

# Transoniq

# Hacker

The Independent News  
Magazine for Ensoniq Users

## Sample This: O.S. 3.08

Pat Finnigan



Product: ASR-10 O.S. 3.08.  
For: ASR-10.  
Price: Free  
From: Ensoniq Authorized Dealers.

It's a bit of a rarified atmosphere over St. Louis at 35,000 ft, but what an appropriate area to describe such an elevated operating system for the ASR-10. Yes, folks, it's finally here. The ability to read Roland and Akai CD samples is a mere floppy disk away. Although it seems rather like some inventive Giebler-type programming here, it was actually a herculean effort invoking the names of the entire code cranking warriors of Malvern. After much griping and whining about how the Kurzweil would read all of these other formats (like comparing a Young Chang "sampler" that doesn't even offer sampling in its base form to a digital audio recording workstation is even remotely valid; "Yeah, right, as if"), we now have this commensurate functionality for the '10. Here's the long and short of it...

(A) You CAN read Akai S1000/S100 samples. You cannot, I repeat, CAN NOT read S3000-format sample files. I know, this may seem to be a serious oversight, given the availability of S3000 stuff, but hey, let's try to keep the OS down to a manageable size (this ain't a PPC601 w/4Mb ROMs yet!) And given the majority of the Akai library is primarily in S1000 format it seems the logical choice to support. Again, perhaps this may be considered an oversight; Ensoniq obviously felt the need to access the broadest base of Akai samples. Yeah, you upscale boomer types will curl your nose at this limitation: we real-world types only pursue perfection without regard to the social implantation of another "leading studio sampler." We already got it.

(B) You can now read Roland S-series CD-ROMs. This more than makes up for the omission of the Akai S3000 format, since it precludes any further nose-curling by offering access to another one of those "leading studio samplers." And let's face the reality of our craft and be brutally honest: every keyboard manufacturer absolutely does one thing best: you can't get a better whip crack than an M1 provides: you can't get more accurate steel string acoustic than the Roland sound library, you can't get the shimmering 22K wash of a TX816 from anyone but Yamaha. And you can't get a better collective representation of all of

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these forms in a seamless integration without an ASR-10. So we now have an avenue of viable access to the excellent Northstar sound libraries, free rein over the Kenny Jaeger String libraries: in one fell swoop, the ASR-10 library has immediately quadrupled. And that implies access to terrabytes of wave data. *that's* why we real-world types curl our noses.

(C) All of this functionality comes with a price, however: given the ASR-10's limitations, you can only import sample files of 16 Mb or less. This precludes the 32Mb pianos and such, but with careful attention to detail, many waves can be imported into layers, trimmed, and our old friend "copy wave params?" comes to the rescue here. Besides, if your piano sound is *that* important, you should be pounding a Yamaha C7 or equivalent anyway. Works for Dave Grusin, anyway. But to quote Dennis Miller; "Then again, I could be wrong." Yeah right; and raptors are vegetarian.

Restricting key range and layers when importing will help overcome the 16Mb wall, but there comes the rare sample which actually exceeds the 16Mb ASR limit. Ensoniq's answer in the table of hints is a simple "Sorry," which appears quite humorous upon discovery. Then again, it makes you wonder what plans Malvern has on the drawing board for the ASR-11, 'cause I've never heard Ensoniq say "Sorry" in print without hiding something up its collective sleeve. Don't forget their change of slogan to "*Leading the World in Sound Innovation*" — they're definitely into being a multimedia company. *That* makes you realize the ASR-10 is showing its age (a mere year and a coupla months: how many babies do you know this powerful that have gone thru this number of revs? Chill...)

The Audio Tracks features are improved: the ability to delete temporary "Atrks" is a real blessing to recovering lost HD space. Digital I/O backup/restore/verify seems improved and more robust, although the manual notes humid conditions still may cause a verify error although the tape is actually good. Maybe S/PDIF is hygroscopic or something. You can't "scrub" audio yet, and given the limits of SCSI disk technology and available RAM buffers, don't count on seeing it in an ASR-11. You'll still need Digidesign, er, Avidd for that...

In general, this version of O.S. seems much more robust and less prone to crash than 3.0. I can't tell if it's cleaner code or what, but I don't experience anywhere near the "Error 129-Reboot?" numbers I got in the previous OS. Somebody did something here: the new code acts as if all segments must complete their run before any other interrupt or button press can unload them. In simple terms, "it don't crash no more!" Period. I'm not saying you can't force a crash by feeding it 250 BPM 64th's on all tracks in Multi mode from the external Sequencer from Hell; you have to *intentionally* try to force a crash in three or four ways to get an error code out of the ASR-10 now. Very cool stuff, this spin of the OS.

Obviously there's new magic going on in the box again, and the changes are literally transparent. This is both cool and not cool: cool for us manic button pushers who appreciate not being able to "outpace" the system as in the previous O.S. (remember how sluggish some commands behaved?), and not cool for the programmers whose laborious cranking of code is reflected in the seamless simultaneous operation of keyboard/sequencer/DAR/DP1 not recognized for the redefinition of a new product but the enhancement of an old (year-old baby?) product. Then again, the successful revolution is the one that no one realizes has taken place until it's over...

Specifically, handling of import samples from one format to another is a risky business, tenuous at best. It's not as easy as writing a translator, coding it and watching it work. Loading/unloading foreign/native segments during execution is not exactly a Sunday drive thru the park, folks. Ensoniq doesn't have MetroWorks CodeWarrior utilities to convert foreign data into native Ensoniqspeak. They're still torquing 680X0 code to meet and supersede the incessant demands we make of such an elegant user interface. What we have here is an extremely bright and diligent programming team which not only cranks effective and powerful executable code in an unbelievably small ROM space, but maintains an unbelievable focus of vision when it comes to identifying which direction the market is moving, and responding *immediately*. That's why we curl our noses...

The test suite consisted of:

- (A) ASR-10 SN#12832, SCSI, OEX, 16Mb installed (4 4x8, 70ns SIMM RAM)
- (B) Quantum 730 Lightning (formats to 700Mb) SCSI HD in Frye case
- (C) Seagate Barracuda 2.1Gb SCSI HD in Diskovery case (for audio tracks)
- (D) Toshiba 2X CDROM drive
- (E) TrippLite line stabilizer/conditioner

Without fail, all sounds within the 16 Mb or 31274 block limit (how we used to slave to stuff 4096!), O.S. 3.08 performed flawlessly. I did stumble over a few Roland "text" files/landmines ("read me" in Macspeak) that wouldn't load, but you're warned of this anomaly in the addendum (like, as if, text files were valid wavedata, yeah, right, as if), so 'nuff about that. Without a DAT I couldn't verify any further crashworthiness/robustness of the DIO from the 2.5 or 3.0 O.S. spec, but when you've quadrupled your sound library, you might wanna think about a DAT for backing up those hours of edits.

The only quirk I noticed was the inability to change tempo of a song once I had recorded audio tracks to the Barracuda. After about 20 minutes of diddling, it dawned on me: to properly sync sequence and audio track playback, tempo *has*

to be locked. If it wasn't, how could "Atrks" chase sequence tempo? Kudos to Ensoniq for anticipating a gnarly problem at this OS inception and forward thinking. This omission could have turned any work in progress or final edit into a real nightmare...

In summary, what is already one of the most esoteric samplers out there (absolutely *the* most esoteric sampling workstation under \$3500) has turned more Synclavier on us. Solid audio track recording, bulletproof operation, more FX processing than most dedicated FX boxes, an unparalleled user interface, and the best track record and most used sampler in the industry set the ASR-10 another dozen light-years ahead of the competition with the O.S. 3.08 release. To quote Thomas Wolfe from *The Right Stuff*: "Our Germans are better than their Germans." But power is relative: some ASR-ers routinely push the envelope to the extreme.

So if all you power-user types still have to gripe about not

being able to import S3000 samples:

- (A) Weigh the competition's lack of onboard *modulatable* effects processing of this flexibility.
- (B) Record Direct-to-Disk on a K2000 or an S3000 for over 54 minutes @ 44.1K and call me back.
- (C) Repeat (B) *stereo* and call me back.
- (D) Plug your S3000 or K2000 outs to your sample inputs, process FX, and make D1 audio tracks.
- (E) Get it fixed in less than a week if it breaks.
- (F) Get customer support from an experienced ASR-10 human every time you call with a pilot error.
- (G) Find something better or more flexible/powerful at 10X the price and call me back.
- (H) Call *their* Germans.
- (I) Rent an S3000 and sample your anal retentive derriere off.

After all, we ASR-types are too busy making music to notice anyway... ■

## Front Panel

### RND ( )

#### Ensoniq News

Ensoniq is offering a special bundle for purchasers of the KT-76 and KT-88. Get an attractive wood keyboard stand and the MS-1 music stand for only \$69 (a \$300 value) when purchasing a KT between May 15 and September 30, 1995. For more information contact your local Authorized Ensoniq Dealer or call Ensoniq at (800) 553-5151.

#### ASR Sounds

*SCD-1*. Ensoniq's first Signature Series release on CD-ROM features the band Chicago. This collection includes their trademark vocals and horn section, as well as bass, guitar, organ, drums, and percussion loops. *SCD-1* contains over 600 MB of data, and also includes a special audio demo track (playable on a regular CD player) featuring Jason Scheff. *SCD-1* retails for \$249.95 and will start shipping late in July.

*SCD-2*. Rap, hip-hop, and D.J. effects from D.J. Jazzy Jeff and A Touch Of Jazz. The definitive collection from one of the originators and masters of the form. Retail price \$249.95, available in August.

*SCD-3* — Steve Gadd "DrumScores." Drum sounds and performances from this legendary artist — no hype needed. Retail price \$249.95, available in August. DrumScores is also available as a 2-disk audio CD for \$179 from Q-Up Arts — call (800) 454-4563, or fax (801) 944-9677.

#### ASR/TS Sampled Sounds

*AS-15*: "Techno/Ambient." A five-disk set of sampled sounds

for the ASR and TS instruments covering synth dance sounds. Suggested list price — \$39.95.

*AS-16*: "Techno/Trance." More sampled sounds for the ASR and TS instruments, covering different synth dance trends. Suggested list price — \$39.95.

#### TS Sounds

*TSD-1006*. A broad collection of synth sounds for the TS-12 and TS-10. Suggested list price — \$19.95.

#### KT Sounds

*KTC-2*. Contains 160 diverse ethnic and vintage sounds, modeled after the TS "World Piece" collection (*TSD-1005*). Includes 20 Performance Presets and a demo. Suggested list price — \$99.95.

*KTC-3*. 160 sounds for church and gospel music performance, programmed by Music & Sound Associates (Clark Salisbury and Erick Hailstone). Includes 20 Performance Presets and a demo. Suggested list price — \$99.95.

#### Hacker News

We'd like to welcome a new advertiser (and budding entrepreneur), the 88 Gray Company. Be sure to check out their innovative keyboard stands. We have a bit of a warm spot for keyboard stands — our very first advertiser in our very first issue (ten years ago this month) was for keyboard stands. Which brings us to...

10 Years ago in the *Hacker* — Eight whole pages. Featuring



Clark Salisbury's very first article: A First Look at the Mirage. Erick Hailstone gave us a MIDI lesson, there were a couple of questions and answers, and that was about it.

*Hacker* writer and all around good guy Craig Anderton has yet another book out of interest to our readers (DP/4 fans in particular): *Multieffects for Musicians*. The book is published by

Amsco Publications, covers multieffects in Craig's usual comprehensive manner, and should be available at music stores.

**Corrections for Issue #120:** The Fax number for Cybersounds in the Sample Bank review should be: 1-519-745-0953. The Basement Tape review gave one of Tom Shear's (many) old addresses. It should be: 726 Fourth Ave., Williamsport, PA 17701.

## TS-10/12 CD-ROM Compatibility

Anthony Ferrara

Many people (myself included) use a powerful instrument like the TS as an all-in-one music composition environment. Most people who use the TS alone without a sampler opt for a CD-ROM drive. This gives the user quick access to many sounds through the many Ensoniq and third party compatible CD-ROM disks available.

When the TS's SIMMs capacity is expanded to a full 8 meg of Sampled Sound memory, this results in 8114 blocks (4 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 4 meg sampled instrument. All of the existing Ensoniq CD-ROM disks will load a majority of their sounds into a fully-expanded TS via SCSI. Obviously, you will need to have the SP-4 SCSI option installed to take advantage of this capability.

### CD-ROM Compatibility

The formats for CD-ROM drives that are currently known to work with our TS series synths include Sony, Toshiba, and Chinon 435 and 535 model mechanisms. Check Ensoniq document number 0015 entitled "Approved SCSI Storage Devices for Ensoniq Products" on our Automatic FAX Retrieval System (1-800-257-1539) for up-to-date information about compatibility. Special Note: TS O.S. Version 3.00 will allow a TS to work with an Apple CD-150 model CD-ROM drive. To arrange for the upgrade, call our Technical Support number (610-647-3930) to find the Authorized Ensoniq Repair Station nearest you.

### Macintosh Compatibility

There are problems inherent with addressing the internal CD-ROM drive found in some Macintosh computers from an external SCSI device like the TS. The TS SCSI Interface manual explains this somewhat more thoroughly, but the two most important issues would be that of termination and SCSI ID number. Your best bet is to buy an external CD-ROM drive that is compatible with both your TS and your computer. External CD-ROM drives (vs. internal) tend

to be much easier to deal with, since termination and SCSI ID number are more conveniently accessed and resolved when working with an external SCSI peripheral device.

### PC Compatibility

PC-compatible computers generally do not interface directly with SCSI peripheral devices such as CD-ROM or external hard drives. PCs are generally configured to work with IDE (Integrated Drive Electronic) interface devices, which are lower in cost. This is due to the fact that they incorporate drive controller functions directly on the IDE device, rather than receiving commands by connecting to a controller card. The IDE-type drive connects directly to the PC's mainboard. In order to get the PC to address the external CD-ROM drive (or any other SCSI peripheral device, for that matter), you would first need to install a SCSI adapter card into the PC. SCSI adapter cards are available from Adaptec, QLogic and others. SCSI adapters for the PC may cost in the general area of \$150-300 dollars, depending on the features needed, whereas a compatible CD-ROM drive might cost approximately \$200-500, depending on the speed (2x, 3x, 4x, etc).

Of special interest to PC-compatible users is Giebler Enterprise's Ensoniq DISK MANAGER software application and its use with the PC's CD-ROM Drive (IDE or SCSI). This program enables you to read EPS and ASR sample instrument files directly from Ensoniq format CD-ROMs using the PC's CD-ROM drive. EPS and ASR files can be saved to the PC's hard disk drive, and then written to Ensoniq format floppy disks which can be loaded into your TS. If your PC already has a CD-ROM drive, this software can provide easy access to the Ensoniq CD-ROM library without purchasing any additional hardware. For more information call Giebler Enterprises at 610-933-0332. ■

*Bio: Anthony Ferrara has written for Electronic Musician, Recording, and Keyboard. He is still hard at work on some new "snappy ditties," and is playing concerts in the Philadelphia area. Call 215-742-0738 for concert info.*



# Static Free Transwave Samples

Part II

John Loffink

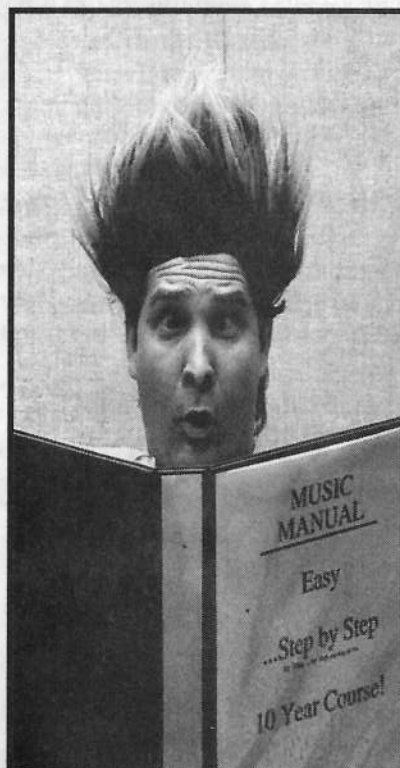
A long, long while back some questions were raised in the Interface concerning Transwaves on the EPS-16 Plus. Since I'm not in the sample marketing business anymore, I thought I'd share some of my "trade secrets." After many hours of experimentation, I have come up with the following hard and fast rules for smooth Transwave creation. Last month we covered the first two — now for the remainder.

1. Use single oscillator samples only.
2. Make sure all frequencies have zero phase shift.
3. Sample at 22,321 Hz, 32,894 Hz or 44,642 on the note D.
4. Use multisamples for rapidly modulated Transwaves.
5. The Wave Mod Amount range of 99 will cycle through 128 "loops."
6. Best results can be achieved using computer synthesis.
7. Resynthesis may transform a poor Transwave into a good Transwave.

8. Brute force sample editing can work somewhat, but is tedious.
9. Phase shift effects from filtering can be avoided by editing tricks.

**Rule 3: Sample at 22,321 Hz, 32,894 Hz or 44,642 Hz on the note D.**

It is possible to make clean, click and pop free Transwaves, given the right conditions. If you've tried turning any old sampled sound into a Transwave, you probably got a bunch of clicks and pops as you modulated through the sample. The point to remember is that every repetition of the transforming waveform in the loop should retain near perfect zero transitions. Transwaves apparently switch on whole number ratios. The fractional part of the loop end has a no effect on the sound. To be able to sample on a standard note pitch, it follows that the sampling frequency should be a



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near multiple of the note frequency. In other words, the sample root frequency times some integer should equal the sampling rate.

Hang on, I've already done those calculations on a spreadsheet. Sampling on note "D" with the sampling rates of 22,321 Hz, 32,894 Hz or 44,642 Hz results in an error of just 0.04 Hz at D5=587.3 Hz and 0.09 Hz at D6=1174.7 Hz. The loop period will equal 76 sample words for D5. Sample Root Frequency x Integer = Sampling Frequency;  $587.3 \times 76 = 44,634$ , which is near the EPS-16 Plus standard sample rate frequency of 44642 Hz. Looking at it another way, 128 periods (the maximum Transwave modulation amount) of 76 sample words is 9,728 words. And  $(44,642 / 587.3) \times 128 = 9729.6$ . So at the maximum modulation amount the error between the ideal sample points and the actual sample points is only  $9729.6 - 9728$  words = 1.6 words, which is a tolerable amount for most cases.

Alternately, you may detune the source before sampling to create a frequency that is a submultiple of the sampling frequency.

#### **Rule 4: Use multisamples for rapidly modulated Transwaves.**

If the modulation source for the Transwave is the modulation wheel, pressure, or a foot pedal, you may be able to get away with single sample Transwave instruments. However, rapid modulation by the LFO, an envelope or an over-anxious wheel twiddler (an evolutionary descendant of the knob twiddler of the analog days) can cause the EPS-16 Plus to choke in the lower registers. Apparently what happens is that the Transwave needs to transition through the sample faster than one loop per cycle, since the bass cycles are proportionately longer than the higher ones. The instrument ends up skipping cycles unevenly, causing abrupt shifts in timbre. The solution is to multisample on octaves, using less samples for each lower octave. I advise using only 5 to 15 cycles for samples as low as D2, and 10 to 30 cycles for samples as low as D3. Since D3 = 146.8 Hz, at a 44,642 sampling rate each cycle will consume 304 sample words per period for a total wavesample size of 3040 to 9120 sample words, or 12 to 36 blocks.

Conversely, using too few cycles in the upper registers will cause not so subtle shifts in timbre as the Transwave is modulated. You could call this a kind of timbral quantization.

#### **Rule 5: The Wave Mod Amount range of 99 will cycle through 128 "loops."**

The Wave Mod Amount doesn't have a one-to-one cor-

respondence to the number of loops cycled through as suggested in the *EPS-16 Plus Musicians Manual*. For instance, a Wave Mod Amount of +8 cycles through ten loops, not eight. By experimentation, I've found that the ratio of the selected Wave Mod Amount to actual Wave Mod Amount is 77 to 100. To cycle through a 25 waveform cycle from your modulation source, you would set the Wave Mod Amount to 19, because  $25 \times 77/100 = 19.25$ . This makes the maximum waveform count equal to roughly 128 cycles, not 99.

#### **Rule 6: Best results can be achieved using computer synthesis.**

The best solution for Transwave creation is to use computer synthesizer software that implements interpolation synthesis. You can also use additive synthesis provided that frequency modulation envelopes are flat. You can even emulate resonant waves with additive or interpolation synthesis if you understand your basic synthesis. Just make sure all your waveforms begin and end on a zero crossing.

Best of all, with computer synthesis software you can force the sampling rate to values 22318 Hz, 32890 Hz or 44635 Hz which yield near perfect integer values for the Transwave cycles. The slight pitch change that this causes is inaudible. Looking at the previous example of sampling on D5 at 44k Hz, the number of samples would be  $(44,635 / 587.3) \times 128 = 9728.0$ , giving an error of virtually zero. However, you should check your synthesis software, because its method of generating frequencies may not be that accurate. Mine wasn't.

Synthesis and modification techniques to avoid are pitch shifting, detuned oscillators, ring modulation, dynamic filtering, echo, reverb, chorusing, phase shifting and frequency modulation. I'll give a few tips for various synthesis methods that do work below.

Additive: Use whole number ratio harmonics. Don't use frequency modulation envelopes.

Vector, Pseudo-Additive, Interpolation (different waveform mixing techniques): Make sure all waveforms begin and end on zero crossing points. Don't use frequency modulation envelopes.

Distortion/Waveshaping: The input sample should not have any DC content (the sample should be centered around zero). Make sure the zero points of your input are not shifted by the distortion or waveshaping process. For non-linear waveshaping, this means that the waveshaping table will cross through the origin of the X and Y axis. Most envelope controlled clipping, doubling, saturation or fuzz type distortion effects will work fine.



**Phase Angle Modulation:** Make sure both the carrier and modulator waveforms begin and end on zero crossing points.

**Graphic Eq/Parametric Eq/Low Pass Filters:** Use mild filtering and hope that the phase delay of the the harmonics is not too great. A better tip for filtering is given below in rule 9.

**Flanging:** Avoid LFO modulation of the flanging rate. If possible, set the delay to an exact multiple of a waveform cycle. Depending on the input waveform, you may still encounter Transwave clicking.

### **Rule 7: Resynthesis may transform a poor Transwave into a good Transwave.**

Another avenue worth trying is resynthesis. This process, available on some sample editor programs, analyzes the frequency content of the sample and then regenerates the sound. In most cases, only the frequency content would be preserved, while the phase content would remain constant. This means that the process could remove any phase shifts occurring in the sound. However, you'll still need to follow rule 1 for your input sample.

### **Rule 8: Brute force sample editing can work somewhat, but is tedious.**

Jack Schieffer wrote a very good article on the brute force creation of a Transwave using only the Ensoniq sampler's internal editing commands (*TH* January 1995). While I feel that 7 Transwave cycles he used as an example will create rough sounding transitions, his technique could easily be extended to the creation of more cycles. The Invert Data and Scale Data command could be used to warp a square wave for various timbral modifications. A computer based

sample editing program might expedite matters somewhat, but would still be tedious in my book.

### **Rule 9: Phase shift effects from filtering can be avoided by editing tricks.**

I've had a problem with aliasing distortion in the upper octaves of my EPS-16 Plus. Assuming that the high frequencies cannot be removed from the sampling or synthesis method, the obvious solution is to filter the high frequencies out after the sample is created. But that would cause the problem of phase shift from the filter. Here's a tricky solution that's possible from most computer waveform editors: filtering the sample twice. Begin the process by reversing the entire waveform and filtering it. Then reverse and filter the waveform again. What you've just done is cancel out the phase delays! The resulting filter effect is a squaring of the original depth. You may need to create an excess head and tail to your sample that you can truncate after the filtering, because the filter will usually have a transient response that distorts the first few cycles (and last few cycles as well, when the waveform is reversed).

### **The Windup**

Creating Transwaves is lot like creating good loops — it takes a lot of skill, patience and praying. Hopefully, the information I've given here will get people started on the right track.

*Bio: John Loffink is not a rocket scientist, he's an electronics engineer for NASA's Special Projects Laboratory at the Kennedy Space Center. He had been hanging out at the Shear mailbox to intercept that free ASR-10 Ensoniq was supposed to be sending Tom, but Tom moved so many times the FBI must have ended up getting it.*

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# **Pedal to the Mettle**

*Robby Berman*

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From: Syntaur Productions, 5402 W 43rd St., Houston, TX 77092.  
Phone: (800) 334-1288, (713) 682-1960, fax (713) 682-2072.  
Product: *TS Set 1*, 60 patches on a disk.  
Price: \$39.95.  
For: TS-10 and TS-12.

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Okay, I'm greased up and ready to kick some *Hacker* butt (not yours, okay?). I've got my CV pedal plugged in to my

TS-10, my Data Entry Slider set to TIMBRE (on the third System page) and my headphones on and cranked. I'm in receipt of Syntaur Productions' \$39.95 *TS Set 1*, a floppy containing 60 patches for the TS-10 and TS-12. Syntaur is not only a major source for sounds and samples for Ensoniq instruments, it's also the home base of Sam Mims, who has, of course, guided us through many a programming twist and turn in the *Hacker*. The sounds in *TS Set 1* were programmed by Mims and fellow Syntaurist Todd Speer.

Though I'm only now sitting down to write this review, I confess that as soon as I got the floppy in the mail, I tore open its defenseless little bag and immediately shoved it into the disk drive. The disk, that is. I was, of course, intrigued to see what such a knowledgeable — okay, maybe "smar-tytpants" is a better word — programmer as Mims would come up with. There's no accounting for personal musical taste; I wondered would he like to program what I like to hear? Not to worry — "wow" is the word that springs to mind. Though at first I was surprised to see no demos included; after a couple of moments I could see why the Syntaur team felt them unnecessary — these sounds pull you right in. My quickie preview let me know I'd have to get out my CV pedal and engage my Timbre slider for the actual review; Syntaur's sounds really use what the TSs have to offer.

The 60 Sounds in *TS Set 1* are arranged in groups of six; each screenful is basically a different category (though there are two sextets of pads). The groupings are pads; keyboards; organs; loop splits and drums; basses; bass synths; synths; guitars and brass; and wind, plucked and sound effects. As you can see, rather than concentrating on one area, this set aims wide (Warning: no strings attached). The amazing thing is that Syntaur's programming skills are so deep that they pull all these different types of Sounds off admirably.

The very first program, RAINFOREST, immediately clues you into the operating programming sensitivity. On very first blush, the Sound strikes one as a close relative of the factory GENESIS — oh no, the boidies again — but a little playing reveals it to be more expressive than that. The PANFLUTE wave is enveloped and filtered into a light breeze. The CV pedal fades the birds out (and, okay, I admit it, back in). Long, long notes gently fade in delicately wavering VOCAL-OOHS. I'm in love again. And that's just the 00 Patch Select. I got quite lost in \*0, where the muted pads are eventually sprinkled with a light forest rain. Ooh, that's tricky; the rain is just the top end of the until-now muted VOCAL-OOHS fading in. Oh man, this is exciting. It's been a while since I've found myself scratching my head over how something's done in my TS.

I'm not going to describe every Sound; however the very next one is also worth mentioning: LAND-HO. Beautiful. A vocal pad with tinkling bells which suddenly drops an octave with the mod wheel (and the mod mixer), Patch Selects with seagulls reminiscent of the laughter loops in The Beatles' "Tomorrow Never Knows." The pads are all lovely, actually. Each one is somewhat dazzling; they're not the unnoticeable kind.

Let me just mention some of my favorites in this excellent set. There's VALEN-TINES, an electric piano notable for

the delicateness built into its velocity response, something that immediately whispers to you to play soulfully. There's also the beefy VITAL-ORGAN (I just now got the joke).

As for the Hyper-Wave rhythm Sounds, I gotta tell you, they display the presence of an unusual sense of rhythm, and I'm not saying that euphemistically. The grooves are rock-solid, but they're also cool, challenging stuff. Well done.

FENDER-BASS goes immediately into my everyday collection. CLICK-BASS is a whistle-clean stereo sequence-style bass. SKANK GUITAR is perfect for the reggae upbeat (one Patch Select even plays a major triad for you), and HAPPY-GUITR is a pleasing full-bodied version of a TS Stratocaster.

Look, these are just some of my favorites. So often, in reviewing sound sets, a reviewer finds him/herself in neutral territory, not knowing what to recommend. But that's not the case here. Buy *TS Set 1* (you'll like it even more if you've got a CV pedal). The Sounds are terrific: they sparkle, they're useful, they're distinctive and they're thoughtful. The accompanying documentation is also well-done, a good thing since it provides the key to finding all the enjoyable amenities Syntaur has built in to these Sounds.

And, as a bonus, if you want to really learn how to program your TS, you could find no better example of the art. ■



*Bio: Robby Berman is a musician squirreled away outside of Woodstock, New York with his wife and five cats (who are not allowed to mess with the squirrels). His most recent album is "Rings and Rings."*

## 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.



# Waveform Mutilation 101

## Return of the Living Transwaves

*Jack Stephen Tolin*

The scene is set; a dark night over a small town in the Midwest. A heavy fog slowly rolls over the countryside. Drivers are cautious and traffic is slow. Most people are hidden inside. There are memories of the old tales of the town — long forgotten mysteries of an ancient curse — that one day they would return — ancient, long-forgotten, huge, elongated slimy things that supposedly had lived beneath the town, crawling ever so surely, changing the very atmosphere of the entire community. There is a sense of foreboding, of dread. Could this be the night that these poor ignorant fools will become victims of the “Return of the Living Transwaves?”

This, of course, leads us to our topic today. If you listen to a transwave straight from the machine without adding any frills or modulators, you will probably not be too extremely impressed with what you hear (although you may). Of course, it would be the same with just about any other wave or waveform in the table.

But, to better inform you, the reader, from whence I come, let me explain what my motivation is for writing this article. As you may have noticed, the newer synthesizers by Ensoniq do not provide filter resonance — Q — like the older ones. And, as you may have read in the pages of the *Hacker*, Transwaves can be used to simulate resonance, but Q? If an SQ-1, VFX, SD-1, KS-32 or KT-76 can sound like it has filter resonance, why is it that no one seems to believe that it is true? Well, anyway, this article does not really deal with the issue of filter resonance per se, but it actually arose out of my trying to do an article on that very subject. Ah well.

If you have an SQ synth (all except for 80), try the following. If you have any other synth that has transwaves, then try something along the same lines. You should still experience the same kind of result. Find some of the organ sounds in your selection — not pipe, mind you, just some generic organ sounds. The SQ-1 includes Organs 1-4. Select the first one. Next, select the first voice — page 0 in the Wave bank. Next, select page 1 and switch Wave (class) to Transwave, and try each transwave out one by one. You will, of course, also try changing voice 2 in the same way. You will probably find that not only will you come up with a new usable organ sound, but you also have a new lead-type sound in the upper registers (which would go nicely with some digital delay). You can even change the

Start Index value on page 3 to alter each variation further. Continue with trying all the organ sounds you have in the same manner. Lesson number one: Plain transwaves are very usable without even tapping into their covert changing ability to make the sound change over time.

Now, for you SQ users, put the program “LivingTranswaves” into your synthesizer. This program is intended to display certain qualities of synthesis including, of course, the changing ability of the transwaves as well as some other anomalies. The “living” aspect of the transwaves is in the fact that they change over time. It is this way that the sound literally crawls along. This is an example of how you might program one transwave into a program with one (or two) other wave(s) in order to give that program some sense of motion or change over time. With “LivingTranswaves,” you simply have all voices doing something similar with the transwaves but in different ways.

Each transwave is programmed to have its Start Index (page 3) modulated by its voice’s LFO by +99. You will notice that all the LFOs have the exact same settings. However, this effect does not allow each individual voice to sound the same because of a very simple feature: Restart = OFF (LFO bank, page 2). Every time you press a key, the synthesizer will randomly decide the level of the setting at which to initially trigger. Because the full modulation value of 99 is taken advantage of (Wave bank, page 3 “\* +99”; LFO bank, page 1 “Level,” page 2 “Wave = POS/SINE”), at some point within the context of the sound cycling through we can hear all possible “indexes” of each transwave.

Before we continue, just a note about the “POS/SINE” wave. The reason that POS/SINE is used here rather than SINE, is this: We are using the LFO to modulate something in such a way that any value as a modulator will begin from value 0. In the Start Index, we are modulating a feature (the start index itself) from value 0, hence, “Start Index = 00.” If we set the Wave on page 2 of the LFO bank to “SINE,” we will no longer hear the whole effect of the Wave because half of it will be in unmodulatable territory.

Consider this analogy: We are on the border of the U.S. and Mexico, but just on the U.S. side. This is the value of the start index, regardless of what the actual value is set to. Traveling north and/or south would be the effect of the modulator (in this case the LFO). Here is the catch: We are

only allowed to travel a maximum distance of 99 miles before we have to return again (Wave bank, page 3, “\*+99”). Here is the other catch: We have to actually traverse a full range of 99 miles altogether. Deciding that we only want to stay within the U.S., we set our home-base (start index) at 00 — the U.S./Mexican border — and we set our course (wave) for POS/SINE — travel into the U.S. only and back again, and so on. IF we set our course for, let’s say, U.S. and Mexico, we might try to just lay in SINE for wave. But here’s the problem: After having traveled the 99 miles into the U.S., by the time we arrive back at the border, we no longer have any authorization to enter Mexico (the start index cannot have a negative value). But we can’t just up and leave, going back to our regularly scheduled course into the U.S. again. We actually have to wait the amount of time it would have taken for the jaunt into Mexico before we can go back into the U.S. again. What a waste of time! After all, that would have been half the journey! If we want to go to both the U.S. and Mexico, we have to set the border to a different value, like Start Index = 50. This is still the border between the two countries, but we just call it something different — 50 instead of 00. This also allows us to go into both countries about the same distance,

49 up and 50 down. If we wanted to allow the Start Index to be 50, we would also set the Mod (right under it) to be modulated by +49, and the LFO Wave would be set to SINE. If you do this, you will be amazed to find that there is no noticeable difference between this way and the one previous.

The filters in “LivingTranswaves” are there to add some variety among the voices. Of course, the settings for all three filters are the same, but since they are modulated completely (with the exception of velocity \* +19) by Envelope 2, these settings are more crucial in effecting the filter’s response. I have taken and altered three default settings for each voice’s filter envelope: SLOW STRING for voice 1, PIANO DECAY for voice 2, and BRASS FILTR for voice 3. Though each offers different filter response, I wanted the whole program to sound more as if it were three parts working together as one rather than three distinct, unrelated parts. Therefore, attacks are all equal to 00 and releases are all equal to 50, LevV=06, AtckV=53, and VelCurv=QUIKRISE. As a result, each ENV2 will respond the same to key velocity (though different envelopes themselves) and will all attack and sustain together. You may just want to experi-

## SQ, KS, KT Prog: LivingTranswaves

By: Jack Stephen Tolin

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	Transwave	Transwave	Transwave
Wave	Res1-X	Res3-X	Pulse1-X
Delay Time	000	000	000
Wave Direction			
Start Index	00	00	00
MODSRC	LFO	LFO	LFO
MODAMT	+99	+99	+99
Restrk Decay	00	00	00

PITCH	1	2	3
Octave	+0	+0	+0
Semitone	+00	+00	+00
Fine	+03	-03	+00
ENV1	+00	+00	+00
LFO	+00	+00	+00
MODSRC	Off	Off	Off
MODAMT	-	-	-
KBD Ptch Track	On	On	On
Glide	Off	Off	Off
Glide Time	-	-	-

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	12	12	12
Noise Rate	99	99	99
Level	99	99	99
Delay	00	00	00
MODSRC	Off	Off	Off
Wave	Pos/Sine	Pos/Sine	Pos/Sine
Restart	Off	Off	Off

FILTER	1	2	3
Filter 1	2LoPass	2LoPass	2LoPass
Filter 2	2HiPass	2HiPass	2HiPass
FC1 Cutoff	028	028	028
ENV 2	+99	+99	+99
FC1 KBD	+00	+00	+00
MODSRC	Veloc	Veloc	Veloc
MODAMT	+19	+19	+19
FC2 Cutoff	000	000	000
ENV2	-99	-99	-99
FC2 KBD	+00	+00	+00
FC1MOD-FC2	Off	Off	Off

ENV2	1	2	3
Initial	56	99	32
Peak	99	99	99
Break	94	75	54
Sustain	84	84	99
Attack	00	00	00
Decay 1	42	50	22
Decay 2	48	70	80
Release	50	50	50
Vel-Level	06	06	06
Vel-Attack	53	53	53
Vel Curve	Quikrise	Quikrise	Quikrise
Mode	Normal	Normal	Normal
KBD Track	+00	+56	+28

AMP	1	2	3
Initial	00	00	89
Peak	99	99	99
Break	99	99	99
Sustain	99	99	99
Attack	00	00	00
Decay 1	20	20	00
Decay 2	20	20	00
Release	20	20	50
Vel-Level	19	19	19
Vel-Attack	99	99	99
Vel Curve	Quikrise	Quikrise	Quikrise
Mode	Normal	Normal	Normal
KBD Track	+00	+00	+00

OUTPUT	1	2	3
VOL	90	70	65
Boost	Off	Off	Off
MODSRC	Pedal	Pedal	Pressr
MODAMT	-20	+15	-50
KBD Scale	+00	+00	+00
Key Range	A0 C8	A0 C8	A0 C8
Output Bus	FX1	FX1	FX1
Priority	Medium	Medium	High
Pan	-56	+56	+00
Vel window	000	000	000

## EFFECTS

### 8-VOICE CHORUS

FX-1	50
FX-2	50
Chorus Rate	05
Chorus Depth	50
Chorus Center	50
Feedback	-27
MOD (Dest)	Rate
BY (MODSRC)	Modwheel
MODAMT	+99

Notes: Try also Wave bank, page 0, “SelectVOICE:ALL”; Filter bank, page 2, “Mod=<OFF>”; ENV2 bank, page 3, ENTER (Try each one! Remember to continually adjust your CV pedal.) OR try the same thing with the Amp bank defaults. Mix and match!



ment with different ENV2 settings by soloing one particular voice. This is easier in telling the differences of the individual default settings (if you want to play around with the default settings specifically).

The 8-VOICE CHORUS is being used here, as you may have seen (and certainly have heard by now, right?). I have used the 8-VOICE CHORUS here not only because it generally sounds good, but because of the nice way it readjusts the voices you hear in the stereo sound spectrum. In other words, though voice 1 is more in the left channel and voice 2 in the right, the chorus takes everything and throws it all over the place. You still hear voice 1 predominantly in the left channel and you do hear its echo over in the right channel. You will be able to hear this effect much better if you follow along with the notes I included with the program sheet for "LivingTranswaves." I find the chorus a very nice blending tool, a glue, an adhesive.

Aaah, real time controllers. Where would we be without them? Things would certainly be more static, to be sure. The CV pedal changes the mix between voices 1 and 2 since voice 3 is the main voice around which the other two voices are ornamented. In normal position, voice 1 is heard at a higher volume than voice 2. Full modulation applied, voice

2 will be louder than voice 1. The modulation wheel adds a nice bit of much higher rate chorusing. Although many people will not be willing to trade this effect in for a more realistic vibrato, well ... here it is anyway. Applying pressure decreases the volume of voice 3. Obviously this patch was put together as a way of playing among the three voices. Try anything here that amuses you for future projects.

Keep in mind that much of whatever you may be learning here can be easily used as fodder for other synthesizers and even some samplers. Many of the techniques are transferable. Also, as you program whatever it is you may own, keep in mind that what you are participating in is actually a manner of artistic creativity. Have fun, try new things, experiment. ■



*Bio: Jack has been married now since 8/20/94 to Janice Fay, programs alternative music with a contemporary flavor, and tries his best to take experimental sequencing, synthesis and sampling to new heights.*

From the Trenches:

## Tips and Tricks for Live Playing and Sequencing

Steve Vincent

One of the Best Things about being a faithful reader of the *Transoniq Hacker* for the past eight years has been all of the nifty tricks, tweaks and turnarounds that I have learned from my fellow keyboardists. Now it's my turn to offer some of my own tidbits, geared especially toward those of you on the front lines, playing live in smoky dives night after night, or in the sanctuary on Sunday mornings, or anywhere in between (like smoky sanctuaries on Sunday nights?). This is a potpourri of miscellany, some of it very basic, some of it just a little less basic. Here it is, straight from the trenches...

### Slick Click Track Intros

The oxymoronic decision to play live to sequences carries with it some good news and some bad news: the good news is, you've found a perfect way to torture the drummer! The bad news is, if the drummer ain't happy, then nobody's gonna be happy. My first bit of advice, geared toward your

pouting drummer, is: Split the click track and the sequence's audio tracks to separate outputs, one panned hard left, the other hard right. Isolating the click track will allow you to send one line just to the monitors and, ideally, to the drummer's headphones. In one band, I further split the click track output using a Y-adaptor, sending one line to be processed by the board for the monitors, and the other line directly to the drummer's private headphone amp, so he could have his very own private click track/monitor mix. Depending on the venue, it is likely that the audience will never hear the click track if it isn't coming out of the main speakers. I can hear some of you whining, "But the music won't be in stereo!" Relax — save the stereo stuff for your home studio projects. Nobody in a live audience is going to miss the stereo sound if it's not there, and you certainly won't be able to appreciate its subtleties from your perch behind the monitors.

On a couple of songs, specifically "1999" by Prince and

"Black Cat" by Janet Jackson, there are some sampled phrases that occur a number of measures before the beat begins, and we didn't want the click track to obscure those measures. Unfortunately, you can't program the click track to wait until the eighth bar, click for a measure, and then stop. The workaround is to create your own click sound, and sequence it into the song just like any other keyboard sound. I used a snippet of a clave sample that I had made, and it's a dead ringer for the EPS's click sound. You could cop your own click sound from just about anywhere (there's a Hackerpatch just waiting for the adventurous programmer!), even creating one from scratch on the EPS, using the CREATE WAVESAMPLE command, which will give you a nice (well, tolerable) sine wave sample. The click sample will take almost no memory, and you can insert it anywhere in the sequence. So, you can push "PLAY," the tiger can snarl "Rrowwr, rrowr, RROOwwwr!," Janet Jackson can say, "Ain't no acid in this house," then you (but not the audience) hear, "CLICK, click, click, click," and if everything goes right, the drummer will go "SMACK" on the snare, and you're into "Black Cat." Just make sure that you've panned your custom click the same as the on-board click, or the drummer will be coming after you with one hand wielding a menacing cymbal stand, and the other cupped over his deafened ear.

### Sending Program Changes: I don't think so.

I know there are probably many reading this who have been using your keyboards to send program changes to outboard effects modules with perfect success. I hate you. No, I don't really hate you, but it's been my experience that the MIDI utopia we read about in the ads where your flawless sequences spew out perfectly executed patch changes to your lights, your Midiverb, your drummer's D4 module, your guitar effects, and orders a drink for the lady at the third table — well, it just don't happen. I've spent billions and billions of hours attempting to get my EPS to change my SGX-2000 guitar module from the "Steve Howe Clean" patch to the "Steve Howe Fifths" patch for the guitar solo in "Owner of a Lonely Heart," and I'm halfway through the solo before "Fifths" drops in for a short visit, the Midiverb changes to a reverse gate on the vocals, the lights go out, and I find out that I MIDI'ed a Shirley Temple to the guy at the second table. No, I'll use my X-15 foot controller in conjunction with my God-given appendage to do it, thank you. Unless you're a solo act and you really depend on your sequencer to orchestrate the mixing and patch change duties, I highly suggest you have a real human being change the outboard effects. If you want to automate "just because



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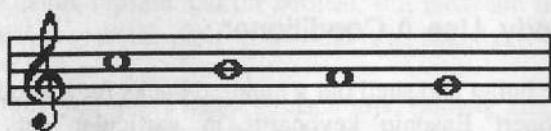


you can," it may not be worth the headaches. (Please, no letters defending sequenced patch changes — I know it can work! Sam Mims once showed me his patch-change configurations during a break at one of his gigs, but that doesn't count — he's Sam Mims.)

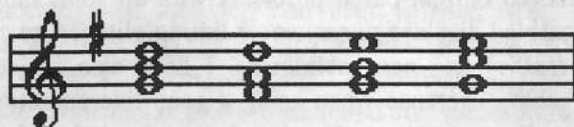
### Creative Use of Pitch Tables (Cheating, Part 1)

Legitimate, trained, and disciplined musicians may want to skip the next few sections. For the rest of us, there are times when you don't want to condemn your band to playing along with a sequence and click track just for the sake of four measly chords, but your guitar duties won't allow you to reach over and grab the keys for even a moment, and you don't quite trust the lead singer to play those four chords... what's a hacker to do? Pitch Tables to the rescue! Our band was covering "Anyway You Want It" by Journey, and I thought our female lead singer would look cool actually *playing* the keyboard for those four chords, but she just couldn't nail 'em. I decided to program some "one-note wonders" which would allow her to play those four triads by merely poking, in descending order, middle C, B, A and G. Everyone knows that you can make one-key chords by Layering sounds of different pitches, but changing the intervals from key to key is a bit trickier.

Using the above-mentioned "Anyway You Want It" chord changes as our example, we want to set up the EPS (or ASR or TS-n) so that when these four notes are played on the keyboard,



these are the chords that "come out":



Pitch Tables on the EPS's and ASR apply to Layers, so each Layer can have a different Pitch Table. The goal here is to create three Layers so that the above triads can be played by pressing one note per chord. The first thing to do is to pick a sound. For this example, you must begin with a one-Layer sound, preferably a lush organ sound. To begin with, COPY your organ LAYER three times — this will yield four Layers of the same sound to work with: three copies, plus the original (you'll want to keep the original Layer intact for one normal patch select). We'll be creating new Pitch Tables for Layers 2, 3 and 4 to form the chords.

Starting with Layer 2: Solo Layer 2 by choosing Layer 2 only on the OO PATCH = - 2 - - - - - page. Now make sure you're editing the correct Layer by pressing EDIT, LYR = 2. To get to the Pitch Table command, press COMMAND, PITCH, then choose EDIT PITCH TABLE, YES, then CREATE NEW PITCH TBL?, YES again. This brings up the screen where you program new pitches for any key on the keyboard. For the top notes of our triads, enter the following information:

KEY C5 = D5 0 CENTS  
KEY B4 = D5 0 CENTS  
KEY A4 = E5 0 CENTS  
KEY G4 = E5 0 CENTS

After this, scroll to the right to name your new Pitch Table: TBL NAME = CHEAT LYR 2.

Next, solo Layer 3, then make sure you're only Editing Layer 3 on the EDIT page. Hit COMMAND, PITCH again and say YES to EDIT PITCH TABLE / CREATE NEW PITCH TABLE? again. Now for Layer 3, you are creating the middle note of our four triads, so create the following Pitch Table:

KEY C5 = B4 0 CENTS  
KEY B4 = A4 0 CENTS  
KEY A4 = B4 0 CENTS  
KEY G4 = C5 0 CENTS

Finally, for the bottom notes of the four triads, make sure you're Editing Layer 4, then enter the following values:

KEY C5 = G4 0 CENTS  
KEY B4 = F4+ 0 CENTS  
KEY A4 = G4 0 CENTS  
KEY G4 = G4 0 CENTS

Now, having programmed Layers 2, 3 and 4 with unique pitch tables, Layer these three Layers together by going to the PATCH select page and enabling 00 PATCH = - 2 3 4 - - - -. If you did everything right, you'll get Figure 2 when you play Figure 1.

This is just one extremely simple application of Pitch Tables to The Real World of live playing, but it gives you an example of some of the programming power at your fingertips.

### Creative Key Mapping (Cheating, Part 2)

Another way to make live playing a bit easier is to split your keyboard into different zones for playing different keyboard parts as they come in and out rapidly during a

song. Now, before you say “duh” and turn to the Classifieds, consider that not only can you map different instruments to different zones, but those instruments can each do a pretty unique thing. For example, on Amy Grant’s “Good For Me,” I had three different sounds mapped across the keyboard: at the far left was the piano, in the middle was the synth pad, and the upper two octaves covered the Hammond B3 duties. On the recording, the simple piano melody was just five notes with a slapback echo. Rather than tie up an effects processor, I programmed those five notes to repeat the note on key up — perfect! But lacking keyboard dexterity in my left hand (alas, my early childhood training was on accordion), it was difficult for me to play the highly syncopated and percussive synth jabs with my right while poking the piano melody with my left, so I programmed the synth pad to (you guessed it) play one-note chords *a la* the above-mentioned Pitch Table technique. So all I really had to do was to sorta slap the correct note to the right beat, leaving my true powers of concentration for the left-hand piano melody. Then when the B3 solos came up, I was ready to wail with my right hand and switch the synth coming to my left hand. Schizophrenia would help.

### The Guitar-Possessed Keyboard (Cheating, Part 3)

While I’m not above a little bit of cheating, I absolutely refuse to sequence keyboard solos for live gigs. I’m sorry, but watching an EPS spit out passionate pre-recorded solos unattended is going a bit too far. But what’s a guitarist/keyboardist to do when you want to play the keyboard solo, but can’t do without the rhythm guitar backing? Nothing could be simpler: sample the guitar part and sequence it into the song! Our band did a Santana medley, and I played the organ intros live, then let the sequencer take over the organ parts when my guitar came in. Since I wanted to play the organ solos live, I just sampled myself playing the rhythm guitar part, which was just two chords, and sequenced the strumming into the song. It was an absolutely seamless transition: not one guitar chukka was lost, and the audience was treated to a live organ solo. And since I sampled the guitar directly from my own guitar rig, the sampled/sequenced guitar part was identical to the live playing.

### SCSI-fy

If you really want to add convenience to live playing, get yourself a SCSI drive if at all possible. Scour the classifieds, haunt the swap-meets, beg, borrow, or steal — but find yourself a SCSI drive for live giggin’! It’ll be worth its weight in gold. It doesn’t have to be huge — my SCSI drive for live gigs is just 20 megabytes, but it’s plenty big for everything I need live. It also doesn’t have to be expensive — mine cost me only ten bucks, including the case and cable. But it’s the speed with which you can load banks that

will really take the pressure off when you’re standing in front of a waiting audience and an impatient drummer. Using a SCSI drive makes playing live to sequences just a little bit more relaxing. You may even get to enjoy playing the music, rather than constantly be focused on the technical aspect of the gig.

While you’re at it, go to the trouble of arranging your “live banks” directory to follow your song set, and if possible, group some songs together that use the same instruments in order to speed up loads. By the way, when you format your SCSI drive, make sure that you set the interleave factor to its optimum setting. This can significantly affect the speed of your data transfers! Setting the interleave ratio is an option during the SCSI formatting procedure. You may have to experiment with a few different settings in order to find the fastest one, but it’s worth the time it will take to format and re-format your hard drive a few times at the outset. The procedure is: format your hard drive with a particular interleave setting, then transfer a pretty good sized instrument to the hard drive (at least 2,000 blocks), then load the instrument from the drive into your keyboard, timing the transfer on a stopwatch. Write down the elapsed time. Re-format your SCSI drive with another interleave setting, then load the same instrument, again recording the time. Do this with three or four different interleave settings (you probably don’t need to test all ten of them, unless you’re more compulsive than I am), noting the fastest setting. Finally, format your drive using the fastest interleave factor. You bought the thing for speed; you might as well make it as fast as you can!

### For Body, Use A Conditioner

Bite the bullet and shell out a hundred bucks for a good line conditioner! Ensoniq keyboards in particular get very cranky when fed less-than-pristine electrical current. I have used VFX’s, SD’s, ESQ’s and EPS’s in live gigs, and I have experienced current-based problems with all four, ranging from garbled displays to sequencer timing glitches, to complete crashes and near-meltdowns. I have also noticed a remarkable difference when using a good line conditioner. It’s worth every penny for the peace of mind and confidence it will give you.



These suggestions just scratch the surface; I am in the process of compiling a set of Country & Western tips and tricks for Ensoniq keyboards. They’re actually the same ones, but you’ve got to read ’em with a drawl and a cheek full o’ Skoal. Until then, happy giggin’! ■



# Crustaceous Percussionus

The Big Fish Audio Ross Garfield CD

Pat Finnigan

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For: ASR-10 w/SCSI, 16 Mb and compatible CD reader.

Product: Big Fish Audio *Ross Garfield Percussion CD*.

Price: \$299.95, Audio CD: \$69.95.

From: Big Fish Audio, 11003 Penrose Street, Suite C, Sun Valley, CA 91352, phone: 800.717.Fish (voice), 818.768.4117 (fax).

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This month we get to flex the new ASR-10 O.S. V. 3.08 and torque it around to review some Roland S7XX-type CD files from Big Fish Audio. And, if you read the header at the top of these reviews, be advised you'll need the full 16Mb expansion to read many of these files. We've been clamoring about our sampler not being able to pull some of the stunts that the K-type sampler will, so here goes...

## The Roses

All the samples are glorious D3 (digital in, digital process, digital out), so the noise floor of these samples is basically the same as the floor of the ASR-10. And you get 1137+ of *the* best drum samples out there in the ether wind: hard kits, soft kits, medium kits in both both hi and low memory configurations abound. For the cross-platform audience General MIDI kits are represented for perusal. But these are for the Cakewalk crowd: the meat of this CD is its sound...

And sound you get. I mean Gretsch kits, Ludwig kits, DW kits, Leedy kits, even the cymbal sizes are noted in filenames! Chokes, half-pedals, splashes and damped cymbals abound, and the snares! Any tuning, any length gate, any process, any size you can hear is here. Wet, dry, predelayed, snap, pop (sorry, no crackle) snares are all over this CD. Jazz kits here, with tight crisp fusion styles represented; even metal kits are included for speedthrashing. Of course there's 808 kits too. The very cool thing here is all are represented in both the aforementioned hi and low memory configurations for us.

Hundreds of configurations are present, so you won't have to assemble your drum kit piece by piece. Still, you'll get the best results by mixing and matching: I actually sculpted a Led Zeppelin kit that sounded nearly indistinguishable from the record. Gated kick with dry beater and 3' head, ultimo snare in short ambient room; all the stuff is right here! This CD is enough for you to seriously consider devoting your ASR-10 to the complete drum library/history, both

past, present and future. If you gotta ADAT, this CD will push that idea over the top.

MSRP includes a license to the purchaser for live or recorded use (in legalese, a reproduction license). You can't tweak these samples and sell them as your own, but an agreement is included just in case you're dense, cognitively challenged, or otherwise devious, reminding you not to distribute someone else's intellectual property as your own.

## The Thorns

This *is* a Roland CD, so you're gonna become one with our new friend O.S. 3.08 exploiting Ross Garfield at his finest on this disk. Since this *is* a Big Fish Roland Audio CD, every filename begins with a period (not a filename/extension separator), so don't think the ASR display has a stuck digit. Big Fish Audio explains this is the Volume ID in the Disk Load menu page of the S-Series, but that doesn't do us a whole lotta good, does it?

Also, a low memory configuration in an S-series is considered 8 Mb, with 1 Mb SIMMS populating all the SIMM slots: a high memory configuration is 8 4Mb SIMMS installed, or 32MB (re., 2X the max ASR config). A lot of these high memory kits simply won't fit into an ASR. So you'll find yourself importing half a low mem kit (kicks, snares and toms) into 3-4 layers, and trying to import half a high memory cymbal kit into the other 3-4 free layers. This is not the optimal deal, but it's better than the "import incomplete-out of memory" messages you get trying. You're gonna learn fluent Rolandese architecture (say sample-timbre-patch-program) and learn to import patches rather than programs to optimize drum kit creation. You'll quickly discover the 8-layer limitation this way. I spent 4 and a half hours importing/massaging/layering etc. creating that Zeppelin kit I spoke of earlier. And that's likely the antithesis of what we went with the ASR for in the first place: a supremely crafted, highly productive user interface. So you've gotta understand Rolandese to get the file to come across? Hmmm; could that be methane in the breeze? Anyway, it's the price you pay, so so-be-it.

Some of the samples that tweak the S-series resonant filter just don't come across, because, unless you use Waveboy's Resonant Filter Disk, you can't dial the ASR's filter Q up

high enough. Not a biggie, but duly noted. Importing certain samples by limiting key range seems to be the only way to stuff some of those 32Mb kit files into our 16Mb sampler, with striking results. Other imports layer right and left channels as two distinct layers: add a coupla layers for velocity switching and you'll bang the memory wall. All this is documented in the O.S. 3.08 release notes, but be forewarned...

The sheer number of representative sounds per drum might just drive you up the wall trying to figure out the subtle difference in sound. If you begin to wonder why the plethora of sounds is represented under 46 different effect settings, remember; the S-series doesn't have built in DSP. So smile approvingly at the DP-1 built into your ASR-10... I also discovered how slow an Apple 300 2X CD really is when uncached.

### The Deal

This is a CD of remarkable percussion content and unsurpassed sonic quality. It just doesn't xlate to the ASR as I'd like it to. And it's *no* fault of Big Fish Audio: this CD IS the goods: it's just that you'll have to jump through some hoops to massage them into ASR format. And it's not as big

a pain in the butt as it is to import samples via MIDI into another architecture: tried bouncing samples around on a Yamaha or a Peavey lately?

It's just that you're likely to lose sight of the forest pedigring the bark of the trees from this CD. You'll have to dissociate your programming hemisphere from your musical hemisphere to properly use this product. Consequently, you'd better spend a coupla days or weeks xlating and mapping these Garfy samples into Garfsoniq. *Then* load the kits instead of your routine default drum files, *then* start mixing track levels and tweaking instrument levels. You'll be much happier than trying to import the sound, wrestle with a loop-tuning parameter anomaly in the sample, get it processed right, map it onto the right notes, tweak the layers, and *then* trying to sequence the rhythm track. Do it in three steps: First, import the sounds and save in ASR format. Second, torque and tweak into a kit. Third, load and use with your left hemisphere: give that right lobe a break cause it's been doing double time. And sleep between these steps...

This CD is a genuine diamond of such high quality professional jewelers can only appreciate. If you've got a torqued-out ASR-10 to the max, you're probably one of those jewelers. A very small market niche of a niche of a

## - ENSONIQ SOUND HEADQUARTERS -

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niche: ASR-ers who have the hardware to read someone else's software, and the discipline of not only matriculating your instrument but its latest OS release is where this CD is aimed. And it's not really aimed at the ASR to begin with, so unless you can distinguish ear candy from ear truffles, it'll probably miss you.

But for those patient types who will spend more time than it should take to get things just right, this CD will return its benefit in spades. You've got to realize that you're in that rarified atmosphere above the 96 percentile where each percentage point costs an exponential amount of the preceding percentage point. You're not a casual club player or hobbyist. You're not a weekend warrior who blazes through the repertoire in crowd astonishment. You're not a diddler who hangs at the studio waiting for the open track to fill. You probably run the post-house, if not outright own it. You bought an early \$6000 ADS digital reverb over a Lexicon for the studio because *you* could hear the difference.

An A- is an A+ unless you can hear the difference. Ear candy for the educated palette. I rate this CD an A- because the label rates itself as "The Best Drums on Earth." That's pushing it a bit, if not outright facetious. Perhaps "The Best Sounding Drums on Earth" is correct. Because if they were indeed "The Best Drums on Earth"...

...they'd already be in Ensoniq format. ■

*Bio: When not answering broadcast NTSC/PAL video-capture questions for TrueVision, Pat Finnigan is a tech support person for RasterOps, a company that makes video boards and monitors for Mac and IBM platforms. He still uses a B-3 for a keyboard stand and watches the alpha channel.*

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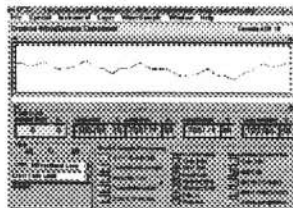
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# More on DP/4 Reverb Parameters

Ray Legnini

If you've been following this series of DP/4 articles, you know that last time we touched on some of the basic parameters that you need to understand in order to tweak existing DP/4 presets or your own reverb creations. We used a plate reverb last time. This time we'll continue, using the room and hall algorithms. We'll be focusing on using the parameters that are different in this type of reverb. Any changes we make apply also to the DP/4+. The parameters are identical.

Set up your DP/4 and console. We need an aux send connected to Input #1 of the DP/4. Connect the stereo outs of the DP/4 to two channels of the console for monitoring. A sound source capable of sending a percussive instrument such as a cowbell should also be set up. As I mentioned last time, it is easier to hear the differences in the parameter changes you make while learning if you use a short percussive sound. In fact, sometimes when I'm editing, I'll use a workstation keyboard and sequencer (TS-10 — plug, plug) to repeat a short phrase so that my hands are free to tweak reverb settings.

On the DP/4, select Config #52, 1 Unit Presets, by hitting the *Select* button and then scrolling with the data knob. Then, hit the *Unit A* button, and select ROM preset #52 Hall Reverb. The parameters and the experiments in this lesson apply to the Small Room, Large Room and Hall Reverb algorithms.

Last time we discussed the Reverb time, pre-delay time, and High Frequency Damping parameters. They function in the same manner. Take a moment now to scroll through the editable parameters available in Hall Reverb. The first new one you'll see is *LF Decay Time*. This parameter will set the rate at which low frequencies will decay. Higher values mean that low frequency information will take longer to decay. Try it; send a tom or a kick drum to the DP/4 while increasing this parameter. You should hear a definite increase in bottom "boom." At some point it will start to sound like you're in an airplane hanger. A negative setting on this parameter will have the opposite effect; the low frequencies will decay faster. Return the *LF Decay Time* setting to "00."

Moving on, we come to the Diffusion settings. There are two of these, one for high frequencies, the other for low frequencies. These are followed by the Decay Definition parameter. Send a cowbell to the reverb while you change the value for Diffusion 1. With lower values you will hear more of the quick echoes that make up the reverb. Here's a tip: if you're

editing and want to quickly compare a value you've chosen with the original, hit the "Cancel/Undo" button located to the left of the cursor arrows. This will undo the last edit you made and return it to the previous value as long as you still have that parameter flashing in the edit window. Recall the Hall Reverb preset before continuing.

Moving on, the signal passes through a detune section. This helps to smooth out the decay even more. Edit the rate and depth parameters. In this case it's easier to hear the effect with a sustained sound. This detune should be easy to understand if you are familiar with a synth LFO altering pitch. The pitch moves slowly above and below the center starting point at a steady *Rate*. Higher settings of *Depth* will make the effect more obvious. Recall the original preset before continuing.

Hit *Edit* and scroll to parameter #14. The next group of parameters control a delay line used to simulate the sound source bouncing around the room, creating the early slap echoes you hear in a hall. Two sets of these delay parameters are provided. Use your percussive source again while you move the values for *Time* and *Level*. Again, try an extreme setting (*Time* = 120 msec and *Level* = 50-100) to get your bearings and then back off into more subtle settings as you get more comfortable.

Recall the Hall Reverb preset before continuing. Hit *Edit* and scroll to parameter #20, *Position Balance*. The three settings available here allow you to change your listening perspective, from closer to the stage to farther back in the hall. You can blend the three position amounts to suit the context of your music. Zero out the factory settings while sending a percussive source through the DP/4. No reverb! This is actually a mixer of three areas within your hall, close to far. With your percussion sequence playing, listen to each of the position taps separately; then start to combine them.

That's all for now. Editing reverbs may seem difficult at first, but with a little practice you too can create useful presets. As always, save the best variations to a librarian program for easy recall. ■

*Bio: Ray Legnini is a world renowned television host. Watch for his new TV show "Reverbs of the Rich and Famous" coming this fall.*



# WHAM, BAM! Kickin' Drums from Sam...

Jeremy Ryan

---

Product: *Kickin' Drums, Syntaur Sample Set #3.*

For: EPSs, ASR, TSs.

Price: \$29.95/4 disks.

From: Syntaur Productions, 5402 W. 43rd St., Houston, TX 77092,

Phone: 1-800-334-1288, non-U.S./Info: 1-713-682-1960.

---

Sam Mims that is, along with Todd Speer, Tweaker in Residence around Syntaur Productions of Houston, TX. I'm a wee bit skeptical as I load Disk EPS 301 (Disk 1 of 4) into the '16 Plus... "Whirr clunk clunk."

Now, as a would-be musician hanging around anywhere I could find a microphone or an indulgent ear, I've known a few acoustical drum sets that occupy a permanent place in memory, including a raucous Vista Lite set by Ludwig, an all-maple set of Rogers, and a middle-of-the-line Pearl set with hydraulic heads. Thing is, this sample set is derived from all electronic sources, and all I've ever worked with in drum machines is a Sequential Drumtraks, a LinnDrum, and a Synclavier (which, of course, is not a drum machine per se)... Not to worry though... My expanding library offers bokoo whams, bamms, and things that go "BWAMP SHINGLEYJING" in the night, so we're checkin' 'em out to see exactly what these drums be "Kickin'."

**DISK 1; File 1: Roland TR-909** — Of note here is a splash cymbal sound mapped to C5 vicinity... Very delicate and treated gently in assignment of effects on the patch selects. A wood block (or wood rim tap) is also very mellow with that hollow nutty "clack." A set of Roto-Toms, or the like, misses the mark for me.

**File 2: Oberheim Kit** — Help me! I'm lost in space... pretty spacey sounds even for a madman like me. However, there is a very interesting (albeit how useful is up to the user) sustained tympani. If ever you require the sound of Dr. McCoys' sick bay bio-monitor, you'll find it on low C. Of interest is the fact that I was able to record instant patch select changes to sequence as some care has been taken to vary the internals of the effects rather than to impose the delay in trying to let the patch selects call up new effects titles. One can cleanly have some beats change in color on the very next hit due to this programming.

**File 3: E-mu Percussion Effects** — I wonder if the buying public knows how much time and effort goes into tweaking this many recordings into 146 blocks. There is an excellent

set of bamboo pipes that have a bit of bass kalimba sound in the attack, quite playable as they're mapped across the entire instrument. There are a few mappings that bring up entirely new waveforms under certain patch selects.

**DISK 2; File 1: E-mu Procussion Rap Stuff** — You will find a very punchy kick drum on the bottom... If you call up the X0 patch on this key you get... Nothin'...Oh, it's backwards. Thought I found a mistake... Wrong! There is one interesting loop. It's a kind of Jetsons' spaceship sound, 'tho a bit retarded, like a pitch-shifted motorcycle at idle. I wasn't successful in using it musically, perhaps another try later. You'll find some record scratching and such...Oh, well.

**File 2; Yamaha RX-11 Drum Machine** — I had to BOOST=ON to really hear these. Most of these are more traditional (acoustic) drum sounds although the patch selects call up a respectable psychedelic wrap. Good metal in this set yields legitimate playability. Discovering one of the double key combinations, I'm reminded of the report heard a few seconds after the blue flash of mortar explosion during fireworks shows at the Washington Monument.

**DISK 3; File 1: Boss DR-550 Drum Machine** — So far, I think this set emerges as premiere. There are many, many, drums crammed into 1585 blocks and the player can instantly change to totally new renderings during play by calling up layers on the patch selects. It's a huge set and, although I preferred to tweak down some of the 'verb on certain kick and toms, I'm going to get mucho mileage out of these. For many moons now, I had been working on developing a drum sound reminiscent of a burlesque-hall trap set such as one might have heard barking out rolls and rims to the bump and grind routine of Honey Divine. This set will get me close (along with ED-001, etc.).

**DISK 4; File 1: Roland TR-606 Drum Machine.**

**File 2: Phunky Drum Kit** — Here you will find that obnoxious hum-thump that pulsates into your space from the interior of an automobile. Outta my face! Caught that one exactly. Other novel entries are contained herein as well.

**File 3: E-mu Procussion Rap Kit** — You can easily create rhythmic pulse or "trance" sequences with this bad boy.

**File 4: Mars Percussion** — Here's a tiny little 66 blocks of special effects percussion that are imaginative enough to

launch a complete composition. Very inspiring... Call 'em "Speer's Weird."

**Conclusions:** I figure that there is an infinite number of variables that become manifest when any object strikes another. Believing this, it seems a futile effort to attempt to collect every drum sound available. No, I'd much rather keep selections down to a manageable 400 or so... well, Okay, 350 then... alright, but 300 is as low as I can go. I've divided my

available drum sounds into three classifications: Earthbound, Atmospheric, and "?". Kickin Drums makes welcome contributions to all of 'em.

You will find that Kickin Drums from Syntaur is 99 & 44/100% pure bang for the buck. ■

*Bio: Jeremy Ryan ("J.D.") is busy establishing his new studio in the more temperate climes of Clearwater, Fl.*

## HYPERSOFT

## New Product Announcements

**PC\_MATIC midi Software**, Netherlands, has released version 2.40 of *EPSASR EDIT for ATARI*. The editor now has full GEM-compatible windows. Perform all commands from your PC. Popup keyboard (never touch your sampler again). Wave-data display, wave overview-display. Edit SAMPLESTART and END, and LOOPSTART and END parameters by drag and dropping with your mouse. Graphic PITCH-, FILTER- and AMP-ENVELOPES. Shape your envelopes by drag and drop.

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## Classifieds

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Ensoniq ASR-10, 8mb ram, keyboard cover, extended sound library, 1 year subscription to *Transoniq Hacker*. Studio condition, less than 1 year old. \$1599.00. 704-542-1513, Chris.

VFX-sd w/hard case + large library. \$895. Tel/Fax: 212-727-0887. Mint!

VFX-sd, non-32 Voice, all other updates. \$850. Todd, 402-553-3750.

ASR-10. Used 6 months. Original box & equipment plus 200 sound library. \$1800 or best offer. 605-362-9429 or 605-330-6431.

ASR-10, 1 year old. Used in home less than 10 hours. Factory memory. 40 disks of patches. \$1700. 610-449-9922 after 6:30 pm (EST).

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"Resonant Dwarf" forges original electro/acoustic & electronic samples for EPS-16+. ARP, Korg, Moog, Hohner, Paiste, Roland, Sequential and assorted sonic surprises. Catalogue = \$1 or free with SASE. \$4 per disc. Andrew Faltonson, "Resonant Dwarf," 903 NE 50th St., Seattle, WA 98105.

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Prog: Lemongate

By: Jeff Jetton

Notes: A simple, one-voice patch showing how to emulate a keyed-gate effect. Check out "Lemon" by U2 or "Crazy" by Seal to hear this effect in action.

WAVE	1	2	3
Select Voice	On		
Wave Class	Transwave		
Wave	Resonant 1X		
Delay Time	000		
Wave Direction			
Start Index	00		
MODSCR	Env1		
MODAMT	+99		
Restrk Decay	00		

PITCH	1	2	3
Octave	0		
Semitone	0		
Fine	0		
ENV1	00		
LFO	00		
MODSCR	Noise1		
MODAMT	00		
KBD Ptch Track	On		
Glide	Off		
Glide Time	00		

ENV1	1	2	3
Initial	00		
Peak	99		
Break	99		
Sustain	99		
Attack	60		
Decay 1	00		
Decay 2	00		
Release	50		
Vel-Level	00		
Vel-Attack	00		
Vel Curve	Linear		
Mode	Normal		
KBD Track	00		

LFO	1	2	3
LFO Speed	41		
Noise Rate	00		
Level	99		
Delay	00		
MODSRC	LFO		
Wave	Square		
Restart	On		

FILTER	1	2	3
Filter 1	3Lo		
Filter 2	1Lo		
FC1 Cutoff	000		
ENV 2	00		
FC1 KBD	00		
MODSCR	LFO		
MODAMT	+99		
FC2 Cutoff	000		
ENV2	00		
FC2 KBD	00		
FC1MOD-FC2	On		

ENV2	1	2	3
Initial	-		
Peak	-		
Break	-		
Sustain	-		
Attack	-		
Decay 1	-		
Decay 2	-		
Release	-		
Vel-Level	-		
Vel-Attack	-		
Vel Curve	-		
Mode	-		
KBD Track	-		

AMP	1	2	3
Initial	00		
Peak	99		
Break	99		
Sustain	99		
Attack	40		
Decay 1	00		
Decay 2	00		
Release	65		
Vel-Level	00		
Vel-Attack	00		
Vel Curve	Linear		
Mode	Normal		
KBD Track	00		

OUTPUT	1	2	3
VOL	70		
Boost	Off		
MODSRC	LFO		
MODAMT	00		
KBD Scale	00		
Key Range	-		
Output Bus	FX1		
Priority	Med		
Pan	00		
Vel window	000		

EFFECTS — CHORUS + REVERB

Standard, default settings.

**The Hack:** I won't go into the details of how a gate works, but basically you can set it up so that the sound you're running through it is turned on and off according to another sound coming in the "key" input. If you run a string pad through it, and key it to your drum machine's hi-hat, for example, the pad will pulse on and off in time to the beat. "Lemongate" shows how to get a similar effect on your SQ/KS/KT. Ideally, you'd want to modulate the output section with an LFO, but since that produces a bit of a clicking sound, I tried the next best thing. By setting the LFO to a square wave, and routing it to the filter section, you get a similar effect — the LFO clamps down regularly on the cutoff frequency so that no sound passes. In addition, I put in a little Transwave action, to emulate a resonant filter. Although, to get a realistic gated sound, you have to play all your notes at the exact same time (so the LFOs will be in synch with each other), it still sounds pretty cool if you don't. The first thing you'll want to adjust is the LFO speed, which controls the tempo of the gate. The default chorus/reverb effects setting sounds good, but you can really use anything you want. Per-

sonally, I just bump up the reverb decay time to around 35. You also might want to try out some other LFO waves, such as POS/TRI. And if you'd rather have the sound come in right away, set the attack of the amp envelope to 00. I made this patch intentionally simple so that you'd have no excuse not to program in the dang thing. Of course, there's two extra voices just sitting there, waiting to be used, so you may want to try beefing it up a bit. The mod wheel could also stand to be put to good use. And, if you happen to like clicking sounds, go ahead and try using the LFO on the output section. That'll free up your filter for more ordinary uses.

*Bio: Nashville-based keyboard player Jeff Jetton toured with John Berry for two years, and is currently on the road with Warner Brothers recording artist Victoria Shaw. His favorite Gibb brother is Robin, although it's really hard to choose just one. You can contact him via E-Mail at jeffjetton@aol.com if you have any comments or questions.*

**Hackerpatch** is intended to be a place where patch vendors can show their wares and musicians can share their goodies and impress their friends. Once something's published here, it's free for all. Please don't submit patches that you know to be minor tweaks of copyrighted commercial patches unless you have permission from the copyright owner. All submitted patches are subject to consideration for mutilation and comments by Sam Mims and Jeffrey Rhoads — our resident patch analysts. If you send in a patch, *please* include your phone number. Requests for particular patches are also very welcome.

# 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: interface@transoniq.com  
Subject: Trimming Samples

In Issue #119, Robby Berman offers way to insure that samples are tight and don't have unnecessary silence in the beginning resulting in "flabby" sounding samples. I have another suggestion for a way to do this that has worked great for me, and I believe is even a little easier.

Simply take the sample in question, for example a snare drum, and use the root key parameter on the pitch page to transpose the sample WAAAAAYYYY down... to the point where it doesn't sound like a drum anymore. Then all you have to do is play the sample and adjust the sample start until you hear sound immediately after you strike the key. With the sample transposed down, any extra space at the beginning of the sample will effectively be "stretched out" and easier to hear. After you're done, bring the pitch up to its original level, truncate, and you should have a snare drum tighter than a goose's bum.

Tom Shear  
Via Internet

[CS - Thanks for the tip. And check out Paul Najar's letter below for another approach to goosing sample start times.]

TH -

Here's a tip for the Hacker -

For those wanting to print out the e-mail version of the *Hacker* in a way that saves some paper....try using the "TEXT IN" feature of Word Perfect 5.1 using the "DOS TEXT (CR/LF to SRt)" option. This changes the formatting to eliminate a lot of blank space at the end of each line and re-save the file. Then I use a WINDOWS type word processor (MS Write will do in a pinch but you'll need to save the file as an ASCII text file) and reduce the font as much as I can while keeping it readable.

Looking forward to the next issue.

Rob Fisch  
Chatham, NY  
Via Internet

[CS - Cool! Go online, save a tree!]

[TH - And whatever you do, printing out the entire issue is NOT recommended! (Actually, after a little while net-surfing, a lot of people don't bother at all with hardcopy.)]

Hi Hackers,

Does anyone have any experience of using the new Iomega Zip drive with the ASR-10R, as it seems like a very cheap storage option? The drive uses 3.5 inch media and works a bit like a Benoulli Drive and costs under \$200 and a 100MB cartridge under \$20. There are two versions of the drive; one for PC with just a parallel port and one for Mac with a SCSI port.

Ian Barnett  
Via Internet

[CS - Ensoniq confirms that the Zip drives work just fine with the ASR and TS series (see Brian Albritton's letter below). However, for some reason the drives do not seem to perform well with the EPS or EPS-16 PLUS. Stay tuned; we'll bring you the details as they become available.]

[Ensoniq - We have been testing the Zip drive, and it works fine with the ASR and TS. Our only caveat is that Iomega has implemented a proprietary software-based write-protect scheme that is not part of the SCSI standard. The cartridge that comes with the Zip drive includes some bundled software utilities and is write-protected. The ASR cannot reformat the cartridge - you must use your PC or Mac to un-protect it before you can re-format it. Blank media is not protected this way, so your subsequent media purchases are no problem. This also means that these cartridges cannot be write-protected for use with the ASR so please be careful!

To get ahead of the development cycle for once, we can announce that Iomega has

also just shown a new drive called Jaz, which is a 1-Gigabyte removable mechanism similar to the Zip drive. It will retail for approximately \$699, with 1-Gig media costing about \$100. We have already tested this device and it works fine with the TS and ASR, including Audio Track recording. What a country...!]

Subj: CV Pedal controls other device.

I have a Digitech MIDI effects device that can accept continuous controller info to alter various sound parameters in real time. However, their controller pedal array goes for about \$300.

I have a TS-12 and a CV pedal. Can this be used as a continuous controller for the Digitech device? In other words, I have the CV pedal plugged into the TS-12 and the TS-12 is MIDied to the Digitech. Does the TS-12 output the CV pedal data as MIDI continuous controller data so I can use this as an indirect way to control the Digitech?

Thanks,  
jc  
Suntower Systems  
Via CompuServe

[CS - The volume pedal can be set up to transmit MIDI controller data via the TS-10/12 MIDI out. Setting the pedal to VOL on the SYstem page will cause the pedal to transmit controller #7, volume. Setting the pedal to MOD (modulation), will cause it to send controller #4.]

Hi to all,

I thought Robby Berman's article on trimming samples was well intended but I feel that there is a much quicker and easier way to achieve the same task with the same amount of accuracy.

First thing you do is go to "edit/system3" and turn auto loop finding off. Then after having taken your sample set the sample start to zero then bring the sample end point down to almost zero (to a point where all you hear is "dead air"). By moving the sam-



ple end point (toward the back of the sample) you will be able to hear where your sample starts indicated by a small click (the very front of your sample). Then by moving the sample end point back closer to the start point you will gradually eliminate the click and you can get this down to single sample accuracy where, perhaps, a setting of 564 (0) in the sample end page will give you a small click but setting 563 (0) will give you no click at all.

Once you have established this condition make sure you set your sample end point (in this case) to 564 (0). Then go to sample start and push its value full up. It will then read (in this example) 563 (0). Finally go back to sample end and push its value all the way back to the end of the sample. This last step may seem like an obvious one but I have been caught out by truncating before doing this and inadvertently erasing some of the sample I wanted to keep.

Even though the above explanation may seem a bit strange at first, for me the whole process described above takes about fifteen seconds and it's dead accurate. Using headphones or a fair amount of monitor volume helps because the first murmurs of a sample can be pretty quiet. Also my default "pre-trigger" setting (in the sample page) is 15ms and in a 2-second sample at 44.1k between 500-700 single samples of dead air seem to be about the norm. I would much rather trim after the fact than be worried that I have missed something at the start of the sample.

Finally, Robby Berman's mention that all factory samples are well trimmed has not been my experience. While I admit the majority are, I have found plenty that are not.

With MIDI music I believe that the above concept is one of the most crucial techniques one needs to master to make effective use of available resources otherwise Quantization and a whole host of other often used sequencer techniques has no frame of reference.

I hope some of this makes sense and helps.

Cheers,  
Paul Najar  
Paddington NSW Australia

[CS - I don't suppose I need to point out to you Tom Shear's letter, above. Keep on trimmin'...]

[Robby Berman - Well. Taking Tom's suggestion, Paul's technique, mine, and adding the one where you just listen to what you're lopping off, you have pretty much all of the possible ways to trim the front of samples. I still prefer my method, which, by the way, is virtually the same as Paul's, except the way I do it, the click keeps clicking as the loop goes round and round - I just think it's easier to hear what's going on that way. Any one of these approaches will work.]

Dear Transoniq Hacker,

In Issue 119 you made some suggestions about using the ASR-10 as an outboard effects processor. I have tried before to make an effects loop using the effect sends/returns on my Tascam 4-track and the audio inputs/outputs on my ASR-10; however, I develop a phasing problem, i.e., the signal is doubled and offset a little. This happens no matter which effects algorithm I am using. Is this because somewhere on the line, the wet signal is getting slightly delayed relative to the original signal? Could this be caused by unbalanced jacks or

other things I should be taking into consideration?

Also, a reader wrote in that his TS-12 crashes in EVENT EDIT. My ASR-10 rarely crashes except when saving a whole mess of edits I've made in EVENT EDIT TRACK (I don't remember the exact name right now, but it's the one where you edit events in a song track), especially if the piece is long. This can be extremely frustrating. I was wondering if this had to do with the way the ASR-10 shuffles data in RAM (all those scattered blocks and stuff) and if adding more RAM (I have 10 Meg) would help? I am currently using V 2.0 of the OS (though I have 3.0, I don't use it because it takes too long to save stuff or make changes).

Thank you for any illumination you can shed on these matters...

Gerry Valle  
Via Internet

[CS - The first thing I figured when I read your letter was that you must be mixing some of the dry signal through the ASR

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back in with the original dry signal present in you Tascam. This would happen if you were processing audio through your ASR with the effects mix set to anything but 100% wet (which you accomplish by setting the mix for whatever FX busses you might be using in the ASR to 99).

Still, if you were inadvertently sending dry signal back to your Tascam along with the effected signal, the audio would only exhibit some problems with phase cancellation. You wouldn't hear anything that could be described as doubling, or perceptible time delay.

The fact is, the wet signal is not delayed in any way (unless, of course, you're using an effect algorithm – the delay algorithms come immediately to mind – designed specifically to delay the signal). So if what you're experiencing is actually just problems with the phase, I'd recommend double-checking the effects mix for any of the busses being used. If you are actually hearing some sort of delay, I'm not sure what that might be. If this is the case, you might try to provide me with a bit more info on how you're setting things up, or you might try contacting Ensoniq Customer Service (610-647-3930) directly.

As far as the crash problem goes, the one thing I will recommend is that you use the most current version of your preferred OS. In your case, this would be OS 2.51. You should be able to acquire a copy from your local dealer, or directly from Ensoniq.]

TH, Ensoniq:

First of all, I would like to say how happy I am with my TS-12 and the Hacker. (You hear all the negative stuff so I thought you might want to hear some positive comments.)

Question: I recently purchased the CV pedal so that I could record volume changes in sequence mode. (I avoid using song mode be-

cause you have to load the sequences in the correct location for a "song" to work properly.) Is there a way to copy volume changes from one track to another in a sequence? This would help me evenly fade out all tracks at the end of the sequence, etc...

Thank You,  
Joe Allbritten  
Caddo Mill, TX

[CS – You can use the FILTER command (located among the EditTrack menu pages) to copy data from one track to another. First, make sure that the track containing the data you want to copy is selected. Press the Edit Track button twice, and select FILTER. Select the type of data you wish to copy (in this case, probably either CNTL-7.VOLUME, or MIXDOWN-VOLUME, depending on the type of data you've recorded into the source track). Select MODE=ERASE; this will take you to a sub-page which will allow you to specify whether you will be erasing or copying the specified events. From here, you can select the destination track – the track into which the source data will be copied. Do so, and then press the soft button above \*COPY\*; you will be returned to the FILTER page, and you can execute the copying of the data by pressing \*YES\*.]

Interface:

I have a question for: 1. Clark, 2. Ensoniq, and 3. Hackers out there...

The Situation: After a few years of relative safety in my home studio, my original VFX, purchased in 1989, has taken to the road. In October, I hooked up with "Slip of the Tongue," (stop laughing at the name, please) a Visalia-based band, and my VFX (including all connections and stand) go through at least two complete tear-downs and set-ups each week. I'd appreciate any ideas or experiences to minimize unnecessary trauma/pain/damage to my VFX. I play

rock and blues, so keyboard-pounding is a factor.

I've taken the obvious precautions – purchased a good hard-shell case and an Isobar surge-suppressor gang-box, and my stand is 1-3/4" tubular steel. I'm looking for the stuff that I haven't thought of, like the "VFX Twist" documented in a recent issue.

For my contribution to the "Playing Live Caveats" – be aware of the relative humidity and air circulation of the room you're playing in. During a break at a gig in the basement dining room of the Wausau (WI) Country Club, my VFX began firing off notes by itself. Luckily for me, it was a Christmas party and the patch setting was some sleighbell sound, but you get the idea. The local authorized tech said it was probably the very high humidity that did it.

Anyway, any additional advice would be appreciated.

Joe Travo  
Visalia, Ca

[CS – I've used Ensoniq gear in club dates for years without trouble, and my only recommendation is just to treat everything sensibly. Try to avoid unnecessarily dropping your VFX from high places, try not to drive over it when parking the band van, and so on.

Seriously, your VFX should provide you with trouble-free operation as long as you treat it with a modicum of respect.]

[Ensoniq – It sounds like you might need your VFX checked out and be sure that everything is as current as possible. Contact Customer Service to discuss this further.]

TH:

To all VFX and SD-1 owners: There is a hard-core fix for your so called vintage key-

## Change of Address

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

## Missing or Damaged Issues?

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boards. No, it's not easy to do, and no, it's not for all users to take on by themselves. Yes, your keyboard will perform like never before, and, finally, yes, you'll fall back in love with your VFX, SD-1 like you've always wished you could! How, you ask? Read on!

In the *Hacker*, I often read letters from owners who are saddened by the unreliability factor associated with these fabulous keyboards. Well, fear no more the inevitable crash, oh great and inspired performer. There is hope and the proof is making itself evident in my own SD-1 week in and week out. It took many months of trial and error and a good knack for electronics, but success prevailed. My unit hasn't crashed, miscalibrated, locked up, or any other commonly written about failure since the installation of my modifications.

I've noticed in the *Hacker* that questions about the reliability of the units in question here are often not answered or you get the response that we all know too well, "Contact Ensoniq Customer Service."

Well, your keyboard may have a problem that Ensoniq may not be aware of! Before I begin, let me say that I have never dealt with such a committed group of individuals as I have encountered at Ensoniq. Their service is second to none, product knowledge is a life saver, repair time is fast, and they can and do fix most of the problems we throw at them. However, by swapping out main boards and power supplies, etc., they may be missing the source of some problems that will ultimately return. Starting to sound familiar to anyone? By this I mean that, by design, some problems are destined to come back given the elements of corrosion and road beatings.

I have some fixes that are working extremely well and have so far kept my unit on stage with me and not at Malvern on the bench. The VFX, SD-1 Series is indeed quite unique to the later Ensoniq releases and in many ways still superior. Enough jabber, I just wanted to make sure you all understand that my love affair with the SD-1 and Ensoniq is strong and unblemished, as is my passion for reading the *Hacker*.

Special note: Ensoniq neither endorses, nor are they yet aware of my fixes. Furthermore, do not even get near your unit with a screwdriver if it is still under warranty. Let them do their jobs, that what a warranty is

for. If not under warranty, you take your chance of breaking a working unit. It's your call, so think before you act. Aside from that, if you're on your own with an annoying unit, read on!

1. Connectors: The history of a connector is one of failure. Any connection in a design that can be eliminated will improve the reliability of a design. Humidity, vibration, and temperature changes make the metal connectors become less of a conductor and more of an insulator thus a failure in the system. Ribbon cables and their connectors simply do not make sense in a portable keyboard. There's way too much vibration and the conductor is so easily broken. If you experience many calibration errors, hard wire the keyboard assembly to the main board. I used 22AWG stranded alarm wire because it is flexible and easy to solder. I individually hand soldered each pin on each end, paying attention to pin numbers and order. Don't make any mistakes is all the advice I can give. When you've finished all the separate wires, bundle them, cable tie them, and install a few chokes around the lines. You can fit about six wires per choke. The chokes help eliminate high frequency interference which can upset digital transmissions. Also, hard wire the power supply connectors on the input and output of the power supply board. It's the one with the fuses and the large heat sink sticking out of the back. Now, speaking of heat...

2. Voltage Regulation and Temperature-Related Dropout: Have you ever felt the back of your unit and found it to be too hot to keep your hand on it for any length of time? It's warm because it's doing its job. Heat is caused by the voltage regulators on the power supply doing their job. But, if they get too hot, their outputs may vary. Such is the case with the voltage regulator found on the main board of the SD-1. (This section is specific to the SD-1.) The -5v regulator is the one with the heat sink on it, closer to the front of the unit, near the keyboard. (It can be seen simply by opening the top.) This regulator has a direct effect on the Reference Voltage used by the main board. When it gets too hot, reference drops to below 123. (Can be viewed by pressing Preset and Compare simultaneously.) When you first turn on the unit it will read a nice cool 127 or higher. But after an hour or less, it drops to a dangerously low 123 or less. At one point, I got a 112 before I modified the unit. After hardwiring J2 at the power supply to J14 at the main board, it jumped to 120 - but my lockup problem

still existed. I then used a can of circuit cooler and sprayed the regulator while watching the reference page to find that it jumped to 133. As it slowly warmed it dropped to 120 again. Still in the crash zone. I decided to replace the regulator with a military spec regulator Part Number 7905CT0220 -5v. I installed it with a larger heat sink and a cooling fan. Now the unit fires up cold at 133, drops to 127 and holds steady. Ever since, I have had absolutely no crash or lock up problems at all. I powered the 12v micro fan directly from the unit power supply pins 6 and 9 at J2. I also installed a switch on the side of the keyboard to be able to turn the fan off for quiet times in the studio where it can be heard humming. On stage I leave it on for a steady 127 during my performances. Even with the fan off however, the new regulator never drops below 125. Success!

So my fellow VFX and SD-1 owners, take control of your instrument and really enjoy its prowess. The SD-1 is and always will be my favorite keyboard. Hands down, it blows all others away. At this point I have visions of puzzled faces at Ensoniq. But fear not, they know me well, ask Denny! Hey guys, whatever it takes, I am going to keep my SD-1 on the road. Now I've found a way. Incidentally, my old Ensoniq SDP-1 is still on the road with me as a MIDI driver - due to some of the very same modifications.

P.S. To whoever started this rumor about the VFX/SD being vintage keyboards already - that's balderdash!

If you have any questions, please write to me at:

Roy Bertucci  
PO Box 32124  
Lafayette LA 70593

*[CS - The modifications detailed above are neither sanctioned nor recommended by yours truly. So if you blow something up performing one of these procedures, write to Mr. Bertucci, not me.]*

*And thanks for the tips, Roy.]*

*[Ensoniq - Hard-wiring connectors is always superior from a road-worthiness point of view. Unfortunately, we can't eliminate connectors in our designs, as there would be no way of installing or removing modules for fast service.]*

*We have no idea how the -5 regulator could*

lead to either a crash or a lock-up. At worst, the reference reading changing can cause the analog controllers to produce inaccurate readings. And you are correct – we don't endorse your "fixes," and they would void warranty.]

Dear sir,

Since December, 1993 I've been a proud owner of an Ensoniq synthesizer. I like the sound of Ensoniq a lot. Since then I've become interested in MIDI, sequencing, etc., have become a member of a Dutch computer club MIDI group (HCC), and have the synth connected to a 486 PC. The combination of the synth and the computer is great.

I have some questions about my synth. Perhaps you can help. My synth is an Ensoniq SQ-2/32, 230 Vac, 50 Hz, Serial Number: SQ-12886, date: 11/09/93.

Since the synth is not General MIDI there have been some problems with some software. Also, the SQ-2 is not a common synth in Europe. I've worked with a Windows

MIDI mapper so it understands my SQ-2, but I'm not satisfied with my solution.

I've been phoning my dealer, the import company, and an Ensoniq club (The Belgian Ensoniq Association) to get a better solution but none of them could help me. So I'm writing this letter to you and Ensoniq because I think there has to be a reasonable solution. Is there? Are there any other programs that would be useful? Is there a good edit program that runs under Windows? I'm going to be near Chicago in June, is there any place near there where I could buy any of this software?

Also, I can't find the number of my SQ O.S. (or how to find the number of my O.S.). I'd like to know about O.S. upgrades – but I don't know what I have now.

Thanks for your time,  
Henk Salomons  
The Netherlands

[CS – I'm afraid I'm not too clear on what it is you may be asking for. For instance, how is the SQ's lack of General MIDI com-

patibility presenting a problem? If your difficulty stems from the fact that GM compatible sequences are not selecting the correct programs when played on your SQ, then it seems to me that you have already found the solution: use a MIDI mapper to re-map program changes to play the correct sounds.

While I'm not all that familiar with the Chicago area, I'm sure Ensoniq could direct you to any of their authorized dealers in the area. One of these dealers should be able to help you straighten things out.

To display the OS version on your SQ, press the Edit Seq/Presets button, then hold down the Bank 9 button (located in the upper row of buttons), and press the number 1 button in the lower row.]

[TH – Regarding the Chicago question, we've faxed a copy of your letter to Ensoniq in the hopes that they'll be able to help you before your plane takes off. (Not much lead-time!)]

[Ensoniq – We received your letter from the Hacker but don't really have any fast response that could help you while you are/were in Chicago. It sounds like you want to use software that conforms to the GM standard, and the SQ doesn't support GM. There is no other solution beside what you have done. We are not sure what you need from the SQ that can be addressed – it will not listen to 16 MIDI channels at the same time, and only has 80 programs per Bank.

This does not mean that you can't make great music with it, and create wonderful new sounds. Just don't lock yourself into the limits of GM – enjoy the SQ for the wonderful synth that it is.]

Dear In-yr-face:

Just wanted to drop a line or two about a couple of Ensoniq-related things. For starters, our church just purchased a KT-88. I am happy to say I participated in the selection and purchasing process. The KT is a fine instrument. There is a readily discernible improvement in the quality of the samples and programming, and the keyboard feel is out of this world. It is good to have the Rhodes sample in there too – it HONKS! I had one of the early 8-bit sampled piano modules and really liked the Rhodes sound. Joey Paschall from Ensoniq was kind enough to come over and give us a

## 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.

TS Questions – Pat Esslinger, Internet: patc@execpc.com, Compuserve: 74240,1562, or AOL: ESSLIP.

TS, VFX, and SD-1 Questions – Stuart Hosking, stuh@ozemail.com.au.

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) 925-8881. EST.



demo one Sunday afternoon on his own time. He is truly an ambassador for Ensoniq. He even gave everyone pointers on making an expressive face when using aftertouch. I also think it appropriate to commend Tom Henderson at George's Music in Spring City, PA, for the way he worked with us. We're not that far from Malvern, so why doesn't someone just drive over and give old Tom a pat on the back, okay?

There was an SD-1/32 bug I discovered a few years back and I wanted to relay it. MIDI program change number 001 (true MIDI number 000) does not get transmitted in Song Mode. For example, if you have three sequences (call them... let's see... hmmm... Sequence 1, Sequence 2, and Sequence 3). Track 7 on Sequences 1 and 3 is configured for MIDI channel 9, program number 001, while Track 7 on Sequence 2 is configured for MIDI channel 9, program number 002. If you select the sequences individually, the program changes will occur. When you string the sequences together into a song and then select the song, the program change to 001 will go through. When the song plays, however, the program changes to 002 at Sequence 2, but does NOT change back to 001 at Sequence 3 - it remains at 002. The behavior is the same on outboard module, keyboard, FX, etc. The workaround is not to use programs in the 001 location.

Also, someone wrote in about this a few issue back: I too have had the problem of the BPM spontaneously going WFO to 250 when a sequence is playing while on the Locate page.

In response to Dick Young's letter in the Interface TH Issue 119 regarding a "roar" breaking out: I have experienced something which might be the same thing with my SD-1/32. I have noticed it most prominently on RUDE GUITAR and DYNAMIC GRAND. While playing RUDE GUITAR, sometimes a drone breaks out and develops into a loud, feedback-like roar. I know feedback is a frequently-used rock guitar technique (I play guitar), but somehow I don't think this is part of the effect. It is not always necessary to be playing for this to happen. It seems related to the FX program; switching to a different patch eliminates the noise. I have not tried pressing the same patch button a second time. DYNAMIC-GRAND has the same tendency, although the drone does not develop into a full-fledged roar - more like a metallic hum. This most definitely seems related to

the FX program, because I get the same thing when using that FX algorithm in a sequence.

One more thing - I wanted to turn hackers on to the music of Bill Champlin, former Sons of Champlin leader, then LA session vocalist and songwriter, now with Chicago. He has a solo career going on the side and has some CDs out on the Turnip label (full name Turnip the Music Group - get it?). "Burn Down the Night" is a fairly recent release, and "Through It All" is either in the works or done by now. "Burn Down the Night" liner notes state that he uses Ensoniq products. In a response to a reader in *Thunder & Lightnin'*, the Bill Champlin newsletter, he recommends the TS-10 for a songwriter to do basic demo tracks at home, and says that he has used the TS-10 for "a lot of things, especially on the road." I've been trying to arrange an interview with him for TH. Stay tuned.

John R. Bolles  
Allegra Music Production  
2219 Heather Lane  
Gilbertsville, PA 19525

*[CS - Haven't heard anything about the "bug" you've discovered with program 001, but the problem you describe with the tempo changing is usually related to data slider "jitter." The solution is either don't leave the SD showing the locate page while a sequence is playing, or get your machine in to your nearest service center. Also, I don't know what might be happening to cause the "roaring" noise you are hearing occasionally. This, too, seems like a problem for a qualified service center.]*

*[Ensoniq - We'll have to look into the SD-1 "bug" and get back to you. Your problem with the effects "roar" sounds like your ESP chip needs adjusting or possible replacement. Contact Customer Service for more help.*

*P.S. Check out Bill Champlin's smokin' organ playing on our new SCD-1 Chicago Signature Series!]*

Subject: Vox Function  
Interface@transoniq.com:

I am looking for any software that will enable me to sample only between a certain preset threshold for both start and stop/continue using the Enter button as the final stop before key assignment. Also, what is avail-

able for programming the ASR more in depth using a PC and where can I get the information and hardware?

Bill Farkas  
The Glass Menagerie BBS  
Reading Pa.

*[CS - I know of nothing that will record audio only when it crosses a defined threshold in the manner you describe. Oh well.*

*As far as I can tell (remember, I'm mainly a Macintosh user), the program "Sample-Vision" from Turtle Beach (800-645-5640) is probably most worthy of checking out in your quest for a ASR-compatible sample editor. Another program which has gotten a lot of praise is one called "Sound Forge." Unfortunately, it apparently does not yet communicate directly with the ASR. If you just want to display and edit ASR parameters, you might check into EPS/ASR Tools for Windows from Rubber Chicken Software Co., (800-8-PRO-EPS).]*

Dear Transoniq Hacker:

A friend who has been playing the TS-12 even less time than I has asked me if there is any way to change the time signature of a sequence after you have created it. I told him "no" at the time, but now have discovered that it can be done. Here's how I discovered this simple trick:

I was studying drum rhythms out of a book and sequencing in realtime some 2-bar patterns in 4/4 time. I looped one, and was jamming with MONSTR-LEAD, when the

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idea for a tune began. I appended the drum sequence to itself until I had 16 or 32 bars, and then laid down bass guitar and lead guitar tracks. I soon discovered that the chorus had one bar of 6/4, two bars of 4/4, one bar of 6/4, two bars of 4/4, etc. The drum track didn't fit. When I made the intro, it was three bars of 5/4 and two bars of 3/4.

What I did was create a new sequence in 1/4 time, and copy the tracks one by one from the original sequence in 4/4 to the new one. Then I edited the drum track to add the extra two beats for the measures of 6/4, so the drums were in synch with the other instruments. This same method could be used to change a sequence from 6/8 to 2/2, for instance (anyone else out there interested in jigs?). I hope this will help out other novices like myself.

Thanks,  
David Simenson  
Merced, California

[CS - Thanks for the cool tip, David!]

Hi, Transonique Hacker!

Thanks for the nice magazine - it has helped me a lot in working with my TS-12. However, I still have some questions concerning using the TS-12 with a computer.

I want to buy a new Apple Performa 630CD or maybe a Power Mac. The main use would be working with my TS-12 and running a software sequencer/notation program. So my questions are:

1) Is the Mac a good choice and which one would you recommend? I.e., how well do they work together with the TS?

2) Which MIDI interface will work best with the Mac and the TS-12?

3) Which software would you recommend (Cubase, Mark of the Unicorn,...)?

One reason I'm looking for serious information is that I've become cautious after learning about the GM Mode of the TS-12. I was disappointed to realize the the TS can only receive GM information via an external sequencer. (But GM is written in three-cm letters on the keyboard.) I didn't buy a synth/sequencer to have to buy a second sequencer to have General MIDI.

## Keyboard Raves About Ramtek

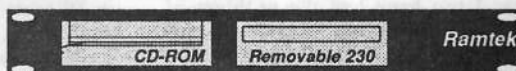
November 1994

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] DI200, 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.

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Well, anyway, I like the instrument and I can live with that.

I hope you can help me.

Yours,  
Herbert Lacina  
Wien, Austria

*[CS - Without really getting into a lot of depth on this one, I'd just like to point out that any Power PC-based Mac is going to remain a viable machine longer than any 68040-based Mac you can name - the Performa 630 included. I will mention, though, that I've heard that Apple now offers what they are calling a Performa 6115. This is a Power PC-based Performa series Mac that sells, apparently, for not much more than \$2000 or so, complete. I'd take a close look at this machine, if Macintosh is the way you want to go. As far as the Mac-versus-PC controversy, there are just too many factors that go into making a decision about which to buy for me to be of any assistance. Suffice it to say that there is excellent music software and hardware available for either platform. And if I had to make a glib, shoot-from-the-hip statement about the differences between the two platforms, I'd have to say that PCs tend to find their happiest homes with wireheads; they tend to be a bit less expensive to purchase, expand, and upgrade, while the Mac has the advantage, (hands down), in the "plug-n-play" department.]*

2) Any MIDI interface that will work with the Mac will work with the TS-12. The interface you choose will depend on a number of factors: Do you need to be able to synchronize to external devices, such as multitrack tape decks or video decks? Do you plan to expand into a large MIDI system where you might want to have a highly organized approach to using multiple instruments? If you're not sure what you might be doing with MIDI down the road, just get the least expensive interface you can find. It'll probably run you \$40 - \$60 which you can easily write off should you decide you need something a bit more sophisticated later on.

3) As far as software goes, I'm afraid you're on your own here, too. There are way too many factors involved in choosing software for me to go into here. My best recommendation? Find a dealer you trust and feel you can communicate with, and have him or her take you through the decision-making process.]

---

Subj: SYSEX string for VFX-sd.

I am using my VFX-sd with CakeWalk Pro 3.0 (CWP) and have been trying to send a SYSEX command to reset my bend range. I have yet to be successful in getting any SYSEX response from my VFX. I tried the Identity Request and got nothing. I have been told that CWP is too fast for the VFX and the SYSEX string must be slowed down. Is this correct, and if so, how is it done? What would be the SYSEX string for a Bend Range setting?

Thanks for the help.

Ted Hyatt  
via Internet

*[CS - Sorry. As far as I can determine, there's no way to set pitch bend range on the VFX-sd via MIDI. (If there is, I'm sure someone from Ensoniq can clue us in).]*

*[Ensoniq - Sorry, there is no way to set the Pitch Bend Range via Sys Ex.]*

---

Dear Transoniq Hacker-

Here is another list of suggestions:

1. Control audio CDs from the ASR-10. (I have RCA outputs on the back of my CD-ROM drive and I would like to be able to control an audio CD for sampling purposes.)

2. Copy or move instruments and directories on a hard drive (like how a Mac can move folders and such) or to another hard drive. I like to reorganize my removable drive sometimes and it is difficult when I have to copy each instrument separately.

3. A tuning effect (Waveboy perhaps?). It would be cool to be able to tune without having to load another instrument and then compare the pitches.

4. Looped or stacked sample recording (like an Echoplex). I like to do this on my SPX90 but the quality is not as good as it could be on the ASR-10. Maybe Ensoniq could set the duration or sample time in seconds.

5. Access all the parameters of the effects while in sampling mode. (I like to get really weird effects and tweak the parameters of a effect in real time that I can't reach with MIDI - maybe 7 or 8 different parameters.)

6. Undo function. (I know this one is a long shot because it takes up a lot of memory, but I'll suggest it anyway because I just erased a file by accident and I'm mad.)

7. Be able to lock instruments in memory so you don't accidentally (see #6) erase them by loading a new instrument over them - my finger sometimes hits the wrong button and zapppp!!! - there goes my work.

8. Be able to cancel a load or import. (Occasionally I would like to stop loading a sound and I hate having to wait 30 seconds for a 16meg sample to finishing loading so I can load another.)

9. When importing tell how many blocks an instrument is before you try to import. (It drives me nuts when I try to import a sound and I get all but one sample in memory.)

10. Rename files and directories.

11. PLEASE, PLEASE, PLEASE will you guys at Ensoniq allow the next sampler you design to load more than eight instruments? I don't care if it doesn't have resonant filters, 64 voices, or even a volume knob (okay, just kidding about the knob). I need more instruments!

12. Separate LFOs for pitch and pan.

13. Some new effects like AM, crosswave, sync, etc. (I really like the FM effect from Waveboy.)

14. On a hard drive - I would like to be able to see all the files (effects, instruments, etc.) in a directory at the same time so I can scroll through and see them all.

COMPLAINTS:

1. When importing a timpani drum that should have been about 2 megs, my ASR-10 imported the data separately for each key (instead of sharing the wave data like when you copy wavesample and select "parameters only") and it ended up eating up 16 megs. I have had this happen on 3 or 4 other patches that I have imported. If I go back and delete all the extra info and hack the instrument for a while I can get it back to 2 megs - but it is a drag and very time consuming.

2. When importing and all instrument spaces are filled, the ASR-10 tries to access my hard drive. If I don't have a disk in the drive, it then reads the floppy and the only

way I can access my hard drive again is by turning it off and then on again. Why doesn't the ASR-10 recognize the drive as being there even if there is no disk in the hard drive?

3. When importing instruments and I get a "memory full" message, I save the instruments in memory and then "delete instrument" all of them from memory. My ASR-10 has no instruments in memory, but it doesn't have 31273 blocks left (I have 16 megs) it now has 31273 minus whatever the size of the last imported sound was.

4. When importing stereo sounds, I always have to go in the new instrument and turn the stereo layer link.

5. When reading Roland CD-ROMs, the ASR-10 won't let you rename the sound if your new name is longer than the Roland name. Example - "bass 1" cannot be renamed "bass 1.1" because it is two characters longer and I know you can name instruments longer than 6 spaces.

6. When I play a sequence (external seq) and go to the pitch window to change the sample pitch, the wavesample range always gets screwed up as I scroll by the wavesample range page to get to the wavesample

pitch page. I can't think of a good solution but it is very irritating. Also, after it messes up my pitch range, I try to change it back and the ASR says "no pitch in layer mode." Why did it just change during the sequence then? It also won't let me change it back while the layer link is on, even when I underline a wavesample. I have to turn off the layer link, change each wavesample independently from its companion wavesample and then turn it back on.

7. I also have the same problem as the guy in my new Hacker with stereo time compression and expansion. One side of the sample gets compressed and one side doesn't. Sometimes one side works and one side starts to loop on its own after about 1 sec into then 30 sec stereo sample. Is it true that values beyond 60 on the quality don't really do anything but take more time? No wonder I have to let it compress overnight!

#### TIME STRETCH:

Someone wrote in not too long ago and asked how to calculate the percent when time stretching samples - here is the way I do it. Say you want to take a drum loop that is 102 bpm and stretch it to 140 bpm. Take the original bpm (102) and divide by the destination bpm (140):  $102/140 = 0.7286$ . Now move the decimal two spaces to the right and you get 72.86%. Same thing goes if you wanted to go the other way:  $140/102 = 1.3725$  or 137.25%. The easiest way to verify that you divided the numbers correctly is - to speed up a sample, the percent must be lower than 100% and vice versa.

P.S. I have been using an Iomega Zip Drive with my sampler for about three months now and never have experienced any problems. Someone out there might be interested to know that this 100 meg removable hard drive is only \$200 with the first cartridge and extra carts are only \$15!!!! You can get them through Macwarehouse at 1-800-255-6227. Can I have a free cart or two for the plug?

Brian Albritton  
The Hunger  
Via Internet

[Ensoniq - Thanks - these are all great ideas. Regarding your complaints:

1. This is just the way that it is. We are not disagreeing with you, but it would have taken much longer and used up too much

code space to develop an intelligent copying function within the import process. Sorry.

2. Your drive shouldn't lock up if it is accessed without a cart in it. It may be peculiar to that particular mechanism (you don't state what you are using). As a work-around, have the current storage device be the floppy prior to running the import command (or leave a cart in the drive!).

3. Good catch - we tried it and could repeat the problem. We'll have to look into this further. For now you'll have to re-boot if this situation occurs. We generally look at the documentation for the sound (as meager as that information may be) and only import items that we know will fit. Roland format sounds seem to generally be listed by the length of time of the recordings, not the size, but our specs clearly show the available recording times at different memory configurations.

4. This is because imported sounds may mix mono and stereo samples within the same layers, which can only be edited properly when stereo layer link is off. Having layer link off usually does not degrade the stereo image.

5. We could not reproduce this phenomenon. Is this always the case, or only when you perform certain actions?

6. It's an old joke, but don't do that!

7. We haven't had time to investigate this fully. It is not true that values over 60 do nothing but take time, but the differences are slight enough that we don't believe it is worth your using them.

It's nice to see so many users responding to the time stretch question from last month. We weren't sure whether Clark was going to answer it or us, but thanks to all for filling in. That's what's so great about the Hacker community.

Regarding the plug for the Zip drive you'll have to contact them for the free cart(s)!

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SQ-1	1.11
SQ-1 32	2.03
SQ-1 PLUS	1.1
SQ-R	1.02
SQ-R 32	2.03
SQ-R PLUS	1.15
SQ-2	1.2
SQ-2 32	2.03
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SD-1 32	4.10/4.10
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