the right button sounded layers 3 and 4. This made a combo organ sound that ranged from light and fluty to rich and full volume pipe organ quality.

Next was the crescendo organ. Patch 4 (both buttons) was set for layers 5, 6, 7, and 8. No changes had been made in any of the voices to this point. I simply pulled them all into one instrument so that I could sound them together. I did lose the stereo separation and the coursing effect the original author had included. This is a practical limitation here, since the maximum number of notes that can sound at one time is 20. Each layer counts, and when all eight layers are active, you cannot sound a full triad without losing some of the voices. That is the three notes of the triad times eight layers gives 24 notes.

Next step was to copy layer 1 to layer 5. Select layer 1 by pressing "Edit" and scrolling until the layer space is underlined, then selecting "1" with the up and down buttons. Press "Command," "Layer" and scroll to the "Copy Layer"

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option. Press "Enter-Yes" and the display should say "To Inst xxxx" where the "xxxx" could be any one of the active instruments. Press the Instrument selection button for the crescendo organ, and press "Enter-Yes" to complete the command. The EPS display will ask "Parameters Only?". Press "Enter-Yes" since we only intend to change the parameters, and none of the wavesample data. The EPS will respond with "Layer 5 Created."

If you were alert there, you might notice that copying layers between instruments does not offer to copy parameters only. Copying layers within the same instrument does offer that option. Select "Enter-Yes" if you just plan to change parameters, and choose "Cancel-No" if you intend to modify the wavesample itself such as by smoothing it, fading it, mixing, splicing, or scaling it.

Next I copied layer 2 to layer 6, layer 3 to layer 7, and layer 4 to layer 8.

Time to talk about the pedal itself. I have a CV pedal, and normally use it for volume. For this instrument to work you must go to the "Edit," "System" group of pages and scroll to the "Pedal =" page. Change this to "Mod" using the up and down arrows. If you don't have a CV pedal you can still use the "Mod Wheel," but you will need to go to the "Edit" "LFO" pages and change the "LFO Mod =" to "Pressure" only on layers 6-8. The instruments I was working with allowed both pressure and wheel to change the vibrato.

Now we select layer 6 to edit by pressing the edit button, underlining the layer position and scroll the number displayed to 6 using the up and down buttons. Now edit the amplitude pages by pressing "Edit" then "Amp" and scroll to the "A-B Fade In" page. We want layer 6 to fade in between 30 and 35. Set the left A-B value to 30 and the right value to 35. This will bring layer 6 in rather suddenly at about 1/3 pedal (Wheel). Scroll further to the "Volume Mod =" page and select "Pedal" if you are using the CV pedal, or "Wheel" if you plan to use the "Mod Wheel" to bring in the crescendo. Set the amount on the same page to 99.

Similarly set layer 7 to an "A-B Fade In" of 60 and 65, and layer 8 to 95 and 100. Also be sure all of the "C-D Fade Out" values are 127 and 127. Note that layer 5 is not changed, and sounds at full volume throughout the pedal or wheel travel.

Before we quit here let's review what we have done, and what limitations this instrument has. We have pulled a layer in from four different instruments, and created three very normal patches. Patch 1, no buttons, uses layers 1, 2, 3 and 4. These layers can use the normal wheel for vibrato effect even if you use the wheel as a crescendo pedal. We copied the parameters only of layers 1, 2, 3 and 4 to layers 5, 6, 7 and 8 respectively. Finally we set up the CV pedal as a MOD pedal, and set the volume mod of layers 6, 7 and 8 to pedal. We set the A-B Fade In of layers 5, 6 and 7 to bring in those layers only when the pedal is depressed to about one quarter, one half and three quarters respectively. This way the volume increases in steps as different voices are pulled in, rather than the smooth build-up of volume a synthesizer normally allows. This simulates the stepwise increase of a theater organ's crescendo pedal.

There are several other possibilities with this same concept. We could have forgone the alternate patches and imported eight voices to eight layers altogether. We could have divided the 127 by eight and made the steps about 16 numbers wide. With this arrangement, however, we could have only played two notes at a time, since all eight layers are active even at minimum crescendo with only one voice sounding. That may or may not be a limitation depending what type of music you are playing, or if you are laying down tracks on a tape machine.

By limiting ourselves to four layers we can play 5-note chords

before we start getting the disappearing note effect. Also if you don't have a CV pedal, or prefer to retain the CV pedal for volume control, the patch could be routed to the mod wheel, as I discussed, or to an external MIDI controller. Using the same technique, we could also pull in layers using pressure or velocity.

In this example we have modified existing instruments to create a new effect. Even though I believe these voices to be public domain, I intend to not distribute something modified in this manner without the author's approval. Should I find out from the original author that he or she would approve of such a distribution, I will, of course, release it to the public domain as well.

Bio: Gary Dinsmore has been an amateur musician all his life, at least all he can remember. He started piano and grade school band in Spokane Washington back in the '50s. He played the baritone in the Coast Guard band for a while, and took up the guitar in college. Gary spends a lot of time working with computers, so programing the EPS is an easy extension of those skills. He has started doing a little freelance writing and has recently published "The EPS Users Guide." ■

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Front Panel

RND (♪♪♪)

Ensoniq announcements:

The current Operating System for the EPS is version 2.4. When making copies of this new O.S. you should: Format a blank diskette. Use the "Copy OS System" command (Direct Dial "Command - System - 3") to copy the system to your new diskette.

It has come to our attention that some people are having problems making back-up copies of this system. We have looked into this situation and found no problem with the above method, and suggest you follow it make copies of this new system. There does seem to be some problem with the "Copy/Backup/Restore" function, and users should not use this command. It will make one back-up successfully, but subsequent copies may fail. We are looking into this situation.

As with all Ensoniq product updates, we will contact you with more information as soon as it becomes available.

* * *

Worst-Mistake-A-Magazine-Can-Make Dept.: Last month's article, "Synthesizing Ma Bell" was written by David LIBBY - NOT "David Bell." Very sorry, David.

* * *

Donna Murray & Jeffrey Richter would like us to pass on that their EPS-Sense program can now copy instruments because Ensoniq has corrected this bug in Version 2.4 of the EPS O.S.

* * *

NEWS FROM HEAVEN !!! Yes, we've actually heard from the elusive Glenn from Heaven. (See also this month's *Interface*.) Glenn not only paid for past ads but reports that he's sent out all unfilled orders. If you were expecting (long, long ago) a set of patches from Heaven and you don't get them in the very near future, please contact us. Glenn has given us a new address where he can be reached for complaints and such, but he doesn't want it published because he does NOT want any more orders. He's out of the patch business. Glenn also reports that he's making his patches available for public distribution in *Hackerpatch*. We'll be including choice patches from this collection from time to time.

* * *

Transoniq Hacker is typically on a 4-week, 4-week, 5-week schedule. You should receive the next issue (#52) 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.

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

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

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

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

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

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

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

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

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

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

MIRAGE 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) 938-0906.

HYPERSOBIQ NEW PRODUCT RELEASES

Syntaur Productions announces a second set of 40 sound programs for Ensoniq's ESQ-1, ESQ-M, and SQ-80 synthesizers. "*SOUNDSET 2*" sounds were programmed by Sam Mims, a soundtrack and jingle composer, session player, and keyboardist for Karen Newkirk. Mims also authors monthly columns in *Gig* magazine and the *Transoniq Hacker*. Syntaur's "*Soundset 2*," as well as the previously-released "*Soundset 1*," uses several unusual programming techniques that Mims has developed. For example, several of the programs have a distinctive "D-50" flavor, and many are programmed with a reverb effect, even though the keyboard itself has no effect processor. "*Soundset 2*" is available from Syntaur Productions for \$17.95 postpaid, and includes data for 40 programs, plus demo sequences, on either Mirage-format disk or cassette tape. Also included is a 23-page booklet containing data sheets, programming explanations, and performance tips so that users can benefit from learning the techniques employed. Contact: Sam S. Mims, Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602. (818) 769-4395.

EYE & I Productions announces the release of *Voice Crystal X* for the Ensoniq VFX. VFX is a fully programmable EEPROM cartridge capable of storing a full 60-voice program bank, presets and your multi A and B setup. Available at Ensoniq dealers. Suggested retail price is \$116.50. VC1 through VC4 are expected to follow soon. For further information, contact: EYE & I Productions, 930 Jungfrau Ct., Milpitas, CA 95035. (408) 945-0139.

BACK ISSUES

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

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Programming The VFX: An Interview with Mark Wiens (Part 3 - The Conclusion)

by Sam S. Mims

[Mark Wiens is the president of Eye & I Productions, manufacturers of the Voice Crystal cartridges. Mark was recently contracted by Ensoniq to program about half of the VFX's "factory patches." Parts I and II of this interview appeared in Issues #49 and #50.]

The VFX is a little different from the ESQ in that you can hold down a note while editing and hear the edit as you move the slider.

Right, that's one really nice thing - it's real time. In almost all cases. The pitch is not real time, but almost everything else is. As far as editing goes, it's just beautiful. It has global editing. Let's say you're editing envelope 1 of the first waveform. You like those parameters, and you want to put those parameters into envelope 2. You hit COPY, you say MAKE COPY, you say RECALL, and you say COPY FROM ENV 1 INTO ENV 2. So now you've copied every parameter - all three pages of envelope 1 - into 2.

Say I want to adjust two waveforms that are not muted; they're playing. I hit SELECT VOICE, I double-click it, both waveforms are underlined, I go to anywhere I want, let's say to the filter, and I get a flashing GROUP EDIT on the display. I hit the cutoff frequency, and I can adjust both at the same time.

That's very handy.

And you can do that with just about anything. Let's say I wanted the LFO page of that particular voice to copy over into another voice; the global editing makes this really easy. There are also default envelopes, just like the EPS, that give you standard string envelopes, brass, and such.

You also have a voice priority setting. If you've got a lot of voices going at once, and you don't want the voice stealing to be very obvious, you can set some to low priority and some to high.

So you set this parameter for each of the six waves in a patch?

Yeah. Let's say on one patch, I've used all six waveforms, but two of them are chiff flutes - maybe they're just chorusing a bit with the pitch detune or something. If you lost one of those chiff flute waveforms momentarily due to voice stealing, it wouldn't be very noticeable. So you would set that particular waveform to low priority, and the other one to medium, and maybe the other waveforms to high. It gives you a little more control in case that happens.

That's a nice feature.

The other nice feature is it's got a pre-gain. It's a hot instrument, but there are still times when you need more gain. On the Voice Crystal 1 cartridge, there is a stand-up bass patch. There was no way to get that realistic stand-up bass sound without having the filter cut-off really low, and there was no way to bring the volume up to match the other sounds. This gives you an option of doing that. You don't want to do it too often, but it gives you a good boost. The maximum volume setting is 99. When you put in pre-gain, that same volume becomes apparent at 66.

And that's a programmable part of the sound, and not a global thing?

Right, that's on each waveform. The bend range is a global thing, but you can go to presets and have two patches, one that has a bend range and one without. So there's always a way to accomplish something on here, whereas on other

synthesizers, you're just stuck.

The filters are typical of the EPS: you have two filters at once, and three different versions. You've got low-pass two-pole or low-pass three-pole on filter 1, and high-pass 1, 2, and a low-pass 2 and 1 on the second filter.

Are the filters digital?

Yes.

Can you expound a bit on the Preset Mode?

The preset mode is a performance mode, essentially, where you can take three patches, you can set the volume of those three, you can determine whether you're layering them all together, and you can set the pan, the timbre, the key zone, transposition, release, and patch select of each of them. And you have control over the effects also, and can store all of these settings in any of 20 preset locations.

When you're in the preset mode, when you're working with numerous waveforms, you can also adjust the overall release. Let's say you're in a session, you suddenly realize you need a little more release time, and you've got six waveforms going. Instead of going in and having to edit each of them, you can just do them all at once.

One thing that's really nice on the second master page is that you can set the data entry slider to normal or to timbre. When it's set to timbre, timbre can be a modulator.

I'm trying to envision that....

You've got pressure, wheel, wheel plus pressure, pressure plus velocity, external controller, pitch, pedal, keyboard, velocity, mixer, noise, envelope 2, 1, LFO, and timbre. So anything you want to modulate using the slider in a performance setting, you can do that just by setting the slider to timbre. In a lot of cases I use the timbre to bring up the highs, and bring up the high-pass filter just a little bit.

I'm not quite understanding why they're calling that "timbre," since it's essentially just the data entry slider working as a second mod wheel or something.

That's just what they call it because...well, they just called it "timbre" [laughs].

It would have made more sense, at least to me, if they had just called it "slider."

Okay, that's true. [TH - Ensoniq tells us that since the majority of modulation functions that users can program will control some aspect of a sound's timbre (i.e. what it "sounds like") they chose that as a logical name.]

How many MIDI channels can you play multitimbrally at once?

Twelve.

Does the VFX use the same cartridge as the ESQ?

No, it's more expensive. It's 256k instead of 64k, so they're going to be more expensive. Back in early '87 when we first sourced our ESQ EEPROM, the company gave us two samples of their newly-developed 256k EEPROM chip; if we would have had to buy them, they would have cost \$150 each. Now, the price has been cut to a third of that, but VFX cartridges will still have to be expensive.

Are you going to come out with an EYE & I cartridge for the VFX?

We're going to try to come out with a cartridge here pretty soon. I've got to do the best I can programming, regardless of whether the sounds are for somebody else, so I haven't set any voices aside for us when we come out with one.

How many are you doing for Ensoniq?

The deal is for 180.

How difficult is it on the VFX to come up with a sound that you conceive in your head? On the ESQ, for instance, it might be easy to come up with a brass sound, but on a DX-7, it might be extremely difficult. How does the VFX fare in this regard?

I'd say really well. You have a lot of options, but it's pretty clear. You just run through and find the right shade, again using the transwaves if you don't have anything there.

What excites you the most about this keyboard?

The quality of the sound is good, and the range of sound you can get out of it.... I've been working on D-50 stuff a lot, so one of my focuses was on emulating the D-50's sound, and you are able to get those real lush sounds. Just being able to have access to all the different types of sounds, and the programmability, is the exciting part of it. When you want to do something, it's there, and you can find a way to do it.

As far as waves go, you have inharmonic loops, your typical sort of D-50 noise cluster. And it's got excellent noise - it's got real white noise instead of digital whatever [like the ESQ-1 and SQ-80]. On the final wave page, you've got what's called ALL WAVES, and it's essentially every waveform in the entire 1.5 Meg of memory, played in succession. You can select your start point, and the length - how many waveforms you want to play through - and the direction, forward or reverse.

So they're always strung together in a certain order, and you can't alter that?

You can't alter the order, but you can alter the direction. On the multisampled waves you get the whole thing, but when you get into the transwaves, it's as if you're playing smaller portions. So you can get some really interesting things. It's like working with an EPS sample and cutting portions to where you're just getting part of the wave that you sampled. You start ending up with new waveforms and so forth. [He plays an extremely bizarre, seemingly random string of sounds.]

So does this have any practical application?

Actually, I've used that to actually get waveform timbres for different things. A violin patch I did, and a couple of other things, I've used that in the waveform sense. In other words, I found an area where I could get a waveform out of it that I couldn't get otherwise.

Is there anything that troubles you about the keyboard?

Ummm...no comment. I don't want to get anybody mad at me! [laughs]

Have these troubling things been software or hardware?

No, it's working really well now.

So they've been fixed?

Yes. On the prototype instrument, there were quite a few little things. When you globally edited the waveforms, you got some funny things, and...we didn't lose too many patches, I don't think. But all that stuff goes along with creating a new product. You're going to have those initial bugs when you're starting out. I'm really happy with the whole thing.

I've heard comments from other people about the piano not

being.... I somewhat agree, although I've worked really hard myself, and so have the other programmers, to bring out the good piano. Ensoniq probably sold 50 percent of the ESQs based on the piano waveform. [TH - Ensoniq tells us that the piano wave in the VFX is far better than the ESQ-1. However, their intention was to create a synthesizer, not a sample-player. Devoting a lot of memory to longer piano samples would have seriously limited the rest of the wave memory and, with it, the VFX's abilities as a synthesizer.]

Are there any bugs or nuisances in the current software that you'd like to see changed, or any good ideas that you'd like to see added?

There was one question Ensoniq had of us, and that was that the D-50, they determined, used a loudness curve in the output, and that's why they get that sound. It's like turning on the loudness switch on your stereo. I'm not sure whether they went to this degree rather than a straight EQ, but on a real loudness curve, the lower the volume, the higher the highs, the more bass, and the midrange goes out. And they asked us if we thought that they should do this. And we thought about it for a minute, and we both came up with the same answer, and that was that the ESQ-1 had its own niche in sound - it cut through - and you should probably leave well enough alone. And then it was later on that I suggested perhaps in the output page having a loudness curve on an on/off toggle, which could be something that they could implement later.

As far as programming goes, this thing is real deep. But it's really quick once you get started on it. Like the ESQ, it's pretty easy to grasp. I've had this thing since December, and there's still a lot of exciting unentered territory.

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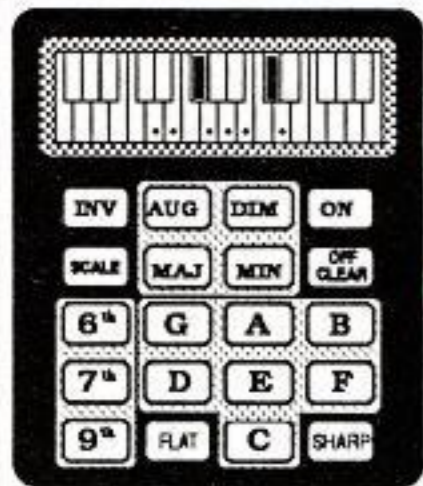
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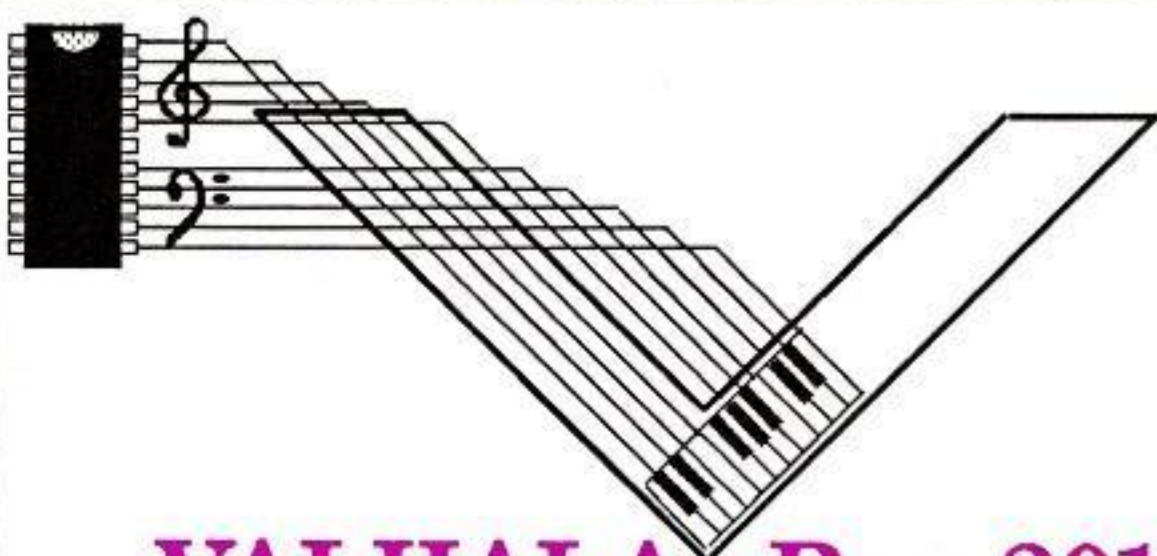
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Using The Rack Mount ESQ-M

by Chris Barth

When Ensoniq discontinued selling the rack mount ESQ-M, I couldn't resist the bargain prices which appeared when the remaining units were put on fire sale. Once I bought it and got it home, though, things got a little more threatening. No keyboard, and the display was a lot smaller than I was used to on the SQ. As with all rack mount synthesizers and samplers, it wasn't always obvious how to accomplish even the most basic tasks, much less doing something clever with the unit.

Well, we're both a year or so older now, and for all you rack mount owners, here's a few tricks and some insight into the big picture which should increase your enjoyment of the unit and get you moving on the learning curve. These tricks should work with any combination of Ensoniq synths - in my case, an ESQ and Baby M - but the focus today will be on the rack mount. If you don't have one, check the want ads, and you may find one or two used ones out there. Come to think of it, if you have the space and don't mind the second keyboard, you could buy a used ESQ and use it as described in this article.

The best way to begin is to decide how the ESQ-M should be incorporated into your existing system. There are four basic ways to work with the ESQ-M, and depending on your choice, the setup will be different. You can use the ESQ-M as:

- 1) an 8-voice expansion module for another SQ or ESQ-M, using nine MIDI channels and Ensoniq's OVERFLOW mode;
- 2) an 8-voice synth module operated by another MIDI controller or sequencer on a single MIDI channel;
- 3) 9 separate synthesizers (sharing 8 voices) operated by another MIDI controller or sequencer on nine MIDI channels;
- 4) an 8-voice synth module for a MIDI guitar controller, using the MONO mode. This topic is left wide open for anyone out there who has been working with this application, since I haven't.

But first, a little background, starting with how you can use your rack mount to stop all that note stealing in your elaborate SQ sequences.

USING THE ESQ-M AS AN 8-VOICE EXPANDER

The ESQ-M can be used to expand the eight voices of an SQ (or even another ESQ-M) to a maximum of 16 voices. This is done by connecting the MIDI out of the SQ to the MIDI in of the ESQ-M, placing the ESQ-M in MULTI mode, and activating the OVERFLOW function on the MIDI PAGE of the SQ.

The most common error I've seen can be easily avoided. Do not activate the OVERFLOW function on the rack mount, unless you have two ESQ-M units and you want one rack mount to be expanded to 16 voices while you play it from another keyboard. The rule is, OVERFLOW should be activated on the sending unit, but always disabled on the receiving unit. If you're using the SQ as your keyboard, you'll want to overflow to the ESQ-M. If you're using some other master keyboard or controller, it doesn't matter whether the SQ overflows to the rack mount, or vice versa.

When the OVERFLOW function is activated on the SQ, notes which would have otherwise been stolen once the eight SQ voices were used up, are now sent via MIDI to the rack mount, which plays them as required. For this to work, you should have the same programs in both units, and you should coordinate the MIDI channel assignments for both the SQ and the rack mount. The straight synth section of the SQ (this is when you're playing the keyboard without reference to any of the eight sequencer tracks) will overflow to the rack mount on the Base MIDI channel, which is selected on the MIDI page.

You should then match up the Track MIDI channels of the two synthesizers so that each track of the SQ will overflow to a track on the ESQ-M which is set to the same channel and the same program. A good example to follow appears on page 99 of the ESQ-M manual.

If any of your sequencer tracks are set to MIDI or SEQ status, they will not be affected by the Overflow Mode. All of their data will be sent out by way of MIDI, and will not be played locally on the SQ keyboard. Since the notes are not being played by the SQ voices, they won't use up any of the eight voices available simultaneously on the SQ.

Don't forget to turn the OVERFLOW function off if you disconnect the rack mount. If you leave it on, the SQ will send random notes out the MIDI channels to the unresponsive receiving unit, and the SQ internal voices will never play them. You'll lose some notes to MIDI limbo forever (if no one ever hears them, are they still music?). If you leave the rack mount connected with MIDI track assignments that are not coordinated with the SQ, the OVERFLOW mode will send the right notes to the wrong channels, and garbage will result - random notes sent to random patches.

If you're using OVERFLOW, you'll also want to avoid setting any sequencer tracks to BOTH status. This is usually done when you want to layer an SQ track with another synth or sampler on the same MIDI channel. When OVERFLOW is on, tracks with BOTH status will send nothing over MIDI (instead of everything) until all eight SQ voices are busy. Then all notes will be sent out over MIDI until another SQ voice is available.

The right program changes are sent automatically by the ESQ-1 to the ESQ-M as long as you are using Version 2.1 or higher for the ESQ-1. As the manual suggests, don't forget to set the overall volume, equalization and effects settings of the two units to the same settings so they will appear to act as one 16-voice synthesizer.

If you have sequences which were created before you started using OVERFLOW Mode, you'll have to go back to the MIX/MIDI page to assign the proper MIDI channels; otherwise, the OVERFLOW MODE will send the notes to the wrong destinations. You'll also have to make a decision regarding tracks with BOTH status; either change them to LOCAL or MIDI status depending on your needs.

And for the daring out there, why not try another company's synth as the receiving unit? For example, set the SQ OVERFLOW on, select a string patch, and then connect another synthesizer with a similar string patch to act as the receiving unit. The SQ will play the string patch, but randomly send out notes which will be played by the second synth. With the right patches, this is a great effect. I would only try this with the straight synth of the SQ, since if we used MULTI mode, we'd need a second synth with that capability and it would be very difficult to match up that many patches on two different synths. Better you should save this trick for your big string arrangements and stick to one basic sound on one MIDI channel for both synths.

Next time - more on BABY M, and maybe some neat tricks for live performance and recording.

Bio: Chris Barth is a producer and musician specializing in MIDI, synthesizers, and computer sequencing software. Chris owns and operates the Silicon Chip MIDI Studio, where he records and produces jazz and progressive rock for some of Philadelphia's finest musicians and the occasional pinhead. Chris is also an attorney and teacher with masters degrees in economics, insurance, and taxes, but he doesn't tell this to anyone anymore, as it gives the wrong impression. ■

Soundprocess Hackerpatch #2

By Bob Spencer

Last time we looked at the process of Getting Into a Patch, Changing Octaves and Changing Oscillator Pairs. Remember? O.K. - a quick review:

Param. ----- (00) - Patch area mapped (even #1-00)
 (01) - Patch # at (odd #1-11) info.
 (54) - Changes patch to be worked on
 (69,71) - Course tuning - oct.
 (60) - Osc. Pair to work on w/VCA,LFO,
 Algor., Tuning, Etc.

This time let's look at how Triton gets that big rich SP Sound. There are basically four ways to achieve this:

- (1) - Chorusing - Par. (70,72)
- (2) - LFO (76,77,78)
- (3) - Changing Octaves (69,71)
- (4) - Mixing Wave Forms (73,74)

Most of the time you will be using combinations of 2, 3 or all 4 ways. Try this patch:

Parameter	Pair: 1	2	FILTER	
Volume Envelope			[89] Attack	0
[61] Attack	00	0	[90] Peak	13
[62] Peak	31	31	[91] Decay	21
[63] Decay	12	12	[92] Sustain	22
[64] Sustain	10	10	[93] Release	31
[65] Release	13	13	[94] Decay kbd	0
[66] Decay kbd	0	0	[95] Peak vs	18
[67] Peak vs	31	31	[96] Sustain vs	0
[68] Sustain vs	10	10	[85] Freq	0
OSC A			[86] Q	0
[69] Octave	2	2	[87] Track	0
[70] Fine	0	0	[88] Max Freq	99
[73] Waveform	40	36	PATCH	
[80] Volume	63	63	[97] Transpose	12
			[98] Volume	53
OSC B				
[71] Octave	2	2		
[72] Fine	0	0		
[74] Waveform	40	36		
[81] Volume	63	63		
LFO				
[76] Freq	0	0		
[77] Depth	0	0		
[78] Switch	0	0		
MISC				
[75] Algorithm	1	1		
[79] Kbd Switch	3	3		
[82] Vol Track	31	31		
[83] Trig Time	0	-		
[84] Trig Cntr	0	-		

(Use SP Op. System Disk Program #11.)

One of my favorite tricks is to take P. 69, drop it down by 1, then change P. 70 to FF (Or FE, FD, etc.). Then change Osc. Pairs (P. 60) leave 69 as it is but change P. 70 to 1, 2, 3, etc. This gives the "fat" chorusing sound of voices or ensemble strings. It also works to give more movement to any sound. Try it on the above patch:

- (69) - 1
- (70) - FE
- (60) - 2
- (69) - Same
- (70) - 2

Notice the difference? Try doing similar changes with the other oscillator:

- (71) - 1
- (72) - FF
- (60) - 1
- (71) - Same
- (72) - 1

Another trick is to drop one Oscillator an octave and decrease the volume on it to give it a more classic "Dino- Synth" sound:

- (69) - 0
- (80) - 20-30 Range

Or you may want to try using LFO's to give more lushness:

- (60) - 1
- (76) - 30
- (77) - 5
- (78) - 2 (2nd Osc. in this pair)
- (60) - 2
- (76) - 4
- (77) - 5
- (78) - 2 (2nd Osc. in this pair)

Mixing waveforms is a powerful tool to create huge sounds:

- (73) - 55
- (74) - 47
- (60) - 1
- (73) - 51
- (74) - 19

You can edit the patch chart to include any or all these changes according to taste - like just the smallest amount of pepper or huge bunches of garlic! Try different amounts of (70), (72), (76), and (77) or change waveforms (73) - (74). Or change (69) and (71) - up or down.

Please send any recommendations, questions or criticisms to my attention via the Hacker.

Bio: Bob Spencer is a full-time musician and husband, part-time programmer and movie addict! He is currently at work on a 4th disk of Soundprocess sounds and has no extra time on his hands!

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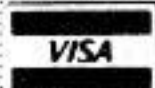
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Ensoniq Introduces VFXSD Music Production Synthesizer

Ensoniq Corp.

Combining proprietary Dynamic Component Synthesis technology with a powerful, yet friendly 24-track sequencer Ensoniq Corp has introduced the VFXSD - a Music Production Synthesizer. The VFXSD brings together synthesis, effects processing, sequencing and disk storage into a single keyboard designed for music composition and performance.

SOUND

The sound of the new VFXSD is based on the same 16-bit technology found in the Ensoniq VFX, the keyboard that redefined state-of-the-art synthesis. Each of the over 200 Programs shipped with the VFXSD is composed of six completely independent sound sources, drawing from a palette of over 1900 wave possibilities. These sound sources, or voices are layered together to create rich new textures that combine analog, sampled and exotic digital sounds. The custom 24-bit effects are incorporated as an integral component of each Program, and can be dynamically altered from many of the VFXSD modulators. Exclusive Ensoniq performance features like Patch Select buttons and a Poly-Key(TM) pressure keyboard provide great flexibility for sound variation and expression.

The VFXSD has 41 new drum and percussion sounds in wave memory, and 24 drum kit Programs are provided in ROM/RAM memory. A disk with sequenced drum patterns is provided to help the user get started writing music quickly.

SEQUENCER

The heart of this Music Production Synthesizer is an all-new 24-track sequencer that continues Ensoniq's evolution of powerful yet friendly sequencer designs. Standard memory of over 26,000 notes (expandable to over 75,000 with an optional SQX-70) is shared by a 60 Sequence/Song structure. The clock resolution is 96PPQ guaranteeing accurate recording and playback. Automated punch and edit points can be defined by bar/beat/clock and note range offering great flexibility for the user. There are three record modes (Replace, Add, Loop) to cover any recording style/application, with advanced auto-locate functions and editing options. You can audition every record and edit function of the VFXSD, allowing you to experiment freely and always compare the results. Best of all, the sequencer operating system is loaded from disk into dedicated RAM, so it can easily be enhanced in the future. MIDI Automated Mixdown remembers all volume changes for each track, as well as panning, program changes and other controller information. The VFXSD has four individual polyphonic outputs with versatile effects routing capabilities. A 3.5" disk drive stores sounds, sequences, songs and can also act as a MIDI Sys-Ex recorder for other MIDI products.

SUMMARY

The VFXSD offers an integrated environment for music composition which goes beyond the "scratchpad" concept of most synthesizer/sequencer combination products. The bold sound of Dynamic Component Synthesis, as first introduced in the Ensoniq VFX synthesizer is a highly praised professional sound which need not be replaced in a final production situation. 24-bit dynamic effects and 16-bit CD quality hardware provide stunning clarity of sound. The all-new 24-track sequencer offers recording and editing features that rival many stand-alone and computer-based sequencing packages. Providing all these features in a single, integrated keyboard greatly helps the user to capture their ideas and inspiration quickly, and produce "master" quality music.

The Ensoniq VFXSD carries a suggested retail price (US) of \$2595.00 and will be available in October 1989.

VFXSD SPECIFICATIONS

Keyboard

61 note (C-C) weighted-action Poly-Key* (polyphonic after-touch) keyboard with programmable velocity and pressure sensitivity.

Up to 12 programmable keyboard zones for splits and layers.

Controllers

Exclusive Patch Select buttons for instant access to four Program variations.

Programmable dual footswitch input for sustain, preset advance and other assignable functions.

Pitch and Mod Wheels.

Mod/Volume Pedal input.

Data Entry Slider.

Internal Program Memory

64K bytes of ROM/RAM for 120 Programs and 40 Performance Presets.

Cartridge

32K bytes for 60 additional Programs and 20 additional Performance Presets.

Waves

14 Megabits (1.75 Megabytes) of waveform ROM.

Over 1900 variations possible from the 141 wave selections, which include:

Multi-sampled acoustic instruments in String, Brass, Breath, Bass, Drum and Percussion groups.

Sustain waveforms with harmonic and inharmonic structures.

Unlooped percussion samples and attack transients.

TransWave (TM) spectral interpolation waves with real-time modulation.

Timbre-shifted versions of acoustic samples.

Modulatable start point and forward-backward playback modes on all samples.

Pitched or fixed frequency playback of all waves possible.

Voice Architecture

21 dynamically assigned voices.

A single Program can use up to 6 waves per key simultaneously.

Instant selection of alternate voices within a program using Patch Select buttons or velocity.

Programmable voice delay up to 2000 msec.

2 independent multi-mode dynamic digital filters per voice (low pass, high pass, variable bandwidth band pass).

3 six stage envelopes per voice w/16 parameters per envelope.

One LFO with modulatable rate per voice.

15 modulation sources, routable to Pitch, Filter 1&2, Volume, Pan, Wave start index, Effects mix and others.

17 preset envelope templates for ease of programming.

Fully multi-timbral, with up to 12 simultaneous Programs in Multi mode.

One fully programmable pitch table available per Program for alternate tunings, with interpolation and extrapolation capabilities.

System Pitch Table allows user to use any Program Pitch Table on all sounds instantly.

Performance Preset Parameters

The combination of up to 3 Programs, special performance parameters and an effects setup can be saved as a Preset.

Easy access performance parameters include Volume, Pan, Timbre, Key Zone, Transpose, Release Time, Patch Select status and others.

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16 bit D/A conversion with 96dB dynamic range.
First-order linear interpolation for wide transposition range.
Linear phase output filters.
Dynamic stereo panning per voice.

Digital Signal Processor

Custom VLSI 24 bit digital signal processor (ESP chip) specifically designed for audio processing.
Programmable stereo effects processing with real-time modulation of reverb decay time, chorus depth, chorus rate, flanger frequency, flanger rate, delay regeneration and others.
20 effects algorithms including Large Hall, Small Hall and Room Reverbs, Inverse Room Reverb, Chorus, Flanging, Delay, Roto Speaker and multi-effect combinations.
Three stereo busses allowing for dry, individual or grouped effects processing (routed to Main stereo outputs).
One additional dry stereo bus routed to Aux outputs.

Sequencer

24 polyphonic tracks (including 12 "Song Tracks") each with separate Program, Volume and MIDI channel/status.
Tracks can play internal Sound Programs and/or external MIDI instruments.
60 Sequence/Song structure.
Song form provides up to 99 Steps with up to 99 Repetitions for each Step (each Sequence Track in a Step can be individually Transposed and/or Muted).
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Clock resolution of 96PPQ.
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Auto-locate controls, adjustable click track (routable to Main or Aux. outputs), Tap Tempo control.
MIDI Auto Mix automated mixdown feature records all volume/panning changes for each Track.

MIDI

Poly, Omni, Multi, Mono A and Mono B modes.
Multi-timbral, accommodating up to 12 simultaneous polyphonic MIDI channels with separate Programs and performance parameters.
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800K double-sided 3.5" micro-floppy.
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Left and Right Main audio outputs (connecting either singly provides Mono output).
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MIDI In/Out/Thru.

Standard Accessories

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VSD-100 Sound Disk (contains back-up of RAM Programs, 84 additional Programs, current Sequencer Operating System and sequenced drum patterns).
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VPC-100 Series ROM cartridges.
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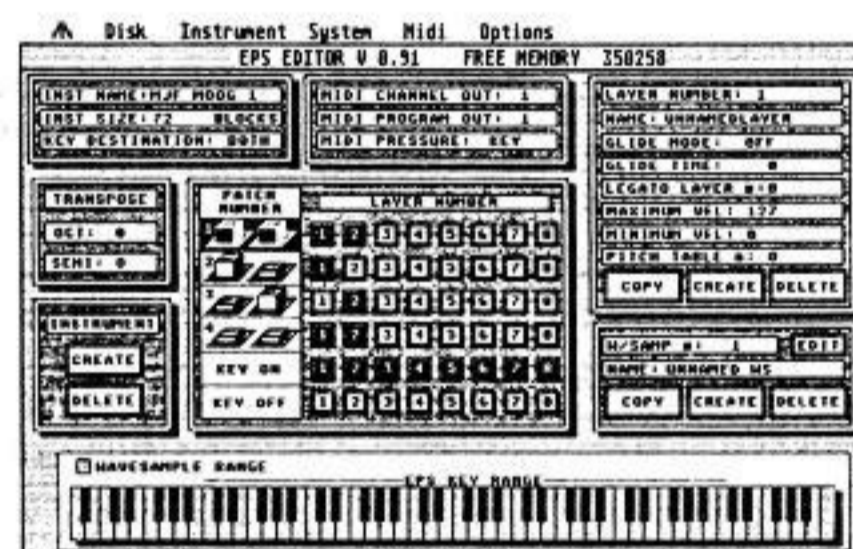
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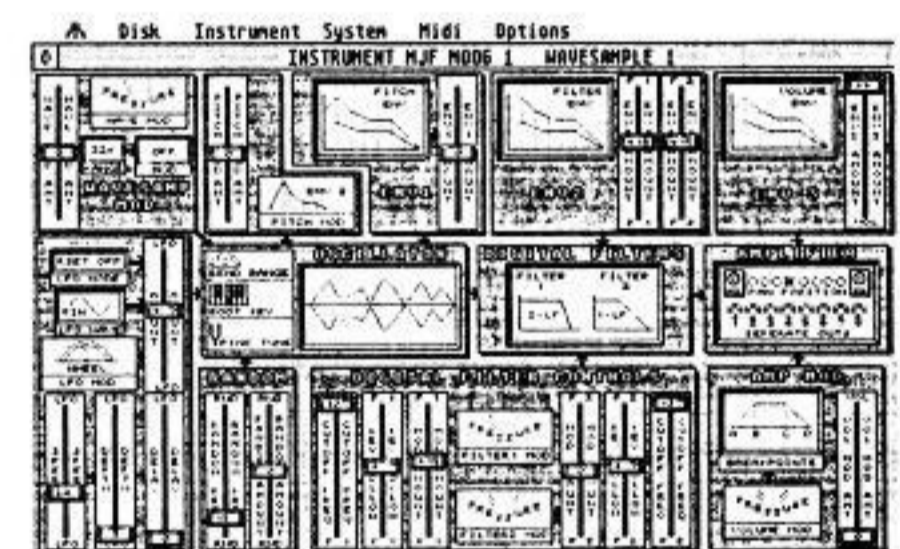
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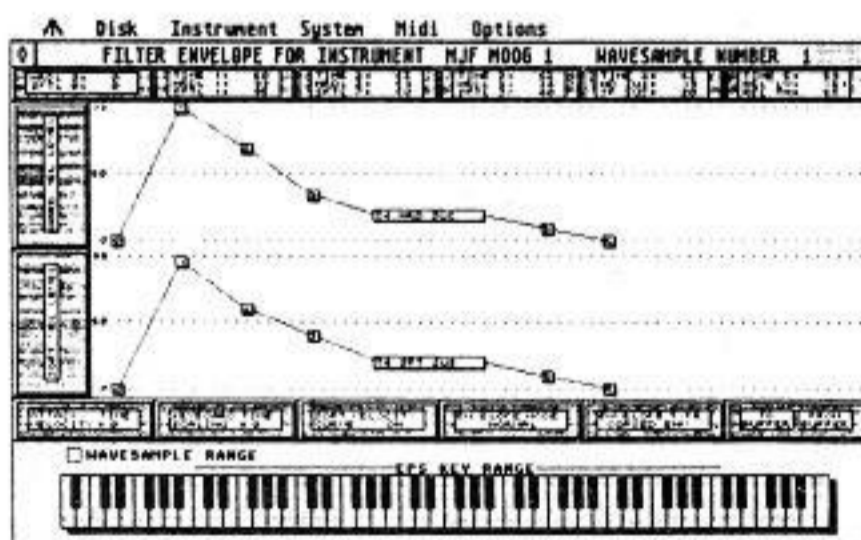
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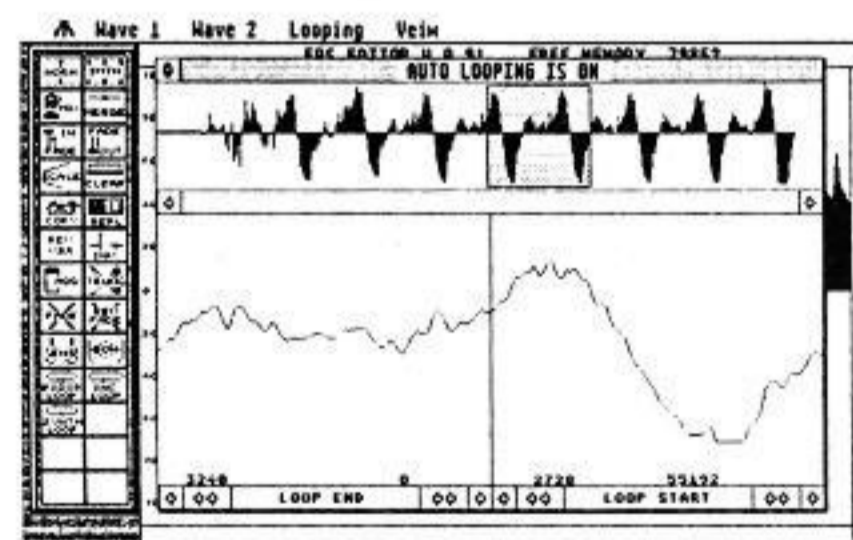
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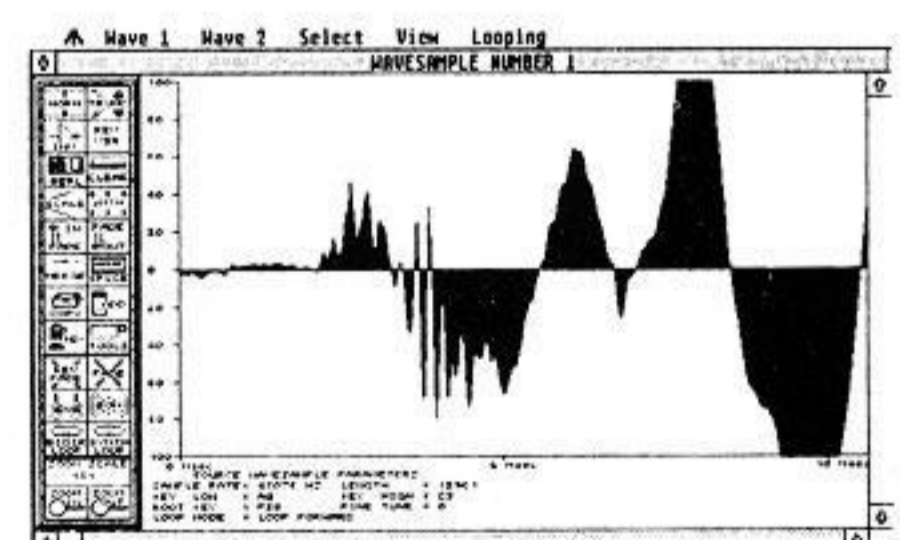
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The Ensoniq EPS "Digital Effects Processor"

Tim O'Connor

O.K., I admit it, I'm a bit of a bit head. I love to play around with the low level wave data commands on the EPS. It is possible to create some very interesting effects using these commands, including simulated stereo, chorusing and echo or 'slapback' effects. Consider this problem: You would like to apply echo to a sound but A) you don't have a digital reverb with this capability, B) you have one but are using it for something else, e.g., reverb, or C) you would like to have the echo on a single sample, say, snare drum and leave all other sounds unaffected. With the power of the EPS's wave data commands, the glory is yours and more. In fact, the resulting echo effect will be more versatile than any "reverb in a box" can offer.

For this example, let us assume you would like to have a "slapback snare" sample in your drum kit. The first step is to load layer 1 with a snare sample. Any snare sample will do, although I like to use one with lots of "ambient" sound in it. The next step is to create what I call a "null" sample. By this I mean a sample of silence. This can be created by taking an existing sample of sufficient length and using the CLEAR DATA command to set it to all zeroes, or, as I prefer, create a null sample from scratch. This is done by going into sample mode, setting the record threshold to its minimum value, then begin sampling. After about a second or so, hit enter and play a root key. With nothing plugged into the audio in jack of your EPS, you have created a sample of silence of arbitrary length. The null sample should be at least 50% longer than the snare sample. Create your null sample in layer 2 so the snare sound and its echo can be layered together. Fun begins now.

Select the snare sample as your edit wavesample. Using the COPY DATA command, copy all data from the beginning of the wavesample to the end (copy PARAMS+DATA) from the original sample to the null sample. For the DESTINATION ADDRESS, choose a value that is about 50% from the beginning of the destination wavesample. When the copy is complete, you have created a second identical snare sample except this new one has a period of silence in front of it. With the "instrument" set up to play both layers 1 and 2, you should hear both the original snare and the "delayed" snare on the same keystroke. If you are not happy with the length of the delay, you can adjust this by changing the SAMPLE START address of the delayed sample via the EDIT SAMPLE page (in fact, the SAMPLE START address can be modified by velocity, keyboard position or any other controller allowing for real-time modulation of delay effect. Try to do this on your MIDIVERB!). An extremely short delay (2 - 5 percent) will create a good phase-shift. The two layers can be panned to opposite sides for stereo echo, the delayed sound can be pitch-shifted, changed in volume, filtered, etc. for a variety of effects.

What we have done here sounds great but is wasteful of precious EPS memory, since you have a lot of duplicate data in your machine. What we do now, then is actually DELETE the original snare wavesample. All we really need is one sample in memory with as many copies as we want echoes, all with different sample start addresses. After deleting the original sample, copy the sample in layer 2 back into layer 1 (copy PARAMS only!) and adjust its sample start to "remove" the silence at the beginning. As I have implied, you can repeat this entire procedure, creating several copies of the sample (up to eight since you're layering) with different wavesample start addresses. This creates a nice multi-tapped delay effect. As you will notice, the echoes may, but do not have to be equally spaced in time (another unique EPS effect). To conserve EPS voices (20 voices just doesn't seem like a lot any more, does it?), you can MIX the wavesamples together (the COMMAND

AMP page) but then you give up the stereo effect.

So far, I have talked about single shot (i.e., non-looped samples) since these are relatively easy. With looped samples the procedure is the same except you must write down the DESTINATION address you specified when you copied the original sample to the null sample. This offset must be added to the LOOP START and LOOP END points when looping the delayed sample to avoid a tedious relooping exercise. In addition, for melodic voices (pianos, etc.), it is a good idea to modulate sample start with keyboard position to nullify the effect of the delay time changing with pitch.

What does all this mean, gentle reader? By using a single one of the EPS's low level wave data commands, "COPY DATA", we have been able to create an echo effect which is 1) stereo, 2) real-time modifiable, 3) pitch shiftable, 4) wavesample specific, 5) equally or non-equally spaced in time, and 6) has zero loss in signal quality. Not bad for a keyboard which doesn't even mention any of this capability in its advertisements.

I hope you have found these ideas useful and can develop them even further than I have. As for me, I am going to investigate using REVERSE, INVERT and REPLICATE data on old Beatle samples to find out once and for all if Paul is really dead.

Bio: Tim O'Connor is a professional software nerd by day and a semi-unprofessional singer/songwriter/keyboardist by night. His favorite color is extreme infrared, visible only to the rare spotted leopard toad of Eastern Papua New Guinea. ■

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Learning to Live with Dynamic Voice Allocation

by Jim Johnson

When I first got my ESQ-1, one of its most impressive features, at least from a technological standpoint, was its use of dynamic voice allocation. That's the trick that lets the ESQ play eight trumpet voices, followed immediately by eight string sounds, or whatever. Prior to this machine's introduction, the state of the art in multi-timbral instruments was represented by the Oberheim Xpander, a six-voice synthesizer that does not use dynamic voice allocation. On the Xpander, each voice in the instrument must be assigned to a particular patch. If you want to play three trumpets at once, then you have to assign half of the Xpander's voices to that patch and channel. This is very much like the situation in a real orchestra, and it's nice from that standpoint, since it gives you a way to control the number of voices that can be used on any part - but when you're running out of voices and you've got two of them semi-permanently assigned to the flute part that only occurs in measure 98, you start to wonder if there might be a better way to do things.

So the dynamic voice allocation in the ESQ-1 is certainly a welcome feature, since it lets me pretend that my "orchestra" is much larger than it really is. However, as is always the case with self-deception, blind acceptance of this illusion can lead to problems down the road. With the ESQ, the piper must be paid when you exceed the instrument's eight voice limit.

If you're new to the ESQ (or the EPS or VFX, for that matter, since they also use dynamic voice allocation) and don't quite understand how dynamic voice allocation works, here's an analogy that may help. Imagine that, inside the ESQ-1, there are eight very skilled musicians. Each of them can play any of several instruments. When the ESQ is told to play a note (either from its keyboard, its sequencer, or from a command at the MIDI input), one of these musicians picks up the appropriate instrument and plays the note. (These guys are very fast.) When the note is finished, the musician puts down the instrument and waits for the next note. So far, so good - but as soon as you tell the ESQ to play more than eight notes, problems start to occur. All eight players are busy, so what happens? The ESQ's "conductor" (that part of the circuitry that tells the eight musicians which instruments to play) tells one of the musicians to stop playing, and to play the new note. In the VFX, the "conductor" is pretty smart, and you can set things up so that when "voice stealing" (which is what this is called) occurs, the note that is stolen is something that is relatively unimportant. However, in the ESQ, this voice stealing occurs more or less at random, so it's just as likely that that loud, sustained note in the guitar solo will be stolen as it is that a short drum note will be cut off. The result: a nasty gap in the music, usually accompanied by an obscene pop or click as the note terminates.

The solution to this is conceptually simple: just make sure that the ESQ is never playing more than eight notes at a time. However, like all simple solutions ("If people would just love each other, there'd be no more war"), this is easier said than done. This was brought home to me in a very forceful way recently when I was working on a sequenced version of Beethoven's Eighth Symphony. The ESQ was assigned to play nine different instruments: two oboes, two bassoons, two clarinets, and three strings. However, by carefully going over the score, I was able to convince myself that at any given time, no more than eight of these instruments were playing together. (Actually, in the last few measures, more than eight notes were called for, but I was able to get around this by thinning out a few parts.) So I figure I'm set, right? Wrong. After all of the

parts were added, and I played the thing for the first time, I heard all kinds of ugly pops and snaps from the ESQ. Obviously, voice stealing was occurring, but WHY?

A few seconds with my graphic sequence editor revealed the problem. Figure 1 shows the two violin parts, as well as the reason for the voice stealing. As you can see, several of the notes in these parts overlap just a little bit. This is not enough to cause audible slop in the individual parts, but when the ESQ is being pushed to its limits, voice-wise, this is enough to cause the dreaded voice stealing syndrome to occur. Once the problem was identified, the solution was simple: just shorten those overlapping notes, and everything was cool.

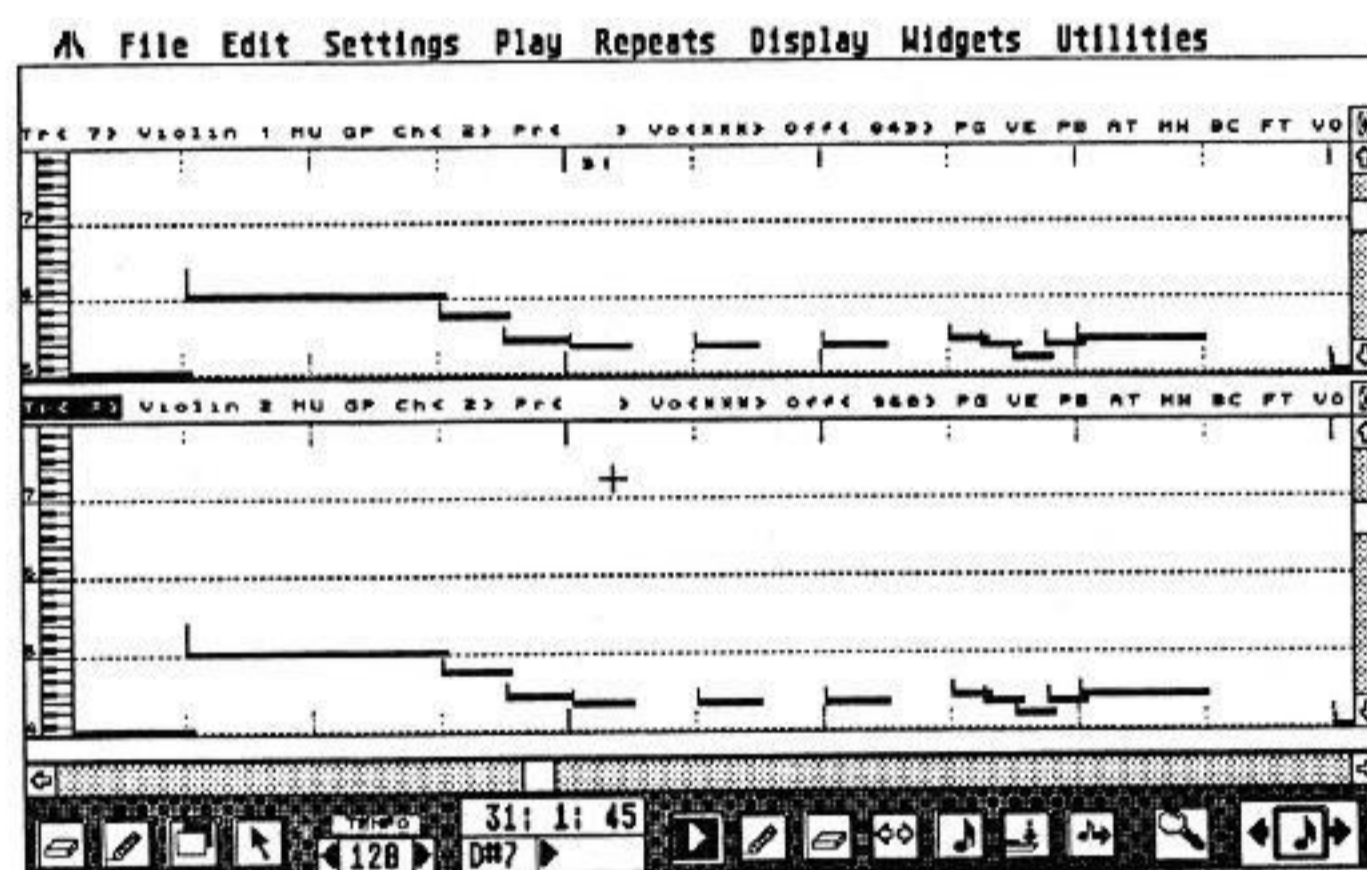
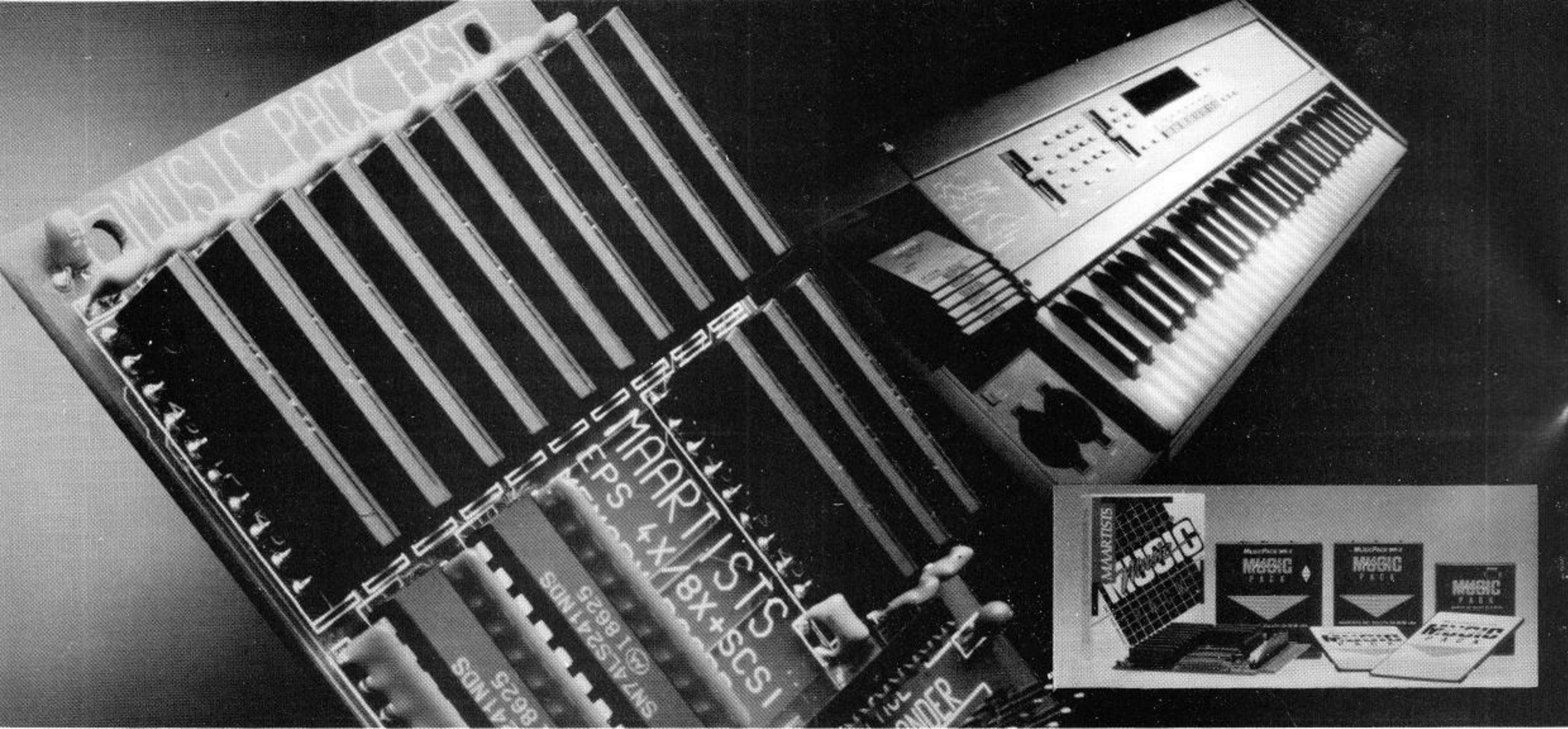


Figure 1.

Those of you who are still using the ESQ's sequencer are probably saying "Great, but how do you do this WITHOUT a graphic editor?" My answer, unfortunately, is that there is no really easy way to do this with the ESQ's sequencer. If you have a software sequencer that provides list editing (instead of graphic editing), you can fix these problems by reading through the event list, though this can be tedious, but because of the ESQ's limited step-editing, it's practically impossible to make these corrections directly at the synth itself. Your best bet, in this case, is to transfer the sequences into a computer, edit them there, and then send them back to the ESQ.

If you have a system with plenty of MIDI channels (for instance, a Mac sequencer with more than 16 channels), there is another possible solution. If you set the ESQ-1 to play in mono mode (MODE = MONO on the MIDI page), each channel will only play one voice at a time. If you assign the voices properly within the ESQ's sequencer (two oboes on tracks 1 and 2, bassoons on tracks 3 and 4, etc.) this lets you bypass dynamic voice allocation altogether and precisely control the number of voices available on each part. The down side is, of course, that you eat up as many as eight MIDI channels when doing this.

One final note: if any of your patches make use of layering, all bets are off. In this case, the ESQ can play no more than four voices - or maybe six if only one of your tracks use layering, etc. Suffice it to say that when layering is used, things get even hairier, so you should avoid layered voices if the ESQ is needed to play a lot of parts. ■



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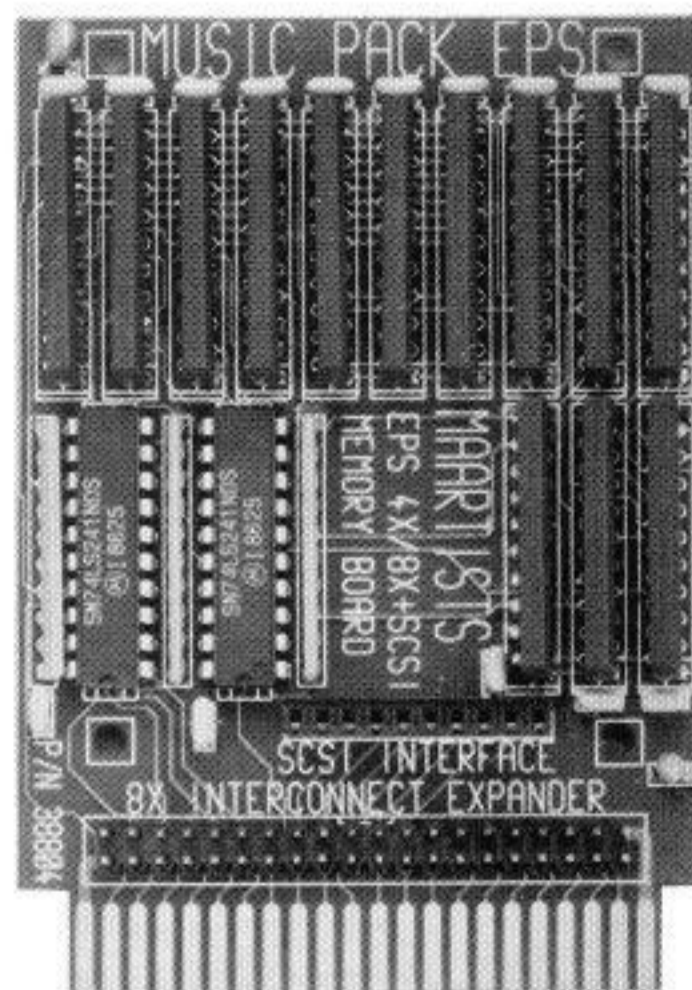
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Ensoniq EPS Used to Solve Crime!

by Bob Wehrman

The Ensoniq EPS was recently used to aid a criminal investigation into alleged police brutality in Caldwell, Idaho. According to Jim Rogers of Caldwell, Canyon County sheriff deputies were called to apprehend a "Man going berserk in his girlfriend's house." They were instructed, via radio, to get the suspect out of the house without violence. When they rushed the building, the man jumped out at them from behind a closet door, waving a very big knife. The deputies shot and killed him.

An investigation is being held to see if the officers really followed dispatch instructions, which are routinely recorded on tape. Somehow, the recording had been made at an unusually low ips rate so when investigators played the tape, they found that it was playing back at an incredibly high speed. All they could hear were munchkins.

The investigators called on Rogers to digitally decipher the recordings. He sampled them with his EPS at a 39.1k sampling rate, which gave him 26.17 seconds of recording time. He then pitch shifted the samples down 2.5 octaves and re-recorded them on to tape. He repeated the process until he had assembled almost an hour's worth of dispatch's communications with the officers. Rogers says "The tapes were in pretty bad shape when I received them but, by using the EPS, I was able to recreate a very audible and understandable recording."

There has been no decision to date as to whether or not the officers acted appropriately, but it just goes to show that there is no limit to what one can do with an Ensoniq EPS! ■

Minotaur Disk #8

Reviewed by Don Slepian

For: Mirage.
Product: Rare, acoustic instruments for the Mirage. Disk #8 - Harpsichord II.
Price: \$20. Set of eight disks for \$110.
From: Minotaur Studios, 52 State St, Canton, NY 13617.

This disk offers a full sounding Harpsichord, a Hammer Dulcimer with plucked harmonics, and a consort of flutes. The sounds are well recorded and balanced across the keyboard. The three variations of each sound are both useful and interesting.

I recommend this disk to anyone interested in exploring and using unusual acoustic instruments. I use the flutes to good effect as a single rank of a pipe organ. The third variation of the Harpsichord gives it a soft attack and long sustain, creating an unusual string-like timbre. Play ragtime on the Hammer Dulcimer and the effect is reminiscent of a Nickelodeon.

These sounds are exotic, and in most music should be used sparingly, like hot sauce. It is their quirky acoustic nature that shows the Mirage off in a good light. This disk is a good value and a welcome addition to my library. ■

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IS IT THE COLONEL OR THE CHICKEN? "Original Chicken" samples for the EPS -- Atmospheres, Mellotron, #1 Tympani, and more! \$10.95 per disk - mix and match for your convenience. Demo tape \$5. RUBBER CHICKEN SOFTWARE CO. Dept. R, PO Box 428, Renton, WA 98057. 206-242-9220.

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EPS - Realistic Drums sampled with natural ambience. Disk 1 - standard kit plus cymbal roll. Disk 2 - jazz kit (primarily brushes). Send \$8 for one or \$12 for both to: Robert Ackerman, 3111-21 Suite #144, Mahon Drive, Tallahassee, FL 32308.

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I have recently bought an IBM AT with a Roland MIDI-interface. I also own an ESQ-1. Now I am looking for software to control the ESQ, as well as sequencer programs and other MIDI programs. My address is: Anders Wallgren, Studentstaden 22:214, S-752 33 UPPSALA, SWEDEN.

Passport (Master Tracks) 16-track Sequencer Pro, C-64, \$49.95. P/H \$3.00. ORBITAL ACTION MUSIC, PO Box 55191, Grand Junction, CO 81505.

EPS-Sense: IBM Sound Editing System for the EPS/EPS-M reviewed issue #50 of TH. Program: \$50.00. MSC1: IBM VES for Mirage reviewed issue #38. Program: \$40.00, demo: \$7.00. Add \$5.00 for S/H. Send check to: Jeffrey Richter/Donna Murray, 3502 Village Bridge Apts., Lindenwold, NJ 08021. Phone: 609-346-0943.

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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: MINGUS, by Scott O'Hare, Island MIDI

MINGUS is a standup acoustic bass patch for the ESQ-1. It is constructed dynamically as a percussive "pluck" (ENV1 and ENV2), followed by a swell (ENV3). ENV2 is notched (L2) to add the realism of the pluck. The SINE waveform appears to be indispensable for a fat but muted standup bass sound, while the KICK waveform in OSC2 is used to simulate the fretless "buzz", which more or less coincides with the swell of ENV3. Detuning is minimized, as this only seems to muddy things up. For the same reason, only a single LFO is used. There are approximately two octaves of useful notes here, beginning with low F. Creative pitch bending will create excellent effects.

THE HACK

Hey, no reason to stop at low F - MINGUS sounds good all the way to the bottom. Obviously named after jazz bassist Charles Mingus, this patch is a nice alternative to the "standard" upright bass sound; it's more legato for slow walking lines, rather than a plucked sound. The mod wheel adds an appropriate subtle vibrato, but the rate was a tad slow for me, so I changed the **FREQ** of LFO1 to 17.

It's puzzling why **FINE=01** for all three oscillators; this merely tunes the whole patch a bit sharp. Set these to zero to stay proper. The use of the KICK waveform is a neat trick - the buzz it produces is very realistic. You can emphasize this tone by adding a bit of filter resonance, but anything beyond **Q=5** seems too much.

The upper octaves might be useful to you as well, as a rather muted bell sound. Turn on the **AM** (MODES page) for a different variation here. Otherwise, this patch is a good candidate for splitting, with perhaps a piano up on top.

THE PATCH: M/PERC, by Joe Rose, N. Attleboro, MA

This patch is the organ sound I'm using. It's no B3, so I call it M/PERC after my retired M-100. Try layering with a similar patch (without the percussiveness). For a super chorused Hammond, detune the layer patch (you knew that!).

THE HACK

While organ sounds abound for the ESQ-1, this is one of the better ones I've heard. The mod wheel, however, doesn't do much for the sound, so let's make a reasonable Leslie out of it. Joe has already started this, with LFO2 modulating OSC1 and 3 in opposite directions, but the effect is too much, so decrease the **DEPTHs** to +01 and -01 respectively. Now, let's add it to the filter and panning as well. On the **FILTER** page, set up LFO2 as a modulator with **DEPTH=+06** or so, and do the same on the **DCA4** page, with **DEPTH=+28**. As a final touch, apply LFO2 to **DCAs** 1 and 3 as well, with **DEPTHs** of +04 and -04.

The speed of the Leslie is controlled by the **FREQUENCY** of LFO2. For a slowly-spinning Leslie, set **FREQ=13**, and use the mod wheel about halfway full. For a fast spinner, go for **FREQ=35** or so. If you have a CV pedal, you might replace the

LFO2 modulator with **PEDAL** so the Leslie can be switched on by foot.

THE PATCH: PLKBL2, by Charles Fischer, Mescal Music

PLKBL2 is a digital pad for subdued moods. New Agers should find plenty of uses, while rockers will offer obscene comments. Stereo panning by **ENV4** adds an ambience similar to reverb.

THE HACK

Here's another entry in the percussive attack/synthy sustain category of sounds that is so in vogue these days (and for good reason). Charles used the mod wheel to brighten the sound up a bit, via filter modulation. **OSC3** provides the initial attack, with the **PLUCK** waveform, and the other oscillators sustain the sound. This is quite a subdued patch, though, so I found it advantageous to crank up **DCA4's FINAL VOLUME** to 63.

PLKBL2 is easily adaptable to an ESQ, though you'll get a slightly different attack sound. Try **BELL** as a waveform for **OSC3** and turn **MOD #1** to **OFF** (surprisingly, this works better than just setting it to **VEL**). Other waveforms that work well in **OSC3** are **SINE**, **SQUARE**, **BASS**, **SYNTH2**, and the **VOICE** waves.

THE PATCH: RORBKZ, by Erick Hailstone, MIDI Connection

RORBKZ is a soft brass sound with some ambient noise, which is more pronounced in the lower half of the keyboard.

THE HACK

This doesn't strike me as being very brassy; I find it more of an ethereal flute-ish sound. **OSC1** adds an attack noise that sticks around as the sound sustains. **OSC3** uses LFO1 twice as a modulator - why not use it once at a depth of +06?

I made a couple of minor tweaks to suit my ears better. First, I changed the **DCA4** modulator to **KBD2**; this gives the same effect of keyboard panning, only it centers it better. I also didn't care for quite as much release time as Erick programmed, so I changed **T4** of **ENV4** to 35. (I'd rather less ambience in the sound itself, with it then piped through a reverb unit.)

The effect of the mod wheel seems mighty strange at first, as it adds a quick vibrato, as well as raising the pitch of **OSC2**. But then I found that it is very effective when added just a bit to the attack of some notes (not all notes, or it sounds overused). It adds a very human expressiveness.

Finally, I played around with the waveforms and the filter and came up with some interesting variations. My favorite was the use of the **SINE** waveforms on **OSC2** and 3, with the filter cutoff frequency turned up full (**FREQ=127**). This makes the noise much more prominent in the sound, and gives sort of a D-50 flavor, particularly when used with an outboard reverb. Other good alternatives for waveforms are **SQR2**, **OCTAVE**, and **OCT+5**. And it's also interesting using the filter frequency **AND** the resonance both wide open.



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: MINGUS BY: SCOTT O'HARE

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	1	BASS2	LFO1	2	ENV2	-6
OSC 2	-1	0	1	KICK	LFO1	-1	OFF	0
OSC 3	-1	0	1	SINE	LFO1	2	ENV2	-6

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	39	ON	ENV1	63	ENV3	27
DCA 2	0	ON	ENV3	63	LFO1	-30
DCA 3	16	ON	ENV1	63	ENV3	30

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	26	0	15	ENV3	5	ENV2	28

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	LFO1	25

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	15	ON	ON	TRI	30	26	19	WHEEL
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	0	0	15	0	0	21	28	63	15
ENV 2	63	0	0	52	8	5	3	0	0	63
ENV 3	60	63	0	31	0	20	19	40	37	36
ENV 4	63	33	58	36	0	1	0	4	19	33

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

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

ESQ-1 PROG: M/PERC BY: JOE ROSE

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	OCT+5	LFO2	2	OFF	-
OSC 2	1	7	6	SINE	OFF	-	OFF	-
OSC 3	-1	0	2	OCT+5	LFO2	-2	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	OFF	-	OFF	-
DCA 2	8	ON	ENV2	63	OFF	-
DCA 3	63	ON	OFF	-	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	86	11	-	OFF	-	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	50	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	-	-	-	-	-	-	-
LFO 2	20	OFF	ON	TRI	15	0	0	WHEEL
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	63	-31	3	0	0	0	28	63	20	0
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	63	55	63	0	0	0	29	52	4	9

	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	-	-

SQ-80 PROG: PLKBL2 BY: CHARLES R. FISCHER

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	SYNTH2	LFO1	1	OFF	-
OSC 2	0	0	4	SYNTH2	LFO2	-1	OFF	-
OSC 3	2	0	2	PLUCK	VEL-X	1	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	56	ON	OFF	-	OFF	-
DCA 2	55	ON	OFF	-	OFF	-
DCA 3	48	ON	VEL	15	KBD	8

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	38	-	18	ENV3	36	WHEEL	10

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	54	2	ENV4	63

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	21	OFF	ON	TRI	0	0	0	PRESS
LFO 2	22	OFF	ON	TRI	0	0	0	PRESS
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	63	12	12	28L	0	0	18	0	24R	14
ENV 4	63	63	63	20L	0	0	32	32	32R	0

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

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

ESQ-1 PROG: RORBKZ BY: ERICK HAILSTONE

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-3	0	0	NOISE1	ENV3	63	LFO1	5
OSC 2	0	0	0	SQR	ENV3	63	WHEEL	7
OSC 3	0	0	4	SQR	LFO1	1	LFO1	5

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	0	ON	ENV4	52	KBD2	-13
DCA 2	0	ON	ENV1	55	OFF	-
DCA 3	0	ON	ENV1	55	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	0	0	56	ENV2	19	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	KBD	49

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	22	ON	OFF	TRI	0	0	63	WHEEL
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	63	63	63	0	0	15	25	63	63	0
ENV 2	63	0	0	24	0	0	8	0	0	0
ENV 3	63	0	0	0	0	0	0	0	0	0
ENV 4	63	0	63	36	0	0	51	63	45	0

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

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

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 Transoniq Hacker,

I don't suppose you have ever gotten a letter like this before, but I just had to write and tell you how I came to own an Ensoniq **EPS**.

In February (1989) I was very sick with hepatitis and thought I was going to die. While I was in the hospital I thought of the many things I wanted to do before I died. One of them was to own a very good "electric piano." I told myself that if I lived I would go and buy one as soon as I was physically able. Of course I lived and I started looking for that good electric piano. I went to many music stores in Beaumont and Houston and got very confused because there were so many different kinds of keyboards that could do many things I had never heard of before.

Here in my city, Beaumont, Texas, there was a kind, understanding salesman named Chuck Pearce at the Guitar and Banjo Shop. The shop carries Roland, Yamaha, Ensoniq and other brands of keyboards. I told him that I wanted a keyboard that really sounded like a real piano and one that would transpose because I was tired of rewriting my music for accompanists. (I am a contralto)

Chuck told me that he thought I would be happy with an EPS because it sounded more like a piano than any of the others. They didn't even have one in stock for me to play because they had just sold their last one.

I told him to order one for me. So you will know just a little about me - I am 55 years old and have taught primary school for 34 years and I have been church organist at a Southern Baptist Church of 23 years. I play on a 3-manual Rodgers. I don't ever remember a keyboard being used in our church before this time. I knew nothing about keyboards and all the little toys that go with them. I have not been to any secular concerts nor did I listen to rock music.

Well, my EPS came in. Chuck told me it would do a lot of other things. (WOW!) He tried to explain some of the functions to me. I had never heard the words sequence, sequencer, wave sample, truncate, quantize, patch, etc. in my whole life. I got out the little black manual when I got home and started reading. What a shock! Chuck had given me many samples so I had lots of neat sounds to play with,

One week after I had gotten my EPS, a music evangelist named Jerry Wayne Bernard came to our church for a revival. To my surprise, he had an Ensoniq keyboard (with lots of little gadgets hooked to it) that he used in the services. He told me he made all those tracks he was singing with on his keyboard. This started me rolling.

1. I have made accompaniment tracks for our choir.

2. I make accompaniment tracks for myself and other soloists.

3. And sound tracks for programs at school.

4. Play for garden weddings.

5. Made drum patterns to use when playing at receptions, etc.

6. Made partial tracks so rhythm plays and the piano's live.

7. Offertories at church. (People ask how I can play so many instruments at once. They don't know when I am really playing.)

This thing has consumed my life! I spend hours trying to learn new things. I feel like the world of music almost passed me by and I didn't even know what I was missing. I wish there were workshops or some way to learn just what these machines can do. I call Chuck all the time and he is very helpful, but I know he has other customers and private lessons to teach.

I have not even touched the sampling nor the tweaking of instruments. I still have a lot to learn.

I see now that I am going to have to play for a lot of weddings to pay for my new hobby. I just read where there is a pedal board that will connect to my EPS that will make it like an organ with bass pedals. I just paid for 4X memory. Also there are so many samples advertised in the TH that I would like to buy. I need more "church" sounds.

My! How things change. I was very strict with my children about what kind of music I would let them listen to - now they kid me because they sometimes catch me listening to rock stations. I tell them I have to hear the latest drum patterns and the new synth sounds.

If anyone can help an old Baptist learn how to use her EPS to the fullest, please let me know.

Betty Ling
Beaumont, Texas

[TH - Betty, have you seen the EPS Users Guide reviewed in Issue #46? It may be of some interest to you. Let us know how things are going.]

Dear TH,

I own a 2-year-old (version 3.5) **ESQ-1** which started scrambling cartridge sounds before the warranty ran out. I took it to the shop, but they couldn't get it to do anything. All they could recommend was that I buy a spike/line noise/surge protector. Scrambling, they explained, is like having a hallway full of open and closed doors. As electricity travels down the hallway it enters the open doors and bypasses the closed ones. When you program a sound into your synth, you are telling it which doors to open and close. A voltage drop or spike causes the electricity to go through the wrong doors and there goes your sound. This explanation sounds good, but is it really true? Do all ESQ-1s do this? Is there something wrong with the motherboard? Why don't the internal banks get

messed up? I put a scrambled cart sound in the edit buffer and then wrote it into an internal bank. It stayed scrambled even though all the numbers read right. After a while the scrambled cart sounds cleared up (as they always eventually do) so I checked the internal copy which was still scrambled. If I replace the cartridge when it is in a scrambling mood then the replacement is also scrambled.

I've been told that ESQ-1s are sensitive to static. Is this true and can it be my problem?

I've also been told to check for a ground loop in the wall socket. I plugged my VOM into the round hole and the wide slot. I saw no movement on the scale so I presume there is no ground fault. I have had scrambling occur when there were no other appliances on. Conversely, I have had times of trouble free operation when the electric water heater, electric furnace and electric dryer were in operation.

Can this problem be caused by a radio transmitter broadcasting with too much power? I live about 200 feet from some big power lines. Could they create enough phase disturbance to be a problem?

The occurrences of my cart scrambling has increased in frequency from one every month or so to one every time I use it.

I hope I have given you enough details to solve this problem for me. I wrote to Ensoniq several months ago but they never responded. If it turns out that there is a problem that should have been fixed while the warranty was good will Ensoniq still fix the problem under the elapsed warranty?

Thank you for your time,
Robert J. Yates
Aurora, Colorado

[Ensoniq's response - It is possible there is an intermittent problem with the cartridge cable or buffers used in the cartridge interface. It is true that any microprocessor based system is subject to power and static glitches. However, this is more likely to cause problems with the internal memory rather than the cartridge.]

A ground loop can still occur if the line cord of the ESQ is grounded to a different ground source than that of the audio system being used. This would more than likely cause some hum at the output. If you call Ensoniq Customer Service, they will be glad to assist you with your situation.]

[TH - Note: a ground fault (open ground) is not the same as a ground loop. A ground loop can occur when all the various grounds in your system aren't at quite the same potential. This can cause small amounts of 60 Hz potential to show up in strange places - like the audio (where it's known as "hum"). You probably won't be able to find this with a VOM.]

Dear T. H.

After reading the article by Charles Fischer in

last June's issue, I couldn't agree with him more. Maybe two wrongs don't make a right but considering the fact that I was burned by **HEAVEN** as well, I think this is a good idea. If anyone remembers my first letter to the Hacker, I received one cartridge and was promised another cartridge since he took about four months to process my order. I have documentation about this on my receipt.

I read the letter by all the victims of this company, and I thought about lending a hand. I changed my mind about doing it because I was planning to sell my own experimental patches in the future and didn't want to show a conflict of interest. Charles has a good idea in which anyone with a cancelled check or proof of payment could order the patches from someone who has them.

I would gladly help out at \$7.00 a cassette (shipping, handling, cassette, etc...). I hope this is a fair price. If someone else can do this a lot cheaper, I will support them 100%. If the readers who have been taken advantage of by **HEAVEN** think that this is a good idea, please write the Hacker and I'll be more than happy to help out.

P.S. I would like to hear from anyone who has the B cartridge.

Sincerely,
SIR ROBERT (Robert Robinson Jr.)
2279 Plaster Rd., #6
Atlanta, GA 30345

[TH - Big news on Heaven in Front Panel.
(And see below.)]

Dear TH,

I'd like to comment on some recent letters concerning The Great **Heaven** Debacle. For those who'd like to know, Heaven was one guy, Glenn Javaheri, who originally sold his eight track studio to launch a product which he presented at the Winter '87 NAMM show. The product worked but was outmoded upon its arrival, partly due to the appearance of the ESQ-1 which stole the show. Glen set out to design and build ESQ-1 cartridges in order to recoup his losses and upgrade his product.

My association with him was as a sometimes cartridge supplier (he also supplied several other sound developers), and was more frustrating than any of those who have written letters. He is not a con man in the traditional sense. That is, his sincerity and good will is genuine, and he made sure his patch developer clients had alternative suppliers before he split (including some of my competitors). He has a kind of - "I'm a cool guy and I have a lot of outrageous fun and I don't care what anybody thinks" - philosophy of life. That is no way to run a business, but it is the stuff rock stars are made of - or were in some long gone halcyon days.

Anyway, his cartridges had design and manufacturing problems right away, so his financial situation deteriorated quickly. And, though he did finally produce some high quality cartridges, and a second set of sounds that are some of the most interesting synth-pop oriented programs I've heard, I doubt there were ever "thousands sold." His prices were ridiculously low besides. A year ago he was broke, being pursued by creditors, and had no permanent address. I don't know where he is, nor do I have his sounds, but David Gray of Leo's Audio and Music

Technologies, in Oakland, CA, still uses them to demo ESQ-1's and SQ-80's. David is one of the MIDI Elite here in the Bay Area (where it all started), so he may not like people calling him, but he still might have enough good will for Glenn to cover for him.

Tim Martin's letter concerning his MIDITERM C-64 Librarian mentions people selling it for a profit illegally. I got an angry call from Tim accusing me of selling his program listed in my ads as a generic C-64 librarian. As I told Tim, the program I sell is called MIDISTOR64 and was written by James Chandler Jr. I don't sell very many, probably because of the prior existence of such "shareware." Another programmer currently under contract to me had a similar experience with an IBM compatible program. Let this be a warning to programmers. Shareware works for business programs whose target market considers \$20.00 lunch money.

Sincerely,
Nick Longo
Cesium Sound

[TH - Before everyone writes to Leo's Audio and Music Technologies, check out the Heaven news in Front Panel.]

Dear Transoniq Hacker gang,

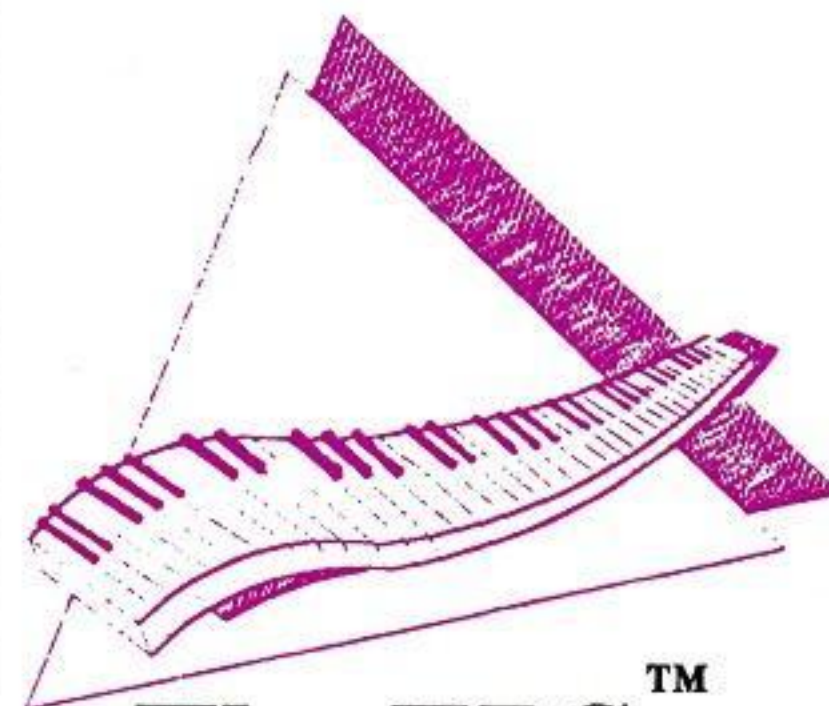
As you might expect I have a couple of gripes over a recent review of **Livewire's** disks in your otherwise fine magazine.

For starters, on our guitar disk I sampled a Fender Strat directly. If it doesn't sound like a Strat to reviewer Kenn Lowy, well, I guess his Strat doesn't sound like mine. However, I can't understand complaining about the "Metal 5th's" sample only being on the bottom half of the keyboard. Real rock guitar players do NOT play over an octave and a half of "fifths" chords on guitar, unless their guitar neck is twelve feet long.

As for our Vocal disk #23 (Aah 6th's) I resent being called lazy (first time THAT'S ever happened!). It's obvious that Kenn got a bum disk that caused a "click" in one sample, since there are NO clicks on ANY of our disks. If he had bothered to call me I would have been happy to replace the disk. I would have done the same for Disk 44 (Alesis HR16 drums). A customer brought the volume problem on this disk to our attention many months ago, and the disk (and our master disks) were corrected with a simple change of one parameter. Apparently Kenn received one of the older disks. Again, if he had called I would have sent him the new version. That's what I'm here for - customer service. Ask and ye shall receive!

Kenn also seemed to think the patches on some of our disks are "boring." Our records show that most EPS owners don't do any editing AT ALL, so we have to cover the basics first. Our patches are usually set up to give the user a "straight" sound, a chorused sound, and perhaps an octave up or down or both. There's no saying that customers can't do their own wild and crazy stuff if they want, but most folks don't want wild and crazy, they want patches they can use.

On our two-disk Yamaha Grand piano set, Kenn is the first person who has had problems loading this. I realize that our loading instructions for multi-disk instruments with the newer O.S. may not be exactly correct,



The EPSTM Users Guide

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

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



MONSTER DAN is hotter than ever with the new "Best Of The 60's" dance list. Hundreds of selections, from the 50's to this weeks chart, for your ESQ1 or SQ80. Data includes sequences, drum patterns, patches and programmed mix. Demanding professionals agree that **DANLAR'S** incredibly detailed arrangements and intricate patch programming are the *greatest!* Convincing demo available. Call or write anytime.

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(503) 692-3663

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and I'd love to correct them if Ensoniq would ever bother sending us a REAL manual for the EPS (anybody listening out there??). Until then, we'll just have to guess. Anyway, if Kenn had a problem or a better way to load this disk I'd love to hear about it. If he didn't care for the piano sound itself I'd also like to know what was wrong with it (how about some constructive criticism?). I still stand by our position that this IS the best sounding piano for the EPS.

Most ironic was the comment that the sequence on one disk was "damn amusing" and "impressive" but a waste of money (!). Funny, how I hear complaints that we should have sequences on the disks and the one time I find the time (and memory) to stick a good one on I get grief over it. Damned if you do and...

Finally, I am somewhat annoyed that Kenn makes a big deal about the disks being non-returnable. This is certainly not unheard of in the software industry, especially for non-copy protected software, and that's why we make a demo tape for people to audition the sounds before they buy them - something Kenn didn't even mention. Sorry, but we can't guarantee that all our disks are 100% suitable for every need of every EPS owner!

Just to be on the fair side, I thought Kenn did great on the nearly-impossible job of trying to describe our "Unusual" disks. But still, who the heck is Kenn Lowy? He never heard a Roland Jupiter keyboard, or a minimoog squarewave bass? (I think a few thousand producers might disagree with him that the MiniMoog bass is "dated" and "unusable".) Couldn't you find a keyboard player to review disks for a sampling keyboard?

Mick Seeley,
Livewire Audio

[TH - Kenn Lowy's response:
Dear Hacker and Mick Seeley,

After reading Mick's letter I feel the need to respond to some of his points. Some of his complaints are valid, for example, "Real rock guitarists do not play over an octave and a half of fifths". True enough, but I'd personally still like to do it with a sampler. Mick mentions several times that I may have received a "bum" disk from him. Again this may be true, but in the past, most bum disks refuse to load at all. I would be more than happy to re-review any disk that Mick feels was unfairly reviewed because of a manufacturing error. Mick also mentions my problem with loading his (2 disk) grand piano sample. He blames this problem on Ensoniq and here I have to wholeheartedly agree with him. The EPS system has many bugs in it. And I (like Mick and Steven Fox) have found them to be very (VERY) annoying. For example, when you load a sound while playing, the entire keyboard goes DEAD for a second (Ensoniq has acknowledged this problem). This sounds rather unpleasant when performing live on stage! My keyboard also loses its sound when I change the configuration on my MIDI patch unit. None of my other synths have this problem!

As far as constructive criticism about his piano sound. It is not a bad sound by any means. And I believe I mentioned in my review that I have yet to find a truly good grand piano sample (to my ears). This doesn't mean it's not worth buying. But I do

feel that listening to samples is a very personal thing. Just because I like (or dislike) it, doesn't mean you'll feel the same way.

And finally, although I am primarily a guitarist, I use an awful lot of keyboards in my music. And besides, the EPS isn't really a keyboard instrument anyway, it's a sampler!

Although the review of Livewire's sounds was mixed, I do want to reemphasize that some of the sounds were really good. The "unusual" sound disks were great, and I still feel that way after listening to them for several months. And I want to stress (again) that anyone looking for good samples should listen to them first before buying. Livewire, like many other companies, offer demo cassettes of their sounds. If you like what you hear on the cassette, you should like what you hear on the diskette.]

Hello again.

After reflecting upon Ensoniq and TH responses to my letter on page 29 of Issue 44, it appears that I left a hazy impression. The letter proposed solutions to previously discussed problems preventing the addition of new waveforms to the ESQ-1. Ensoniq offered their cookbook corporate response about not having enough resources to develop old and new products at the same time. Additional comments by Ensoniq and TH left the taste that 1) I may have bought my ESQ expediting that "someday" it would do what I wanted; 2) I might not ever be satisfied with my ESQ, and 3) I might be a hacker type who bought my ESQ counting on "expandability" and "hackability". This is inaccurate. I purchased a Mirage and an ESQ soon after each was released, got more than I expected from both machines, and (excluding minor quality problems with both machines which were corrected under warranty) have been completely satisfied with the machines themselves. It is Ensoniq's corporate philosophy which I (and judging from TH letters, several others) differ with, leading to the additional comments below.

A little bio might add some perspective. I am a loyal (so far) Ensoniq customer and TH reader, a songwriter/performer on a limited budget in an area of limited opportunity, and a student of business working as a quality professional in a manufacturing company. In this last role I am compelled daily to deal with management compromises (from corporate to line level) to meet short term cash flow requirements, tight shipping schedules, unreasonable marketing goals, and to cover for poor planning. As a result it is particularly frustrating for me to encounter a corporate and/or publishing policy of excuses, incomplete or misleading information, and insensitivity to the customer in an aspect of life as personal to me as the creation of music. This description as applied to the policies of Ensoniq and TH is certainly subjective and will probably seem harsh to some, especially given TH's probable, as usual, dash to defend Ensoniq and themselves. I will attempt to cast a light on specific points bright enough to leave some undeniable conclusions which might provide motivation for change.

Excuses?

As described above my letter in Issue 44 dealt with adding new waveforms to the ESQ-1. My suggestions were based on questions

previously raised by another TH reader (Issue 42, p.25), to which Ensoniq responded with technospeak as to why such modifications would lead to chaos and were essentially not feasible. After my letter pointed to some possible technical solutions, Ensoniq recognized that this wasn't so infeasible after all but that their limited resources were really to blame. One excuse is as good as the next.

Incomplete or misleading information?

Well, excuses are misleading, aren't they? And what about the "no profit in a rack EPS" statements. Are we to believe the rack EPS wasn't in development even as these statements were published? After a while the reliability of the source comes into question. Also makes one wonder about TH's commitment to their readers when you never see a "Yeah Ensoniq! How 'bout it?"

Insensitivity to the customer?

Excuse making is insensitive and treats the consumer as if he/she doesn't have enough sense to understand real, legitimate reasons for making prudent business decisions - not that I think all Ensoniq's decisions are prudent or I wouldn't be writing this letter. A prime example is Ensoniq's service policy, characterized (yet again) by Ensoniq in response to a TH reader (Issue 49, p. 25) as providing equal service to all, improving the performance and extending the life of their products, and preventing injury to us dumb ol' consumers. TH put their two cents worth in by mentioning the incredible liability problems confronting companies today.

Now somehow I don't feel equal to the guy who lives down the street from his "Ensoniq Authorized Service Facility" and can drop his board off today and have it tomorrow when I have to make two 200 mile round trips and be without my gear for a week or more just to pop a new software ROM chip in my ESQ (which I've done at least three times). That's a bunch of sounds he bought that went in my gas tank. I'll bet the guy in Port Angeles, Washington (250 mile drive) feels the same way. Extended life? I keep forgetting that we're all too dumb to pop out ROM chips and put in new ones or replace plug in modules without damaging our equipment or ourselves. I'm sure all those technically minded TH contributors (and readers) really love that one. Well, maybe it would be unfair for Craig Anderton to get free ROM replacements while Joe Notek has to pay somebody to put his in. Improved performance? I guess those Ensoniq ROM chips and replacement modules are specially trained to perform better for "Ensoniq Authorized Service Facilities". All right! I love the circus. And a "hard reset"? Sounds tough at \$18. Maybe a "hard boot," properly placed, would be more effective and less dangerous. Void the warranty? Lots of those left on Mirages and ESQs I'm sure. (Didn't somebody already say that?) Liability? My 240 volt clothes dryer probably doesn't have any user serviceable parts in it either, but they'll sell me a new burner, switch, relay, etc. if I need one. Do you suppose my family can sue Ensoniq if I'm killed making an unnecessary trip to my "Ensoniq Authorized Service Facility"? If I want to void my warranty and expose myself to shock risk, this is America and that's my business. Ensoniq is either liable for leaving it possible for me to open the enclosure or they are not liable because I've been properly and

reasonably warned about the risks. Selling me a ROM chip or replacement module makes them no more liable than Radio Shack is for selling me a resistor or the local hardware store is for selling me a replacement part for my 240 volt clothes dryer. (If I'm wrong, I'd appreciate a qualified legal explanation, not more Ensoniq corporate-speak.)

Ensoniq may have better customer service than anyone else in the business. That is irrelevant when the service doesn't provide maximum satisfaction for the maximum number of customers, especially to us customers who are affected by what we identify as a weak point in service policy. I challenge Ensoniq to provide an explanation of their service policy that provides legitimate answers to the above questions or to change it. The only fallacy in executing poor policy is failing to recognize and correct it. I challenge Ensoniq to improve in all aspects of their business. If limited resources are valid for not furthering development of existing products, then get more resources. If the profit potential/risk equation is the real reason, then say so and encourage third party development. Don't pass off excuses about technical impossibilities and the like. Provide information about technical restrictions to qualified developers. I also challenge Ensoniq to question whether limited resourcefulness and not limited resources might be a prime factor in the equation.

As implied by my previous letter, flexibility is the order of the day:

flexibility = increased market share = greater profit potential

The rush to develop and market this year's wonder machine is already starting to fail. The consumer/home recordist oriented market has tight pursestrings and the market for used equipment is limited. As these two elements approach saturation, support of existing products will become more important with greater profit potential. Ensoniq should also be asking themselves how many ESQ owners might buy a \$200-300 upgrade that can't afford a new SQ-80, EPS, or VFX.

As a professional in the field of quality dealing with all aspects of design, manufacturing, and service; I encourage Ensoniq to pursue World Class Manufacturing techniques (Quality Function Deployment, Just-In-Time, Total Quality Commitment, Statistical Problem Solving, and many others) if they are not already doing so. Just as an example -- such techniques, fully implemented, would quite possibly have made it feasible to continue production of the ESQ-M (I'd buy one at the right price) on a make to order basis, even if demand was very low.

I am certain that I speak for other TH readers and Ensoniq customers who have expressed similar views by saying that we're not asking Ensoniq to sell the farm and risk the business. All we expect is to be treated with respect and to get honest, no excuses answers to the questions we ask. TH can help by not publishing reader's letters without answering all questions or at least saying "We don't know." One of the most important tenets of the World Class Manufacturing concepts mentioned above is respect for people -- from suppliers to customers and at all points in between (employees). I am not a disgruntled Ensoniq basher. I am just as satisfied as all

those Ensoniq customers and TH readers who write glowing letters of praise and commendation. Trouble is, some of us are never completely satisfied. Better is never good enough.

Tomorrow is a new day. Muster the meddle.

Toon Smith
Riding the Plains Again
Independence, KS

[TH - Well, we realize that we've already been pre-damned if we 'dash to defend ourselves' - but please forgive us if we give it a shot anyway. (We're sure Ensoniq will have their own response.) First off, we don't always rush to Ensoniq's 'side' in all cases. There have been several 'Yeah Ensoniq, how 'bout it?' comments in these pages. There's also been more than a few of these that don't even appear. When Ensoniq's response occasionally seems to miss the point, we ask for additional clarification. (And, believe it or not, they've always said they were glad that we did.) We also do a fair amount of throwing in our two cents in defense - but, Jeeze, have a little respect for these guys, too. They're NOT trying to pull a fast one. Where else in the industry can you see ANY other company willing to air their complaints and dirty laundry in such a public forum? Sometimes we get feeling a little drained by one more "Why don't you guys do this?" letter. (Keep sending them though...)]

We're not completely thrilled by Ensoniq's service policies either. "Hacker" is in our title for a reason. We'd just as soon have service manuals and the like available for public distribution. (We've said this before.) We love it when warranties run out and people can start opening their instruments with gay abandon. But - this doesn't mean that we can't understand why they handle it the way they do (even if we disagree). When we threw in our two cents on the liability situation we said, '...many would say TOO careful.' (We agree that in a free country you should be able to assume your own risks and be responsible for the results - but Americans lost that freedom years ago.) We certainly don't agree with the present situation, and we know many companies are making things harder than they have to be because they're overly concerned about this - but then, it's not our 'deep pockets' that are going to be emptied by some stupid lawsuit, and it's not our service department that has to fix someone else's repairs.

If you see an unanswered question, sometimes that means we just missed it, sometimes it means we figured it's covered in another letter or elsewhere in the issue, sometimes it means we don't know, and sometimes we're just hoping that a reader will have an answer. We should probably be more explicit about this. We actually do appreciate the feedback, and we will strive to be fair and try to address all questions.]

[Ensoniq's response - You ask to be treated with respect and to get honest, no excuse(s) answers to the questions you ask (to quote your letter). Since we founded Ensoniq we have tried to do just that through the dialog we offer here in the Hacker, through our dealer network and through our Customer Service. We respect and value your comments as well as your business. Unfortunately, that doesn't always mean that we can satisfy all of your expectations of us.

1600 ESQ1 PATCHES For Your ESQ1/ESQm/SQ80

40 Banks - \$32.00

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

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

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

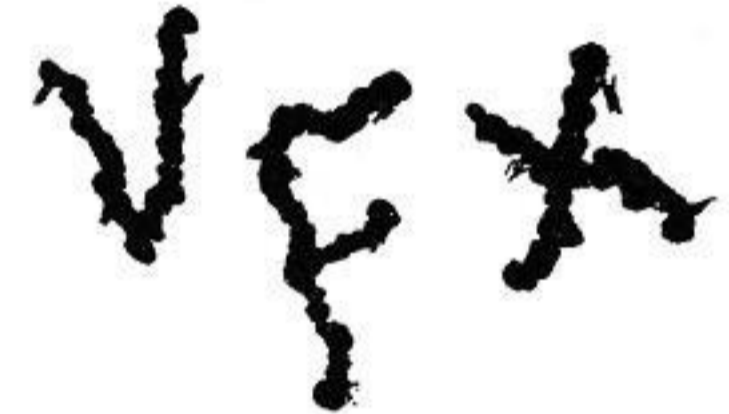
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The most disturbing aspect of your letter is the idea that our answers in the Hacker are less than truthful, 'cook-book corporate responses'. They are as accurate and honest as we can make them. As a manufacturer we have to weigh many factors in making business decisions and we cannot discuss all of those planning decisions in advance and in a public forum.

We have instituted all the World Class Manufacturing techniques you mentioned several years ago and invite you to tour our facilities to see for yourself, the next time you are on the East Coast.

Our Customer Service Program was designed and is administrated by people who have many years of experience in keyboard service. Our most important concern is taking care of a customer's problem quickly. (Steve Coscia is contacting Mr. Smith directly to discuss his concerns and/or problems.)

Please be assured that we are continually striving to improve in all aspects of our business and we appreciate your comments.]

Dear TH:

I currently own an EPS (with 4X, serial #10693 F, using OS 2.35) and a VFX (serial #12471 - V). I have taken any other sound processors, drum machines, etc., out of the my MIDI set-up, so that I know that the following problem is with Ensoniq equipment. Here's the scenario:

I connect the MIDI OUT of the EPS to the MIDI IN of the VFX, and play the VFX sounds

using the EPS sequencer and keyboard. I put the VFX in MULTI mode and insert sounds other than Starjamhold and Play-1-Note into Multi A of the VFX. I start recording on the EPS sequencer, having established MIDI instruments to play over various numbered MIDI channels. I record a few bars by use of the EPS keys, decide to "keep" it by hitting "enter/yes," and then press "play" in order to audition my work. At that point, any sound in the MULTI mode is bumped out of its position, and is replaced by either Starjamhold or Play-1-Note. While auditioning the work, I am able to Replace any offensive sounds with my original choices, and I am then able to continue listening (by stopping and starting the sequencer repeatedly, if I wish) with no additional problems.

This might not sound like a cataclysmic problem, but active sounds in the MULTI mode are bumped out EACH time I make ANY change to the MIDI data of the EPS sequencer by Recording notes or program changes. Again, when that happens, any active MULTI mode sounds are bumped out (I've had up to the entire MULTI A screen of 6 sounds each transformed into Starjamhold or Play-1-Note; listening to six simultaneously playing Starjamholds can cause structural damage to one's house) and replaced with unwanted sounds. To manually replace the MULTI mode sounds after each sequencer modification is time consuming and distracting.

My dealer referred me to Ensoniq, and I, individually, have not been given any explanation or hope from Ensoniq's customer service department. I would assume that I am

being tormented with a software problem caused by one or the other Ensoniq keyboard. If you cannot offer me assistance, I will be forced to employ an Exorcist. Any ideas?

P.S. Other than the above bug, the EPS and the VFX are phenomenal products, which I would enthusiastically recommend.

Sincerely,
Erich Vieth
St. Louis, MO

[Ensoniq's response - It sounds like you are changing the VFX program at the VFX and not remotely from the EPS. In this case, the EPS does not know about these new program assignments, and each time you audition changes, it is transmitting the MIDI program change that is in the EPS instrument on each track (the EPS only transmits program changes when something has changed).

The default program change number in an EPS instrument is #1, explaining why all VFX tracks revert to STARJAMHOLD. This leads us to a cardinal rule of sequencing: ALWAYS change programs from the sending device, not at the receiving one. In the EPS, this is done from the EDIT/INSTRUMENT page.

When you record a sequence track, the EPS records the current program number of the instrument into the track. So for each track you record, you should first go to the EDIT/INSTRUMENT page and set the MIDI program to the number you want that track to play on the VFX. (You will see and hear the VFX sound change as you do this).

To fix existing tracks:

1. Set the record mode on the EDIT/SEQ. SONG page to ADD mode.
2. Select a track, then press EDIT, then INSTRUMENT and scroll to MIDI PROGRAM = .
3. Adjust this number until the program you want is playing on the VFX track.
4. Go into RECORD for at least one bar, then stop.
5. Keep the new track.

The new program will be recorded into the track, and each time you play the sequence, the track will send the proper program change to the VFX MULTI track. Repeat these steps for each track of the sequence.]

Dear Transoniq Hacker:

As a MIRAGE owner who also owns the Soundprocess system and really enjoys using it, I feel that Bob Spencer's idea about running a series of articles on the SOUND-PROCESS SYSTEM called "Hackerpatch" is great. I also believe because of the number of Mirage owners out there who own SOUND-PROCESS or will buy it (old Mirage users never say die they just buy a new operating system) warrants such a series of articles if not more. I would also like TH to do a review of MIDICASTER by The Midi Connection. I saw the ad in TH #49 and I as well as many other Mirage users would like to hear your unbiased opinion on exactly what that software is capable of doing. And also, how well it does it. I really hope that I will see these and many other articles in future issues of TH.

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Peter Axel Prins
Leguna Hills, CA

[TH - Midicaster was reviewed in Issue #35 by Walter Daniel. We agree with you regarding Bob's Soundprocess Hackerpatches. (There's another one around here somewhere... Ah! This issue.) Bob, send us more!]

Dear T.H.

No matter how many times I read through my EPS Advanced Applications Guide, I always end up feeling like a door has been slammed in my face. ('Well, we've beat around the bush long enough now ... so good luck!') SLAM!

Why can't Ensoniq explain to us MUSICIANS - not sound technicians or computer geniuses, mind you - the essential concepts which are the basis of what's really going on inside that little black box? I feel like a forgotten POW left behind to struggle on his own. I can live with all of Ensoniq's "We have no plan for" replies when it comes to an on-board kitchen sink, but it hurts to see our most modest request for a decent user manual be disregarded. How degrading and most unresponsive.

Thank you, Hacker, for being there when I musically feel that my worst enemy is Ensoniq. I feel like they have basically told me where I can stick my instrument. You guys are the reason why I keep the machine.

How about a response from Ensoniq? How about a response from all of the other EPS refugees who feel that they are in the same boat as me?

P.S. I am aware that you previously published the name of a gentleman who wrote his own user manual. Would you please publish it again? After I get over the humiliation, I will probably break down and buy one. Ensoniq should be ashamed to know that someone else really had to do that.

George Logemann
Pittsford, New York

[Ensoniq's response - Although the EPS manual was incomplete for quite some time, we feel that with the Advanced Applications Guide, we have rectified that situation. Our manuals are for the majority of users. We cannot cover all of the possible background material and science that may be associated with a keyboard's processing functions. There are numerous books, magazines, and school courses available which teach the basics and theory of acoustics, sampling and sound programming. We have seen Gary Dinsmore's book and it is a quality document/manual. We also suggest Hal Leonard's "The Sampling Book" and "A Practical Approach To Digital Sampling" as excellent resources.

[TH - Neglected is the equipment that DOESN'T have third party manuals these days. Check the ads for more info. By the way, Dinsmore's EPS Users Guide was reviewed in Issue #46. (32695 Daisy Lane, Warren, OR 97053.)]

To whom it may concern:

I am using a DX-7 S#(70131) and FB-01 MIDI'ed to an EPS. I am using the MIDI

volume controller feature of the EPS to control the volume of my DX-7 and FB-01. I am using this configuration so that I only have to use one foot pedal to control all of the instruments volumes simultaneously.

I am having trouble with the DX-7. As I back-off the volume pedal the DX-7's volume decreases like it should to a certain point. After this point, instead of silence I get this awful distorted aliasing type noise. What is happening and how might I correct the situation? The FB-01 responds normally.

I notice that while controlling the DX-7 from the EPS's keyboard, the DX-7 is over sensitive to my key velocity, causing it to distort. I've tried to adjust the key velocity sensitivity on the DX-7 with no success.

If these questions have been addressed before, please refer me to the articles in your magazine. I am a long time subscriber.

Sincerely yours,
James Rosand
Port Angeles, WA.

[Ensoniq's response - The distortion sounds like a problem with the DX-7, so you may want to check with Yamaha. Unfortunately, the DX-7 keyboard does not produce full velocity response, so when full velocity is sent to the DX-7 over MIDI, it can drive the DX-7 harder than its own keyboard can. In most cases, the DX-7 sounds must be edited to compensate.]

Dear TH,

Here are a few questions about the EPS. I hope you can get answers for me.

1. When a MIDI device is connected to the EPS' MIDI IN and you turn this device off while the EPS is running, the EPS display will read, "ERROR -- 144 REBOOT?" I have tried both the Alesis QuadraVerb and HR-16 as the MIDI device.

2. Here is an interesting quirk I uncovered. First press the LOAD button to get the instrument directory of a diskette. Replace the disk in the drive with any other disk (try one with lots of instruments for better effect). Press the up arrow and the left arrow in quick succession. The file names start scrolling rapidly by on their own! Pressing any arrow again will stop this. I am using OS 2.35, and my ROM is V 2.00.

3. I made a sample 29K bytes in length. This sample loops forward. If I play an octave interval, the upper note should play exactly twice as fast as the lower, no? I find that the upper note slowly creeps forward out of phase. Is there a way I can prevent this, perhaps with a pitch table? Please advise.

I look forward to getting OS 2.40 and the 6db audio output upgrade. Thanks for a wonderful tool, Ensoniq!

Here is a question for TH people. Where can I rent or borrow a Sound F/X library on CD? Thanks for the help.

Aaron Lyon
Sunnyvale, CA
CompuServe: [73710,773]

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[Ensoniq's response - 1. It sounds like turning off either of those external products first is causing a glitch in the data line which is confusing the EPS. The only alternative we can suggest is to turn the EPS off first.

2. Every computer is bound to have hidden quirks that can be uncovered by a series of random button presses, and it seems that you have found one in the EPS. It won't damage the unit and offers no known benefit except for entertainment value.

3. Unfortunately, getting every octave interval to be exactly in tune exceeds the pitch resolution of the system. Depending on the root pitch, sample rate, and how far the two notes are from the original root key, there is no way to guarantee that any octave will be exactly perfect. You might be able to improve a given case with a custom pitch table.]

[TH - Regarding F/X CD: Dunno. Readers?]

Dear TH,

Well, of course I want to renew my subscription! Just because at least some of the music stores don't subscribe doesn't mean that I don't wish to be up-to-date with Ensoniq products and miscellaneous discoveries. Perhaps you should flood the world with a poster saying "TRANSONIQ HACKER; the most important source of up-to-date info for all Ensoniq users. Subscribe now!"

Anyway, whilst I'm here let me announce (as I haven't read it yet in the Hacker) that I've discovered **LOADING A SOUND ON THE EPS WHILST A SONG IS PLAYING IS AS EASY AS 1. 2. 3. 4. 5.**

1. Have your song and its sounds (or most of them) loaded and ready to go.
2. Select the SOUND FILE you wish to load.
3. Press ENTER/YES to receive "PICK INSTRUMENT BUTTON."
4. Now play the sequence.
5. Press the instrument button of your choice (even a seq-track) whenever you wish to begin loading. You can actually hear the sound being loaded in.

Okay, so it's only one instrument, but in a live performance it can be invaluable. Let's say you don't want a 30-second break while you wait for EPIC STRINGS to load in, which you don't need until the chorus anyway - just start the sequence to keep 'em happy and THEN begin loading the new sound. Variations on this theme are endless.

Steven Fox (Leaping Lizards fame) suggested something similar with BANK loading but I haven't gotten his idea to work yet. And, by the way, Steve, YES there IS someone out here who is absolutely peeved off by the E4 pitched hum on the output. My EPS was kicked out of a recording studio because of it. The television station I work for could really do with an EPS - but could do without the noise also. The Electric Factory reckons they can't hear it - or that it's just digital noise. YUK! They had repaired it earlier, though, when it got so bad it actually crackled.

To elaborate on the problem: the EPS must be booted, loaded with a sound and then the

sound must be played and from then on - E4 is a-ringing in my ears and a-being recorded on my 4 track. In my situation it is only present when a layer/sample is panned RIGHT. Hard left pan, and it is almost inaudible. I hate this so much I've thought of selling, but there just isn't anything that comes close to the the EPS for price and features. (I've yet to make my first million.) When is that output booster available? Will it help this?

Other Quirks - The last BAR number of a delete/add bar(s) function defaults to one less than it should. The results of someone prompting "yes" in a hurry could be completely disastrous.

Anyone try quantizing a 3/4 signature? Have fun! (Turns to garbage.)

I had to try MANY times to save a song with LOOP + OFF. It kept turning the loop back on, even if all sequence loops were off.

The EPS (well, mine at least) is the world's first keyboard to actually make noise at you with the power turned off. I've woken several times in the middle of the night to the sound of its less than solid casing crack or pop quite loudly.

Actually, I know how to make that first million - design a cheap angled window attachment so that we can all see the EPS display, and an accessory that adds more instrument/tracks/voices. Impossible? It's hard to believe the guys who made the EPS believe such a word. Funny, though, how you invent an incredible machine, and all we want is more.

Really quite satisfied (except for unwanted E4),
Robert Kral
South Australia

[Ensoniq's response - It seems as though you have uncovered a loophole in the EPS software. We have tried it and it does work, however you can't stop the sequence until the sound is finished loading. Also, this method will only work consistently with a 4X expanded unit, since the sequencer memory is partitioned from the rest of the unit's RAM.

If you have a 2X expanded unit or an unexpanded unit, you will experience unpredictable results, so we can't recommend this practice. Concerning the output noise problem, we have contacted the Electric Factory to see if we can provide any assistance.]

Dear Hacker,

Thank you for publishing Al West's review of our **MIDI Arpeggiator** in the June '89 issue (#48). We would like to let your readers know that an Amiga version of the arpeggiator, with several added features, is currently being tested and should be available by the beginning of September, 1989. Write for details. I also regret to correct one of Al's statements. We do not currently have an ESQ Editor/Librarian in the works. I have been looking to add an ESQ-M to my MIDI arsenal, but haven't been able to find one anywhere. When I do get one an editor won't be far behind. If any of your readers have or know of an ESQ-M for sale, please have them contact me at Triangle Audio (301) 526-6224. Thanks.

"Synthcerely,"
Jim McConkey,
President and Software Guru
Triangle Audio

Dear TH,

I have a curiosity question about the **ESQ-1** FSK/Sync output. I have a MacPlus and a sequence program. First, I set up a sequence on the ESQ with just one measure, then I set the LOOP = ON and set up the 8 tracks to do their thing. I do not have a dedicated external stand alone sync box, so...to get a sync track I set the ESQ to "MIDI SYNC" and I start the Mac sequencer. That in turn sends an FSK output from the ESQ to my tape recorder. Now, to read that sync track, I set the ESQ to "TAPE SYNC" and slave the Mac sequencer to "EXT SYNC" (ESQ) and everything is just fine. My question is this - why does the FSK output "audibly" sound different when used this way, as opposed to using the ESQ without a slave-driver? Could it be the difference in resolution (Mac = 480 ppqn vs ESQ = 24 ppqn)? Or, the internal clocks? Twilight zone? It doesn't really matter, as long as it works. I'm just curious.

Thank you,
Gregory M Brettell
Phoenix, AZ

[Ensoniq's response - The sync output of the ESQ-1 is not FSK, it is simply a click which is referenced to the clock rate. Depending on the default clock rates of the two systems, there probably will be a difference in frequency.

As long as you play sequences back with the same clock they were recorded at, you shouldn't have any problems.]

Dear TH,

Since I bought my **SQ-80** I have had problems with notes being cut off. When I record the track, it sounds great, but when I play it back notes get cut off. What am I doing wrong or do I need additional equipment?

David Capps
Lubbock, TX

[Ensoniq's response - Most likely you are running out of voices (remember the SQ-80 as well as the ESQ-1 can play a maximum of 8 notes at a time, including previously played notes which are still decaying away). If this number is exceeded, some notes will be cut off, and they may not be the same notes that were cut off when recording the track.

You can add more MIDI modules to your system for increased polyphony, but there is no way to add more SQ-80 voices without adding a second SQ-80.]

Dear Sir,

Would it be possible to list the mailing address for each of the hard drive companies that are okay for the EPS?

Sincerely,
Fred Cronin
Worcester, MA

[Ensoniq's response - Ads, addresses, and phone numbers of virtually all of the companies listed can be found in any Macintosh magazine (Macworld, etc.)]

Dear T. Hacker,

I was glad to see the letter written by Charles Fischer (Mescal Music) about the **Heaven** rip-off situation. I've been abused by those people and I feel that Heaven is not the proper name for their business. I could come up with some alternative names.

Any of your readers looking for software from third party sources could be scared off by the situation, but I'd like to point out some better, more professional companies. I've purchased patches from many of the prominent names - Technosis, Sound Logic, Patchworks, etc. and have been very pleased with quality and order response. I screwed up an order with Cesium Sound recently and not only got it straightened out, but I feel I found a new friend because of Nick Longo.

The situation with Heaven has me angry, not so much that I got robbed, but for the principle of the incident. I'd be more than willing to spend a few extra dollars to recover my losses. I have cancelled checks and letters sent to Heaven. I don't know that much about law either, but if action were taken against anyone involved, I'd be more than willing to help cover legal fees. Again, it's the principle of the thing.

Thanks,
Les Meriwether
Canadaigua, NY

[TH - Check out Front Panel and the above letters from Nick Longo and Sir Robert regarding Heaven.]

Dear Sir:

We would like to know if you have ever compiled a collection of **ESQ-1/SQ-80** patches from the "Hackerpatch" and, if so, how they could be obtained.

We have purchased several collections. However, the individual patches in the four issues of the Hacker we have received contain the more interesting and useful (for our purpose) patches.

Thank you,
John C Graves
Cassville, MO

[TH - This is another one of those things that we'd like to do but haven't got around to yet. Right now (and probably for a long time), the only way to obtain them is by buying back issues. (You'll like the other stuff that comes with them - we promise.)]

Dear TH,

I want to thank you for being there. You make an ideal medium for exchanging knowledge on some very sophisticated synths.

Your ads do indeed reach a large group of users. I have sold out my first printing of "The **EPS Users Guide**."

With the second printing, I did address Kenn Lowy's single minor complaint. I had the manual printed two-sided. It allowed me to use a 1/2 inch binder, so it should fit on the shelf (or pile) better.

Gary Dinsmore
Warren, OR

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

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

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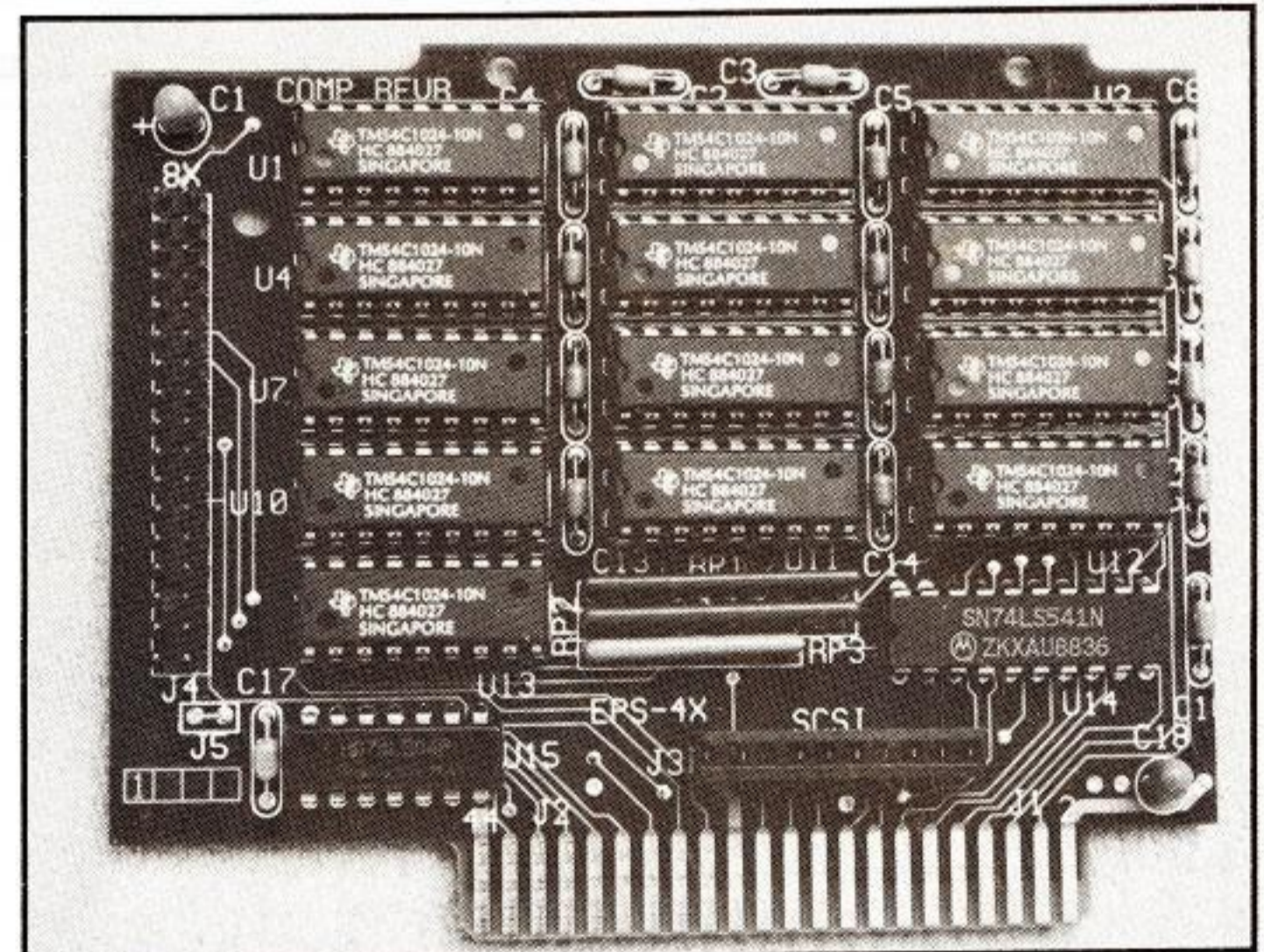
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