

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

More Mims

Pat Finnigan



Product: *VFX Set 2*.
For: VFX, VFXsd & SD-1.
Price: \$39.95.
From: Syntaur Productions, 4241 W.
Alabama #10, Houston, TX 77027. Phone:
(713) 965-9041, (800) 334-1288.

Sorry to be away for so long, fellow hackers: been juggling TWAIN resources in Premiere 4.1 for the 3rd spin of Targa 2000 for Mac. When the flu is a reprieve from work for most of our engineers, just say "Nubus bottleneck" really fast 12 times and you're back in Kansas. "And Toto, too!" New year's weekend here already? four days in a row? I read like a W-30 display while receiving a KS-32's sequencer contents. Tired? Nooooo; Bevis and Butthead are role models in my present state. Ten uninterrupted hours of sleep later, I'm back among the living. Clumping out in the snow after the mail jeep stops and goes, what's this? Aha, an 800k floppy in ye old snow-covered mailbox; this can mean but one thing; synth wares!

Well, ol' Sam's at it again. Not content to leave well enough alone, we're privy to the *VFX Set 2* this month. Sam Mims is not your average tweak-a-factory-sound-til-it's-perfect kind of guy, and this set of sounds reflects nothing you've ever heard in the Ensoniq library. Or probably any other library, for that matter. For those of you who aren't hip to Sam, he's the guy Ensoniq chose to take over the Mirage library for distribution, as well as the *Hacker's* resident VFS/SD patch guru: if that's not enough recommendation of his skills, let's just say he's one of the really fly VFX(sd)(-1) programmers, if not the original flyguy himself. His modulation routings and spectral animation through very innovative envelope programming border on the legendary.

You won't find precision acoustic piano sounds or definitive P-bass sounds in this collection. Sam realizes (as we all should) that that corner of the envelope is for sampling types: the VFX-sd-1 is a synth: program it like a synth, make it sound like a synth; make it sound like a stack of synths, make it sound unlike any stack of synths you've ever heard. That's where he's at in a nutshell, that's where this collection's at; synth use of the Ensoniq wavetable.

As close to an emulative patch as you'll find in this collection is the "Click-Bas+OB8" patch of bank 6. Far from the

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trans-indie-sub-pop- fare, "DreamStream" is the definitive JX-10 analog square wave pad as string bed: adding a 5th into the patch this is a lift from cut #7 of that R-company's CD, while "Delicate" is about as narrow a squarewave as you can get and remain musical. "Amazon- Valy" is the typical patch-as soundtrack: holding open 4ths in one hand, press patch select X0 and add the sus4ths; press the sustain pedal, lift, select patch XX and play octave tonics. "Yes — I make movies for HBO" comes to mind. "OgreandAngel" is various x-mod left hand patches with an octave pad unchanging in the right; "Syn-Split" is its converse. "Toy Circus" is right out of the Walter Carlos "Clockwork Orange" period: "Melancolia" is out of the Wendy Carlos "Seasons" period; I don't know how much more full-circle Sam can get here...

"Thundr+Rain" along with "Cartoon-FX" are the obligatory FX patches, although you better play a lotta notes to hear the rain. "Industrial" is noise mod as filter sample and hold, with patch XX a pretty credible anvil emulation from the tubular bell waves. "Mean-Trent" is, well, ya gotta be trendy once, and with the delay and key-up restrikes, it's not just a clever name, although Trent would've given a 'nad to have had this kinda horsepower in the early Nine-inch days.

A cursory examination of these patches shows no wave calls that the early VFX couldn't assemble. I planned to SysEx these into a first-spin VFX last week (remember before it had a sequencer? And then before it had a disk drive?), but the music store sold it before I could PowerBook it, so I'd assume only the effects processing would be less sterling. I discovered the data transfer rate of my SD-1's floppy was around 16 blocks/second (the 63-block file loaded in 4 disk clunks of about a second/clunk for a 4-second load), as was the VFXsd, so this review has scientific ramifications as well (clunks/sec???). All modulators are used (another Mims exclusive): you'll want the CV pedal hooked up as well has a free hand to wiggle the Data Entry (or, in this case, Timbre) slider. Betcha discover that it's gotten a little dirty over the years, too...

This is a very pervasive collection, especially after the knock-out animations of the VFX Set 1. This set, on first listening, is kinda cool but doesn't sweep you away with transwaves or motional envelope fades, filter sweeps and tinklies sweeping right to left over "Nimbus" pads: this is more VFX Set 1 on Prozac. It doesn't jump around and amaze you with its 6-octave Mariah Carey vocal gymnastics: it's a more Celine Dion evocative kinda thing. Restrained is the operative, subdued is the mindset, and haunting is the mood for most of these pads. Dark but not looming, these patches require a coupla takes to appreciate; upon first listening I was really disappointed, expecting those big glorious animations that have become Sam's trademark. You know, those huge glorious pads that sound wonderful by themselves but invariably take over the mix and leave little room for anything else...

This collection reflects Sam's maturation not only as a programmer/performer/musician, but as an individual as well, in spite of Bank 2's "Secret Message." I've been known to bury messages in sequences too, Sam (as I'm sure Ensoniq would rather forget). Hey, this is all he does, and does a d----- fine job at it, too, so yeah, \$40 is a justifiable price. But hey, Sam, if you scattered the data over the disk so it took longer to load, it would appear to be a much more substantial investment than the 4-second load time belies. Just frag your floppies first (nyuk-nyuk-nyuk). Excuse me; the EPS side of me broke loose for a minute. Seriously, though, data is data. I'm sure he's got a coupla dozen templates for these sounds, but you'd spend weeks just juggling wavesets into them (let alone months tweaking mod routings and envelope x-fades and times) to come up with this kinda effort. Scary stuff for the human.

This is not a "one-size-fits-all" collection. Being a compilation by Tony Davila, Todd Speer, and Sam himself, this is hardly a solo effort. But the spit and polish is Mims, and you don't have to be a rocket scientist to hear his influence in this set. Yeah, this might be the MOR/adult contemporary version of Set 1, but it hasn't lost the formula. A liquid sound stage for your VFX-sd-1: the four-second load time just belies the depth of programming here. This collection is simply moodier and subtle: you've got to listen for it. But I'll bet I'm not the only person to identify with that. I jumped on the Ensoniq bandwagon when the Mirage knocked my door down with audio sampling, and branched into video sampling hardware for the Macintosh. A lateral shift, if you will. And that's synonymous with what Sam has done here with the VFX Set 2. The fire still blazes, but it can warm, as well as burn. And this is the cold and flu season.

Probably the most esoteric/understated 63 blocks ever conceived for the VFX series. ■

Bio: When not answering broadcast NTSC/ PAL questions for TrueVision, Pat is a tech support person for RasterOps. He still uses a B-3 for a keyboard stand and watches the alpha channel.

Current Ensoniq O.S. (Disk/EPROM)

EPS	2.49/2.40	SQ-R	1.02
EPS-M	2.49/2.41	SQ-R 32	2.03
EPS-16 PLUS	1.3/1.00F	SQ-R PLUS	1.15
MASOS	2.0	SQ-2	1.2
MIRAGE	3.2	SQ-2 32	2.03
ESQ	3.5	SD-1/SD-1 32	4.10/4.10
ESQ-M	1.2	DP/4	1.14
SQ-80	1.8	KS-32	3.01
VFX	2.30	ASR-10	3.0/1.5
VFX-SD	2.1/2.00	KMX-8	2.00
SQ-1	1.11	KMX-16	1.50
SQ-1 32	2.03	TS-10/12	3.04
SQ-1 PLUS	1.1	KT-76/88	1.60

RND ()

Ensoniq News

From Ensoniq — Building on the great success and reputation of the DP/4 we have released a new, improved effects processor — the DP/4+. Containing all the features and algorithms of the original DP/4, the new DP/4+ adds the following often-requested features:

- all balanced (TRS) connectors
- ground compensated outputs
- +4/-10 dB switch
- headphone jack
- output mute (isolate to headphone)
- front panel Neutrik XLR/1/4" connector
- Seamless switching of effects
- 3rd step added to input LED indicators
- LED's above Config diagrams
- 2nd Foot switch input

The DP/4+ includes the following new algorithms:

- *GuitarTuner 2U*: Can be kept in-line for convenience! Switchable between Guitar and Bass frequency ranges.
- *Guitar Amp 4*: Warm, Class "A" tube amp simulation — non-dynamic.
- *DigitalTubeAmp*: Warm, Class "A" tube amp simulation — dynamic.
- *Dynamic Tube Amp*: A variant of the Digital Tube Amp with slightly different dynamic quality.
- *VCF-Distort 2*: Same as VCF-Distort 1 with the addition of a "tunable" feedback signal for tone shaping.
- *Tunable Spkr 2*: Warmer, more "analog" version than Tunable Spkr 1.
- *Vocal Remover*: Yes, it's an "Instant Karaoke" algorithm!

The DP/4+ is available now, and retails for \$1795 (US).

Hacker News

This issue marks the beginning of a new option for subscribers — an e-mail version of *Transoniq Hacker: e-TH*. We've been collecting names and kinda fumbling around the last couple of months deciding just how we're going to do this, and this is what we've come up with:

WHAT IT IS: *e-TH* will contain all of the text of the printed *Hacker*. This includes text from all the ads. Graphics will not be e-mailed with *e-TH*. There're just too many different systems for getting graphics through the Internet and the various links like AOL or CompuServe or what have you. (The e-mail system just handles text. There are various programs used to convert graphics to text files and back again.) There are a lot of different ways that are being used to electronically publish magazines. We've decided that just sending plain ol' text via e-mail is the one way that can reach the most people. Graphics Gif files will be made available at our ftp site for people who want to see them (ftp's "get" command doesn't care whether or not they're text files). We suspect that most of the time it probably won't really be necessary to get the graphics files — the text should stand on its own. There'll be notes in the text file

if there're any graphics associated with an article. We also hope to have some of our advertisers make use of the site for things like free samples and patches for demo purposes. And we're trying to get Hackerpatches in there somehow too. Anyone who can access our ftp site is welcome to do so — you don't have to be a subscriber to *e-TH*.

HOW TO CHECK IT OUT: Everyone who has e-mailed us about *e-TH* should be getting this issue (#118) by e-mail. If your printed subscription has expired in the meantime, you'll still get an e-mail copy of #118 — if it hasn't expired, then you should be getting both. If you inquired about *e-TH* and all you're looking at is the printed copy, then we had some sort of problem with your e-mail address and you should send us a message. If you haven't done anything but you'd like to see a sample of *e-TH*, just send us a message (e-TH@transoniq.com). Please let us know if you want us to just send out the current issue or if you'd like to be included in the mailing of the next issue (say, to check out mail delays or whatever).

TO CHECK OUT THE e-TH ftp SITE:

At your system prompt...

```
$> ftp ftp.teleport.com
```

```
Name: anonymous
```

```
Password: use your e-mail address for the password
```

```
ftp> cd vendors
```

```
ftp> cd trnsoniq ** yes — without the "a" in transoniq **
```

```
ftp> dir
```

This should give you a list of files and subdirectories. There would normally be subdirectories listed for the last few months' worth of *e-TH*. So if you need, say, Figure 2 from Issue #120, you would type "cd 120" then do a "dir" to confirm that the file is there and what its name is — say, "fig2." Then do a "get fig2." When you're done, logout with a "bye." Eventually, our ftp site will be reachable at ftp.transoniq.com and you won't have to change directories to get in there. Right now, the only thing at the ftp site is a file containing some SQ/KS/KT patches from Gregoire Marechal of Vanves, France. Thanks, Gregoire — you're the first! (These patches should show up in future Hackerpatch columns — but you can get them now.) More files are on the way.

WHAT IT COSTS: Here's our complete rate schedule:

	U.S.	Non-U.S.
1 year, printed:	\$23	\$32
2 years, printed:	\$40	\$58
E-mail, cost per year:	\$20	\$20
1 year, both (printed cost + \$6):	\$29	\$38
2 years, both (printed cost + \$12):	\$52	\$70

CONVERSION: Here's where things get a little complicated...

U.S. Subscribers: If you want to switch over to an e-mail sub (only), your subscription will be extended by one issue. If you want to switch over to the "combo sub" (both printed and e-mail), send \$6. Note that with combo subs your e-mail sub and your printed sub will expire at the same time. So, if you've got a renewal coming up in a month or two you may want to wait 'til then. If you've just recently renewed for two years, well, then you're getting a deal.

Non-U.S. Subscribers: If you're going for the combo sub (both), then it's the same as for the U.S. subscribers — send \$6. If you're

going to switch over to the e-mail only, then you get a bonus — one extra issue for every six issues remaining on your subscription. (We round up — so you'll at least get one extra. If you've just recently renewed for two years, you'll get four extra.) Don't try to figure out how we arrived at this, because, basically, it was arbitrary.

ERROR — REBOOT

We goofed on the title to last month's TS article from Jeff Rhoads. "Looking for TS Wavetables" should have been "Looking for TS Envelopes."

And a couple of errors weaseled their way into Pat Finnigan's review on the Powerhouse CD: First, MIDI MARK Production's address should have been P.O. 217, Whittier, CA 90608, NOT P.O. Box 317. And, we had a little problem with the price — Pat says, "At \$199, a fat CD, super value for your buck, and reflecting the Ensoniq philosophy of royalty-free wares. At \$299, still a pretty good deal, but not the bargain with the fervor I wrote about. 300 smackers'll buy the CD-ROM to read this disk, or a 540-Mb drive to copy it onto for edits, or 8 Mb for your ASR-10, or a 14" monitor, etc. Not that MIDI MARK isn't competitively positioned: priced a Roland CD? Yikes! The Bomb ROM is mondo cool wares, well or-

ganized and authored, and well worth the extra 34 cents/meg. We're talking about a different economy of scale as well as hardware/software: one third-party company supporting one keyboard manufacturer. I trust readers considering this ROM won't change their mind due to this error — hey, it's going to take me another month to squeeze another yard out of my wallet, too! My apologies to MIDI MARK and all fellow hackers..."

Other Hacker News...

(A little whining music, maestro...) You might have noticed a change in the inside paper in this month's issue. Well, when the Postal monopoly raised their rates 14%, we didn't change any prices or anything — we just "absorbed it" (nice term). Now our printing costs are scheduled to go up 11.5%. We can keep this down to a mere 8% by going to the cheaper paper on the inside. (We could get it down to 4% by making the cover paper cheaper but the aforementioned Postal Service does enough damage as it is.) So, sorry about the cheaper interior — but at least we're keeping the price the same! (Web offset rolls of paper have gone up over 70% since last April, coated paper has gone up 20% over the last six months — look for changes in a lot of magazines — except, of course, the ones that are e-mailed...)

Technical Support Q & A

The Fabulous Ensoniq TS-10/TS-12!

Anthony Ferrara

Welcome to the return of Ensoniq Technical Support Q & A. I have been so busy lately writing technical articles relating specifically to the ASR-10's Disktracks application that I haven't had enough time for more general types of coverage. I'll be wrapping up the Disktracks series with another installment or two and moving on to more in-depth TS coverage soon. With that in mind, I am using this opportunity to revive our Ensoniq Technical Support column, where I'll talk about commonly-asked technical questions.

Since this column last appeared in the *Hacker*, plenty has changed. One big addition on our part is the availability of Technical Support information, 24 hour a day, 7 days a week. We have gone to great lengths to install an Automated Fax Retrieval System, which you can access at no charge by calling 1-800-257-1439. All you need is a fax machine to receive the documents that you select, and you can choose up to three at a time. The types of documents available include not only product spec sheets and current retail pricing information, but extensive lists of sounds by category or sound library. There are also numerous technical applications presently available for a variety of current and past Ensoniq instruments, with additional floppy and CD-ROM library lists and application documents on the way soon.

Our Technical Support group regularly hears from users from around the world; I personally have talked to people recently

from as far away as Australia, New Zealand, Sweden, Belgium, and Germany. Nothing yet from either the North or South Pole, but hey, there's still plenty of time. These questions come to us from a variety of sources, such as phone calls from individual users and salespeople, letters, faxes, along with technical inquiries from our international distributors. All inquiries so far have been terrestrial in origin, but we're still waiting.

This month, I am focusing exclusively on the TS series of instruments, and I hope to answer some of the most frequently asked and important questions relating to the TS-10/TS-12. It is worth mentioning at this point that the only functional difference between the two models is the keyboard (61 VS. 76 keys) and Poly-Key vs. channel pressure sensitivity, respectively.

I'll start right out admitting to a personal bias. The TS-10/12 is my favorite synthesizer and music composition environment ever, and is the centerpiece of both my live and studio setups. To stick to the plain vanilla facts however, you don't need to look any further than the feature set: fabulous sounding 254 waveform ROM catalog, 8 MB SIMMS expansion capacity of Sampled Sound memory with two MB standard on board, EPS, EPS-16 PLUS, and ASR-10 format sample load through SCSI and floppy drive, an easy-to-use (and expandable to over 97,000 note events) sequencer, Hyperwave

Wave-List editing, and 73 on-board effects algorithms with multiple variations for each.

SCSI port option and device compatibility

The SP-4 SCSI port is available as an option on the TS, and retails at a suggested list price of \$249.95 installed. Do keep in mind that the SP-4 has a read-only SCSI implementation, and will not save, format, or otherwise write to a hard drive. If you do buy a SCSI hard drive you will need another unit such as the EPS, EPS-16 PLUS, or ASR-10 to save sampled instrument sounds to the drive. In this scenario, the TS could read the instrument files already saved to the drive. Some players use both the ASR-10 and TS in their home and studio environment and take only the TS to live performances for sake of convenience.

Most people who use the TS alone and have the SCSI port installed opt for a CD-ROM drive for quick access to many sounds through the many Ensoniq and third party compatible CD-ROM disks available. FOD (Fax On Demand) Document number 0015 gives current information on "Approved SCSI Storage Devices" for all Ensoniq products, as well as the TS.

The General MIDI option

The 3.00 operating system ships with all current units and includes the General MIDI option. However, if you own a

pre-3.00 unit you will not be left out in the cold. All units with older operating system versions can be upgraded at an Authorized Repair Station. This upgrade to 3.00 does require some modifications to the TS mainboard, and is available for a suggested price of \$99.95 installed. This feature allows the TS to function passively as a General MIDI tone module receiving MIDI data from an external (usually computer-based) sequencer. The upgrade does not allow the TS to load, read, or play Standard MIDI Files disks from its own disk drive.

By the way, operating system version 3.00 allows a TS to work well with an Apple CD-150 model CD-ROM drive. People who tried to address the CD-150 with an earlier TS operating system were not able to load sounds, but the new version corrects the lack of communication between these two devices.

SIMMs memory capacity and expansion

Standard SIMMs memory of two MB comes installed in the stock TS, which is expandable to a total of eight MB. FOD document number 0006 is entitled "Choosing the right SIMMs for your ASR/TS Keyboards," and clearly explains the basic specifications required. Also included are some recommended SIMMs retailers and their phone numbers.

When the TS's SIMMs capacity is expanded to a full eight

Keyboard Raves About Ramtek

November 1994

One of the benefits of Ramtek's products... is that they're rack-mounted, which is preferable to table-top units for rack-owning and/or traveling musicians. (Ramtek also makes tabletop models.) The cabinets are of rugged steel construction, a necessity for use on the road. In addition, whereas [Ramtek's] competitors shy from offering their storage systems in a single-space format because of the size constraints and possible thermal problems, Ramtek doesn't. In the 6 months we used [Ramtek's] D1200, we never encountered any trouble due to overheating. Those with limited rack room should appreciate the small space these products require. Also impressive is the fact that the internal cooling fan, which is quieter than the hard drives themselves, adds minimal acoustic noise to your music environment... If you're running short (of storage space) Ramtek should be one of the places you call.

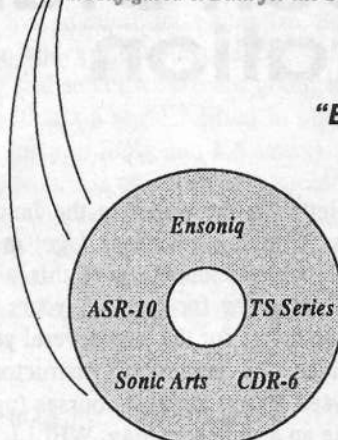
BOTTOM LINE

[Ramtek's systems are a] Grade-A choice for any rack-oriented and/or traveling musician in need of lots of reliable digital storage space.

Rackmount Mass Storage Systems Designed...



...Configured & Built for the Serious Working Musician



Ensoniq CDR-6
"Best of Sonic Arts"
Vintage R&B
and Rock
Instruments

Ramtek, Inc.

Memory Driven Technology

32003 Plymouth Road
Livonia, MI 48150

Special Combination Pricing Available. For More Information, Call 1-313-513-7440

MB of Sampled Sound memory, this results in 8114 blocks (four meg) of available RAM in BankSet S8 and 8191 blocks in BankSet S9. In other words, the largest each instrument location can contain is a four-MB sampled instrument.

Computer-based visual editor and librarian

There are currently two major software programs supporting the TS that I am aware of, and there may be individual editors available from other sources soon.

a) *MIDI QUEST* by SOUND QUEST is both an editor and a librarian, and is available on the PC-compatible, Macintosh, Atari and Amiga computer platforms. This is a stand-alone application, which also allows you to write your own custom editors.

b) *Opcode Galaxy Plus Editor* by Opcode, which features librarian capability only. This program is generally acquired as part of the Opcode Macintosh sequencing environment. Check with your local music retailer and the usual music industry magazines for technical information and display ads on these products.

TS compatibility with other sequencer files

We are often asked whether the TS will read other sequencer format files such as ASR, SD-1, and in particular, Standard MIDI Files. The answer is that the TS will not directly read any of other these sequencer file formats. In practice, there are several ways around this, however. TS series instruments

have their own proprietary operating system that is different from the Standard MIDI File format, as well as those of the SD-1 and ASR-10. The solution to this scenario would be to initiate a real time multi-track record from the original unit's sequencer into the TS, or to use the PC-compatible *Giebler Disk Utility* advertised elsewhere in the *Hacker* to convert other format sequencer files to the TS.

Compatible CD-ROM disks and floppy disk sets

Any Ensoniq format CD-ROM disk or floppy disk that identifies itself as compatible with the TS, EPS, EPS-16 PLUS, or ASR will be fine with your TS, within the limits of memory. Once again, TS series instruments can load up to four MB into one sampled instrument location through floppy or SCSI.

The ever-changing world of technology

As is often the case with technology, the specifications and availability of peripherals like computer software editors, SIMMS, hard drives and CD-ROM drives are liable to change without notice. Stay in touch with us through the Transoniq Hacker, our Fax On Demand System, and our Technical Support number (610-647-3930). Also keep in mind that your local Authorized Ensoniq dealer is always a source of up-to-the-minute info on product releases, options, and accessories. Happy hacking! ■

Bio: Anthony Ferrara remains a happy Ensoniq Corporate Citizen. He is currently working on a full-length audio compact disc of catchy original "snappy ditties."

I've Been Drummin' On The Workstation

Terry W. Everson

Answering a question in a letter to the editor in the January issue of *TH* and in response to many questions I get at the store about drum programming, I decided to give this a try. Having been a professional drummer for over 27 years and using drum machines and sequencers for the past several years I thought "Why not?" Besides, my percussion instructor in college told me to apply myself to my English courses (ugh!) because I might want to write an article someday. WELL!

How To Begin

Since the focus of *TH* is on Ensoniq I will limit my explanations to their gear, but many of these things can be applied to other brands and types of gear (i.e. drum machines, dedicated sequencers, etc.).

After turning the instrument on, choose an empty sequence, name it something other than "sequence #?" if you prefer, choose your time signature (of which there are 594 available on Ensoniq boards, right Roy?). For now let's stay with the default setting of 4/4 time. (4 quarter notes to a measure.) Next, choose a drum map for track #1. For now let's use an Ensoniq drum map (kit) like "Ballad-Kit" on the SD-1 or something similar on the SQ's or KS's.

Also, so we can experiment later, copy this kit into the next few tracks by simply selecting those tracks. You should now have your kit in several tracks. On the samplers you will have had to load a kit to begin with, then copy it.

At this point I would like to make a case for being able to read at least some music or have an understanding of how rhythms

are written. Many musicians who do read regular music have no concept of how drum parts are written. (No comments please about how drummers are not musicians, etc. Remember, you are the ones who don't understand how drum parts are put together, *Right?*) Actually, a very simple solution to a lot of this would be to simply pick up an elementary drum set method book from your local music store and keep it on hand for future reference or talk to a local drum teacher, making sure, of course, that he or she knows how to read music.

Build From A Basic Rhythm

After selecting track #1 in your sequence you must decide what the most basic part of your rhythm is. This is usually the simplest part of your beat (i.e. a bass drum-hi hat combination, a ride cymbal, cowbell, etc.). I like to find this element first because all of the other parts play off of it or are compared to it. (Note: I don't always start with a drum part when sequencing. Sometimes another instrument like a bass may be the steady beat I use to play from.)

Set your tempo using the click track control. If you are not sure what tempo you need, you can go into record and listen to the click and make adjustments with your data slider, or simply hit the soft button under the tempo control on the SD-1 or TS's two or three times in the tempo you want and it will lock in to that tempo. Make sure on your click or sequence control page that the "click" control is on and the "time" is set to 1/4 or one quarter note. This is your unit of measure for now, the clicks you hear will all be quarter notes. Also, make sure your volume for the click track is fairly loud.

For now, let's set a tempo of 120 bpm (beats per minute) and lay down a simple bass drum and hi hat part. (The hi hat is the foot pedal to the drummers left, usually, that opens and closes two cymbals with some sort of a "chic" sound. It is also played with a stick or two for a variety of effects. There are many variations on this, but we'll just stick with the simple use for now.)

Drum patterns can be created in any length, but for most patterns I use I enter 4 measure patterns, which means 4 times 4 steady beats or a total of 16 beats. Put your sequencer into record and listen to the four click beats *before* you start playing. This is your count off. Now play one bass drum note for each click for a total of four measures or sixteen clicks. Press STOP to end the recording after sixteen beats. **KEEP THIS TAKE!** Go to your sequencer control page and change the RECORD-MODE=REPLACE to RECORD-MODE=ADD with your data up arrow. You have now established the length of your sequence for now (it can be changed later), and are in a position to add other drum parts to this track. Also, for now, make sure your LOOP function is off. More on this later.

Adding Parts

Let's add a hi hat part on the second and forth beat of every

bar (measure). (The closed hi hat sounds are about 17 to 19 keys up from the bottom of a 61 note keyboard, or E3 to F#3.) Go into record, listen to the four-beat count off and begin playing on the second bass drum note and every other note thereafter. This is also called the "back beat" or "after beat." In jazz the drummers actually keep the band together with a strong "after beat" on their hi hat. We should now have bass drum beats on all sixteen notes and hi hat beats on every other note from the second note on, or two and four of every bar. **KEEP THIS TAKE!**

Repeat what we just did with the hi hat, but add a snare drum part instead.

Now let's add a ride or crown cymbal part by playing the typical "rock" steady eighth note pattern. (Twice as fast as the original bass drum pattern.) Use the same procedure as we did with the hi hat and snare drum. **KEEP THIS!**

Quantize, What's That?

At this point, unless you are incredibly accurate with your playing, you probably notice that not all of your notes are exactly in time, even though this is a very simple rhythm. It's time to **QUANTIZE!** This is a magic function made to straighten out all messes you get into, right? Nah! It is a very handy tool to help tighten up your rhythms, but it must be used judiciously to avoid the constant rap against the electronically produced drums as not sounding human. Being a drummer myself, I can appreciate the differences and I go to great lengths to promote a "human feel" to my own tracks. What we just put down in our little exercise would be very boring to listen to for long, but is useful for the purpose of this article.

With that in mind, let's quantize. Select your "EDIT TRACK" button and go to your quantize function soft button (SD and TS's) and select it. We are going to quantize our track to 1/8 notes (that's a regular filled in note with a stem and one flag on it for you SQ's and KS users). Press "YES" and listen to the results. All of your notes should line up exactly with each other. The advantage to quantizing is that it gives you a rock-solid beat that is very clean, which a lot of drummers are incapable of. *However*, it often leaves you without that "human feel" that many of us like. What to do?

Options

#1 You might want the snare drum to have variation or the cymbal to do some extra fiddlin' around. One answer is to not add those parts to the track until you have the other parts quantized. Remember, you do not have to quantize as your last function. You can always quantize the basic parts some variation or the cymbal to do some extra fiddlin' around. One answer is to not add those parts to the track until you have the other parts quantized.

#2 Or, remembering the other tracks that we copied the sounds to originally, this is where they can come into play. Many times I put down the basic track with maybe bass drum, hi hat and cymbal on track one, a wild snare part on track two and toms and crash cymbals on track three. After I get them the way I want them I can merge them back to track one *carefully*. Always pre-preview a merge before you save it, sometimes weird things happen with the effects which you may or may not want. If the merge doesn't work, leave the parts on separate tracks if they're available. If not, revert to our first option. A little practice helps here.

#3 Separate tracks also give you other options for volume control, panning, out-put routing and different effects routing, in which case you also would not want to try to merge back to the first track. Many times I have changed a snare drum sound by simply transposing the track to give a totally different sound. I also find it easier to control the volume level of one particular sound within the set when it's on a different track. For instance, I might want the hi hat to be a lot stronger than the rest of the set to help achieve a drive to the music.

#4 This one gets a little tricky, but it works. If you have all the parts on one track, but would like to do some of the things mentioned above and want to have some fun, copy only one instrument (i.e., the cymbal) to a second track. To do this go to your EDIT TRACK page and press the "copy" soft button. You'll see the "Time In & Out" section. Set those times to the beginning and ending of your sequence (if you want to do the whole track length). Next, set the "Key Range" so the two extreme notes are both the same as the note you want to move. Do this by underlining the first note and hitting the key of the sound you are moving twice, thus changing both of the readings in the window to your note. Press "Set," returning you to the first window. Next press the soft button under "Track" to underline which track you are sending it to. Use up or down arrows to select the track and press "Yes" to copy the part to another track. Your single part is now on another track and can be edited from there.

You will also now want to erase that part from its first location so it won't conflict with the new one. Again go to EDIT TRACK and select "Erase." Set its range the same way you just did to copy it and hit "Set," then "Yes," and it will be erased from the first track. As you can see, if you think that you might want to do some of this type of thing, it may be better to just record on separate tracks to begin with.

#5 Another good trick is to combine two totally different drum set sounds (Ensoniq calls them programs). For instance, on the SD-1 I often combine the "Brushes" program in the interior bank with a drum set in another bank to get a complete set. Here, the bass drum and hi hat from "Ballad Kit" might be in track one and the "Brushes" in track two. Again, this gives me separate volume and effects control over each track. It also allows me to "ad lib" more on the brushes, playing them against the other track.

Looping

Previously you made sure that your "LOOP" control was set to "OFF." If you set it to "ON" after you record your first take to establish the length of the sequence you will find that the sequence will continue to loop or repeat every four bars and you can continue to add drum parts quickly. This is a great feature after you have learned how to put parts together or if you are just trying to experiment with rhythms and sound combinations, but it makes quantizing a lot more difficult and it can tend to give you a very cluttered drum track. Drum tracks usually lose their drive when too many things are happening at once. The exception, of course, is Latin music, where large rhythm sections are the order and chaotic rhythms are used a lot (ala Miami Sound Machine, which I love). Still, there are a lot of Latin rhythms that are very tight and simple like rhumbas, beguines, tangos, etc. that contribute in their simplicity to the beauty of the dance.

Hint: I generally wait until I have most of the rest of an arrangement laid down and *then* I go back and add the gingerbread (fills, etc.) to the drum part. This way I make sure the drum parts don't collide with or clutter up the rest of the chart.

Hint: The reason I like to use four-bar drum parts is that I can vary little things like bass drum kicks or snare or hi hat sounds (open or closed) so that the pattern doesn't sound so repetitive when it loops. I can also append it out to 8, 16 or 32 bars quickly and have a track with subtle variations that isn't too monotonous. It is also easy at this point (after it is appended) to add some tom fills or cymbal crashes in select spots to add even more variation and punch. For odd bar phrasing just add or delete bars from the pattern, Ensoniq makes that very easy.

I was recently asked by a rapper if I could come up with a drum part similar to what we hear on rap albums. I think my reply was "In my sleep!" Create a two-bar pattern with some clever little gimmick sound and loop it for five minutes or so. (I know, I'm doing this while they are out there making a million or so, so who's got the last laugh? Irony isn't it?)

Anyhow, while there is a lot more to cover, I hope this introduction has given you a start into the world of sequenced drum parts on workstations. For some added fun, go ahead and put your own rhythms in place of the ones we used for our example, but remember, start with the basic simple part of the rhythm first and then add the rest.

With a little practice you too can create some pretty great drum tracks. Go to it! ■

Bio: Terry has been a drummer and utility percussionist doing symphonic, shows, recording, jazz, big bands for over 30 years. He now has a small ADAT equipped studio with an Ensoniq SD-1 and EPS-16 Plus. He does everything from simple demos up to full orchestra and big band sessions.

How Sounds Work

Part XII – Always Room for Cello

Mark Clifton

Out of all the instruments in the orchestral family (and we all know there are a lot of them) my favorite has to be the cello. With all of its little quirks and nuances the cello is one of the few instruments that, in my opinion, comes even close to the expressivity of the human voice. It has a velvety, resonant tone that is remarkable reminiscent of that of a baritone singer. It can be warm and commanding, able to take hold of the most serious furrow-browed Beethovenian motif and drive it right into your gut. Yet it retains just enough of a tongue-in-cheek sense of humor about it, especially in the high range, that it avoids being outright solemn. Its voice is more that of a close friend than fearful oppressor. It is power delivered with a smile and a wink.

So of course I would jump at the chance of programming a cello sound for my beloved SQ-1, especially after I got it expanded to 32-voice mode. The new wave set didn't include a solo cello voice, but it did have one solo string instrument violin, which is one more than the original SQ had. The original factory ROM sounds do include a patch called "Cello-Like," but those who have heard it will probably agree that its character leans more toward the "Like" part than the "Cello" one. With a little hacking and smacking I hoped to be able to squeeze a usable cello patch out of the new waveform. Total accuracy was probably too much to ask, but hopefully I would be able to produce something that would at least sound okay buried in an orchestral mix or used in a personal compositional demo. This I got, though with a little more work than I expected, with the patch "Solo Cello."

"Solo Cello" uses two versions of the aforementioned SOLO VIOLIN wave, each pitched down an octave and altered in a slightly different way. Because I'm using a violin sample and not a cello one total accuracy can't be expected. Rather, the tone of the sound is actually kind of thin and lacking in resonance and bow noise, mainly since the SQ's violin waveform gets a little thin at the bottom of its range and probably could have used another multisample there. This creates a problem in creating good violin sounds, and naturally since we're pitching the waveform an octave lower than its original range, trouble is to be expected in this case. "Solo Cello" wasn't really created to be a full replacement for a real sampled cello, though, and a half-accurate cello is better than no cello at all. Suffice to say that it's possibly the best imitation available considering the resources and should be a good stand-in for sketch sequences and demos.

Oscillator 1 uses the straight SOLO VIOLIN waveform transposed down an octave with no major changes to the waveform. Vibrato, as usual, is supplied by the LFO routed to Pitch with a value of +02. As with the violin and all other fretless string instruments, the cello produces a pure up-and-down pitch vibrato in a shape pretty close to that of a sinewave, which is (surprise) what the LFO waveshape is set to. LFO Speed is 38, which is average-to-fast for a cello. This area is basically left up to the discretion of the programmer. Just make sure not to program the vibrato too slow, as some people are apt to do. The logic of low (as in pitch) equals slow is not always correct. Vibrato control is routed to the modwheel, though aftertouch will also work for those of you with a keyboard that will respond to it, and LFO Restart is set to ON. This insures that the LFO will reset itself to the beginning of its cycle with each new note, yielding a realistic effect in acoustic vibrato simulations. For the most realistic playing, don't apply vibrato to C2, which is the cello's lowest note and always an open string.

The filter is set to a 2Lo/2Lo-pass configuration, with a medium FC1 cutoff letting through some low- and mid-frequency content and a lower FC2 cutoff letting through higher-end bow noise and rosin. Both are routed to ENV 2 to further shape their response and to velocity, which opens the filters and brightens the sound with harder keystrokes. A Keyboard Tracking amount in the plus range for both poles also brightens the sound as you play higher up on the keyboard.

Both Envelopes 2 and 3 (the AMP envelope) are set to the same basic shape — a soft attack followed by a peak of 99 and then a slow tapering off as the sound decays. The attack is modified by the Attack Velocity parameter, which quickens the attack the harder the keys are struck. This means that at soft velocities the sound will have a mellow, gradual attack. At higher velocities the envelope attack amount will increase, bringing out the bow-scrape attack of the original waveform. This simulates the dynamic response of a real cello as the bow hits the strings harder at higher volume levels. The gradual decrease in envelope amount as the sound decays simulates a slight dulling of the sound as the bow is drawn across the strings (for more on this effect, refer back to January's violin patch, which uses most of the programming tricks explained here). Level Velocity for Envelope 2 is set to 26, which, since it is routed to filters, helps to brighten the sound more with velocity. The AMP Level

Velocity of 33 increases the volume of the sound with harder playing. As with most of the other sounds explained in this series, "Solo Cello" is highly responsive to velocity.

While Oscillator 1's job is mainly to supply bow noise and high- and mid-range frequency content to the sound, it is the job of Oscillator 2 to add some resonance and "wood." To do this I used the old waveform shifting method described way back in Part I of this series, which focused on low string sounds. For those of you who missed that installment, or can't recall such ancient history, here's a brief recap:

When a waveform is transposed using the usual "Oct, Semi, Fine" controls in the pitch page, the key ranges of all of the samples in the waveform are shifted with no change to the samples themselves. This means that when you transpose a piano wave up an octave and fifth, you are really just shifting the range of the keyboard and not actually bending the pitch of the samples. This is to insure a realistic and consistent response in the timbre of the sound regardless of range and to avoid "munchkinization." Munchkinization is an effect caused by the way samples are changed in pitch by a synth. Pitch is made higher or lower by speeding up or slowing down the rate of the sampled data, much like changing the speed on a tape deck. If you alter the playback speed too much you get an unrealistic change in the timbre of the sound. It literally starts to sound munchkinized. The way around this is to use multiple samples spread across the key-

board, each capturing the sonic characteristics of that particular part of the instrument's range.

There are times, though, when you want to, for some reason or another, bend the pitch of the sample data without effecting its key range. This can be very useful for special effects and for adding subtle nuances behind normal waveforms, as we are doing here to "beef up" our cello patch. To do this you have to use the Env1, LFO and Mod parameters in screen two of the Pitch section. Since we want the pitch bend applied to our waves to be a constant, set amount, we set the Mod parameter to MAX ON with a value of -62. A value of +/- 62 is roughly equal to an octave in pitch. (The values of this parameter do not follow a linear response curve, therefore some tweaking may necessary to to get the sound exactly on pitch. You may also have to mess around with the Fine tuning parameter a bit.) Now we have all of the samples in the violin waveform bent down an octave without any change to their keyranges. The Oct and Semi tunings can be left at +00, since all transposition is now being handled by the Mod parameter. If you solo the oscillator, you'll see that it has taken on a very resonant, woody flavor. When layered behind the more thin, rosiny texture of Oscillator 1, you now get a much more complete and complex imitation of a cello's sonic characteristics. Everything previously mentioned about LFO, filter and envelope programming in Oscillator 1 is basically duplicated in Osc 2.

Prog: SOLO CELLO

By: Mark Clifton

WAVE	1	2	3
Select Voice	On	On	
Wave Class	Expan	Expan	
Wave	SoloViolin	SoloViolin	
Delay Time	000	000	
Wave Direction	Fwd	Fwd	
Start Index	00	00	
MODSCR	Off	Off	
MODAMT	-	-	
Restrk Decay	23	23	

PITCH	1	2	3
Octave	-1	+0	
Semitone	+00	+00	
Fine	+00	+00	
ENV1	+00	+00	
LFO	+02	+02	
MODSCR	Off	MaxOn	
MODAMT	-	-62	
KBD Pch Track	On	On	
Glide	Off	Off	
Glide Time	00	00	

ENV1	1	2	3
Initial			
Peak			
Break			
Sustain			
Attack			
Decay 1			
Decay 2			
Release			
Vel-Level			
Vel-Attack			
Vel Curve			
Mode			
KBD Track			

LFO	1	2	3
LFO Speed	38	38	
Noise Rate	00	00	
Level	00	00	
Delay	00	00	
MODSRC	Wheel	Wheel	
Wave	Sine	Sine	
Restart	On	On	

FILTER	1	2	3
Filter 1	2Lo	3Lo	
Filter 2	2Lo	1Lo	
FC1 Cutoff	044	044	
ENV 2	+48	+48	
FC1 KBD	+03	+03	
MODSCR	Veloc	Veloc	
MODAMT	+13	+13	
FC2 Cutoff	014	014	
ENV2	+44	+44	
FC2 KBD	+23	+23	
FC1MOD-FC2	On	On	

ENV2	1	2	3
Initial	87	87	
Peak	99	99	
Break	90	90	
Sustain	81	81	
Attack	26	26	
Decay 1	63	63	
Decay 2	59	59	
Release	27	27	
Vel-Level	26	26	
Vel-Attack	13	13	
Vel Curve	Conv	Conv	
Mode	Norm	Norm	
KBD Track	+00	+00	

AMP	1	2	3
Initial	88	88	
Peak	99	99	
Break	88	88	
Sustain	78	78	
Attack	44	44	
Decay 1	53	53	
Decay 2	66	66	
Release	34	34	
Vel-Level	33	33	
Vel-Attack	19	46	
Vel Curve	Conv	Conv	
Mode	Norm	Norm	
KBD Track	+00	+00	

OUTPUT	1	2	3
VOL	91	86	
Boost	On	On	
MODSRC	Off	Off	
MODAMT	-	-	
KBD Scale	+00	+00	
Key Range	A0-C8	A0-C8	
Output Bus	FX1	FX1	
Priority	Med	Med	
Pan	+00	+00	
Vel window	>000	>000	

EFFECTS - HALL REVERB

FX-1	46
FX-2	25
Decay Time	42
Diffusion	40
Detune Rate	40
Detune Depth	12
HF Damping	19
HF Bandwidth	93
LF Decay	+02
MOD (Dest)	Decay
BY (MODSRC)	Modped
MODAMT	-38

The patch uses the usual orchestral concert hall reverb. The modpedal decreases the decay amount, creating more of an intimate "chamber"-type ambience.

Combining this patch with January's violin sound can yield some pretty nice chamber ensemble imitations, as well as become useful solo voices when used up against a full orchestral backdrop. Next time we'll take a break from all this

nice, tonal instrumentation and return to the good old prehistoric days of manly drum-beatin'.

Bio: Mark Clifton drinks too much coffee, reads too much philosophy and stays up way too late watching cheesy sci-fi flicks and laying down techno/industrial/orchestral tracks on his trusty SQ-1.

Getting Loopy

Tom Shear

We've read it a million times. Sampling has forever changed the face of music as we know it today. Unfortunately, too many of us are content to sit back and ponder this rather than forging ahead and finding new ways to apply this technology to more creative ends. One of the earliest and most popular applications of sampling was the use of the drum loop. When some enterprising young DJ took a one bar loop off an old funk record and used it as the basis for a new song, he could have hardly guessed at the trend he would be starting. This month, we'll be looking at some ways to utilize drum loops effectively and with a little more of your own signature than simply snatching a loop and repeating it ad infinitum.

One thing to keep in mind at the most basic level is that you'll probably have more success retriggering an unlooped sample repeatedly than holding down a looped one for the entire length of the song. Using an unlooped sample tends to be the preferred method among DJs and dance producers for several reasons. First of all, as one reader noted a few months back, using a looped sample sometimes leads to odd phasing problems when your sequence reaches its final bar and goes back to the first again. Secondly, if you're sampling from a live drum source, the timing is most likely not rhythmically perfect and by retriggering the sample repeatedly, you can help keep the loop from drifting out of time with the other elements in your sequences. You can also come up with interesting variations on the loop by retriggering it in a syncopated manner rather than just on the first beat of every bar. This is popularly used in the techno and jungle styles of dance music.

We know you're more creative than to be simply satisfied with using the same few bars of drums for an entire song, but unless you can take several different loops from the same song, you'll need to find another way of doing this. There are a couple options you have here. The first is to simply add your own drum track with fills and variations of your own atop the basic loop. This is usually a good idea since getting a

drum loop off CD to be strong enough to carry the rhythmic load of the whole song without lots of sonic engineering can be quite difficult. You may find that simply feeding the loop through a highpass filter so it filters out all the low end, thus allowing cymbals, tambourines, and such to dominate may work for you. This way you can still get a funky, live feel from the hats and high frequency percussion while your own drum track is the center of attention. The inverse of this, of course, is to focus on your own drum programming and use drum loops only for fills or breakdowns. Try incorporating samples of live fills into your own drum programming or use a sampled loop turned backwards as an unusual accent well-suited for dance music.

The second method of variation is one demonstrated on some of Ensoniq's drumloop samples. Take your drum loop samples, and then make several PARAMETERS ONLY copies of it and map them to one end of the keyboard. Next, go into each wavesample and use the SAMPLE START and SAMPLE END parameters to isolate each of the individual sounds from the loop. In other words, bring the SAMPLE END way down on the first wavesample so you only hear the kick drum. On the next wavesample, move the START and END up a little so you can only hear a single hat. Repeat this process as much as is necessary to get all the sounds that comprise the loop (on live loops you'll want several different kick and snare hits since they will tend to vary in sound a bit...). Now, when you play your loop, you can vary it as you see fit by playing these new wavesamples atop the loop and adding variations, fills, and breakdowns throughout.

This brings us to the next level of drum looping. If you have acquired a good number of these individual drum hits from various loops in your library, you may want to have a go at creating your own original loops or try to recreate classic ones by hand. If the sounds you have are expressive, and thoughtfully programmed, you'll be surprised at how easy it is to create something by hand that your friends will swear

was sampled from the vaults of James Brown. Aside from avoiding any possible copyright infringements, this technique has many practical advantages. First of all, you no longer have to worry about matching tempos of the loops with your songs since you programmed the beat into your sequencer and can thus alter the tempo however you see fit. You also will have more flexibility in that you can replace the individual sounds as needed. Not to mention, you'll find you have more control over panning and volume levels of the different elements of the loop, whether you want some of the drums to play backwards, etc.

Finally we have one rather advanced technique you bitheads out there might want to give a try. Try making several copies of the loop and mapping them across the keyboard. Next, use the SAMPLE START and END parameters to slice the loop up into parts of equal length (this can be tricky). With each wavesample representing a different portion of the loop, you can switch around the order of these portions in your sequences and come up with natural-sounding variations or truly bizarre nightmare rhythms. The smaller the slices you make (and thus the more wavesamples you'll need), the more you'll be able to alter things.

Drum loops have branched out from rap into virtually every type of popular (and not-so-popular) contemporary music today. Hopefully these techniques will act as a springboard to your own creative use of these handy rhythm boosters. James Brown ain't gonna be around forever,

so get to work, and get down with your bad self. —



Bio: Tom Shear can't believe it's not butter.

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Hey, I'm beginning to see a trend here in ASR/EPS/16+/TS wares. And I can't decide whose fault it is. Should I blame Ensoniq, for designing such product, or the 3rd party, who provides such support? The chicken or the egg? This year will prove to blur that argument with such staggering multi-purpose libraries I myself can't decide which Ensoniq keyboard to wax over. One size fits eight? Knowing Ensoniq, it'll be nine as soon as the PCMCIA slot in the KT-76 speaks SCSI. In any case, 1995 looks to be an explosive year for the third party...

And Garth Hjelte hasn't exactly been standing still watching it go by. The *Chicken CD-ROM* comes to us this year, and judging by its content (300+ Mb), I think the only parts he left out were the beak and the feet. At least that's about all I couldn't find on this CD. And, to be perfectly honest, anyone who has bagged/loaded/used/purchased/etc. Rubber Chicken wares already knows the quality of product, so the quality of sound you'll find here along with clever patch selects and novel programming won't be anything new.

Basically, what you get here is the compiled \$800 Rubber Chicken library in toto for \$300, and then some. More on the "then some" later. This CD represents 4-5 years of sample tweaking, compilation, patch and effect programming from one of the premiere Ensoniq 3rd party sources. If Sam Mims is the man for ethereal animation patches for the Ensoniq synth line, Garth is the man for the Ensoniq sampler line. And I say that with no diminution of the pool of very talented Ensoniq programmers out there; I'll wager they would say the same.

This collection is actually the biggest collection of "Who's Who" in the synth market. Collections of JD800, 01W, Morpheus, Wavestation, (not to mention quite a few Ensoniq synths out there), Vintage Keys, Waldorf, PPG, VS are logically arranged for your perusal. *Quite* a few dozen Mb (boy, that sounded funny 'till the ASR) of acoustic and

electric pianos are represented, along with very excellent patch programming variations. There's enough organ samples to keep even Barry Carson busy for awhile: pipes, B-3's (20 variations), Farfisas, Voxes, Rheems, even Fenders (remember the Contempo?) are very well represented. Barry even contributed to the Renaissance/Medieval chapter of this CD, and no, I'm not giving any clues as to what instruments he sampled; you'll just have to find out for yourself. Fifty-four gonzo basses (even Factors!) are resident, along with some luscious K. Thomas acoustic samples (you know, the ones that don't fit on 3 floppies), D-50 and M-1 samples, and, if you can handle it, a 12 Mb percussion file. And, of course the "*Country Set*" reviewed in Issue #108 is here, with those amazing steel guitar pulls and patch selects.

"Then Some": The UA series (for universally accepted) is a hacker's dream. Meg upon meg of raw/semi-raw/partially completed sample data to torque and glean into your own stuff is included in this chapter. Not that you won't find perfectly good, usable bytes ready for play here, as there's plenty. To quote Garth: "About anything you would want is contained here — use your imagination!" To quote Made-line Kahn in *Blazing Saddles*: "It's twuuue, it's twuuue!" This is the public domain chapter of this CD. Surfing through this stuff is like logging onto the Internet the first time: the sheer traffic/volume will just knock your socks off. *This* is the stuff for both the serious types that use those menu pages that don't make much sense on the ASR like "Scale Data," "Add Data" and the like. Don't play dumb: you know who you are, and Garth has found you. He ran out of direct access macros to call these sounds, so you'll have to peck around yourself to locate these goodies. To balance the selection of raw wavedata here, you'll find every M1 and D50 PD sample you'd ever hope for, along with 15-16 mb of guitars, keyboards, bells, pads, strings, and percussion samples. You're right here in "Then Some." On the flip side, there's the "Introductory Pak" chapter which offers a little lo-cal taste of everything in the Rubber Chicken library a "sampler" (no pun intended), if you will. Garth says "UA"; I say "PD."

I felt a little saddened by the absence of classic Mirage samples (just as an historical tip of the hat), but, well, 8-bit is as 8-bit does. By the same token, Garth offers parts of the library in Mirage format, so he hasn't really forgotten what started all of this, either. Demos and sequences are provided, some at the root directory level (like the Renais-

sance/Medieval collection), but some are easter eggs that you'll just have to go out there and locate. I saw some SQ samples in here, too (Jazz Izz, Mystic, and others) masquerading in the SD chapter. Just to see how close to real the SD-1 samples were, I A/B'd 'em with my trusty SD-1, and short of some effects processing and zipper noise, are so close it's scary. If you turn the effects off and A/B the two, well, if the ASR DAC's were available when the SD-1 was being manufactured, I doubt we'd have the TS-series to seriously contemplate...

Again, to reiterate from a previous review, there's not enough page count in the *Hacker* to do a blow-by-blow of sounds, patch selects, and the like. Suffice to say if you've used/heard/tested Rubber Chicken stuff before, you know exactly what to expect. If you haven't, these samples are right up there in the OEM (Original Ensoniq Manufacture) department, with attendant detail to patch selects, effects programming, and ease of use. It doesn't take an educated ear to see the quality of these wares. In the Back-to-Ensoniq-Use-Corner, as with other CD's I've spun, this one also wants to see your reader camped out at SCSI ID#4 for the MacroFile 5 to call 4-digit codes correctly. This is not a rave/techno/funk CD: no loops, no jacked-up grooves here: that's a very saturated CD-ROM market Garth has deliberately avoided here. His *"Hip-Hop Necessities Sampling*

CD" is available for a nominal \$45 if you wanna learn to speak Gottstooohav.

So which came first; the chicken or the egg? I'm no closer to the answer than you'll be after auditioning this CD. But I *am* sure a buck a meg is a helluva bargain for the quality of these wares. The Chicken CD represents the very reason 90+% of sampler owners chose a sampler: "To sound like every other keyboard on the market and then some." Some may argue; some may lament, but there isn't a one of us who hasn't loaded a piano into our Ensoniq. So if this appears a blanket indictment it's a very convincing one. 'Cause it fooled us all...

However, this CD is not a pastiche of polaroid pictures to load and fake: these pix are professional shoots with a Hasselblad and provide corresponding image quality. A more definitive collection of synth samples is gonna not only be hard to find; it'll probably come in about 4X the price. At least that close to what our Asian brethren's sample CD's list for, and they only provide about a tenth of the depth of materiel. Garth's CD represents probably one the best arguments for going with an ASR-10 over the competition. For \$300 or around 10% of what you paid for your ASR/EPS/TS it will *become* the competition: it can *be* any other keyboard out there. As well as the best... ■

Stereo Sampling with the EPS Classic

Russell A. Cardwell

Remember the first time you heard stereo sound? I do. My dad brought home a hulking Magnavox the size of an upright piano. *"The Magic of Stereophonic Sound,"* read the cover of the album he slid onto the turntable. We hunkered down on the floor between the speakers, and — Zing! Zing! — a vista of audio spread out before us. The music had depth, breadth, space. "You sigh, the song begins, you speak and I hear violins," the singer crooned, "It's Magic..." And it was.

If you've ever funnelled a stereo source into your EPS Classic and compared the monophonic sample to the original, you know just how much difference stereo can make. And you've probably been counting the nickels in your jar and slobbering all over the shiny ASRs in the music store. Well, maybe you can have one later, if you eat all your peas. In the meantime, read on, and I'll tell you how to whip up a potion that will give your old EPS the Magic of Stereophonic Sound. But first, wipe the slobber off your chin —

you don't want it dripping on the magazine and making the pages all sticky.

Double, double, toil and trouble

Compared to mono samples, stereo samples sound more alive, more authentic. Ambient sounds retain their spaciousness, and pads and background vocals have an almost palpable presence in a mix. But before you start sampling everything in stereo, there are some important points to consider.

Stereo samples take twice as many mixer inputs, twice as many tape tracks, twice as many sends, returns, inserts, outputs, effects. They take twice as much real-estate on disk, twice as much memory, and more than twice as much time and effort to create. In addition, to get the full stereo effect, stereo samples must be panned hard left and right. If all your instruments are stereo, your options for placing them on the soundstage at mix-down will be severely limited.

Consider how the instrument will be used before deciding whether to sample it in stereo. How prominent will it be? Will it play a lead or solo part, or will it be buried in the mix? Does it have an unusual ambience or stereo effect that would be hard to duplicate? Large instruments, such as piano, pipe organ, B3 with Leslie, or calliope (good luck!), usually benefit from stereo treatment. And of course, that stupendous multi-layered pad, and those twenty-four tracks of overdubbed background vocals for the last chorus — well, it goes without saying...

I'm convinced it is *always* best to sample from a recording. I don't want to enter the "Live or Memorex" debate here. There are purists who prefer to sample from live instruments. To me, that's like trying to barbecue a live chicken. But, hey — it's your party. Anyway, for what you're about to do, you absolutely *must* record the instrument first.

Eye of newt and toe of frog

Two elements are crucial to stereo imaging. Both are associated with the way our brains process our perceptions of sound. The most obvious of these is the relative volume between left and right channels. If one is louder than the other, the sound is perceived as emanating from that direction. Less obvious, but no less crucial, is the relative timing between the two channels. If a sound begins slightly earlier on one side, the sound is perceived as emanating from that direction. You will be able to observe this effect in detail when you start editing the samples.

You may already have noticed that your EPS Classic is not a stereo sampler. Because it has only one analog-to-digital converter, it can only record one signal at a time. But there is nothing to stop you from recording two signals independently, and playing them back at the same time. Its software also provides no means of linking two samples and performing identical operations on both. But, again, there is nothing to stop you from manually duplicating your edits.

Given these considerations, you will need to set up for this sampling session a little differently than under ordinary circumstances. First, make sure you have everything you need handy. Ever run out of floppy disks at three a.m.? They don't have them at Jiffy-Mart — I already looked. Here's what you'll need:

- stereo sound source,
- playback device,
- audio cables,
- formatted diskettes,
- stereo headphones,
- pen and paper,
- plenty of strong coffee.

Insert the cable from the left channel of your sound source into the input of your EPS. With the memory empty, and the OS disk in the drive, press SAMPLE and select INSTRUMENT 1. You should see the Input Level page. Press the DOWN ARROW to reduce the Sampling Threshold one notch. Using the LEFT or RIGHT ARROWS, navigate to the Pre-Trigger page. Set the Pre-Trigger to at least 20 milliseconds. You'll be working with sample start times later, and these settings should give you plenty of room in front of your sound.

Navigate back to the Input Level page, and begin playing your sound source repeatedly. Increase its level until the AMP indicator flashes, then slowly adjust its level to find the point just below where the AMP indicator lights. For stereo sampling, you won't be able to cheat by normalizing the sample — so take your time in getting optimum signal levels.

Once you're satisfied with the input level from the left channel, remove its cable from the EPS and replace it with the cable from the right channel. Play your sound source again. If the AMP indicator does not flash, you have already found the optimum input level and are ready to move on. If it does flash, repeat the adjustment process using this channel. For this to work, the level settings for both input channels must be identical.

Now you are ready to sample. Insert the left channel again, press ENTER, and play your sound source. Press ENTER again to stop sampling, and play the root key for your sample. Switch cables to sample the right channel. Press SAMPLE and select INSTRUMENT 1. You should see a page reading, "UNNAMED 1 LYR=1 WS=NEW." Press the LEFT ARROW once to underline the layer number, and press the UP ARROW so that you see, "LYR=N." Press ENTER, and play your sound source again. Press ENTER again to stop sampling, and assign this sample to the same root key as the first.

Behold! For thou hast the raw data for a stereo sample. Give it a clever name, like "Strings 17," and save it before you start editing. Now go see if the coffee is ready.

Add thereto a tiger's cauldron

Back now? You found some leftover chicken in the fridge? Well, okay, but don't get any barbecue sauce between the keys. It's bad for the contacts, and awfully hard to get out. Let's plow ahead. With your new instrument selected, press EDIT and INSTRUMENT. Your screen should read, "00 PATCH=123-----." Press the RIGHT ARROW to underline the "2," then press the DOWN ARROW to turn off Layer 2.

Press EDIT again, and use the arrow buttons to select Layer 1, Wavesample 1. Press WAVE, and use the arrow buttons to navigate to the Sample Start page and underline the number in parentheses. It should be a zero at this point. With your headphones... You still have your headphones, don't you? Okay, I'll wait. Yes, of course they were here a minute ago. Did you look under those pizza boxes? As I was saying — with your headphones plugged into the Phones output, play your sample repeatedly, while adjusting the number in parentheses. When you have found a spot close to the beginning of the sound, press the LEFT ARROW button to underline the fine adjustment number. Play your sound a few more times while adjusting this number. It often helps to play the sound a couple of octaves lower than its root key. You want to find a spot just before the beginning of the sound. Don't make it too tight, or you may lose some of the more subtle attack characteristics, and you will have trouble getting a stereo image.

Once you're happy with them, write down the sample start settings — you will need them in a minute. No, I didn't take your pen. You probably left it downstairs by the coffee pot. Ready, now? Okay, press AMP and use the arrow buttons to navigate to the Pan Position page. Press the DOWN ARROW button until the star sits right next to the word

"PAN." Your edited wavesample is now panned hard left. Press INSTRUMENT and use the arrow buttons to underline the "2" on the Patch Edit page, and turn Layer 2 back on. Press EDIT, and use the arrow buttons to select Layer 2, Wavesample 2. Press AMP, and use the UP ARROW to move the star on the Pan Position page to the far right of the screen. Your second wavesample is now panned hard right.

If you play your sound now, what you hear should sound like a left-right delay. Could be fun, but it's not what we're after. Press WAVE and set the sample start to the same settings as Wavesample 1. When you play your sample now, what you hear should sound more authentic. Now comes the fun. Play your sound repeatedly while changing the fine adjustment setting, moving the sample start forward or back. Your sounds should appear to converge or to spread farther apart. You want them to converge. Continue making small adjustments and listening. At some point, you will hear a dramatic change — your sounds will suddenly appear to merge into a single sound. This is the Magic of Stereophonic Sound. The sensation beggars description — this is one you just have to hear.

Your sound will now have a stereo image the center of which emanates from a space near your left or right head-

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phone. Use the arrow buttons to move its image back and forth. Incrementing the sample start should move it to the right, while decrementing moves it left. There is a window of sample start addresses about 20 to 30 numbers wide within which a sound has a coherent stereo image that moves across the sound stage. Outside this window, the sound seems to break apart and is perceived as separate layers. When you're through playing with it, center your stereo image, truncate both wavesamples, and save your sound.

Cool it with a baboon's blood

I'll not attempt a blow-by-blow account of the looping process. In brief: turn off Layer 2, find a good loop for Wavesample 1, write down the parameters, turn on Layer 2, and set identical parameters. If it works, Hallelujah! If not, try again. Since the loop parameters must be identical for both samples, and many of the loop-processing commands (such as Reverse Cross-Fade or Synthesize Loop) may destroy the stereo image, finding a good loop can be quite a trick. Save your work frequently, and bear in mind that a

loop that sounds a bit lumpy in isolation, is often acceptable in a mix. For envelopes, filtering and suchlike, just remember to treat both samples in identical ways.

And now about the cauldron sing

By now, you've probably figured out that concocting a polished, multi-sampled, stereo instrument is not a cruise in the Caribbean. It can be a very frustrating and arduous process. Aye, but there's magic in it. If Macbeth had had a sampler, maybe he wouldn't have been bothered and bewildered by those weird sisters. If you've borne with me so far, I hope you've fallen under the spell of stereo sampling. If not, go see what's on TV; I think they're showing re-runs of *Bewitched*. ■

Bio: Russell Cardwell has been making odd noises since getting his first Moog in '74, and spent much of the '80s squinting at the hexadecimal display of his Mirage. You can blame him for a lot of those horrid jingles that get stuck in your head. His sound designs are sold by West Broadway Productions. His email address is: wbbroadway@aol.com.

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Prog: SWOOPY

By: Jack Gardner, Springfield, VT

Notes: I have called this patch "Swoopy." Play and hold chords — the sound changes over time.

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	Perc	Transwave	TunedPerc
Wave	TempleBlk	Reson3X	PianoPing
Delay Time	0	0	0
Wave Direction	Forward	-	Forward
Start Index	0	0	0
MODSRC	LFO	Env1	LFO
MODAMT	0	+95	0
Restrk Decay	20	20	20

PITCH	1	2	3
Octave	+2	0	0
Semitone	+03	0	0
Fine	0	0	-11
ENV1	0	0	0
LFO	0	+02	0
MODSRC	LFO	LFO	LFO
MODAMT	0	0	0
KBD Pch Track	On	On	On
Glide	Off	Off	Off
Glide Time	0	0	0

ENV1	1	2	3
Initial	00	00	00
Peak	99	00	00
Break	99	91	00
Sustain	99	00	00
Attack	20	34	00
Decay 1	20	54	00
Decay 2	40	59	00
Release	20	86	00
Vel-Level	0	0	0
Vel-Attack	0	0	0
Vel Curve	Linear	Linear	Linear
Mode	Normal	Normal	Normal
KBD Track	0	0	0

LFO	1	2	3
LFO Speed	43	34	18
Noise Rate	66	0	0
Level	0	72	99
Delay	0	46	0
MODSRC	Wheel	Wheel	Wheel
Wave	Triangle	Triangle	Triangle
Restart	On	Off	Off

FILTER	1	2	3
Filter 1	2Lo	2Lo	2Lo
Filter 2	2Hi	2Lo	2Hi
FC1 Cutoff	127	124	127
ENV 2	+50	+19	0
FC1 KBD	+25	0	0
MODSRC	Wheel	Wheel	Wheel
MODAMT	-87	+30	0
FC2 Cutoff	029	105	127
ENV2	0	0	0
FC2 KBD	0	0	0
FC1MOD-FC2	On	On	On

ENV2	1	2	3
Initial	99	00	99
Peak	75	99	99
Break	37	74	74
Sustain	00	27	27
Attack	50	47	47
Decay 1	50	44	44
Decay 2	90	67	67
Release	50	48	48
Vel-Level	46	13	40
Vel-Attack	00	00	00
Vel Curve	Linear	Convex	Linear
Mode	Normal	Normal	Normal
KBD Track	0	0	0

AMP	1	2	3
Initial	99	86	99
Peak	50	99	99
Break	00	88	99
Sustain	00	87	99
Attack	43	35	35
Decay 1	50	56	00
Decay 2	99	33	00
Release	30	47	49
Vel-Level	33	13	06
Vel-Attack	00	00	00
Vel Curve	Linear	Linear	Linear
Mode	Finish	Normal	Normal
KBD Track	0	0	0

OUTPUT	1	2	3
VOL	73	58	46
Boost	On	On	On
MODSRC	LFO	LFO	LFO
MODAMT	0	0	0
KBD Scale	0	0	0
Key Range	C3-C6	C2-C7	C2-C7
Output Bus	FX1	FX1	FX2
Priority	Medium	Medium	Medium
Pan	0	0	0
Vel window	0	0	>088

EFFECTS — CHORUS AND REVERB

FX-1	50	FX-2	15
Decay time	31	HF Damping	26
Chorus Rate	20	Chorus Depth	20
Chorus Center	50		
Feedback	00		
Chorus Level	53		
MOD (Dest)	FX1-Mix		
BY (MODSRC)	Pedal		
MODAMT	0		

The Hack: One more from the Jack Gardner Collection. Luckily for us, this guy must live to program or maybe he just likes seeing his name in print. By the way, there are other SQ/KS types out there who live to program or like seeing their name in print, aren't there? (Subtle hint #2.5). With "Swoopy," we swoop into Transwave territory. Voice 2 houses our T Wave, so the most important changes should be made for that voice: in the Filter Section, decrease FC2 CUTOFF to 056; we'd prefer the Transwave to be more dominant. Although the Wheel modulates the filter somewhat, it might be nice to "travel" the Transwave with another modulator. At the Wave Section, change MODSRC to PEDAL. Then raise the MODAMT to full or +99. We may still want to use Envelope 1 as a ModSource somewhere. Go to the Output Section. We need to

apply a smaller amount of Envelope 1 here than we originally used for the wave. Let MODSRC = ENV1 and MODAMT = +10. A note concerning Voice 1: if you wish to employ the Key Range settings indicated on the parameter sheet KBD SCALE must equal ZONE. Try this sound in *Voyager*- or

Generations-like applications (or the original *Dark Shadows*) or use it instead of strings or more generic pads.

Jeffrey Rhoads

Bio: Jeffrey Rhoads is a keyboardist/composer on the Philadelphia Jazz and R & B scene.



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Pending Hacker-Requests: SQ-1/2 — A nice fat sounding trumpet
SD/VFX — A sitar patch

The *Final* Word on Debuzzification for your ESQ-1

Cyrus Dinshah

For those of us stalwarts who still have an ESQ-1, how about another improvement on the basic PIANO tones? Are you still annoyed by "BUZZY" notes — usually the second C or the first C — depending on the particular tuning of the FINE button and various tricks to tame the annoying rasp that seemed to be almost always present on one or more notes?

Yes, I know several ways of improving these have been suggested over the years — way back in Issue #18 there was a letter from Joe Sallenger. Issue #37 had a letter from Steve Hodak, and finally, in Issue #39 Jim Johnson had a scholarly article describing the problem and offering an excellent patch. The patch certainly made a much better second octave C. However, it made an objectionable first octave C. This is less trouble, but wouldn't it be cool to smooth out all the notes and make the entire keyboard range as even as possible?

I would like to suggest another approach to balancing the tuning by a form of modulation (which I have not seen mentioned for this purpose). Simply put: If your piano patch is in the typical format, set OSC 1 and OSC 2 to OCT 0, SEMI 0,

FINE 0. (The OSC 3 is usually for adding the sharp ping to notes and is left for that purpose.) If your patch used any modulators on the OSC section for detuning (like honky-tonk effects), disable that effect. A good pianist wants a good piano, I hope. On OSC 1, set MOD 1 to LFO1 with a depth of +1 — on OSC 2, set MOD 1 to LFO1 with a depth of -1. Now check in to the LFOs. Usually they have not been used (though some patches may give the impression that they were). Set LFO1 to FREQ 0, RESET ON, HUMAN OFF, WAVE TRI, L1 1, DELAY 0, L2 0, MOD OFF.

Try that favorite of yours now. Setting the tuning of the patch either one octave higher or lower does not seem to spoil the benefits. This slight detuning nicely removes the "C Buzz."

I'm including two samples here showing the full format. ■

Bio: Cyrus Dinshah is a long time Certified Electronic Technician. Musically he's an amateur — and yet he still dislikes buzzy notes. He wouldn't trade his ESQ-1 but could sure use a couple of new volume and data entry sliders.

ESQ-1 PROG: GPNO2										BY: Cyrus Dinshah									
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH											
OSC 1	0	0	0	PIANO	LFO1	+1	ENV1	+1											
OSC 2	0	0	0	PIANO	LFO1	-1	ENV1	+1											
OSC 3	-3	0	0	SYNTH3	-	-	KBD2	-63											
	LEVEL	OUTPUT		MOD#1	DEPTH	MOD#2	DEPTH												
DCA 1	61	ON	-	-	-	-	-												
DCA 2	61	ON	-	-	-	-	-												
DCA 3	0	ON	ENV2	+63	KBD	-10													
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH												
FILTER	33	0	7	ENV3	54	KBD	+10												
	FINAL VOL	PAN	PAN MOD	DEPTH															
DCA 4	63	8	KBD2	+27															
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD											
LFO 1	0	ON	OFF	TRI	1	0	0	-											
LFO 2	-	-	-	-	-	-	-	-											
LFO 3	-	-	-	-	-	-	-	-											
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK									
ENV 1	+35	0	0	+46	0	0	1	0	0	0									
ENV 2	+63	+1	0	+36	0	0	17	63	0	0									
ENV 3	+63	+36	6	+63	0	0	44	63	26	53									
ENV 4	+63	+43	0	+57	0	0	50	63	29	48									
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC											
MODES	OFF	OFF	OFF	0	ON	ON	ON	OFF											
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY												
	OFF	-	OFF	-	OFF	-	-												

ESQ-1 PROG: ILSTRT										BY: Cyrus Dinshah									
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH											
OSC 1	0	0	0	PIANO	LFO1	+1	ENV1	+1											
OSC 2	0	0	0	PIANO	LFO1	-1	ENV1	+1											
OSC 3	0	0	0	PIANO	LFO2	+1	ENV1	+1											
	LEVEL	OUTPUT		MOD#1	DEPTH	MOD#2	DEPTH												
DCA 1	56	-	-	-	-	-	-												
DCA 2	56	-	-	-	-	-	-												
DCA 3	56	-	-	-	-	-	-												
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH												
FILTER	33	0	10	ENV3	54	-	-												
	FINAL VOL	PAN	PAN MOD	DEPTH															
DCA 4	63	8	KBD2	+27															
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD											
LFO 1	0	ON	OFF	TRI	1	0	0	OFF											
LFO 2	14	OFF	OFF	TRI	10	0	0	LFO3											
LFO 3	18	OFF	OFF	TRI	10	0	0	OFF											
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK									
ENV 1	+35	0	0	+46	0	0	1	0	0	0									
ENV 2	0	0	0	0	0	0	0	0	0	0									
ENV 3	+63	+36	+6	+63	0	0	44	63	26	53									
ENV 4	+63	+43	0	+57	0	0	50	63	29	48									
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC											
MODES	OFF	OFF	OFF	-	ON	ON	ON	OFF											
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY												
	OFF	-	OFF	-	OFF	-	-												

WAVES	1	2	3	4
Wave	Wave-List	Vocal-Ooh	Kalimba	Panflute
Wave Class	Wave-List	Vocal-Snd	TunedPerc	Wind+Reeds
Delay	0	0	0	0
MS Shift	-	0	0	0
Direction	-	Forward	Forward	Forward
Start Step	01			
Loop Start	01			
End	16			
SampStOff	-	0	0	
Start Modsrc	-	Off	Off	
Modamt	-	-	-	
Mod Dest	Traveler			
Modsrc	LFO			
Modamt	+13			

MOD MIXER	1	2	3	4
Src-1	-	-	Press	Press
Src-2	-	-	LFO	LFO
Src-2 Scale	-	-	0.9	0.9
Shape	-	-	Linear	Linear

PITCH	1	2	3	4
Octave	0	0	0	-1
Semitone	0	0	0	0
Fine	0	0	0	0
Glide mode	Legato	Legato	None	None
Glide time	0	0	0	0

PITCH MODS	1	2	3	4
Modsrc	Keybd	Keybd	Noise	Noise
Modamt	-68	-68	+16	+16
Bend	Sys	Sys	Sys	Sys
PitchTbl	All-C4	All-C4	System	System
Env1	0	0	-01	-11
LFO	0	0	-03	-03

FILTER 1	1	2	3	4
Mode	LP/3	LP/3	LP/3	LP/3
Cutoff	87*	87*	109*	117*
Kbd	0	0	0	0
Modsrc	Off	Off	Off	Off
Modamt	-	-	-	-
Env2	+69	+69	0	0

FILTER 2	1	2	3	4
Mode	LP/1	LP/1	HP/1	HP/1
Cutoff	127*	127*	24*	33*
Kbd	0	0	+47	+47
Modsrc	Off	Off	Veloc	Veloc
Modamt	-	-	+11	+11
Env2	0	0	+41	+41

OUTPUT	1	2	3	4
Kbd Scale	0	0	-12	-12
Lo/Hi Key	-	-	C4-C6	C4-C8
Vol (db)	-09	-09	-09	-12
Modsrc	Pedal	Pedal	Mixer	Mixer
Modamt	-88	-88	+15	+15
Dest Bus	FX2	FX2	FX1	FX1
Pan	0	0	-64	-64
Modsrc	Noise	Noise	Off	Off
Modamt	-66	-66	-	-
Voice Prior	Med	Med	Med	Med
Vel Lo	0	0	0	0
Vel Hi	127	127	127	127

LFO	1	2	3	4
Rate	55	-	59	59
Modsrc	Wheel	-	Wl+Pr	Wl+Pr
Modamt	+22	-	+09	+09
Depth	99	-	0	0
Modsrc	Wheel	-	Wl+Pr	Wl+Pr
Modamt	0	-	+99	+99
Waveshape	Pos/Sin	-	Sine	Sine
Restr Mode	Off	-	Off	Off
Phase	128	-	0	0
Delay	0	-	14	14
Noise Rate	40	40	79	79

Prog: RAINFOREST

By: Sam Mims, Syntaur Productions

Notes & Special Settings: RAINFOREST is an evolving pan-flute pad, with a background of tropical birds, created with the TS's HyperWave capabilities. It is a patch from Syntaur's TS Set 1. The modwheel and key pressure add vibrato and tremolo to the pad, and the CV pedal removes the bird sounds. The 0* patch is just the pan flute pad, 0* adds a rain effect, and ** is a jungle of tropical birds.

Keep in mind a few things when entering these parameters; they will make your button-pushing much easier. First, if a parameter is blank, it has no effect on the sound — so skip it. Second, a good time-saver is to press both the Up and Down buttons simultaneously to center a value (i.e. to set to 0 if its range is both positive and negative). Finally, to enter the wave list parameters, go to the Select Voice page, and press Edit Wave-List.

RAINFOREST is a good opportunity to swap waves around for some sonic variety. Try these substitutions for the Panflute wave of Voice 4: Synth-Pad, Sopr-Sax2, any of the flute and vocal waveforms, and Pad-Wave 5 and 6. The wave list waveforms can also be mixed up a bit. Try taking out all the birds, for instance, and replacing them with percussion sounds.

SELECT VOICE

00	1	2	4
0*			4
*0	1	2	3
**	1		

ENV1	1	2	3	4
Attack	-	-	01	01
Decay	-	-	08	08
Decay 2	-	-	00	0
Decay 3	-	-	00	0
Release	-	-	00	0
Peak	-	-	99	99
Break 1	-	-	99	99
Break 2	-	-	00	0
Sustain	-	-	00	0
Vel-Level	-	-	54	54
Mode	-	-	Norm	Norm
Vel Curve	-	-	CV1	CV1
Kbd Track	-	-	0	0
Vel-Attack	-	-	03	03
Vel-Rels	-	-	0	0

ENV2	1	2	3	4
Attack	50	50	50*	50*
Decay	50	50	50	50
Decay 2	40	40	50	50
Decay 3	61	61	74	74
Release	16	16	50*	50*
Peak	50	50	99	99
Break 1	99	99	70	70
Break 2	99	99	50	50
Sustain	20	20	30	30
Vel-Level	0	0	80	80
Mode	Repeat	Repeat	Norm	Norm
Vel Curve	CV1	CV1	CV2	CV2
Kbd Track	0	0	0	0
Vel-Attack	0	0	0	0
Vel-Rels	0	0	0	0

ENV3	1	2	3	4
Attack	0*	0*	39*	39*
Decay	26	25	25	25
Decay 2	50	50	50	50
Decay 3	50	50	77	77
Release	56*	56*	39*	39*
Peak	99	99	91	91
Break 1	99	99	99	99
Break 2	99	99	93	93
Sustain	99	99	90	90
Vel-Level	21	21	36	36
Mode	Norm	Norm	Norm	Norm
Vel Curve	CV1	CV1	CV1	CV1
Kbd Track	+10	+10	+10	+10
Vel-Attack	0	0	40	40
Vel-Rels	0	0	0	0

EFFECTS

Effect	01
DDL+CHORUS+REV	
A--B	99
B--Reverb	99
A--Reverb	30
FX2--Reverb	99
Dry	33
DDL Mix	30
Level	85
Pan	0
DDL Regen L	+35
Damping	30
Delay Time L	1000
R	500
Chorus Mix	99
Level	99
Wet Pan	0
Dry Pan	0
Chorus Center	61
Rate	42
Width	53
LFO Spread	109
Regen	-66
Reverb Decay Time	4.02
Pre-Dly Time	0
HF Damping	15
Bandwidth	72
Reverb Definition	63
Diffusion	50 50
Modsrc	Off
Dest	-
Min	-
Max	-

PGM CONTROL

Type	Hyper-W
Option	Wavelist
Press	Key
Patch	Live
Restrike	10
Atck	0
Rels	0
Bright	0
Timbre	0
Rate	0
XCtrl	0
V1	-32
V2	0
V3	0
V4	0
V5	-
V6	-

STEP	WAVE	WAVE CLASS	START	DUR	VOL	XFDTIME	XFDDPTH	DIR	KBDTRK	XPOS	DETUNE
01	Bird-Song	Sound-Effect	00	492	0	708	0	Forward	On	0	0
02	Bird-Song	Sound-Effect	00	216	+03	708	0	Reverse	On	0	0
03	Bird-Song	Sound-Effect	00	864	0	252	0	Reverse	On	+06	0
04	Cabasa	Percussion	00	144	-11	0	0	Forward	On	-18	+08
05	Shaker	Percussion	00	624	-05	936	0	Forward	On	-13	0
06	Bird-Song	Sound-Effect	00	24	0	156	0	Forward	On	+04	0
07	Maracas	Percussion	00	156	0	372	0	Forward	On	-05	0
08	Cabasa	Percussion	00	24	-02	492	0	Forward	On	0	0
09	Synhat-Ci	Cymbals	00	228	0	540	0	Forward	On	0	0
10	Bird-Song	Sound-Effect	00	1404	0	840	0	Reverse	On	0	0
11	Shaker	Percussion	00	240	0	528	0	Forward	On	-19	0
12	Bird-Song	Sound-Effect	00	348	0	936	0	Reverse	On	+08	0
13	Bird-Song	Sound-Effect	00	36	-02	312	0	Forward	On	+02	0
14	Tamb-Loop	Percussion	00	132	-05	456	0	Forward	On	-28	0
15	Shaker	Percussion	00	60	0	372	0	Forward	On	-12	0
16	Cabasa	Percussion	00	84	-04	240	0	Forward	On	-13	0

DP/4 Hackerpatches

Dave Kelly

These are a couple more 4-unit/1-source patches that have been developed the past couple of years in recording sessions. Most of these patches are designed for vocal use. One thing I do is use the room detune parameters of the hall and room algorithms to really smooth out the decay. These parameters can be used to create a pitch shift type of effect if not over used. I've found that using the detune parameters works best on vocals and snares.

Staggered: This patch uses the plate algorithm. It gives the feel of large ambience while having short decay times. This is achieved through the delay parameters on the chorus and the

serial routing. Best for vocals.

Power Room: While using the large room algorithm, this patch gives the feel of a very tight room while still creating an openness around the instruments it's used on. Best for "in your face" vocals and snares. ■

Bio: Dave owns and operates Luna Recording, a 24-track studio, in Glen Burnie Md. His band is PASSIONFIX. He's been doing music since he was 5 (37 now but don't tell) and has been engineering seriously for something like 10-12 years.

Name: Staggered

Use: Vocals

Alg	Sm Plt	Alg	8 Vce Ch	Alg	Sm Plt	Alg	Sm Plt
01	99	01	81	01	90	01	89
02	99	02	99	02	99	02	99
03	0.95	03	07	03	1.05	03	1.13
04	0	04	51	04	3	04	0
05	19	05	99	05	34	05	19
06	54	06	00	06	54	06	39
07	42	07	250 ms	07	47	07	63
08	63	08	500 ms	08	58	08	79
09	31	09	99	09	29	09	32
10	+09	10		10	+11	10	+05
11	-06	11		11	+05	11	-08
12	+07	12		12	+05	12	+05
13	+04	13		13	-05	13	-11
14	00	14		14	00	14	00
15		15		15		15	
16		16		16		16	
17		17		17		17	
18		18		18		18	
19		19		19		19	
20		20		20		20	
21		21		21		21	
22		22		22		22	
23		23		23		23	

Configs: (00) 1 (01) Ser (02) Ser (03) Ser (04) 00 (05) 00
(06) Mono (07) b (08) b (09) b (10) b

Name: Power Room

Use: Vocals/Snare

Alg	Lg Room	Alg	Lg Room	Alg	Lg Room	Alg	Lg Room
01	66	01	63	01	63	01	44
02	99	02	99	02	99	02	99
03	0.96	03	1.07	03	1.07	03	1.24
04	1	04	2	04	6	04	15
05	+05	05	+03	05	+04	05	+03
06	48	06	56	06	55	06	41
07	49	07	57	07	56	07	42
08	85	08	76	08	75	08	99
09	68	09	42	09	31	09	80
10	23	10	25	10	28	10	28
11	28	11	16	11	22	11	43
12	18	12	24	12	25	12	45
13	+69	13	+77	13	+74	13	+77
14	14 ms	14	15 ms	14	8 ms	14	13 ms
15	14	15	20	15	57	15	41
16	23	16	16	16	69	16	90
17	27 ms	17	36 ms	17	28 ms	17	24 ms
18	09	18	19	18	37	18	90
19	14	19	21	19	51	19	71
20	+60	20	+77	20	+78	20	+70
21	+50	21	+40	21	+43	21	+48
22	+19	22	+16	22	+15	22	+18
23		23		23		23	

Configs: (00) 1 (01) Par (02) Ser (03) Ser (04) 00 (05) 00
(06) Mono (07) b (08) b (09) b (10) b

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, Internet: interface@transonIQ.com.

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. Resident answer-man is Clark Salisbury (CS). Letter publication is subject to space considerations.

To: TransonIQ Hacker

Subj: TS-12 w/Cakewalk Pro 3.0 for Windows

I'm having a problem with the recording of bank/program changes using my TS-12 with Cakewalk Pro version 3.0 for Windows. I have the following MIDI-related settings in effect:

TS-12 - System Page
MIDI-TRK-NAMES=ON

TS-12 - MIDI Page
BASE-CHAN=1
ALL-OFF=OFF
SEND=TRACK
MODE=MULTI
VELS/XPOS=BOTH
XCTRL=002
LOOP=ON
CNTRL=ON
SONG-SEL=OFF
START/STOP=ON
PROG-CHG=ON
SYS-EX=OFF
DEVICE-ID=01
SEND-PARAMS=OFF

Sequencer Control Page
CLOCK=MIDI
RECORD-MODE=REPLACE
TEMPO=EXT
AUTOPUNCH=OFF
LOOP=OFF
SONG STEP EFFECT=SEQ
REC-SOURCE=MULTI
EDIT-TRACKS=SEQ

Track MIDI Page
Tracks 1 thru 12 set to MIDI-LOOP
Tracks 1 thru 12 assigned to MIDI channels 1 thru 12 respectively

Cakewalk Pro 3.0 MIDI-related settings
Settings/Instruments mapped correctly (all banks) to TS-10 supplied settings
Bank Select = Normal
Controllers = Standard
MIDI thru = Auto
Tracks 1 thru 12 assigned to MIDI channels 1 thru 12 respectively
MIDI out - transmitting MIDI start/continue/stop/clock
MIDI out - transmitting MIDI song position pointer

I am using a Music Quest PC MIDI card - Cakewalk port 1 mapped to this card, mapped to TS-10. I should also point out that I'm no dummy - I own a computer hardware/software company, and am very computer/MIDI literate. Now that we've got all that out of the way... here's the description of the actual problem:

When recording from Cakewalk to the TS-12 (in a newly created, blank sequence)... during recording, bank/program changes are sent and interpreted correctly, i.e. the correct bank/program are selected and play.

After recording is complete, if you play the sequence from the TS-12, when the bank/program changes occur you do not get the correct bank/program selects. I've narrowed it down to this pattern by checking the track event list on the TS-12 for "prg" type events:

Cakewalk sends		TS-12 records		
Bank	Prog	Bank	Prog	PRG track event
0	1	1	0	PRG.000.001B
0	2	2	0	PRG.000.002B
0	3	3	0	PRG.000.003B
1	1	1	0	same set as above
1	2	2	0	
1	3	3	0	
2	1	1	0	same set as above
2	2	2	0	
2	3	3	0	
3	1	1	0	same set as above
3	2	2	0	
3	3	3	0	
4	1	1	0	same set as above
4	2	2	0	
4	3	3	0	

then... just for fun...

2	5	5	0	PRG.000.005B
2	6	6	0	PRG.000.006B
2	7	7	0	PRG.000.007B

All in all, looks like the "bank" number sent is being ignored, and the "program" number is being recorded as a "bank." Keep in mind, that the bank/program IS interpreted correctly during the actual recording - it's

when playing back from the onboard TS sequencer that it is incorrect - this leads me to believe that Cakewalk is sending correct values, but the TS sequencer is recording them incorrectly.

Is this a TS bug? Or am I dumber than I thought?

Any help appreciated! As you hear so often - the *Hacker* is an incredible publication!! Keep up the good work!!!

Pat Esslinger
Milwaukee, WI
CompuServe

[Ensoniq - Thank you for such a detailed letter - this is the type of inquiry that gives us plenty of information to deal with. Unfortunately (or not), when we ran a preliminary test everything worked fine. When we recorded from a TS-12 into Emagic's Logic sequencing program and then inserted various Bank and program changes into the sequence, the TS responded correctly. We then recorded that sequence into the TS-12 and played it back perfectly, with the correct events viewed in the event editor. Yet Clark reported to us that he encountered the same problem as you had when using Opcode's Vision. So we'll have to keep looking into this. I hope we can have an answer for you by the next issue, if not sooner.]

Hi guys!

This is my first time logging in to the *TransonIQ Hacker* and I would like to introduce myself to you all. My name is Ali Janah from Brunei (in case you've never heard of it... well it's a tiny country on the island of Borneo). I'm an amateur musician who plays the guitar and a little bit of keyboard. My home music setup consists of a Quadra 66-0AV (8/230/CD) running Opcode's Vision 2.0, Supra FaxModem 14.4 V32bis, an ASR-10 (4Mb ram), K2000R, Tascam 464, Ibanez Elec.gtr, Roland GP-16, Roland FC-100 MkII foot controller and an EV-5 expression pedal.

I was wondering any of you could help me with a problem that I have concerning the ASR-10. I bought the sampler quite early

when it was introduced and when version OS Ver 2 came out, I got a copy of it and when I tried installing it... it said "requires new ROM" or something like that. It was apparent that the ROM version that I got was an old one. Would anybody be kind enough to tell me how I could overcome this problem. What with Version 3 already out, I would certainly be left out in term of features. And lastly, could anybody tell me the approximate price of the SCSI connector for the ASR-10. The price that I got was about S\$(650.00) – that's Singapore dollars.

Thanks very much.

Regards,
Alijanah
Via Internet

[CS – If you don't have a local dealer who can help you, you should be able to order current ROMS from Ensoniq Customer Service. Their number in the US is (610)-647-3930.]

[Ensoniq – We did have a ROM chip change between OS versions 1 and 2 – the current ROM version is 1.5. This is required to run any OS version higher than 1 so you definitely want to update your ASR-10. Your local distributor can help and they should only charge for the labor to install the chip. We send them the ROM chips for free. If you are not sure how to contact your distributor contact Steve Mash here at Ensoniq (fax # 610-647-8908).]

Here is a question for the Interface:

My students have been creating low bass sounds as part of a transposing/looping exercise and there always seems to be "noise" in the samples. I never heard this on the EPS-16+ until this year; then again I never created much super low end stuff either. It doesn't matter if the samples are looped or not. It sounds like light crackling. Could it be the internals of the EPS? I get the same results with two different amps and speakers and some nice Sony headphones so it most likely isn't the outboard stuff.

Thanks,
Paul Bissell
Go Fish Music
Via Internet

[Ensoniq – This is hard to answer based on your limited description. It is possible that you are recording your samples too loud,

which can result in clipping the input signal. Please contact our Customer Service at 610-647-3930 to give us more information.]

Question for the Hacker:

Do you guys know of any editor for the SQ series designed for the Mac? The ubiquitous Galaxy seems to have ignored this cool soundsource. I am also looking for a disk cataloger/labeller for ASR disks designed for the Mac. I know of Giebler for the PC. Are there any out there for the Mac? Is it possible I will have to change platforms – please not THAT! Anything but THAT! ;~p

Thanks & keep on Hackin'!
Tom Leatherman
Lakewood, OH
Via Internet

[CS – I believe that Unisyn (from Mark of the Unicorn) supports the SQ/KS series of synths with both editor and librarian functions. I've worked with their KT-76 editor/librarian, and have found it to be most serviceable. As far as disk cataloger/labeller software for the Mac, I don't really know of any. Perhaps one of our readers might have some input...]

[Ensoniq – Clark is correct. Unisyn from Mark of the Unicorn has a nice editor module for the SQ (and KS-32) instruments. We should also mention that the KT-76/88 editor/librarian is a beta version that we have helped them to create, and we don't believe that it has been released yet. But it will be soon.]

Hello Hacker:

A question for some of the tech-heads out there, and perhaps for Ensoniq, though I'm sure they won't like what I've been trying to do!

Since the EPS-16 and the ASR use the same effects chip (I think), why aren't the ASR effects downward compatible with the EPS?

I've been trying to load the ASR specific effects (#'s 14-50) to my EPS-16 with no luck. The EPS doesn't even recognize that the effect is on the floppy disk. So I went hunting into the files with a hex editor and changed what looked like a couple of obvious bytes toward the beginning of the files that seemed to specify "ASR" rather

than "EPS." This change *did* make the EPS recognize the effects file on the disk, but then the machine crashed when I tried to load them...

So is there something special about the ASR effects that prevent them from being compatible with the EPS-16 architecture or is just a simple formatting incompatibility? If the latter, why not allow us EPS-16 users access to them? I know it would make a ton of people happy... For that matter, even if you *sold* some of these effects to EPS-16 users things like the keyed expander, compression, van der pol filter, etc..., I'm sure a lot of people would appreciate it, and buy them.

Perhaps Waveboy is listening and could comment too?

Also, has anyone had luck with purchasing the German company's effects for the ASR/EPS-16? I've faxed them with no response... (Sorry, the name of the company escapes me at the moment.)

Thanks for the forum!
Dan Nigrin
GLITCH Defective Records
Via Internet

[TH – We've also tried to get more info on the Germany company and so far – zilch.]

[Ensoniq – The ASR and the EPS-16 PLUS are not exactly the same inside, and this would mean re-coding the ASR effects before they would be compatible with the 16 PLUS. It is not as simple as a header, or formatting incompatibility as you suggest. They use different revisions of our ESP chip, with different tolerances, and would require significant modifications and testing. This is not likely to happen – sorry.]

TH:

I own an ASR-10 and a Macintosh which I use for sequencing and hard disk recording. I have been looking into buying a Syquest drive to use with my ASR, but I also want to use one with my Mac for data backup. Is it possible to get a drive compatible with both, so that I can pop in an Ensoniq-format or a Mac-format cart and use it either way?

Brian Salter
Carmichael, CA

[CS – Removable cartridge drives based on

the Syquest mechanism will be compatible with both the ASR and the Mac. I know many people (myself included) who use just such a setup for exactly the reasons you outline. The one thing to keep in mind, though, is that the smaller Syquest drives are not fast enough to allow for two-channel hard disk recording at 44.1k using the ASR-10 (although they should work fine for Mac-based hard-disk recording). Ensoniq uses and recommends Bernoulli drives as a removable media compatible with ASR-10 hard-disk recording (these will work fine with the Mac, too).]

Hacker,

First of all, thanks for a great magazine. I can't tell you how many times I refer back to it to help me out of a jam of for new ideas. Thanks.

My question is: can a Syquest storage device do double duty for a PC and for a TS-12 and ASR-10? Can you just format the individual cartridges, or do you have to buy a Syquest for the Mac computer? Also, what's the most compatible (quickest hassle-free) storage device for Audio tracks that can also share duty with the PC? If possible I would rather not buy one for each.

Thanks,
Jon Sarta
Via Internet

[CS - To the response made for the question above, I have only this to add: In my experience, there are some odd issues surrounding SCSI on PC-compatible machines. These are somewhat obscure and technical, but the bottom line is this: If SCSI is working fine on your PC, you should have no problem sharing a removable media drive among all three devices (PC, TS-12, and ASR-10).]

[Ensoniq - We would recommend the Bernoulli 150 or 230 MB removable drives as the best choice for recording Audio Tracks and for sharing between your ASR-10/TS-12 and your PC. They have the best data caching scheme we have seen (which helps the Audio Track "look-ahead" mechanism) and have been rock-solid and reliable. You will see them in most of the computer peripheral catalogs.]

After playing piano, guitar, mandolin and other acoustic instruments for thirty years or so, I just bought a TS-12. I am amazed at the quality and variety of sounds and effects it produces. The biggest barrier I face now is my own imagination. I have discovered I am painfully ignorant about rhythm tracks and was delighted to see with my first issue of the Hacker, the back issue index with articles on rhythm tracks and drum programming.

I am learning how to use the sequencer on the TS-12. I don't see any way to vary the time signature within a sequence, i.e. a few measures of 4/4, one measure of 6/4, more measure of 4/4, a section of 7/4 etc. Does each section with a different time signature have to be a separate sequence? Everyone who has been sequencing longer than one month must know the answer to this question but I can't figure it out.

Sincerely,
David Simenson
Merced, CA

[CS - There are two ways that I know of to deal with disparate time signatures in sequencers which do not support time signature changes within a single sequence. The first method is to create and record separate sequences for each different time signature, and then chain together the individual sequences to form the finished song. The other method (and the one I'm most likely to use when faced with the same problem) is to simply ignore the time signature setting in the sequencer, and just record the music in the way I normally would. The trick here is to find a common denominator for the sequence's time signature setting, so that you can still loop and chain sequences together to form songs.

For example, let's say you have a section of a song which has a measure of 4/4 followed by two measures of 6/4. In all, this sequence would play 16 quarter notes (4+6+6). If you set the time signature to 4/4, you'll find that the sequence requires exactly four measures, so this should work out fine.

In some cases, though, you'll have to get a bit trickier. For example, say you have a section comprised of two measures in 4/4, and one in 7/4. You could set this up as a single measure of 15/4, but you might want to set it up as 15 measures of 1/4; this would provide you far more editing options in terms of copying and pasting, etc.]

Dear Hacker,

I am a New Zealand songwriter, I have written a number of songs that may be of interest to your readers. I have a few novelty songs about singing dogs, yodeling dogs and comedy songs with a country base.

I also have a children's bird song featuring native bird sounds.

I particularly like writing songs that use sound effects and also have a number of country and folk songs.

If interested please write:

Dave Ward
The Kiwi Songwriter
85 Pitcairn ST
Oahura 4650
Zaranaki, New Zealand

Dear TH,

I am one of the many who has been reading the Hacker for years and has been pleased with all of your efforts throughout your publication. The following can only be attributed to years of covert brainwashing by your esteemed writers.

Cluseau meets Berman - Given the outlandish tendency of Robby to generously employ an unusually creative amount of flat-out-balderdash verbiage, we know that he must be utilizing four-wheel drive typing to get so much in so quickly! This has been an unsolvable mystery to me until the Feb, 1995 issue (#116) with his ironically entitled column Wave Bye-Bye in which he inadvertently revealed the true source of his work.

Perhaps I should have said that Robby is utilizing four-legged drive typing. The evidence is in non-bold type: "*99 (my cat typed that last bit)." The surface meaning of this was superbly crafted to fool the reader, but the crafty cat created a clever clue to the true identity of the author of the articles - namely himself!

EVIDENCE: *99 consists of a shifted 8 plus two unshifted 9s. This could have only been accomplished by a superiorly intellectured feline who could push the shift-key with a left-handed hind-legged-pre-prehensile paw and the 8-key with its right-handed front-leg paw simultaneously. We have four-

Dear Transoniq Hacker,

legged-ignition typing! Now all we need is an cryptologist to decipher what *99 means.

Is there someone on the shelf or out there in Readerland who can tell us what this means?

Inspirator Cluseau
AKA Paul Henning
Belleair, FL

[TH - We'll get back to you during visiting hours.]

[Aurora Hobbes Berman responds - 00lll-lllllllkihggggggg4e]

[Robby - That is Rory's actual response (note the clever juxtaposition of the zero and the character "o" which begins her retort, not to mention her transcendence of the need for any punctuation whatsoever).]

[CS - I tried to get my cat to respond, as well, but she's too busy working on her latest album mix. Maybe next month...]

Attention EPS Hackers!

WARNING WARNING WARNING: the FATAR Studio 49 (voiceless MIDI keyboard) is not necessarily compatible with the EPS!!!

You may get lucky, but one Studio 49 did not work with my EPS-M (original 13-bit-ter) either before or after Ensoniq changed out most of the internal electronics, and a second one didn't work on the new electronics either.

The Studio 49 drove my ASR-10, Mirage rack, OpCode Systems' Studio 3 Mac MIDI interface, and a cheap Casio thingie as well, but not my EPS-M. At least two FATAR Studio 490s I've tried drive the EPS-M just fine.

I have no information regarding EPS keyboard machines, or 16-bit EPS's, but it's certainly not impossible that they could have problems as well.

Furthermore, if you encounter this problem, the symptoms are such that you will probably conclude that the EPS MIDI In is failing. The Studio 49 throws the EPS-M into a strange mode where it ignores MIDI input, even if you subsequently switch over to a MIDI source that normally works. It

stays in that weird mode until you reboot. (That mistaken diagnosis resulted in a \$200 EPS repair bill that did *not* fix the problem.)

The best explanation I can come up with to explain the symptoms is a MIDI baud-rate mismatch, but I'm by no means certain of that.

Gary Morrison
Austin, Texas

[Ensoniq - It seems unlikely to us that it is a MIDI baud-rate mismatch, but we couldn't be sure of that. It might also be a level problem with the Studio 49's MIDI output. We know the US distributor for Fatar so we'll see if they can lend us one and look into this more. Stay tuned...]

To the folks at Transoniq Hacker:

A constant theme of readers' letters to the Interface has been their design suggestions to the wizards of Malvern. (Many seem to think major new features can be added to existing instruments, which, as patiently explained by CS and Ensoniq, is usually im-

practical.) In this tradition, I'd like to express one of my hopes for *future* Ensoniq samplers.

Several readers have requested that resonant LPFs be implemented by Ensoniq. I concur in that request, but with one important caveat: Please don't implement resonant filters at the expense of the current filter architecture! Having simultaneously available LPF and HPF structures is still one of the coolest elements of Ensoniq's design. One reason I would be unlikely to buy an Emu ESI-32 is its lack of a HPF (as far as I know).

But what I'd *really* like to see Ensoniq implement is complex formant filters, as in the Emu Morpheus or WaveBoy's Voder. The Morpheus filter is arguably the only significant conceptual addition to the subtractive synthesis technique since sampled waveforms replaced simple sawtooth and pulse waves. Emu dropped the ball BIG-TIME when they failed to implement the Morpheus filters on the Emulator IV. (If I've misrepresented any of the capabilities of Emu's samplers, someone please correct me.)

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One more thing: I'd like to see Ensoniq implement *all* the synthesis capabilities of their synths in their future samplers (hyper-waves, modulation routings, whatever). If that means merging the sampler and higher-end synths into one product line, as Kurzweil has done, so be it. (I consider samplers to be synthesizers with DIY waveforms, as opposed to those who use them as simple digital audio playback devices.)

Michael Dolan
Chicago, IL

[Ensoniq - Thanks for the input! We agree about merging the voice architectures of high-end products - it would also make our lives easier to have a common voice to deal with. But that doesn't happen overnight - you have to be sure to design a voice that is complete enough to cover all the needs of sampling, sample playback, and other possibly more advanced methods of sound generation. Who knows what the future holds?!]

Dear Hacker,

I have enjoyed all your help for several years, and I thank you for the good work you do. I would also like to publicly thank Ensoniq and their Customer Relations people for the good work that they do.

I had a sick SD-1 32-Voice that I took to the selling dealer under warranty. They kept it for over two months and returned it to me, "...better than new with a new key bed installed under warranty." It had all the same problems. It was able to perform only until it crashed. No MIDI or sequencer work allowed. I was not allowed to speak directly to the dealer's in-house tech and was advised to send the SD into Ensoniq. I planned to do that, but was soon sick for over two months. During this time the warranty expired. I just didn't use the SD-1 even though it is my favorite keyboard. It would crash and not boot up again, so it was totally undependable.

I went to the Music expo here in San Jose a couple of months later, where Ensoniq was exhibiting. I spoke with a really pleasant young man who advised me that under the circumstances, Ensoniq would resolve my problem, and that he felt they would extend the warranty, and do it without cost. Well, having lived the hard life for 63 years, I didn't exactly jump at this great oppor-

tunity. However, the more I missed my SD-1, the more I thought about writing them. They responded to my phone call almost immediately and confirmed what their rep had told me at the music expo. I packaged it up and put it on the UPS. It was returned three weeks later, prepaid, no charge, and is just like new. It even sounds better as well as plays better.

I want Ensoniq to get all the credit I can get for them. They are a great company, build great products, and have real caring people. I would just ask your other letter writers to think about this when they are attacking Ensoniq and their Customer Relations people. They respond so much better to "please" than they do to "or else," just like all the rest of us. Then don't forget to say thank you for a job always well done. Thank you.

Very truly yours,
Bill Forrest
San Jose, Ca

[Ensoniq - Thanks for visiting with us at the Expo. We're glad we were able to help you.]

To: hacker@transoniq.com

A couple of quick questions about the "Current OS" feature in your magazine, please:

1. How do you find out what OS is in your instrument? (I have an SQ-2, about 3 years old.)
2. How do you go about upgrading to a new OS - can you, even? :-)

Also, it'd be a neat idea (perhaps as a subscription bonus) to have 3.5" disks (in simple ASCII format, if you want) with all the patches you've published for each instrument. You know, you subscribe, and you pick your instrument - and you receive the disk with every patch you've ever printed for it. :-)

John Tracey
Via Internet

[CS - Methods for upgrading operating systems in Ensoniq products differ, depending on the product. For non-disk drive units (such as your SQ), upgrading is accomplished by installing a new ROM chip or two. Generally, Ensoniq will provide the upgrade at no charge, but you will need to have it installed by an authorized service

tech if you don't want to risk voiding your warranty. Ensoniq provides its authorized service centers with guidelines regarding reasonable fees to charge for such work; in most cases, this type of service shouldn't run you more than \$20 to \$40. If you don't know where your closest Ensoniq authorized service center is, Ensoniq can provide you with this information. Contact Ensoniq Customer Service directly at (610) 647-3930.]

[TH - Thanks. We're always on the lookout for new ways to do a whole lot of work and then give it away.]

[Ensoniq - 1) We have documents available on our Automated Fax Retrieval System to help you find out. It can be reached at 800-257-1439. For the SQ/KS-32/KT's you press Edit Seq/Preset and then quickly press the Upper Bank 9 and Lower Page 1 buttons.]

Fellow Earthlings,

As you can see by this crude form of communication, I have not yet joined the information interstate, yet I do need to pick over some roadkill left in its wake, with my fellow Ensoniq owners.

I am currently involved in a love/hate relationship with a TS-12 (Version 2.0) for a little over a year. Love, because of its sounds, operating system and playability. Hate, because of what I consider serious bugs that have not been adequately addressed by our pals in Malvern. If anybody in this solar system has had similar TS problems, please speak now. In no particular order is my list of grievances and, unless otherwise noted, reinitialization does not help these problems.

1. In preset mode, selected tracks will not reliably transmit MIDI data to outboard gear. What happens is if I make more than 2 preset changes, MIDI notes on/off and prog chg will not transmit, although the outboard gear will respond to controller #7. I am not using any MIDI-loops, just one way daisy chain connections.
2. In any mode or keyboard touch scale, there is no audio output from values 000 -> 031, whether using footpedal or vol slider. Also, is it normal for the f/x processor to emit digital noise? Mine does.
3. In sequence mode defined tracks that

only have sound data on them (tracks to be played live while sequence is running) will not be remembered unless dummy data is recorded to said track. However, a song will remember the defined track without recording dummy data. Go figure.

4. The f/x section – often, after powering up, I will view the f/x screen for a sequence, preset, or RAM sound. Where it should say *USER VARIATION* sometimes is filled with gibberish along with some nasty sounding f/x variation. Reinitialization will temporarily make it go away, but it eventually reappears.

5. The single event editor in the track section of the song sequencer commits a most unpardonable sin: After editing notes, it throws you to the audition page, where after pressing "PLAY NEW TRACK," it not only plays the edited track, but also plays the unedited track simultaneously. This seems pretty useless to me. Despite it all, the new changes can be saved properly. Another oddity – when editing a velocity value, the editor will accept a value of 127 but will only store a value of up to 124. Is someone trying to tell me I play too loud? Sometimes the editor won't let me access the last measure or two of a track.

6. Sometimes, when adding new data to a sequencer track, the click will inexplicably not be in sync with preexisting tracks. This makes things a tad confusing when not using a drum track.

7. Sometimes when copying disks for backup, the display will tell me to insert source disks any number of times. Generally if I abort the procedure, then try the copy disk function again, it works okay.

8. Why won't timbre (data entry slider) function as a real time controller in sequence mode? Also, is it possible for ROM sounds to glitch? I didn't think this could happen.

9. Finally, when the hell are the TSD sound disks going to be available? I've had them on order from Ensoniq since Nov., '94.

By the way, to Jim Czebiniak of Schenectady, NY – if you think the TS-12 is heavy, start workin' out.

Thank you,
Al Friedberg
Ronkonkomo, NY

[CS – Al, you need to get to a service center. The problems you describe are definitely not normal. I've performed most of the procedures you describe above in the course of working with my TS-10, with none of the difficulties you describe. If you don't know where your nearest service center is, or if you'd like to have Ensoniq look into your troubles (an option I might recommend), contact them directly at (610) 647-3930.]

[Ensoniq – The majority of symptoms you describe are not normal, and suggest to us that your TS should be checked out. I personally use the TS as my main controller for three other devices and have had no problems sending program changes from within a Preset (question 1), and consistently use Sequence headers as my main form of setup, with no data recorded into the tracks (question 3).

2) We're not sure what you mean by this.

4) Definitely not right – a sign that your TS needs attention.

5)-7) Let's requalify these after your unit has been serviced.

8) Timbre will work as a real-time controller in the sequence mode, when affecting a sound on a track that has Timbre programmed to do something. Perhaps you are using it on a sound that does not have Timbre programmed to do anything.

9) We looked up your orders and show that TSD-1002 was shipped to you on January 4th. TSD-1000, 1004 and 1005 were shipped to you on February 20th, and you just ordered TSD-1001 last week. If you have not received them all by the time you read this please call us. And thanks for

buying so many sounds – we hope you like them!]

Dear TH forum;

A few questions and remarks for you and Ensoniq concerning the ASR-10:

SCSI/AKAI CD-ROM compatibility: I was surprised to see an old wish fulfilled with software 3.0. What a disappointment when I finally got the 3.0 software and I found that Ensoniq left out the current AKAI S3000 series format. The ASR-10 recognizes the volumes and their names correctly but then sees no directories. I take it that the longer program strings of the S3000 format are not recognized. Akai's older S1000/S1100 format is recognized. Help! Do something, boys!

Another wish is DAT-stream compatibility through the DI-10 interface of memory contents only, a feature I found very useful with Akai samplers since you can save the whole production content with settings of a sampler on a bit of DAT datatape for eventual recalls later on. Backup of separate directories from HD would be nice too.

Q: When reloading a bank with a "multi" setup where I've set one or more instruments for MIDI playback ("local off") doesn't seem to be recallable without resetting the MIDI STATUS again and again and again etc. by hand control. In some situations you reload a bank and the instrument shows BOTH while it won't play from the keyboard until you've moved the parameter around and vice versa (MIDI). Have I gotten things wrong or is this a bug?

Q: Does the ASR-10 support SCSI-2 standard and can I use a Syquest SCSI-2 270 MB drive?

Measuring the ground noise (sounds loaded but not playing) on the DI-10's digital output with a digital scope and some 44kHz FX like the DDL+CHOR+REV, EQ+DDL+CHOR, LUSHPLATE & ROTOSP+REV loaded shows some nasty specs specially in

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the low frequency region. I think there is something wrong here with some FX construction work since without FXs loaded the ASR-10 specs out well enough. See included printouts. [TH — Forwarded to Ensoniq.]

Well, of course this is a nagging pain-in-the-butt letter as are so many others. Please note that I think highly of the musical and sound quality of the ASR-10 and Ensoniq deserves a healthy thumbs up for constructing this weapon as well as for their upgrading policies. I like the ASR a lot. If they could make the hard-disk recording feature slivable to SMPTE/MTC or MIDI-clock it would be a real winner in other fields like AV production work too. Stabilize the software a bit more since the thing crashes too often. Increase calculation speed. Make it so you can separately save changes in instrument settings without saving samples again. Neon lighted dashboard and built-in coffee percolator. Auto switch on and load and play functions by vocal control. And all that without buying an ASR-20 or MKII model. Go on boys.

Compliments,

Nout Grupstra
The Hague, The Netherlands

[CS — I'm not sure where you're having problems with MIDI instruments in your ASR-10. A typical performance bank in my ASR will consist of several instrument/tracks set to LOCAL status (to play only internal instruments), several set to MIDI status (to play only external sound sources), and a couple set to BOTH (so they can swing either way, determined by patch select settings combined with program-change messages). This has never given me any trouble, so I have to conclude that either you have a faulty ASR-10, or you're setting something up incorrectly. You may wish to try contacting Ensoniq Customer Service directly at (610) 647-3930.]

[Ensoniq — Akai significantly changed their disk format with the S-2800 and 3000 series, so supporting them is another complete project. We went for the most popular and most-supported format which is the 1000/1100 series, and then chose to add Roland over the 3000 series to offer another very different platform for our users.



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The ASR-10 does not support SCSI-2, but you can use a Syquest 270 (and 105)MB drive.

We received a copy of your noise measurements from the Hacker, but we disagree with your premise. It is not valid to do noise measurements on effects that color sound — by design they will change the sound and introduce new elements into the sound. The only valid noise measurement we could see taking would be of a delay, with no LFO involved, since that should be a pristine representation of the original signal played through it.]

A letter for the Interface,

My name is Zuliken Royce (name ring a note???) If you read the classified ads in the OCT '94 issue it will. It said, "...I desperately need your help! My name is Zuliken Royce and I'm in a federal correctional institution. I've purchased a TS-10 to keep me sane but the IRS froze my account before I could purchase a sound library. If you have any type of 3.5" floppy (drum sequences, samples, duplicates, junk, anything!) I would be forever in your debt." And the ad had an address to go along with it.

I'm writing to you, the reader, to share with you what has turned out to be one of the most recent rewarding experiences to add to my Life's Library of Weirdness & Events.

Not only did I receive several disks but also a blow-up doll with heat and video. The mailroom at this institution said it was unacceptable material and asked me if I wished to send it home or donate it (standard policy). So I sent it to the local Red Cross Training Center in the care of the CPR Training and Development Supervisor.

I later received a letter from the Red Cross with an enclosed voucher for a fully paid CPR course and I was told, "Thanks. Our attendance is up 18%."

What else did I receive??? As you many know, AKAI makes a "dream machine" called a CD 3000 sampler that uses CD-ROM, priced at \$3995.00. I call it a Dream Machine because it's out of most of us musician's grasps. Right? ...Wrong. Someone sent me one @#! — with an additional \$600 worth of Akai-format from East/West Sound Warehouse. (I would have liked to remain loyal to Ensoniq with an ASR sampler, but hey, when it comes to \$4600 worth of free equipment, who am I to be picky!)

Ready for this? I don't even know who she is who sent it! I received the sampler and in the box was a photo of an extremely attractive blondish brown haired girl, 5'11"-ish, 27 to 30. There was an inscription on the back of the photo, "I remember 'raving' with you and your band in Boca Raton, Florida. Loved you then, love you now, loved you always, enjoy!" AHHHHH!!!! Who are you??? Heck, I love you too. Please write me so I can thank you or marry you! You're a goddess! I don't even have a clue who she is and a girl this pretty I would have never forgotten.

What else... well, two publishers wrote me and requested a demo, so I sequenced three songs on my TS-10 in my realm of techno, rave, ambient, and industrial. I received a contract for a music score for an European film regarding "fast life, young adult style" still untitled. The U.S. Government Bureau of Prisons say that I can't generate income while incarcerated so I donated the music. Incidentally, I phoned my attorney who is handling this frozen account tax case and asked her if by donating this music I could use this donation as a tax write off and she laughed and hung up.

What has been the best inspiration of all this is I have developed some superficial friendships as well as some very encouraging supportive real people who I continue to correspond with because of that ad — and two more female visitors on my list who are now the best of friends.

My point is this: I'll be candid with you, fellow musicians, and say that I pursued the dream to produce my own release by trying to take some short cuts. And I ended up here in prison for those mistakes. But, people like Tina of Vermont, Alex of California, Key of Wyoming, Sandra of New York, Tiffany of Texas, Donald and his wife in Wisconsin, and also the girls in the photos in the UCSD locker room shower blowing kisses and bubbles, have made a substantial difference in my life and have made this environment bearable.

Many thanks to TH and the non-plastic, non-phony people out there. If I ever make it in the music field, you people will always have front seats in front of the stage and always in my life.

I welcome any correspondence.

Best wishes,
Zuliken Royce
5741-2, PO Box 2000
Fort Dix, NJ 08640

[TH — Well, like we try to tell our advertisers, "Hacker ads work." (And, of course, you can't write off your own labor as a donation! Sheesh.)]

[CS — So, uh...you gonna use that free CPR course?]

Hi!

I have an Ensoniq synthesizer and recently I've been getting this error a lot: System 129 Error. Could you tell me what could be the cause of this and what I could do to resolve this?

By the way: Are there HTTP-sites which I could contact for some nice info on synthesizers?

Thanks in advance,
Anon Internet surfer

[Ensoniq — You don't mention what synth you have, but Error 129 is a 6800 processor error, and doesn't mean much more than the processor has been "confused," possibly due to getting bad data that it keeps loading in over and over, or a sign of a more significant hardware problem. You could try re-initializing your synth (see your Musician's Manual) or contact Customer Service for more help at 610-647-3930.]

Back Issues

Back issues are \$2.00 each. (Overseas: \$3 each.) Issues 1—40, 61, 67—74, 77, 79 and 82—85 are no longer available. Subscriptions will be extended an equal number of issues for any issues paid for that are not available at the time we receive your order. ESQ-1 coverage started with Issue #13. SQ-80 coverage started with #29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage got going with #35 (and also applies to the ASR-10). VFX coverage (which also applies to the SDs) got started in #48. The SQs got going in #63. (SQ articles also apply to the KS-32 & KT-76/88.) DP/4 coverage started in #88 (much of which also applies to the ASR-10). TS-10/12 coverage got going with #98 but owners should also check out sample reviews (EPS/ASR) and SD & VFX programming tips. Permission has been given to photocopy issues that we no longer have available — check the classifieds for people offering them. A free back issue index is available which contains the tables of content for all issues since Number 43.

To: The Interface,

KMX-16 users – If you sequence with an Atari Mega STE, are you able to use the remote software? Ensoniq has told me, along with the programmer, that the software was written for an older model. If you are able to use the remote software, please call me collect at 310-396-5151.

Rich Strassberg
Venice, CA

Hi Ensoniq, hi TH,

Let me start off with a huge "THANKS" to Ensoniq for their latest OS Version 3. It's great that you are still improving the **ASR-10** – which is probably one of the best samplers in the market (in my opinion...).

Concerning OS 3, I have two questions:

1) I've sampled a lot of drum loops with OS 2.51 and have all of them truncated to fit the speed of my sequencer perfectly. Now what happens when I load these loops with OS 3 is that I cannot play them at the speed

I've recorded. For example: I have sampled a loop which runs at exactly 128 bpm with OS 2.51. Now, when I boot up with Version 3, reload the drum loop and start playback at 128 bpm, the loop runs out of timing. There is no smooth transition between the loop end and start anymore because the first bar does not come tight. The thing is, I'm using the same effects and settings as with the old OS. Can you imagine why this happens? I'd really like to use the new OS because of all the bug fixes, but at the moment I can't and I'd be glad if there was a solution.

2) Is there a possibility to unload the sequencer software out of the ASR's memory? I love my ASR but I prefer sequencing with my old Atari. When I boot up with OS 3 there is not enough space to reload large instruments (created with OS 2.51) because the OS uses more memory. I think unloading the sequencer would help. Or have I not read my manuals properly?

That's it for now. I would be glad if you could answer my questions and I hope you both, Ensoniq and the *Hacker*, continue doing such a great job!

Greeting from the Lake of Constance,
Thomas Bleicher
Germany

[CS – There is no way to "unload" the sequencer from ASR memory. What I would recommend, however, is that you use OS 3.0 only when you want to record and play disk tracks. Otherwise, use OS 2.51, which is quite stable (and in some cases quicker than OS 3.0).]

[Ensoniq – 1) We're not sure about this one. We'll have to look into this and get back to you.

2) No.

Regarding Clark's answer – it is always better to use the latest software because of the bug fixes. And you can't import non-ASR sounds with Version 2.51. Sometimes with progress comes certain trade-offs – the small number of blocks you lost is worth the improvements (in our opinion).]

Dear Transoniq Hacker,

I recently bought an Ensoniq **KT-76** keyboard. I think that it's one of the best keyboards on the market. As you probably know, there are no new sounds for this keyboard yet. I wanted to know if it was possible to use the onboard General MIDI sounds (especially the sound effects) with the onboard sequencer? I have thought of a possible setup to solve my problem. I could run a MIDI cord from the keyboard's "MIDI-out" to the keyboard's "MIDI-in." Is this possible? I have not yet tried this stunt because I don't want to wreck the KT. Please tell me if this setup is possible or offer Low-cost alternatives.

Thanks,
Esmond J. Lewis
Gainesville, FL.

[Ensoniq – Sorry, but the GM mode and the sequencer are mutually exclusive, meaning the sequencer will not work while you are in GM mode, and vice versa. We really feel that overall the "regular" sounds are better-sounding than the GM mode, which must strictly conform to the sound performance of the Roland Sound Canvas (the de-facto standard in GM sound emulation).]

Transoniq-Net

HELP WITH QUESTIONS

All of the individuals listed below are *volunteers*! Please take that into consideration when calling. If you get a recording and leave a message, let 'em know if it's okay to call back collect (this will greatly increase your chances of getting a return call).

All Ensoniq Gear – Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:30 pm EST Monday to Friday. 610-647-3930. Ensoniq's Fax On Demand line, (1-800-257-1439) can also be used to retrieve specs, OS info, hard-drive info, and the like.

All Ensoniq Gear – Electric Factory (Ensoniq's Australia distributor). Business hours – Victoria. (03) 480-5988.

SD-1 Questions – Philip Magnotta, 401-467-4357, 4 pm – 12:30 EST.

VFX Sound Programming Questions – Dara Jones, Compuserve: 71055,1113 or Internet: ddjones@net-com.com or call 214-361-0829.

SD-1, DP/4, ASR-10 Questions – John Cox, 609-888-5519, (NJ) 5pm – 8 pm EST weekdays. Any time weekends.

SQ-80 Questions – Robert Romano, 607-533-7878. Any ol' time.

Hard Drives & Drive Systems, Studios, & Computers – Rob Feiner, Cinetunes. 914-963-5818. 11am-3pm EST. Compuserve: 71024,1255.

EPS, EPS-16 PLUS, & ASR-10 Questions – Garth Hjelte. Rubber Chicken Software. Call anytime. If message, 24-hour callback. (305) 792-9231. Compuserve: 72203,2303.

ESQ-1 AND SQ-80 Questions – Tom McCaffrey. ESQUPA. 215-830-0241, before 11 pm Eastern Time.

EPS/MIRAGE/ESQ/SQ-80 M.U.G. 24-Hour Hotline – 212-465-3430. Leave name, number, address. 24-hr Callback.

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.

SQ-1, KS-32, SD-1, SCSI & hard drive Questions – Pat Finnigan, 317-462-8446. 8:00 am to 10:00 pm EST.

ESQ-1, MIDI & Computers – Joe Slater, (404) 925-7929. EST.

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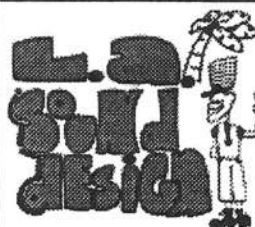
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