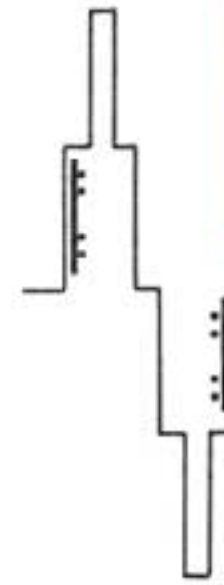


Transoniq



Hacker

The Independent News
Magazine for Ensoniq Users

Creating Pads on Ensoniq Synths — Part 2 (Okay, and Samplers, Too, With Some Diddling)

Sam S. Mims



Last time (way back in Nov. '93 — #101), we created the nice and airy HACKER-PAD simply by starting with a default voice and making some simple tweaks. Now, as promised, it's time to take our creation even further, and multiply it into several big, sweeping pads-of-doom. As before, I have no pre-conceived notions about where we're going. I'm creating as I write this, to illustrate the process a programmer goes through to make a sound.

Giving the HACKER-PAD a listen, I'd say it's time now to add some effects to the sound to fatten it up and give it a nice, airy ambience. The old standby effect for pads is one of the CHORUS+REVERB algorithms; to keep in sync, let's go to the Effects page and call up CHORUS+REVERB.1. Whereas I tend to avoid drowning most sounds in the effects, it's okay to pour on a heavy dose with pads. Set the decay time to 82, and the FX1 REVERB MIX to 50; this gives us a nice big ambience.

The second effects page controls the chorusing, and this is where our pad will pick up even more sonic motion. The RATE setting of 18 works nicely for a slow sweeping, but cranking the DEPTH up to 36

makes the chorusing more apparent.

At this point, we have a fairly complete vocal pad. You can save your work, and use it proudly. But why stop at just one patch? Let's send this pad out to go forth and multiply, so we can get a number of useful variations. We'll make these into patch selects, so that they are all available at once.

First, let's try a bit of D-50 emulation by adding an attack transient to the sound. But rather than add a third voice, which would cut down our keyboard's polyphony, let's use a waveform that has a nice attack transient as well as a sustaining part of the sound. The MARIMBA, KALIMBA, and POTLID-HT waves are my favorites for this sort of thing.

On the Select Voice page, underline Voice 1 (VOCAL-PAD), and then press the Copy button. Then press MAKE COPY of All Voice Parameters. Back on the Select Voice page, underline Voice 3 now, press Copy again, and then choose RECALL. Now mute Voices 1 and 2, unmute Voice 3, and we're off working on a patch variation.

With Voice 3 selected, let's now change the WAVE to MARIMBA (in the TUNED-PERCUS class). Our patch now sounds like the rubbing of a crystal wine glass, and in fact, you may want to save this sound as it is. But notice that there is still not really any attack to the sound; this is because we gave the envelope a brief fade-in time, and the wave's attack sound is getting lost in there. To let it out, go to the second Env 3 page, and set ATTACK to 00.

We now have an "LA synthesis" type of

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sound, using only one voice. But we can now unmute Voice 2, and add that vocal quality to it. I'd suggest turning the VOL of Voice 3 to 99 (on the Output page) to make it fill in better. Just to even out the stereo lopsidedness of the attack, go to the second Output page and change PAN to 40 and MODAMT to +20.

Let's try one more quick version of the same trick. Select Voice 2, and make a copy of it (using the Copy button, as before) to Voice 4. Mute everything except Voice 4, then change its WAVE to KALIMBA, and again, change the ATTACK of Env 3 to 00. Raise the pitch an octave, unmute Voice 1, and there is yet another fine pad!

Now, the next trick in our series: Transwaves. (Sorry, this one doesn't apply to the sampler dudes out there.) Let's again copy Voice 1, this time to Voice 5, and then mute everything except Voice 5. Go to the Wave page, and set the Wave Class to TRANSWAVE. By selecting the START parameter, you can now play the keyboard and sweep through the wave in real time using the data slider (very cool!). The SPECTRAL-X wave doesn't really work for our pad, so let's scan through the other waves, sweeping them one by one to see the timbral varieties that each offers.

Let's go with SYNCHRO-X for now. We want to get it sweeping by itself, however, for some major sonic motion as a chord is sustained. So, assign ENV 1 as the MODSRC for the Transwave, and set the MODAMT to +99. SYNCHRO-X now displays its full colors whenever a note is sustained. Remember, we're using Envelope 1 to emulate a slow LFO, and it seems like it should be a bit slower for this task. So, on the second Env 1 page, change all the times from 50 to 60. Unmute Voice 2, and — presto — we have another wonderful pad that swishes about from here to eternity.

And now, for my final and favorite trick: Let's add a bit of sprinkling glitter to the sound. Mute all of the voices except Voice 6, and assign to it the Default voice. (A refresher from the last installment: Make sure Voice 6 is underlined on the Select Voice page, then go to the Copy page, and press DEFAULT.) You should hear a nice string patch at this point.

Head for the Env 2 page, then press Copy again, and DEFAULT. For TYPE, scroll upward to REPEAT RAMP, then press YES. The idea here is that we're going to use Env 2 to modulate the Output in a repeating fashion (we'll neglect its normal filter routing), while Env 3 controls the level of the overall sound. So, on the first Output page, assign ENV 2 to be the MODSRC, with a MODAMT of +99. Notice that we have a repeating fade-in of the sound (the ramp wave of Env 2 is positive-going); we want to reverse that to a repeating fade-out, so on the ENV 2 Levels page, change both BREAK levels from 99 to 00, and the INITIAL and PEAK levels from 00 to 99.

For the overall shaping of the amplitude, go to the Env 3 page, and copy to it the default PIANO DECAY envelope. We should now hear our string patch repeating away as it gradually fades out. To keep the action going, though, let's make this envelope repeat as well. Change the BREAK 2 level to 70, the SUSTAIN level to 86, on the next page, change the attack time to 36, and on the third page, change the MODE to REPEAT.

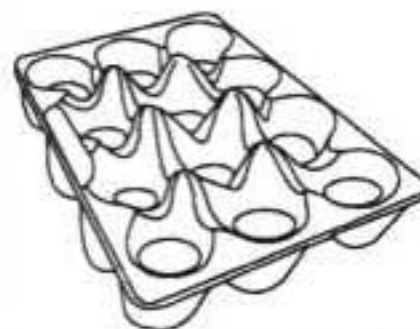
To get a more usable sound happening, change the WAVE to

CLUSTER-LP (in the INHARMONIC wave class). And depending on the final use of this voice, you might want to change the Output VOL to a higher level.

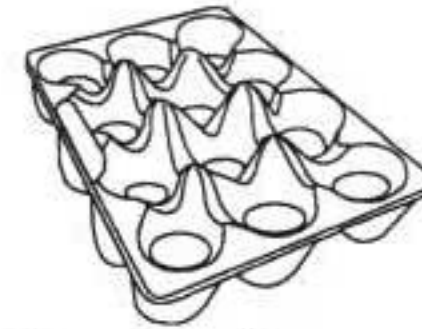
As a final tweak, let's first raise the pitch an octave (set OCTAVE=+1 on the Pitch page), then use the LFO to sweep the "glitter" around. For this, set the LFO RATE to a slow rate of 16, with a LEVEL of 40. I also like to modulate the rate subtly, for a more random effect, so set the RATE MODSRC to KEYBD with a MODAMT of +05. On the second LFO page, set the WAVE-SHAPE to SAWTOOTH, and turn the RESTART-MODE OFF. Then, on the Pitch Mod page, set LFO= -65. (Since the sawtooth LFO normally causes the pitch to rise, we use a negative value to cause it to drop.)

Now, the only thing left to do is to create some patch selects from all of our voices. Voices 1 and 2 make a nice vocal pad, 3 and 4 make a nice pad with an attack, Voices 2 and 5 make a nice Transwave sweep, 2, 5, and 6 make a nice glittery Transwave sweep, and so on. Essentially, we have more patch selects than we can handle at once. But that shouldn't stop you from copying to another location and mixing up a new batch of patch selects.

Don't be afraid to strike out on your own from here, brave explorers. Simply changing WAVES and other simple tweaks can lead to great variations. Soon, you'll have more pads than the maximum number allowable by law! ■



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Ensoniq News

SQ 32 Voice Series — In response to numerous requests Ensoniq is releasing a new card of sounds for the SQ 32 Voice series instruments: EX-4 KS for the SQ — This 160 sound ROM card gives you the exact grouping of sounds that are used in the KS-32. Bank A duplicates the KS's ROM sounds and Bank B duplicates the INT sounds. Now an SQ owner can have the same traditional grouping of sounds that the KS-32 offers. Suggested Retail — \$99.95. Available mid-April.

Ensoniq Errata — "In the last group of letters Miro Svetinsky asked about EMAGIC, and in our haste to get the letters uploaded, we forgot to answer him. Sorry, here's the info: Thinkware is now the distributor, but they are only handling dealer orders. For customer support you can call (916) 477-1051 24 hr. hotline, (415) 738-1633 West Coast, (416) 944-8444 East Coast."

And, there's a new hard drive vendor to be added to the list of approved drives for the EPS family: **Glyph Technologies**, 605 West State St., Ithaca, NY 14850. Phone: (607) 275-0345 voice, (607) 275-9464 FAX/Modem.

Third-Party News

Valhala, one of the larger suppliers of third-party sounds for a variety of instruments, seems to be having serious financial problems. Be advised.

Rhythm Factory, long-time sample vendor, has a new address and phone number: 303 Saddle Bridge Lane, Franklin, TN 37064, phone: (615) 591-9875.

TechWare House, a hard drive supplier whose name we haven't seen around here for a while, also has a new address: 5315 N Corte Puesta Del Sol, Tucson, AZ 85718, phone: (602) 529-8421.

HYPERSOBIQ NEW PRODUCTS

New Sound Music, creators of a variety of Ensoniq-compatible instruction packages, announces the introduction of something a little different — *Resume On A Disk For Musicians*. *Resume On A Disk* is a disk that contains a picture of the musician, their resume, samples of lyrics, and MIDI sequences that demonstrate their writing, arranging, and playing skills. It also includes a reply form for further information. The first disk (including all the prep) is \$59.95. Subsequent disks are only \$2 each. For further information, contact: New Sound Music, P.O. Box 37363, Oak Park, MI 48237. Phone: (810) 424-8619.

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. 215-647-3930.

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

Sampling — The International Samplers Cooperative, 310-455-2653 or via MusoBBS, 818-884-6799.

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

VFX Sound Programming Questions — Dara Jones, Compuserve: 71055, 1113 or Midi-net & Fido-net. Local BBS: Nightfly, Dallas: 214-342-2286.

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.

Sampling & Moving Samples — Jack Loesch, (908) 264-3512. Eastern Time (N.J.). Call after 6:00 pm.

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.

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

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

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

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Plus Pak I from Rubber Chicken

Steve Vincent

For: EPS, EPS-16+, ASR-10, TS-10, TS-12.

Product: *Plus Pak I Sample Set*.

Price: \$39.95 for 5-disk set.

From: Rubber Chicken Software Co., P.O. Box 6056, Hollywood, FL 33081, 1-800-8-PRO-EPS.

Rubber Chicken Software has five different *Plus Pak* sets, each a potpourri of different sounds, ranging from new age timbral textures, to synth-rock leads, to hip-hop vocal effects. This month we'll look at *Plus Pak I*, the first in the series.

General stuff

Garth Hjelte, the man behind Rubber Chicken Software, does something that I haven't seen any other sample vendor do — he offers a different version of his sample sets for each Ensoniq sampler. This means that if you have an EPS Classic, you won't have to reprogram the filter and amplitude parameters to make the samples work on your board. He obviously doesn't have to do this. He could be like all the other sample vendors and just make one version for the latest Ensoniq samplers, and leave the tweaking (and the frustration) to the end user. But he does do it. Maybe the guy is obsessive-compulsive or something, but we reap the benefits from his attention to details, like setting the keyboard ranges from A0 to C8 to accommodate 88-key controllers, defaulting "SEND KEYS" to LOCAL (vs. BOTH) for use in MIDI rigs, and programming the mod wheel for more appropriate uses than vibrato where applicable. He also includes a helpful and info-packed manual with his sets.

Enough... let's get into these sounds.

The Review

This five-disk set contains 16 different 16-bit instruments (at \$39.95, that's about \$2.50 per instrument), divided into five sections: Power Synths, Strings, Pop Sounds, Bells, and Vocals. I auditioned them on the ASR-10, TS-10, and EPS Classic.

Disk 1: Power Synths

Quak-O-Cord (522 blocks) — This is a pleasant, Huey Lewis-type synth pad with a bright (but not harsh) attack. I question the value of the harpsichord-like attack repeated on key-up present on one preset, but in general it's a good stock synth pad.

Oberhorns (597 blocks) — A nice, fat, classic analog Oberheim brass sound (six adjectives — a record!). Patch select variations emulate strings, pipe organ, and a sforzando effect. Versatile patch programming.

Ting String (422 blocks) — Just like its name: a nice, general-use string pad with a gentle "ting"-like attack. Some aliasing was present in the upper octave. Again, versatile patch selects.

Disk 2: Strings

Active Violin (1256 blocks) — The manual describes this instrument as a "violin designed for maximum expression and 'activity'." The five multisamples are very high quality, but the "activity" (vibrato) is in the wavesamples themselves, so the loops get a little redundant on sustained notes or chords. It is, however, a nice instrument with creative patch selects, yielding a number of useful sounds and utilizing the 16+/ASR effects.

Disk 3: Pop Sounds

Wavemix (865 blocks) — This is a "vector synth" type of sound, changing timbre over time, with a plucked attack. There is a "sample and hold" filter mod effect in the wavesamples themselves, giving the sound some nice movement in chords, but the effect is fairly noticeable on sustained single notes.

Super Lead (79 blocks) — A classic Minimoog brass lead sound. There was a little aliasing in the upper octave, but nice use of effects and patch variations.

ELP Breathsy (237 blocks) — This gentle voice/breath sound with plucked attack is indeed reminiscent of Keith Emerson's synth sound on "Pirates" (from *Works Vol. 1*) as the manual claims, and also Emerson's Christmas album. Inspires holiday melody lines.

Simply (223 blocks) — A fat analog bass sound (five multisamples). Nice programming, with one patch select morphing the bass into a smooth stereo pad.

Agogo Snow (164 blocks) — The keyboard is split between an agogo (double bell) and what sounds like a sleighbell pitched down an octave or so. Patch variations include pitched and non-pitched versions and combinations. This sound seems a little out of context on a "Pop Sounds" disk; it might be more at home in a collection of ethnic percussion.

Disk 4: Bells

Vectorbell (880 blocks) — In my estimation, this instrument is the best of the set, combining a bell/pad combination with a vector-like shifting timbral landscape. Once again, creative programming makes this a versatile, useful sound for melody as well as pad duties. This sound breathed new life into my EPS Classic!

Microbell (405 blocks) — This is a nice, mellow orchestra bell (or vibraphone) sound, but it was sampled with a slight tremolo which disappears in the loop on some samples, but not on others. This plus some high-register aliasing mars what would otherwise be a beautiful instrument.

Disk 5: Vocals

This disk contains five different instruments made from vocal samples of various James Brown-like phrases, like "Hey ya wah" and "Bop bop shoo be doo wop wop." The vocalizations themselves are high quality, "sung" by obviously talented singers, and sampled meticulously at 44.6 kHz. Each instrument makes extensive use of patch selects for special effects (usually made from snippets of phrases in backward mode), "drum kits," and even a bass guitar emulation! My favorite sample is a deep breath, which can be used in combination with just about any of the phrases. I'm not sure what you'd use these for, but if you're looking for this kind of thing, they're the best I've heard, being a bit more "crisp" than corresponding Ensoniq samples of vocal phrases.

Conclusions

The quality of the wavesamples in this set is generally quite high, although a little uneven. Many instruments are sampled at

a high sample rate (e.g., the bells and vocals), but aliasing plagues the highest octave on a few instruments. Instead of stretching the samples out too far, a couple of additional high-rate multisamples in the higher registers might alleviate some of this problem. The quality of programming in this set is superb overall; every patch select is used for a different sound variation, and the mod wheel and aftertouch are often used for unique filter and amp modulations.

My conclusion is: there are a couple of yawns, a couple of high-quality "what the hell's?" and a few real standouts. For a mixed set of sounds, the percentage of truly usable material here is definitely on the positive side.

Two of the sounds from this set, Oberhorns and SuperLead, are on Rubber Chicken's demo disk, free to first-timers. This is an excellent, no-risk way to actually hear some of the samples before you buy, from the company that "won't give you the bird." ■



Bio: Steve Vincent recently completed his first album project, entitled A Winter's Tale. When he's not composing, tweaking, or producing, he's a psychotherapist.



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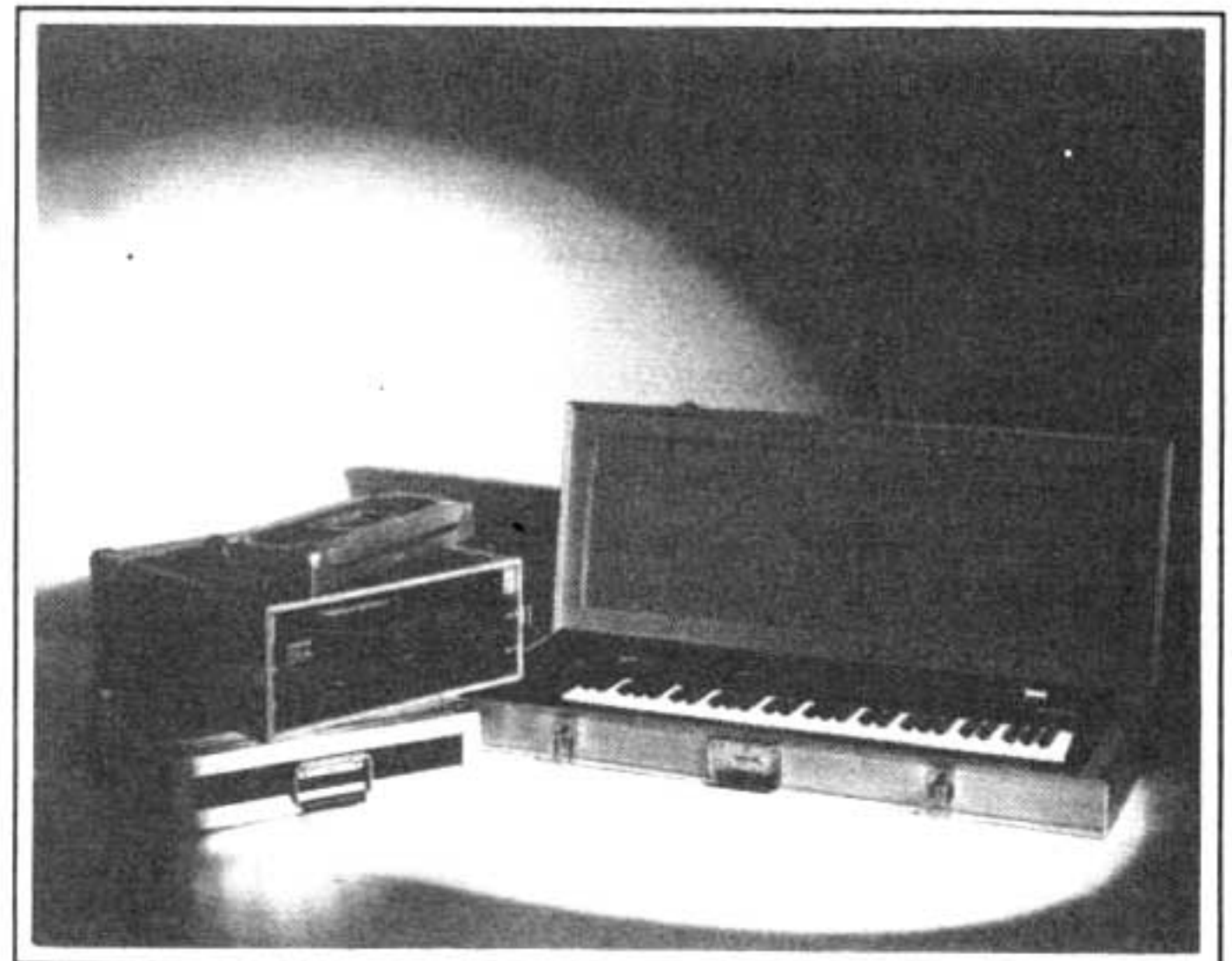
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The Holy Grail: A Complete, 37-Pound B3

Brad Kaufman

With the exception of telling my wife how to cook and advising friends how to spend their money, I'm not much of a theoretician. Instead of describing the steps in making a sound program, I believe it's more useful to give an example and pick it apart to show what makes it work.

Some of my favorite sounds are acoustic emulations — and the TS-10/12, while capable of making all sorts of sounds never before heard, also can produce a variety of “real” musical instruments forever useful in the gigging musician's and studio composer's everyday craft. Not having the \$\$ or roadies to travel with a 400-lb Hammond organ, I have been busy producing keyboard and organ sounds — some ported over from the VFX and many completely new — including .ORGANOMIC. — a very close emulation of the Real Thing, and weighing in about 360 pounds lighter to boot.

On the TS-10 Hackerpatch included here, notice “like 1...like 4.” This means that much time can be saved by using the COPY functions when you plug in the numbers. See the TS-10 article in Issue #100 (October, 1993) for details about the COPY VOICE function. For TS-10/12 owners who haven't yet gotten to the *Musician's Manual*, details of how to plug a program into the EDIT buffer are included in the TS-10 article in Issue #102. Unless I hear otherwise from our editrix, I will assume folks are having no trouble entering sounds from the Hackerpatch into their synths and storing to user RAM, disk, etc.

What Is .ORGANOMIC.?

The patch is set up to give four variations on the Hammond B3. 00 is a full sound. 0* is more traditional or jazzy. *0 has a high-frequency sizzle and ** is more percussive than 00. The patch selects are HELD: 00 is loaded when you choose this sound from your RAM bank, but by holding down the right, left or both patch select buttons, hitting any key and letting go of the buttons while holding down the key, you can hold on to the alternate sound (0*, *0, or **) without continuing to tie up your left hand.

Filters and Envelope 2

In order to get the proper fat bass response for this sound, two 2-pole filters (Low-Pass) are modulated by ENV 2, which opens the filters wide (ENV 2 peak of 99 takes 22 time units to decay to Break 1 of 75) for the brief, percussive attack — the famous key click — and then closes the filters so the mellow characteristic sustain continues as long as the key is held down. ENV 2 release times are zero so the notes stop immediately

when the keys are released, giving a really quick response for fast riffs. I find these FILTER and ENV 2 settings hold up well in many synthesizer and guitar sounds.

Envelope 3

I can't explain why, but having ENV 3 for voices 2 – 6 decay from PEAK 99 to BREAK 1 level of 85, while the filter is closing as modulated by ENV 2, improves the sound. Try setting ENV 3 of voices 2 – 6 to FULL ON by using the default envelopes or simply by making all the 85s in ENV 3 (BREAK 1, BREAK 2, and SUSTAIN) into 99s. It doesn't sound as good, right?

Whatever is going on, to my ears this Karma between ENV 2 and ENV 3 is the secret to VFX-sd and TS-10/12 organ sounds — even though the programming gurus say “Organ envelopes are always FULL ON — all 99s.” I use this setup for ENV 3 and ENV 2 in almost all organ sounds except calliopes, for example, where air-driven pipes respond more slowly, like an accordion, and therefore require slower response with longer attack and decay times in ENV 2 and ENV 3.

Roto Speaker Effects and Insider's Tips

Hacker contributors Barry Carson and Clark Salisbury have both written about a critical step in Leslie speaker imitations. Some of the sound leaks out of the Leslie cabinet without going through the rotating horns. Therefore, at least one voice in the patch should not be routed through the roto speaker. In the middle OUTPUT box on the Hackerpatch, notice that VOICE 5 destination bus is DRY, not routed through the effect. If you change this to FX1, thereby sending VOICE 5 through the roto speaker, the organ sound wimps out at both rotating speaker speeds.

The roto speaker is toggled from the slow “chorale” speed to fast and back again by a foot switch. The second SYSTEM screen must have your foot switch selected to “FX-SW- MOD” to work. You can change this option to the modwheel or your other favorite controller on the last EFFECTS page (MOD SRC= _____). It's worth mentioning that all but VOICE 5 are panned right (+63 on the second OUTPUT page) to route them only to the roto speaker, bypassing the digital delay. If you pan these voices toward the center (00), the Leslie effect becomes watered down and unpleasant.

But I Want More...

Are you like me — never satisfied with just one more patch?

TS-10 Hackerpatch

TS-10 Prog: .ORGANOMIC.

By: Brad Kaufman

Notes & Special Settings:

See the article for details.

Effects Settings: Effect #15.

Make the following changes on the following screens:

- 1) SENDS: A-B 58. B-REV 13. A-REV 00. FX2-REV 88. DRY 99.
- 2) ROTO STEREO ON. LEV 99. PAN 00. AM 46. FM 78.
- 3) ROTO (2) SLOW 50. FAST 73. INERT 72. SPEED: SLOW.
- 4) REVB Decay 2.16. PRE DLY 0. HF 21. BW 94.
- 5) REVB (2) DEF 90. DIFF 72 60
- 6) MOD SRC: Fx-SW. DEST: ROTO SPKR. MIN: SLOW. MAX: FAST

| WAVES | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------|---------|------|-------|---------|------|---------|
| Wave | RockOrg | | Org-1 | Orgwav6 | | Anawav4 |
| Wave Class | Keyb | | Keyb | Wavfrm | | Wavfrm |
| Delay | 0000 | | 0 | 0004 | | 0000 |
| Shift/Index | +60 | Like | +10 | 00 | Like | 00 |
| Dirac/Modsrc | For | 1 | For | For | 1 | For |
| Modamt | - | | - | - | | - |
| Sample Start | 00 | | 00 | 00 | | 00 |
| Start Modsrc | - | | - | - | | - |
| Modamt | 00 | | 00 | 00 | | 00 |

| MOD MIXER | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|-------|------|------|---|------|---|
| Src-1 | Timb | | | - | | - |
| Src-2 | Press | Like | Like | - | Like | - |
| Src-2 Scale | 1.0 | 1 | 1 | - | 1 | - |
| Shape | Lin | | | - | | - |

| PITCH | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|-----|----|----|-----|------|-----|
| Octave | +1 | +2 | 0 | +1 | | -1 |
| Semitone | +07 | 00 | 0 | 07 | Like | 00 |
| Fine | 00 | 00 | 0 | +01 | 3 | +01 |
| Glidemode | No | No | No | No | | No |
| Glidettime | 00 | 00 | 0 | 0 | | 00 |

| PITCH MODS | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|-----|------|------|-----|------|------|
| Modsrc | - | | | LFO | | |
| Modamt | 00 | | | +02 | | |
| Bend | Sys | Like | Like | Sys | Like | Like |
| PitchTbl | Sys | 1 | 1 | Sys | 1 | 4 |
| Env1 | 00 | | | 00 | | |
| LFO | +02 | | | +01 | | |

| FILTER 1 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|------|------|------|------|------|
| Mode | LP2 | | | LP2 | | |
| Cutoff | 036* | | | 022* | | |
| Kbd | 00 | Like | Like | 00 | Like | Like |
| Modsrc | - | 1 | 1 | - | 1 | 4 |
| Modamt | 00 | | | 00 | | |
| Env2 | +60 | | | +80 | | |

| FILTER 2 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|------|------|-------|------|------|
| Mode | LP2 | | | LP2 | | |
| Cutoff | 072* | | | 070* | | |
| Kbd | 00 | Like | Like | 00 | Like | Like |
| Modsrc | Off | 1 | 1 | Timbr | 1 | 4 |
| Modamt | 00 | | | +18 | | |
| Env2 | +18 | | | +18 | | |

| OUTPUT | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|-----|------|------|------|------|-------|
| Kbd Scale | 00 | 00 | 00 | 00 | 00 | -12 |
| Lo/Hi Key | - | - | - | - | - | A0-C8 |
| Vol (db) | +03 | -08 | +05 | -01 | -03 | +05 |
| Modsrc | - | - | - | - | - | - |
| Modamt | 00 | 00 | 00 | 00 | 00 | 00 |
| Dest Bus | FX1 | | | | Dry | |
| Pan | +63 | Like | Like | Like | 00 | Like |
| Modsrc | - | 1 | 1 | 1 | Off | 1 |
| Modamt | 00 | | | | 00 | |
| Voice Prior | Med | | | | | |
| Vel-Window | - | Like | Like | Like | Like | Like |
| Lo | 000 | 1 | 1 | 1 | 1 | 1 |
| Hi | 127 | | | | | |

| LFO | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|-----|------|------|-------|------|------|
| Rate | 50* | | | 51* | | |
| Modsrc | Whl | | | Press | | |
| Modamt | +40 | Like | Like | +34 | Like | Like |
| Depth | 00 | 1 | 1 | 00 | 1 | 4 |
| Modsrc | Mix | | | Press | | |
| Modamt | +77 | | | +85 | | |
| Waveshape | Tri | | | Sine | | |
| Restr Mode | On | | | On | | |
| Phase | 000 | Like | Like | 000 | Like | Like |
| Delay | 00 | 1 | 1 | 00 | 1 | 4 |
| Noise Rate | 00 | | | 00 | | |

SELECT VOICE

| | | | | | | |
|----|---|---|---|---|---|---|
| 00 | | 2 | 3 | | 5 | 6 |
| 0* | 1 | 2 | 3 | | 5 | |
| *0 | | | 3 | 4 | 5 | 6 |
| ** | 1 | | 3 | | 5 | 6 |

ENV1

| | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|---|---|---|---|---|---|
| Attack | | | | | | |
| Decay | | | | | | |
| Decay 2 | | | | | | |
| Decay 3 | | | | | | |
| Release | | | | | | |
| Peak | | | | | | |
| Break 1 | | | | | | |
| Break 2 | | | | | | |
| Sustain | | | | | | |
| Vel-Level | | | | | | |
| Mode | | | | | | |
| Vel Curve | | | | | | |
| Kbd Track | | | | | | |
| Vel-Attack | | | | | | |
| Vel-Rels | | | | | | |

ENV2

| | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|------|------|------|------|------|------|
| Attack | 00 | | | 00* | | |
| Decay | 21 | Like | Like | 12 | Like | Like |
| Decay 2 | 23 | 1 | 1 | 21 | 1 | 4 |
| Decay 3 | 20 | | | 43 | | |
| Release | 00 | | | 00* | | |
| Peak | 99 | | | | | |
| Break 1 | 75 | Like | Like | Like | Like | Like |
| Break 2 | 75 | 1 | 1 | 1 | 1 | 4 |
| Sustain | 75 | | | | | |
| Vel-Level | 00 | | | | | |
| Mode | Nor | | | | | |
| Vel Curve | CV-1 | Like | Like | Like | Like | Like |
| Kbd Track | 00 | 1 | 1 | 1 | 1 | 4 |
| Vel-Attack | 00 | | | | | |
| Vel-Rels | 00 | | | | | |

ENV3

| | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|------|------|------|------|------|------|
| Attack | 00 | 00 | | 00 | | |
| Decay | 39 | 34 | Like | 34 | Like | Like |
| Decay 2 | 00 | 00 | 2 | 00 | 2 | 4 |
| Decay 3 | 00 | 00 | | 00 | | |
| Release | 18* | 18* | | 28* | | |
| Peak | 99 | 99 | | | | |
| Break 1 | 00 | 85 | Like | Like | Like | Like |
| Break 2 | 00 | 85 | 2 | 2 | 2 | 4 |
| Sustain | 00 | 85 | | | | |
| Vel-Level | 25 | 25 | | | | |
| Mode | Nor | | | | | |
| Vel Curve | CV-1 | Like | Like | Like | Like | Like |
| Kbd Track | 00 | 1 | 1 | 1 | 2 | 4 |
| Vel-Attack | 00 | | | | | |
| Vel-Rels | 00 | | | | | |

PGM CONTROL (Page 1)

| | |
|----------|--------|
| Type | Organs |
| Option | No |
| Press | Chan |
| Patch | Held |
| Restrike | 00 |

PGM CONTROL (Pages 2 & 3)

| | | | |
|--------|---|----|---|
| Atck | 0 | V1 | 0 |
| Rels | 0 | V2 | 0 |
| Bright | 0 | V3 | 0 |
| Timbre | 0 | V4 | 0 |
| Rate | 0 | V5 | 0 |
| XCtrl | 0 | V6 | 0 |

EFFECTS

| | |
|-------------|-----------|
| Effect # | 15 |
| Variation # | See notes |

Here are a few tips on making more Hammonds — different drawbar personalities, so to speak.

VOICE 1 is an octave and a fifth above the main sound. Adjust the PITCH to OCTAVE +1, FINE 00, OCTAVE +2, FINE 00, OCTAVE +2, FINE +07. Also try FINE +02 or +04 for a more gritty feel with high-frequency cross-talk.

Adjusting the relative volumes of the different voices on the first OUTPUT page will emphasize different overtones and octaves.

VOICE 2: Try changing tunings/volume as outlined above.

For the environmentally conscious who hate to see polyphony

being exploited or in a sequencing environment where you can't spare four voices for each organ note, try making a patch using only VOICES 2 & 5, 3 & 5, 2 & 3, or 2, 3, & 5. Or try this — on VOICE 1, go to the PITCH page and change GLIDE MODE from NONE to TRIGGER or MINIMODE and increase the volume a bit on the OUTPUT page. This will give a monophonic percussion, which I believe is what the Real Thing has as well and saves three voices of polyphony.

Notice there is no aliasing at the top end of the TS-10 or the TS-12. Be sure to keep turning the roto-speaker on and off to add animation to your performance. And revel in the satisfaction of not having to shlep the old Hammond and Leslie to your gigs anymore. ■

Sampling Synthesizers

Part 2: Roll Up Your Sleeves

Tom Shear

Last month Barry Carson had some tips on rounding up a vintage synth and getting ready to sample. If you've gone through all the processes in that article and are ready for it, let's dig in and start some sampling!

The two main ways of sampling a synth are to either sample the synth directly, or to throw it onto DAT or some other recording medium first, and then sample the recording. For the purposes of this article, I'll take you through it as if we're sampling directly from the synth, but it should be rather obvious that the processes will all be the same, just with the addition of the extra step of recording/playback.

The first thing you'll need to do is call up the sound you want to sample and decide which key you want to use as the root key. If you're sampling a bass sound, you might want to use a lower root key than you might normally. With any other sound however, I almost always use middle C as my root key. This way, the sound doesn't stretch out and get too flabby and grainy at the bottom and it doesn't get too short and annoying at the top end. Using a consistent root key throughout all your samples will make your life a lot easier. Once you've figured this out there is an extra step that only those of you sampling old analog beasts will need to check out. The oscillators on these old synths have a tendency to drift in tune, so using a tuner or another stable source of pitch, make sure the synth is tuned correctly. You may have to do this a couple of times during the sampling session as the tune can drift more as the unit heats up.

Now, at last, you can reach for that magic sample button, play a key on the source synth and take the sample. Before you do anything else, select the root key and listen to the sample you just took (making sure the effects are set off if you're using a 16+ or ASR). Listen carefully for any distortion, clipping, or in-

consistencies in the sound. If you hear any of these, erase the sample and start over again. Any sort of problem like this in the source sound will be greatly exacerbated by looping, so it's good to get it right to begin with.

The next step will tend to vary somewhat depending on if the source synth is analog or digital. In general (but not always), when looping your sounds, it is easier to get a short loop on an analog synth sound (with the exception of sweeps, sample-and-holds, etc.) than on the more complex digital sounds. Many times it is possible to get a single-cycle loop on an analog sound because of the more simplistic nature of the waveforms. In order for a single cycle loop to work, you need a sound that contains at least a section that remains fairly stable and unvarying both in volume and pitch. Simply go to the looping page, turn on a FORWARD LOOP and set a start point around 20 or so. Then move the end point as far down as it will go. Fudge the end point value up and down until you get a relatively seamless-sounding loop that is in tune with the rest of the sound.

If you can't get this you might have to move the loop position up some more (you might be catching some of the attack of the synth sound which can mess things up), or it is possible that the sound you sampled just isn't suited for a single cycle loop. If you can get a decent single cycle loop, you can try moving the loop position down as close to the attack as you can get it without altering the sound. Then you can scroll back to the SAMPLE END value, push it down as far as it will go, and use TRUNCATE to hack off any unused data. You may find that at this point you'll want to copy this layer and tweak the FINE value on the pitch page of one of the layers to add some chorus-ing to the sound. Single cycle loops tend to be very thin.

So what if you can't get a single cycle loop? My favorite trick

for getting good loops out of more complex sounds is to use the **BIDIRECTIONAL LOOP**. It won't always work, but if you have the patience, it can give you very nice results. As before, you must set it for the **BIDIRECTIONAL LOOP** and set start and end points. Start with these values at their most extreme (00 and 99 respectively), and gradually bump them closer until you hear something that sounds pretty close to what you want. This can take a while, but if you care about getting the best quality you can, it's definitely worth it. If you can get an undetectable loop, your work here is done. More likely however, you hear a very faint click or pop that you can't get rid of. This is where the looping utilities come in handy. Use the **BIDIRECTIONAL CROSSFADE** command and use all the defaults it has set up. Nine times out of ten this has worked wonders for me and has perfected the loop to the point where it's very hard to detect. If your sample end is set too close to the end of the sound, you will have to bump this value down, but normally you shouldn't encounter many problems. Of course, you may also use the standard **FORWARD LOOP** to loop these sounds, but the bidirectional loop gives better results with less effort, in my humble opinion.

Once you have a loop you're happy with and have truncated off any excess data, you should tweak one last thing before saving the sound. On the **COMMAND-AMP** page is the **NORMALIZE GAIN** command. Use this with every sample you take! It will boost the amplitude of the sound to the highest level it can

without introducing distortion and will help you keep volume levels relatively consistent throughout all your different sounds. Now save your work.

Before you move on to sampling the next sound, make sure you're happy with how the sample sounds throughout its entire range. If the loop sounds too noticeable or hyper in the upper range, you might want to sample another key or two from the source synth (known as multi-sampling). I generally find that with the exception of synths with multi-sampled acoustic waveforms at the very most you'll need to sample C in each octave. Most of the time, however, a single sample can cover the entire range of the keyboard pretty well. Now **SAVE** your work!

Congratulations! You just made it through the hardest step! Looping is never easy, but like most things, the more you do it, the better you'll get at it. Once you develop a sensitive ear and have done it a lot, you'll discover lots of little tricks that make it easier to do. You might also want to invest in some visual editing software, but I personally find it easier to find a loop sonically than by looking at some computer-generated picture of the sound. So repeat this process until you've grabbed everything you want, and stay tuned for next time when we'll put the finishing touches on our sounds. ■

Bio: Tom Shear is the walrus. He is the egg-man. Coo-coo-ca-choo. [TH — Tom, get a grip.]

Who says you have no **RESONANT FILTER?**

The ASR-10 and EPS-16 PLUS can now go "Bwaaoooww."

The **REZ FILTER** algorithm is a striking re-creation of an analog synthesizer, the classic Minimoog. A four-pole low-pass resonant filter is coupled to a lightning-fast ADSR envelope generator. The filter's resonance control (also known as emphasis, bandwidth, or Q) gives it that distinctive analog sound by creating a sharp peak in the frequency response. This peak is swept by the envelope or any modulation source. It does things you can't do by sampling an analog synth.

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But wait... *there's more*: this disk includes another algorithm that does *frequency modulation* (FM.) Again, an example sound is included that sounds terribly much like the DX-7. But The DX-7 used only sine waves—you can go further. This algorithm allows you to modulate any sound with any other sound! The results can

be unpredictable: really crazy, really fat, and sometimes really gungy. Like **REZ FILTER**, **FM+FX** includes chorus and reverb which can be added to the FM output or used for other sounds on **BUS2**.

The **RESONANT FILTER** disk is just **\$39.95** direct from **WAVEBOY Industries**, including shipping. Foreign orders, add \$6, PA residents add 6% tax. Use Visa, Mastercard, money order or cashier check.

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The DP/4 and MIDI

Part I — Modulating Effect Parameters

Steve Byhurst

In this article we'll be exploring how algorithms can be programmed to use MIDI data to alter (or *modulate*, as Ensoniq calls it) its effect parameters. Then we'll examine the different types of algorithms and check out some of the ways that MIDI commands can be used to control the effects they produce.

Programming Modulators

Every algorithm has a number of programmable parameters which control the way it will sound and the way in which it will respond to modulators. These vary according to the type and complexity of effect, but there are eleven which are common to all algorithms, the first three (Name, Mix and Volume), and the last eight (Modulation).

The DP/4 is configured so that two different modulation sources can be used per algorithm. This means that if you are using all four units you can use up to eight modulators in total, two per unit. These can be all the same (one source controlling all), all different (eight separate sources controlling one parameter each), or somewhere in between (perhaps one source controlling one group of units, another controlling a separate group). This configuration has been criticized for not going far enough by some users and it can be limiting in certain situations. However, for less demanding applications it's fine.

The eight modulation parameters are split into two identical sets of four, one lot for the first modulator, Mod1, and the other (you've guessed it) for Mod2. Use the first parameter, SOURCE, to choose one of the eight modulation sources already programmed in the system global pages. Foot-pedals/switches connected to the DP/4 can be selected as modulators but I will concentrate on using MIDI data. DESTINATION selects which algorithm parameter you want the source to modulate. Any two sources can be programmed to control any two parameters apart from number 00, the algorithm name (no great loss there). This means that amongst other things you can use Mod1 to modulate Mod2 and vice versa.

The final two parameters, RANGE MIN and RANGE MAX, decide by how much your source is going to affect its destination in percentage terms, the range being 0-99%. Note that you are able to invert the values and have a higher minimum range than the maximum. In practice this would reverse the effect a modulator has, meaning that a mod wheel, for example, would appear to send its highest value at the start of its travel rather than at its end.

You may want to confirm that modulator data is actually altering a chosen parameter. This can be done in edit mode by first scrolling the DP/4 display down to the chosen parameter. Now if you send the data you should see the flashing value change accordingly.

There are a couple of general things to consider when programming and using modulators. Pay particular attention to the modulation range parameters. You will need to experiment a bit to get these right for each effect and it is usually best to start with a narrow range unless you want dramatic results. Also, you might find that some parameters (particularly delay times, LFO widths and others which involve rapid reprocessing) are prone to glitching when parameters are quickly "swept" in real-time by a modulator. This may happen because of the combined effect of other parameters and some experimentation with these can sometimes eliminate the problem.

Mix and Volume

It is true to say that not all parameters are suited to real-time MIDI control. However, Mix and Volume, common to all algorithms, provide a very useful way to modify signal levels for all effects.

The MIX parameter regulates how wet or dry the signal will be, a value of 00 being fully dry, 99 fully wet. Use of this depends a lot on your equipment setup. If your source signal is entering the DP/4 via an external mixer you will most probably want Mix to remain fully wet as the mixer will control the dry level. However, if a direct input is used, the DP/4 could be used to control its level and also remotely or automatically change the wet/dry balance by assigning a MIDI controller to the Mix parameter. Very handy if you don't have a MIDI-controllable external mixer to do the same job.

VOLUME controls the level of algorithm output signal. Set to 00 for no output, 99 for full volume. A reminder here that if the output is linked in series to another's input, a setting of 00 will mean that no signal is passed on and therefore no sound will be produced from either algorithm. We have already seen that system global command #57 can enable MIDI-controlled mixing using controller #7 data, but with this parameter any of the eight system controllers can be used instead. This is useful if you are unable or do not wish to use controller #7.

Now for some specifics on the different algorithm types and their associated parameters, starting with...

Reverbs

There are eleven of these divided into standard and non-standard. Both types benefit from the use of Mix and Volume to dynamically change how much reverb is heard. Modulators can be used on standard types to control the depth and width of sound, and also add tonal variation. Non-standards are less suited to real-time control of their most detailed parameters and, once carefully programmed, these are probably best left alone.

Small Room, Large Room and Hall are the most complicated standard reverbs and all three share the same twenty parameters. Whilst it is certainly possible to modulate any of these, I usually leave alone the values that shape the basic character of the reverb as most of the time there is no advantage in using real-time control to alter them. However, the DECAY parameter is very useful for controlling the "bigness" of the reverb during various points of a song and a continuous controller like a mod wheel or pedal works well as a modulator for this purpose. One thing to watch — make sure that you set the modulation range to a reasonable amount, 80% being about maximum. Hall reverb can decay for up to 250 seconds! Also, try using the HF BANDWIDTH and LF DECA YTIME parameters to add some tonal variation.

The Small Plate and Large Plate reverbs are less complicated and have fewer parameters, but once again the DECAY and HF BANDWIDTH commands are the most useful. There is also a LEFT/RIGHT BALANCE value which can be used as a pan control. The Plates work especially well for vocals and you could try changing the emphasis of certain phrases by altering values as a track progresses.

Looking at the non-standards, the two Reverse reverbs and the Gated reverb both feature HOLD TIME, used to control the length of effect, and HF DAMPING to alter tone. The Gated reverb also has a LEFT/RIGHT BALANCE parameter. The Non Lin reverbs are the most specialized type available and have the familiar HF DAMPING, HF BANDWIDTH and LEFT/RIGHT BALANCE values for tonal and pan control.

Next time we will have yet more MIDI fun with algorithms, including DDLs, choruses, flangers and phasers. Beam me up Scotty! ■

Bio: Steve Byhurst is a British composer of synthesizer-based instrumental music. He is an aspiring soundtrack writer who would love to make a living from the results of using his (mainly USA-made) gear. Write to him at 1 Oaklands, Oakhill Road, Horsham, West Sussex, RH13 5LG, U.K.

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Pat Finnigan

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Price: \$20 for SD disk.

This month I actually received an SD-1 disk for review that wasn't a "commercial" offering. No hype sheet about sounds you couldn't live without, no beat basses, no references to unknown "expert" and "world-renowned" programmers; just a single 720k Sony disk with a generic handwritten label on it. And it came with eight pages of laser-printed documentation that looked more professional than many of the commercial sets I've reviewed. "Hmmm, doesn't the shiny side go face up?"...

The *SD-1 Set* from Stephen Mugglin contains 120 sounds contained in seven 30 Song/Sequence Banks and three 30-sound files. The sounds are fresh edits which not only utilize patch selects, but are optimized to use as few oscillators as necessary per voice to give credible emulations. Mod wheel volume routings prevail in many of the patches, and velocity switching voice addition is present in some of the brass patches. Steve is pretty deep into strings, as many of the demo sequences are string-pad prevalent; I have to admit these string sounds are not only good sounding, but oscillator economical as well. These could be very useful for those sequences that want a large stereo field but are too busy to give up a 4-6 oscillator pad. Stingy strings, yeah, that's it...

Pipe organs are a big thing with this collection: anyone with a liturgical organ background will find the 10 variations pipe organ refreshing from the sFZ sforzando full out pipe organ of the SD. Although they aren't labeled as such, you'll find some 16' and 8' Diapason stops, some actual reed stops, and 3 variations of the sforzando pedal. The majority of these patches use 1-2 oscillators, so they're an economical alternative in some arrangements also. Vocal pads are well represented although there's no substitute for 3-4 oscillators in various stages of attack envelope for vocal pads: these patches verify this philosophy. There're two drum kits that thoughtfully aren't 808-type edits (enough FM patches and cheezy drum machine emulations already!), with "Roll Kit 1" the winner because of its drum roll on A#2 and final stroke on D#3. And that's just the 30 sounds in volume A.

Volume B is another 30 sounds with clav, vibe, basses, bells and whistles: Volume C is referred to in the documentation as "Toys & Doo-Dads." Rather than dissect the library, most of these patches are 1-2 oscillator patches with novel uses of the Cymbal Roll wave in the wind patches. Brad Kaufman explored this use in the 6/93 *Hacker*, and Stephen gives Brad the credit here in the docs. Volume C is kinda novel percussive sounds; patches like

"Bubblestop 1" & Stckbounce 1" prevail here, and are pretty effective in the Alternate environ, "percussive sounds a little off the beaten track" is quite true here.

Folks, at \$20, this is software masquerading as shareware. Steve's got a huge heart, and I wouldn't be able to describe why unless you read the documentation. This is an excellent example of how far one person, in his own personal use, has come to know, learn, understand and use the SD-1/32 and document the experience. As such, it's hard to be critical of any one aspect: if one little thing were changed it would probably upset the balance of the whole package. To be sure, there's hipper sounds, more slammin' drums, mondo cooler air pads, etc., out there in the ether wind: I refuse to find fault with these sounds because of this guy's honesty. The demos aren't slammin' beats trying to show the potential of the instrument: they're more of an orchestral/sound track/stage musical presentation of what one person's application of the SD have led to; an educational tool.

The documentation explains and provides the kind of "practical application notebook" so many Ensoniq owners have been looking for. Well organized and explained, this shareware set is a must-have for any SD-1 owner looking for economical voices and application tips. Without trying to sound condescending, this is a professionally documented set presented for the first-time user/programmer/patch writer. The sequences are copywritten, and Steve used them for an original production for the *Children's Summer Theatre Group* in 1992, so I trust him to take the admonition of writing simple documents and notes as a compliment, as he certainly is no amateur. He dissects his own sequences to show the interaction between his patches in context to illustrate how these sounds can be more effectively used. And for 20 bucks it's REAL hard to ignore.

It's going to be a lot of things to a lot of people, but it'll be an inspiration to all. As such, it defies categorization; it almost defies reviewing (I sure tried to keep it objective) as it comes from the truthful place in all of us.

This set is the perfect educational companion for the frustrated SD1/32 owner who not only wants to get a handle on SD architecture, but also wants to learn to program it how to optimally behave in real-world applications. A great deal of time, effort, and emotion went into the assembly of this set, and you'll see it every time you read the docs or listen to the demos. The sounds and the documentation are interwoven as best as I've seen, and the price doesn't begin to cover the costs of what went into this set.

To quote Steve from the cover page: "I would like to share my findings with as many SD-1 owners as possible, not so much for profit, but rather because a discovery made by one has the potential to benefit many." The philosophy of a hacker, defined... ■

How Sounds Work

Part VII — Brass That Kicks, um ...Bottom

By Mark (Kick Brass) Clifton

It's a well known fact that everybody loves brass.

Whether it's the razor sharp stabs of a big band trumpet line or the smooth pastoral strains of a pianissimo horn section, there's a certain underlying power that's created when human breath meets cold metal and makes it sing. With its full, regal tone, brass has always been a symbol of power and triumph. Brass music is music with an exclamation point — even when spoken softly. Through the centuries it has led the processions of kings, called warriors into battle, even acted as the voice of God. And in the constrained surroundings of the concert hall it has stirred the hearts of all who have listened. As a section, the brasses can display a remarkable range of pitches and timbres, from the floor-shaking pedal tones of the contrabass tuba to the eardrum-shattering squeal of the soprano trumpet. The brasses are the monarchs of the orchestra, the issuers of commands and the proclaimers of celebration. From prelude to finale their every note is one of grand fanfare, an expression of a rich palate of emotions ranging from the gentle to the brutal.

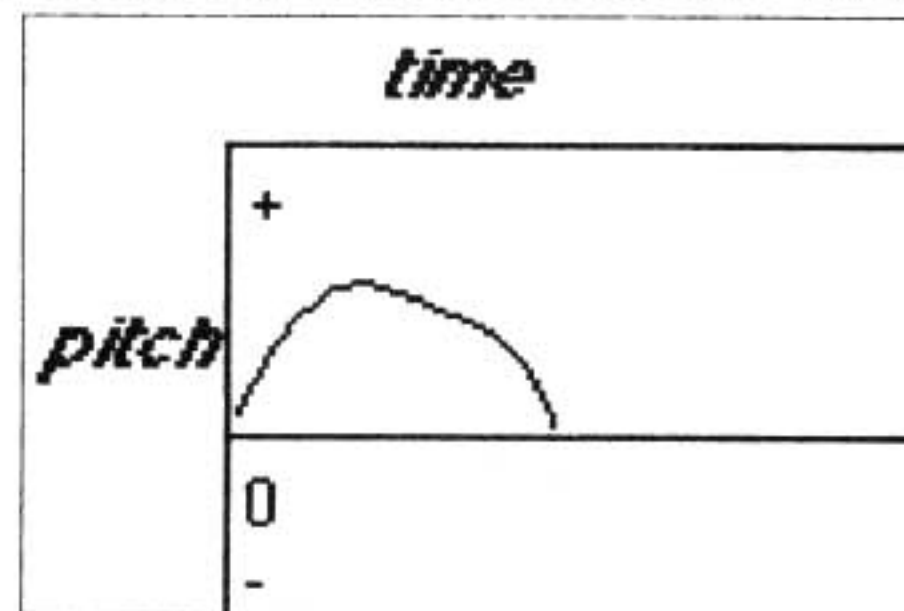
This month we're going to look at the patches "Blue Trombone" from Volume 1 of my *Latter Sounds Hardwire* collection, and "Trumpet Section," which has not yet been released commercially.

"Blue Trombone" is a warm, smooth solo trombone sound that lends itself well to jazz and softer orchestral music. It uses the Trumpet Variation waveform, which is actually the Solo Trumpet wave altered to create the sound of a horn (or any other mellow low brass instrument). This patch is polyphonic, which will allow you to play more than one note at once, but this can cause problems in legato solo passages, when the attacks and releases of notes can overlap with each other — something that is impossible on a real trombone. To remedy this problem, change the Glide parameter of the patch (on the Pitch page) to Retrigger, with the Glide Time set to 00. That way, notes played in a legato manner will slur together instead of overlap.

The first major feature of this patch is the pitch blip. A pitch blip is a slight bending of pitch on the attack of a tongued wind instrument note. It's caused by a momentary increase in the pressure of the air stream as the tongue strikes against the inside of the teeth or mouth and the jaw adjusts minutely to compensate. Pitch blips are short and usually very subtle, but adding them to your wind instrument sounds will add an extra touch of realism and expressiveness. To imitate this effect in "Blue Trombone," I programmed Envelope 1 to a short, positively curved spike (see diagram) and routed it to control Pitch with a small, barely noticeable value of +01. I've found that values higher than +02 or +03 yield too noticeable an effect to be realistic, though the exact value should be customized to the characteristics of each individual patch.

The shape of the envelope curve itself is also very subjective. There is a default envelope built into the SQ called "Short

Blip" that is perfect for wind instrument applications. To select a default envelope, call up the "Press ENTER to select defaults" page in whatever envelope section you are



working with (in our case, Envelope 1) and press Enter. You should now be able to scroll through the choices of envelope default parameters. Select "Short Blip" and the envelope parameters will change to the default values. You can either use the default as is or alter it to fit the particular sound. Once your pitch blip is programmed, play your sound into a tuner or layer it with another sound of unaffected pitch (I keep a pure, unedited sine wave patch in my SQ's RAM memory for these purposes) to make sure the pitch corrects itself after the blip finishes. If the sustain values of the pitch envelope aren't set to a flat value (00 in most cases), the sound may be thrown slightly out of tune.

The vibrato on this patch (modeled after that of a very good 'bone player I once knew named Dave) is created by the LFO and is controlled by the mod wheel, with a wheel position of about a quarter of the way up yielding the best, most realistic sound. If you would rather not have to reach over and move the wheel every time you need vibrato, you can make it kick in automatically by increasing the LFO Level from 00 to around 10 with a Delay of around 59. (You can change these values according to personal taste.) You can still use the mod wheel to control the vibrato amount if needed, or, another choice, you can turn the LFO Mod to "Off" and free up the wheel to control something else.

The LFO is routed to control pitch only in this patch (LFO= +7, on the Pitch Mods page) since a trombone player produces vibrato by moving the slide back and forth, creating a pure up and down modulation of the pitch in a motion almost like a sine wave. The vibratos of most valved instruments (trumpet, horn, tuba, etc.), however, are created by a slight opening and closing of the player's jaw, stuttering the airflow and creating more of a change in the brightness of the sound than the pitch. When programming one of these sounds, reduce the LFO Pitch Mod amount to about +2 or +3 (the jaw movements cause alterations in airflow speed and lip tension that still create slight changes in pitch), and change the Filter Mod to LFO, with whatever amount sounds best to your ears (for me it's usually somewhere between +8 and +20). You should now have the LFO changing

Prog: BLUE TROMBONE

By: Mark Clifton

| WAVE | 1 | 2 | 3 |
|----------------|----------|---|---|
| Select Voice | On | | |
| Wave Class | Brass | | |
| Wave | TrumpVar | | |
| Delay Time | 000 | | |
| Wave Direction | Fwd | | |
| Start Index | 00 | | |
| MODSCR | Off | | |
| MODAMT | - | | |
| Restrk Decay | 20 | | |

| LFO | 1 | 2 | 3 |
|------------|-------|---|---|
| LFO Speed | 32 | | |
| Noise Rate | 00 | | |
| Level | 00 | | |
| Delay | 00 | | |
| MODSRC | Wheel | | |
| Wave | Sine | | |
| Restart | On | | |

| AMP | 1 | 2 | 3 |
|------------|------|---|---|
| Initial | 70 | | |
| Peak | 99 | | |
| Break | 96 | | |
| Sustain | 90 | | |
| Attack | 12 | | |
| Decay 1 | 61 | | |
| Decay 2 | 69 | | |
| Release | 24 | | |
| Vel-Level | 26 | | |
| Vel-Attack | 13 | | |
| Vel Curve | Conv | | |
| Mode | Norm | | |
| KBD Track | +00 | | |

| PITCH | 1 | 2 | 3 |
|----------------|-----|---|---|
| Octave | -1 | | |
| Semitone | +00 | | |
| Fine | +00 | | |
| ENV1 | +01 | | |
| LFO | +07 | | |
| MODSCR | Off | | |
| MODAMT | - | | |
| KBD Ptch Track | On | | |
| Glide | Off | | |
| Glide Time | 00 | | |

| FILTER | 1 | 2 | 3 |
|------------|-------|---|---|
| Filter 1 | 3Lo | | |
| Filter 2 | 1Lo | | |
| FC1 Cutoff | 016 | | |
| ENV 2 | +26 | | |
| FC1 KBD | +00 | | |
| MODSCR | Veloc | | |
| MODAMT | +25 | | |
| FC2 Cutoff | 127 | | |
| ENV2 | +31 | | |
| FC2 KBD | +00 | | |
| FC1MOD-FC2 | On | | |

| OUTPUT | 1 | 2 | 3 |
|------------|------|---|---|
| VOL | 90 | | |
| Boost | On | | |
| MODSRC | Off | | |
| MODAMT | - | | |
| KBD Scale | +00 | | |
| Key Range | - | | |
| Output Bus | FX1 | | |
| Priority | Med | | |
| Pan | +00 | | |
| Vel window | >000 | | |

| ENV1 | 1 | 2 | 3 |
|------------|-------|---|---|
| Initial | 00 | | |
| Peak | 99 | | |
| Break | 00 | | |
| Sustain | 00 | | |
| Attack | 10 | | |
| Decay 1 | 07 | | |
| Decay 2 | 00 | | |
| Release | 99 | | |
| Vel-Level | 46 | | |
| Vel-Attack | 06 | | |
| Vel Curve | Concv | | |
| Mode | Norm | | |
| KBD Track | +00 | | |

| ENV2 | 1 | 2 | 3 |
|------------|-------|---|---|
| Initial | 78 | | |
| Peak | 99 | | |
| Break | 94 | | |
| Sustain | 90 | | |
| Attack | 37 | | |
| Decay 1 | 85 | | |
| Decay 2 | 35 | | |
| Release | 35 | | |
| Vel-Level | 33 | | |
| Vel-Attack | 13 | | |
| Vel Curve | Quick | | |
| Mode | Norm | | |
| KBD Track | +00 | | |

| EFFECTS — HALL REVERB | | | |
|-----------------------|---------|--------------|----|
| FX-1 | 40 | FX-2 | 50 |
| Decay Time | 42 | Diffusion | 40 |
| Detune Rate | 40 | Detune Depth | 12 |
| HF Damping | 40 | | |
| HF Bandwidth | 93 | | |
| LF Decay | +12 | | |
| MOD (Dest) | FX1-Mix | | |
| BY (MODSRC) | Modped | | |
| MODAMT | +23 | | |

Prog: TRUMPET SECTION

By: Mark Clifton

| WAVE | 1 | 2 | 3 |
|----------------|-----------|---|---|
| Select Voice | On | | |
| Wave Class | Brass | | |
| Wave | Brass Ens | | |
| Delay Time | 000 | | |
| Wave Direction | Fwd | | |
| Start Index | 00 | | |
| MODSCR | Off | | |
| MODAMT | - | | |
| Restrk Decay | 18 | | |

| LFO | 1 | 2 | 3 |
|------------|---|---|---|
| LFO Speed | | | |
| Noise Rate | | | |
| Level | | | |
| Delay | | | |
| MODSRC | | | |
| Wave | | | |
| Restart | | | |

| AMP | 1 | 2 | 3 |
|------------|------|---|---|
| Initial | 68 | | |
| Peak | 99 | | |
| Break | 94 | | |
| Sustain | 88 | | |
| Attack | 10 | | |
| Decay 1 | 64 | | |
| Decay 2 | 62 | | |
| Release | 28 | | |
| Vel-Level | 40 | | |
| Vel-Attack | 06 | | |
| Vel Curve | Conv | | |
| Mode | Norm | | |
| KBD Track | +00 | | |

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

| FILTER | 1 | 2 | 3 |
|------------|-------|---|---|
| Filter 1 | 3Lo | | |
| Filter 2 | 1Hi | | |
| FC1 Cutoff | 000 | | |
| ENV 2 | +85 | | |
| FC1 KBD | -05 | | |
| MODSCR | Wheel | | |
| MODAMT | +21 | | |
| FC2 Cutoff | 000 | | |
| ENV2 | +00 | | |
| FC2 KBD | -23 | | |
| FC1MOD-FC2 | On | | |

| OUTPUT | 1 | 2 | 3 |
|------------|------|---|---|
| VOL | 99 | | |
| Boost | On | | |
| MODSRC | Off | | |
| MODAMT | - | | |
| KBD Scale | +00 | | |
| Key Range | - | | |
| Output Bus | FX1 | | |
| Priority | Med | | |
| Pan | +00 | | |
| Vel window | >000 | | |

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

| ENV2 | 1 | 2 | 3 |
|------------|------|---|---|
| Initial | 99 | | |
| Peak | 90 | | |
| Break | 83 | | |
| Sustain | 80 | | |
| Attack | 37 | | |
| Decay 1 | 46 | | |
| Decay 2 | 34 | | |
| Release | 27 | | |
| Vel-Level | 53 | | |
| Vel-Attack | 00 | | |
| Vel Curve | Conv | | |
| Mode | Norm | | |
| KBD Track | -84 | | |

| EFFECTS — HALL REVERB | | | |
|-----------------------|---------|--------------|----|
| FX-1 | 50 | FX-2 | 60 |
| Decay Time | 42 | Diffusion | 40 |
| Detune Rate | 40 | Detune Depth | 12 |
| HF Damping | 40 | | |
| HF Bandwidth | 93 | | |
| LF Decay | +12 | | |
| MOD (Dest) | FX1-Mix | | |
| BY (MODSRC) | Modped | | |
| MODAMT | +23 | | |

the brightness of the sound as well as the pitch.

If your coveted Filter Mod parameter is already used up (as it often is on brass instrument patches), you can instead use the Output Mod parameter, which, while changing the volume instead of the brightness of the sound, should yield a close approximation. Also, make sure that the LFO is always set to a sine wave, since this best imitates the pattern of an actual brass instrument vibrato.

In the Filter section (speak of the devil), Velocity has been chosen as the modulator with a value of +25. This causes the filters to open and the sound to brighten as the keys are played harder, simulating the timbral response to volume changes of a real trombone. Envelope 2 has been routed to give some control over filter cutoff. Its attack has been programmed into a short upward ramp (as has that of the AMP envelope), that, when combined with the pitch blip of Envelope 1, helps to create a realistic tongued attack. After the attack, the sustain of the sound peaks to 99, then the values taper off as "the player" runs out of breath, causing the sustain to weaken slightly. Remember, when playing wind instrument sounds, to avoid sustaining notes for impossibly long times that would asphyxiate any normal player. As a general rule, don't play notes longer than you can hold your breath and exhale. This puts you onto the same level of limitations as the actual player. (The only exception to this rule is circular breathing, a rather difficult technique em-

ployed by some woodwind players and glass blowers that allows you to inhale through the nose while exhaling through the mouth, allowing you to sustain a note for an indefinite amount of time without having to stop and take a breath.)

The second patch, "Trumpet Section," imitates a medium to large ensemble of trumpets (hence the name), using the "Brass Ensemble" wave. Many of the features of the "Blue Trombone" patch also apply here, particularly in the area of envelopes. The only features that aren't included are the pitch blip, being too subtle an effect to be noticeable in large groups, and vibrato, which tends to sound cheesy and unrealistic in brass section sounds (though that doesn't mean that it's not used in some cases). The mod wheel has been routed to modulate filter cutoff with a value of +21, making the sound slightly brighter as the wheel is moved up. The difference may sound subtle by itself, but it really helps the sound to cut through dense mixes, especially in orchestral and big band sequences.

Both "Blue Trombone" and "Trumpet Section" use my trusty orchestral concert hall reverb program, with the FX amount controlled by the mod pedal.

I use both of these sounds constantly in my own compositions, and I hope that you'll get as much mileage out of them as I have. Have fun hacking them for your own diabolical purposes. Next time, we'll go on a tour of some Rhodes less traveled. ■

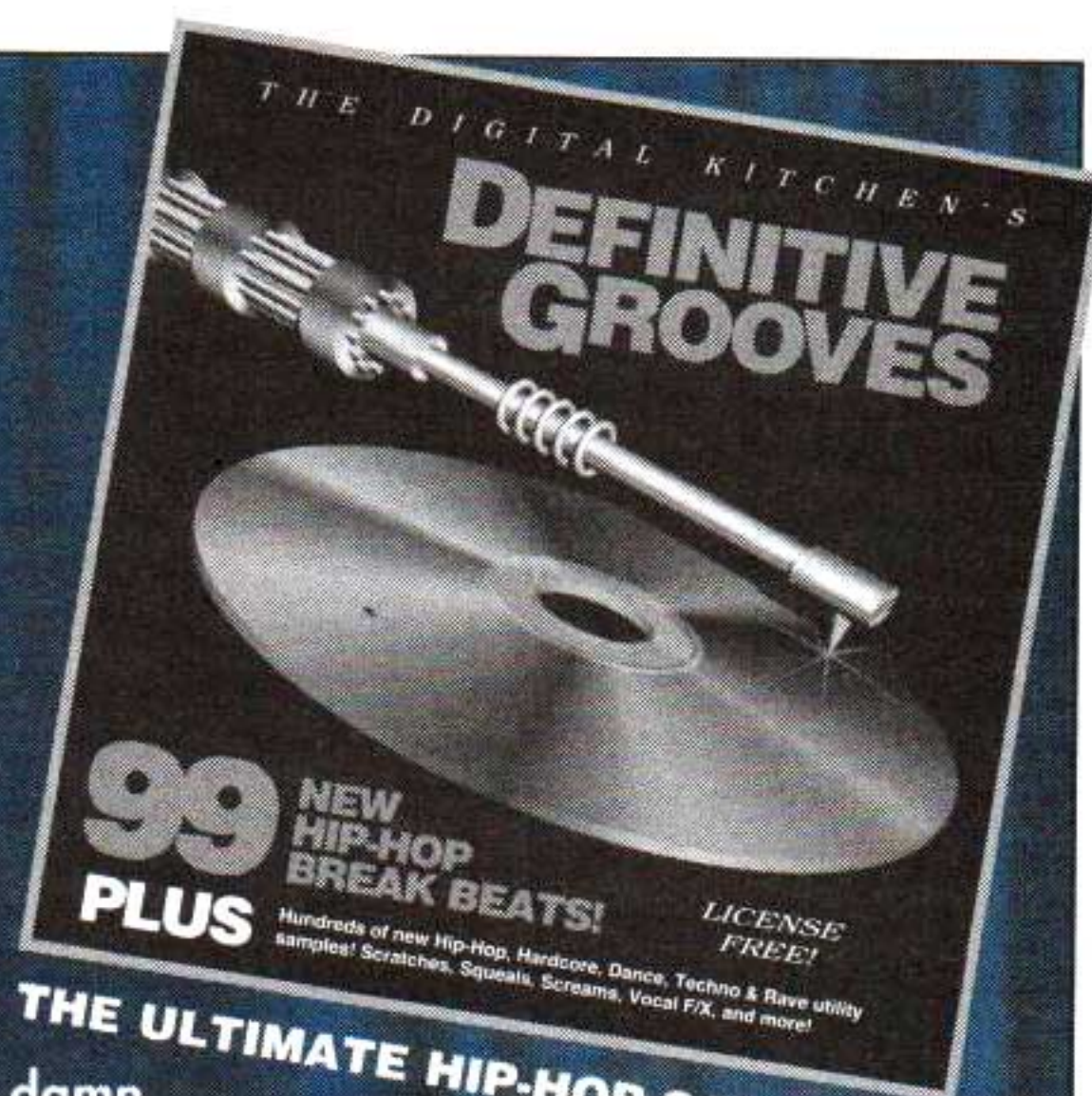
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'16+/ASR Event Edit Fun!

Garth Hjelte, Rubber Chicken Software

One of the funny things about the EPS growing old is that you can't help but find easier ways to do things. Which is great, but then you get yourself crazy thinking about doing something in two minutes that used to take you two hours. The 16-Plus sure is easier to use, in so many respects.

Especially the Event Edit Track page. If you get into it, you'll find mucho helpful utilities, some that go way beyond the original EPS. (Everything following also applies to the ASR.)

What I'm gonna do now is wade through a couple of ways you can make the Event Edit Track page work for you, making your sequencing job on the EPS a whole lot easier. Unfortunately for you Classic owners, most of what I'll explain here pertains only to the 16-Plus. But you're certainly welcome to read along, with your checkbook and bank statement. If you have a 16-Plus, please take this magazine over to your massive megastudio, which, between the ten Synclaviers and the modular Moog that Bob himself gave you, lies the ever-waiting Ensoniq.

Here we go

Nit pick, nit pick. That's exactly what the Event Edit Track parameter does. It provides a window into everything that the EPS secretly recorded while you were hard at work, jamming your life away. It shows what notes you played, what the velocity was, the duration of each note (even in a chord), and *all* the controller information. Not only does it display all that information, it allows you to edit any piece of it. Thus the name, Event Edit Track. It is accessible by hitting CMD-TRACK-5. Once you've done that, you're ready to go.

One thing I should mention — don't work with incredible speed (I'm talking about button-pushing here) with this function. My experience has been that the EPS is very susceptible to crashing when working with individual events like this. Go easy. And you'll be more accurate, too. So take your time, and *save your work frequently to floppy*. Don't learn your lesson the hard way. Also, try not to use the slider. This sometimes goads the 16-Plus into having fits. Due to the operations of Event Edit, the EPS spits out bunches of notes because you usually audition many at a time. This gets annoying, too, so just make it a practice to use the buttons.

To use Event Edit, first, hit YES in response to the prompt. Suddenly, you'll get the main page, which shows (from left to right), EVENT NUMBER — EVENT TYPE — EVENT VALUE — BAR — BEAT — CLOCK. The cursor will be under the EVENT NUMBER value, so go ahead and scroll up on that. Wow! there's your song in manual slow motion! You'll

notice all the notes flying by on the screen, if you're not having too much fun.

There are also several other pages, depending on what mode you're in. For key events, there is a duration page, which tells you how much time there is between the note-on and note-off, and also an Event Type page. This toggles between the various controllers, or combines them all, but it mainly determines what will show up on the main page. This is a source of great fun. On any of these pages (including the main page), you can hit ENTER-YES, and choose whether to insert or delete the current event. And once you're done, just hit CANCEL-NO, and you are at the audition page. You know where to go from there.

Applications — Fix-a-Note Editing

I was recording an album (with a lady Spanish pianist, of all people) and we were doing a solo piano piece into the sequencer. (Free tip: I free-ran the sequencer, and upped the tempo to 240 bpm to get the best resolution. Why 240, and not 250? I noted the average tempo of the piece was 120, so by doubling that I got 240. I figured it might make a subtle difference. The 16-Plus's 96 ppq isn't really that good, compared with the usual 384 ppq found in most PC/Mac sequencers.) She did an excellent job until halfway through the third take, but then she got frustrated and stopped playing, thinking that it was botched, it was a bad take. But I told her I could fix some of the bad notes, if she would be willing to keep playing even if she flopped. So that gave her some extra confidence, and on the fifth take she did a near perfect take, except for some missed notes. So I told her to take a break, and I went to work on the Event Edit Track page. I listened to the piece, first of all, then jotted down where the mistakes were. Then, I scrolled up the Event list until I found the questionables. I simply deleted the three I found (she is quite good).

The ability to fine-edit your performances can help you relax while you do your takes. It is also great on drum tracks, when you want to just take out that one snare hit, or remove a kick drum that you accidentally doubled. Or, you can change snares, cymbals, percussion, or anything else by changing the Event Value.

Another excellent use is to edit certain velocities. Say on a performance some notes kind of drop out because you didn't hit them hard enough. Just edit the velocity of these notes (again by the buttons or by the keyboard). I've used this with great success when creating crescendoing snare rolls and massive timpani rolls. Frankly, though, the process quickly becomes somewhat tedious.

Besides all that, it's nice, every once in a while, to look at the Event Edit Track to just see what's going on.

Application — Mix Volume Edits

Are you tired of the *long* procedure of resetting mix volumes all the time, when you're working with a sequence? I got real tired of it. (For more information on Track mix, please see my article in the Oct, '91 Hacker) But by using Event Edit, I found a much easier way of editing track volumes.

In Event Edit, scroll left into the Event Type page. Scroll up once, until it says AL ALL-EVENT. This will display all the events that the sequencer has recorded on that particular track. Usually the first event is a PC (program change). Then usually follows the MV (mix volume). Whenever you start recording on the sequencer, it will always record a PC and a MV event before a note is entered in the list. Which is why we always have to go to RECORD MODE=ADD mode, etc.

Well, why not get into the habit of manually editing the Mix Volume? That's what I did. All you have to do when you want to change a certain track's volume is to:

- Go to Event Edit Track
- Hit Enter-Yes
- Scroll to Event Type, and scroll to [AL ALL-EVENTS]
- Scroll Right, and find the MV
- Edit by using the chart below

The reason that the chart is necessary is that Event Edit shows

volume represented in MIDI numbers (0-127) rather than in the EPS method (0-99). Incidentally, the chart is approximate by + or -1, because it behaves differently whether you are going up or down in volume.

Beware of the fact that you may have more than one MV in your sequence, due to several trips to the overdubbing lab. In fact, you might have tons of them, all having the same value (which is useless). You can rid yourself of them, if you want. (Filter Event is useful for that.) Again, I hope that you will see how useful this Event Edit Track parameter can be.

Yet another spin-off of this is that you can edit your program changes in the same way. You don't need the chart for that, though, since the EPS treats MIDI PCs in MIDI numerology. Which leads to our next application.

Application — The Mysterious Snubbed Quantized Notes

I run a DX-7 off my EPS sequencer. When I quantize, I had an all-too-frequent problem. The very first note or chord would always get clipped, or not even get heard at all. By using Event Edit, I soon found out why. When you quantize, the EPS moves the notes (or key-events, as the EPS refers to them), to the quantization points, but will leave the controller events alone. So my DX-7 would get the information backward — before I quantized, it would be (in order) PC, MV, and then the key-events, but after I quantized, it would be key-events, then the PC and MV. You see, on the DX-7, when you send it any program change, even if it's the same program that it's on, it will

cut off any note that is playing at the time. That is why my first notes were clipped. My solution? Either I had to eliminate the PC altogether, or better still, I could remove the PC, and then introduce a new PC by using the old RECORD MODE=ADD, press RECORD, then PLAY procedure. By the way, notice that you can't insert anything but key events in Event Edit, while you may delete any event you want. (Isn't it funny how life works sometimes?)

The clipped note problem can happen to other MIDI gear besides the DX-7, and can occur in the EPS as well. It's not really an OS software bug, because when you think about it, there's no other logic that would be better as far as what events are moved when you quantize. It's just a complication of design, I suppose. So if you have this problem, cure it by using

EPS VOLUME - MIDI VOLUME PARAMETER CONVERSION TABLE

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|-------|-------|------|
| 99-127 | 89-114 | 79-102 | 69-89 | 59-76 | 49-63 | 39-50 | 29-38 | 19-25 | 9-12 |
| 98-126 | 88-113 | 78-100 | 68-87 | 58-75 | 48-62 | 38-49 | 28-36 | 18-23 | 8-11 |
| 97-125 | 87-112 | 77-99 | 67-86 | 57-73 | 47-61 | 37-48 | 27-35 | 17-22 | 7-9 |
| 96-123 | 86-111 | 76-98 | 66-85 | 56-72 | 46-59 | 36-47 | 26-34 | 16-21 | 6-8 |
| 95-122 | 85-109 | 75-96 | 65-84 | 55-71 | 45-58 | 35-45 | 25-32 | 15-20 | 5-7 |
| 94-121 | 84-108 | 74-95 | 64-82 | 54-70 | 44-57 | 34-44 | 24-31 | 14-18 | 4-6 |
| 93-119 | 83-107 | 73-94 | 63-81 | 53-68 | 43-55 | 33-43 | 23-30 | 13-17 | 3-4 |
| 92-118 | 82-105 | 72-93 | 62-80 | 52-67 | 42-54 | 32-41 | 22-29 | 12-16 | 2-3 |
| 91-117 | 81-104 | 71-91 | 61-78 | 51-66 | 41-53 | 31-40 | 21-27 | 11-14 | 1-2 |
| 90-116 | 80-103 | 70-90 | 60-77 | 50-64 | 40-52 | 30-39 | 20-26 | 10-13 | 0-0 |

Event Edit.

Application — Clock to Beat Conversion

We all know what bars are and what beats are, but what the heck are "clocks"? It's like the computer nerds are trying to invade the musical realm with their own lingo. Well, here's another chart that will translate some of that for you.

Epilogue — Some Final Notes (Primarily on Other Stuff)

Hopefully this information helps you by getting your mind away from the machine and onto the music. Which reminds me (this has nothing to do with the article, but it's worth saying anyway), people always are asking me through the Transoniq-Net what's a better sequencer, the EPS, or this program, or if it's Mac or PC or Amiga or Brother (oh brother!!). Well, any sequencer is worth its two cents if you are used to using it. The

most important quality of a sequencer is its transparency. Sure, the big difference between sequencing systems is the editing, but if you can't but anything of quality in the thing in the first place, who cares about the editing? If you're wondering what you should sequence on, find an adequate system and get used to it. Don't worry that Cubase may be light years ahead of Performer or Cakewalk, etc. Most people don't use half the stuff that's in the mega-programs anyway, although they are much more user-friendly.



Maybe that's why we have Event Edit Track. ■

Bio: Garth Hjelte runs Rubber Chicken Software, a 3rd-party sample company for Ensoniq products.

CLOCK TO NOTE VALUE CONVERSION TABLE

| | | | | | | | | | |
|---------------------|---|-------|------|-------|-----|-------|------|-------|---|
| <i>Clock Values</i> | 0 | 17 | 25 | 33 | 49 | 65 | 73 | 81 | 0 |
| <i>Note Values</i> | 0 | 1/16T | 1/16 | 1/16T | 1/8 | 1/16T | 1/16 | 1/16T | 0 |

Classifieds

EQUIPMENT

SD-1/32, mint, 6 original diskettes, 1 cartridge, 3 manuals/cassette: \$1,350. w/SKB case: \$1,450. Call (210) 757-1720 after 6 pm.

ASR-10, hard case, excellent condition: \$1750. Call (609) 298-4421.

Selling an EPS-16 Plus with memory and output expander plus 100s of sounds for \$1600 or best offer. (201) 348-0737.

KORG 03RW Synthesizer module. New with eleven months warranty remaining. \$675 obo. Visa/Mastercard. Call after 5 pm Eastern. (703) 988-7442.

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Ensoniq EPS-16+ rack with 230 disks, extras, \$1400 o.b.o. IBM sequencing software: Sequencer Plus Gold/Roland MPU interface, \$180 o.b.o. Call Jon, 908-566-3872. Will ship.

Wanted: ESQ-M. Are there any out there? (Or the fabled SQ-80-M.) Call Dennis, 604-734-8001. Leave message.

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The Ultimate Analog Synth Sample Collection of the MKS80, TB303 & TS-10. For EPS/'16+/ASR. 7 Disks: \$37.95. Visa & MC accepted. Money orders payable to: Steve Brenner, 801 Weber St. East, Kitchner, Ont. N2H-1H5, Canada. Phone: 519-745-0021 (Mon/Tues), 519-765-5300 (Wed/Thurs/Fri).

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PART — set of 80 ESQ-1 (SQ-80) sounds plus two booklets. Classic, pop, ethnic sounds, hidden waves and effects patches, multisplits (!), microtonal scales. Available on ESQ-1 datatape, Mirage, Atari ST, IBM-PC or Macintosh disk. Read review in TH#100. Contact: Paul Timmermans, Steyenhoflaan 33, B-3130 Betekom, Belgium.

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SOFTWARE

CAKEWALK Professional for WINDOWS, V1.03: \$155. Musicquest PC MIDI Interface card: \$60. Both: \$195. (601) 957-6886.

Cakewalk Professional for Windows, V1.02, \$160.00. OVIEW for Proteus, Editor/Librarian by Turtle Beach, \$90. Phone: 818-584-0020.

MISC

Wanted: SQ-R Plus; also realistic Strings, Piano patches/samples for TS-12. For Sale:

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ESQ & SQ-80 Hackerpatch

Guest Hacker: Preston Bricker

Some comments on Kirk Slinkard's VOX Continentals articles: Although the SQ-80 has only six oscillators per patch, I offer a pair of patches - VXC16M and VXCIVM. The Saw waveform of Osc2 in VXCIVM combines that pitch plus half the octave. Since the top drawbar is pitched so high, a lower volume is not a major difference. Two variants replace the Square/Saw with Sine/Octave and Triangle/Saw2. (I name these VXC16S/VCXIVS and VXC16T/VCXIVT.)

Notice that the DCA levels, Filter Keybd and LFO1 Freq have been rescaled to reflect the difference in maximum values. The timbre controller is replaced by the pedal. Env4 is not pure on/off. T1=10 to avoid a bell-like attack artifact. T4=30R to relieve the dryness of the SQ-80.

The oscillators are tuned well tempered as in the articles. Harmonics should be integer multiples of the fundamental. The nearest semi: fine tuning for thirds and fifths is 03:28 and 07:01 respectively. True thirds are noticeably flat compared with the equal tempered value. However, integer tuning, when played in chords, clashes with the well tempered scaling of the keyboard and produces beats. The effect may be desirable for other patches.

The articles make no mention of translating drawbar volume level to DCA level. After experimenting on my ESQ-1 and SQ-80 I offer the following table:

| | | | | | | | | | |
|---------|-----|----|----|----|----|----|----|----|----|
| Drawbar | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Patch | Off | 31 | 34 | 37 | 40 | 43 | 46 | 49 | 52 |

| ESQ-1 PROG: VXC16M | | | | | | | | | | By: Preston Bricker | | | | | | | | | | |
|--------------------|-----------|--------|---------|--------|-------|-----------|-------|-------|-----|---------------------|--|--|--|--|--|--|--|--|--|--|
| OSC | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | |
| OSC 1 | 0 | 0 | 0 | SQUARE | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| OSC 2 | 1 | 0 | 0 | SQUARE | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| OSC 3 | 2 | 0 | 0 | SQUARE | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| DCA | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | | | |
| DCA 1 | 48 | ON | *OFF* | - | *OFF* | - | | | | | | | | | | | | | | |
| DCA 2 | 48 | ON | *OFF* | - | *OFF* | - | | | | | | | | | | | | | | |
| DCA 3 | 48 | ON | *OFF* | - | *OFF* | - | | | | | | | | | | | | | | |
| FILTER | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | | |
| FILTER | 75 | 0 | 24 | *OFF* | - | *OFF* | - | | | | | | | | | | | | | |
| DCA 4 | FINAL VOL | PAN | PAN MOD | DEPTH | | | | | | | | | | | | | | | | |
| DCA 4 | 50 | 8 | *OFF* | - | | | | | | | | | | | | | | | | |
| LFO | FREQ | RESET | HUMAN | WAV | L1 | DELAY | L2 | MOD | | | | | | | | | | | | |
| LFO 1 | 24 | ON | OFF | TRI | 0 | 0 | 0 | WHEEL | | | | | | | | | | | | |
| LFO 2 | 0 | OFF | OFF | TRI | 0 | 0 | 0 | *OFF* | | | | | | | | | | | | |
| LFO 3 | 0 | OFF | OFF | TRI | 0 | 0 | 0 | *OFF* | | | | | | | | | | | | |
| ENV | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK | | | | | | | | | | |
| ENV 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 4 | 63 | 63 | 63 | 0 | 0 | 10 | 0 | 0 | 30R | 0 | | | | | | | | | | |
| MODES | SYNC | AM | MONO | GLIDE | VC | ENV | OSC | CYC | | | | | | | | | | | | |
| MODES | OFF | OFF | OFF | 0 | OFF | ON | OFF | OFF | | | | | | | | | | | | |
| SPLIT/LAYER | S/L PRG | LAYER | L PRG | SPLIT | S PRG | SPLIT KEY | | | | | | | | | | | | | | |
| SPLIT/LAYER | OFF | PGM 0 | ON | VXCIVM | OFF | PGM 0 | 0 | | | | | | | | | | | | | |

| ESQ-1 PROG: VXCIVM | | | | | | | | | | By: Preston Bricker | | | | | | | | | | |
|--------------------|-----------|--------|---------|--------|-------|-----------|-------|-------|-----|---------------------|--|--|--|--|--|--|--|--|--|--|
| OSC | OCT | SEMI | FINE | WAVE | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | |
| OSC 1 | 2 | 7 | 0 | SQUARE | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| OSC 2 | 3 | 0 | 0 | SAW | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| OSC 3 | 3 | 4 | 0 | SQUARE | LFO1 | 01 | *OFF* | - | | | | | | | | | | | | |
| DCA | LEVEL | OUTPUT | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | | | |
| DCA 1 | 48 | ON | PEDAL | -25 | *OFF* | - | | | | | | | | | | | | | | |
| DCA 2 | 48 | ON | PEDAL | -25 | *OFF* | - | | | | | | | | | | | | | | |
| DCA 3 | 48 | ON | PEDAL | -25 | *OFF* | - | | | | | | | | | | | | | | |
| FILTER | FREQ | Q | KEYBD | MOD#1 | DEPTH | MOD#2 | DEPTH | | | | | | | | | | | | | |
| FILTER | 56 | 0 | 63 | *OFF* | - | *OFF* | - | | | | | | | | | | | | | |
| DCA 4 | FINAL VOL | PAN | PAN MOD | DEPTH | | | | | | | | | | | | | | | | |
| DCA 4 | 50 | 8 | *OFF* | - | | | | | | | | | | | | | | | | |
| LFO | FREQ | RESET | HUMAN | WAV | L1 | DELAY | L2 | MOD | | | | | | | | | | | | |
| LFO 1 | 24 | ON | OFF | TRI | 0 | 0 | 0 | WHEEL | | | | | | | | | | | | |
| LFO 2 | 0 | OFF | OFF | TRI | 0 | 0 | 0 | *OFF* | | | | | | | | | | | | |
| LFO 3 | 0 | OFF | OFF | TRI | 0 | 0 | 0 | *OFF* | | | | | | | | | | | | |
| ENV | L1 | L2 | L3 | LV | T1V | T1 | T2 | T3 | T4 | TK | | | | | | | | | | |
| ENV 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| ENV 4 | 63 | 63 | 63 | 0 | 0 | 10 | 0 | 0 | 30R | 0 | | | | | | | | | | |
| MODES | SYNC | AM | MONO | GLIDE | VC | ENV | OSC | CYC | | | | | | | | | | | | |
| MODES | OFF | OFF | OFF | 0 | OFF | ON | OFF | OFF | | | | | | | | | | | | |
| SPLIT/LAYER | S/L PRG | LAYER | L PRG | SPLIT | S PRG | SPLIT KEY | | | | | | | | | | | | | | |
| SPLIT/LAYER | OFF | PGM 0 | ON | VXCIVM | OFF | PGM 0 | 0 | | | | | | | | | | | | | |

SD & VFX Prog: SEM-BASS

By: Todd Speer, Syntaur Productions

The Patch: SEM-BASS, a patch from Syntaur's new VFX Set 2, is a set of bass sounds inspired by Oberheim's analog Synthesizer Expander Module (SEM). The sound is based on pulse-width modulation (PWM), which I emulated on the VFX by using the Transwave Pulse.1-X. The 0* patch select is a stereo-panned and detuned PWM bass that is accented by band-pass filtering as in the SEM. Move the mod wheel past the center and the oscillators suddenly switch to perfect tuning in octaves, panned to the center. Patch *0 is a wet resonant bass sound

| WAVES | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Wave | Pulse.1-X | Resonant3 | Pulse.1-X | Pulse.1-X | Pulse.1-X | Synbass-2 |
| Wave Class | Transwave | Transwave | Transwave | Transwave | Transwave | Bass-Snd |
| Delay | 00 | 00 | 00 | 00 | 00 | 00 |
| Start | 29 | 00 | 29 | 17 | 17 | 00 |
| MODSRC | Env2 | Env2 | Env2 | Env2 | Env2 | 00 |
| MODAMT | +88 | +65 | +88 | +80 | +80 | Forward |

| MOD MIXER | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|---|---|---|----------|----------|----------|
| SRC-1 | | | | Off | Off | Off |
| SRC-2 | | | | Wheel | Wheel | Keybd |
| SRC-2 Scale | | | | 8.0 | 1.0 | 1.0 |
| SRC-2 Shape | | | | Quant-02 | Quant-02 | Quant-02 |

| PITCH | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|--------|--------|--------|--------|--------|--------|
| Octave | -1 | 0 | 0 | -1 | -1 | 0 |
| Semitone | 00 | 00 | 00 | 00 | 00 | 00 |
| Fine | 00 | 00 | +05 | +22 | 00 | 00 |
| Pitch Table | System | System | System | System | System | System |

| PITCH MODS | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|------|------|------|-------|-------|-------|
| MODSRC | Off | Off | Off | Mixer | Mixer | Mixer |
| MODAMT | - | - | - | -28 | +74 | -74 |
| Glide | None | None | None | None | None | None |
| ENV1 | 00 | 00 | 00 | 00 | 00 | 00 |
| LFO1 | -01 | +01 | +01 | 00 | 00 | 00 |

| FILTER 1 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|------|------|------|------|-------|
| Mode | LP/3 | LP/3 | LP/3 | LP/2 | LP/2 | LP/2 |
| Cutoff | 50 | 50 | 50 | 47 | 47 | 50 |
| KBD | +24 | +24 | +24 | +24 | +24 | +24 |
| MODSRC | Off | Off | Off | Off | Off | Wheel |
| MODAMT | - | - | - | - | - | +65 |
| ENV2 | +53 | +21 | +51 | +53 | +53 | +53 |

| FILTER 2 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|-------|-------|-------|------|------|-------|
| Mode | HP/1 | HP/1 | HP/1 | HP/2 | HP/2 | HP/2 |
| Cutoff | 52 | 52 | 52 | 57 | 57 | 00 |
| KBD | +99 | +99 | +99 | +99 | +99 | 00 |
| MODSRC | Keybd | Keybd | Keybd | Off | Off | Wheel |
| MODAMT | +99 | +99 | +99 | - | - | +70 |
| ENV2 | 00 | 00 | 00 | +54 | +54 | 00 |

| OUTPUT | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|------|------|------|-------|-------|-----|
| VOL | 92 | 99 | 89 | 92 | 92 | 99 |
| MODSRC | Off | Off | Off | Off | Off | Off |
| MODAMT | - | - | - | - | - | - |
| KBD Scale | 00 | 00 | 00 | 00 | 00 | 00 |
| LO/Hi Key | - | - | - | - | - | - |
| Dest Bus | FX1 | FX1 | FX1 | FX2 | FX2 | FX1 |
| Pan | 88 | 12 | 12 | 00 | 99 | 50 |
| MODSRC | Env2 | Env2 | Env2 | Wheel | Wheel | Off |
| MODAMT | -80 | +80 | +80 | +74 | -74 | - |
| Pre-Gain | Off | Off | Off | Off | Off | Off |
| Voice Prior | Med | Med | Med | Med | Med | Med |
| Vel Thresh | 00 | 00 | 00 | 00 | 00 | 00 |

| LFO | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------|-------|-------|-------|---|---|---|
| Rate | 41 | 42 | 41 | | | |
| MODSRC | Off | Off | Off | | | |
| MODAMT | - | - | - | | | |
| Level | 00 | 00 | 00 | | | |
| MODSRC | Wheel | Wheel | Wheel | | | |
| Delay | 00 | 00 | 00 | | | |
| Waveshape | Tri | Tri | Tri | | | |
| Restart | On | On | On | | | |
| Noise SRC RT | 70 | 70 | 70 | | | |

with PWM, and ** adds the SYN-BASS-2 wave. Use the mod wheel to high-pass filter the SYN-BASS wave for a wonderful noisy slap. Notice the tuning across the keyboard on this voice.

The Hack: Clever boy, that Todd. How can the tuning of Voice 6 act like a keyboard split? How can the mod wheel (0* patch) act like a switch, suddenly changing the tuning and intervals of the oscillators from one discrete value to another? The secret is in the Mod Mixer. In Voice 6, Todd used KEYBD as a modulator, then quantized it to create a step rather than a smooth range of values. Modulating the pitch with the mixer shifts the oscillator up an octave when it starts getting too low. A similar quantizing technique was used on the 0* patch, this time using the WHEEL as Mixer SRC-2. Wish I'd thought of that....

Some people, particularly in the studio, prefer bass sounds to be completely dry. Even though the reverb decay time is set to 0 in this patch, the PRE-DELAY adds a slapback that you might need to pull off by setting it to 0. You could also pull the EARLY-REFL.LEVEL to zero while you're at it, but it sure adds a nice element to the sound without sounding like an effect.

- Sam Mims

| SELECT VOICE | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------|---|---|---|---|---|---|
| 00 | | | | | | |
| 0* | | | | | | |
| *0 | | | | | | |
| ** | | | | | | |

| ENV2 | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|--------|--------|--------|--------|--------|--------|
| Initial | 99 | 99 | 99 | 99 | 99 | 99 |
| Peak | 93 | 93 | 93 | 01 | 01 | 93 |
| Break 1 | 18 | 18 | 18 | 03 | 03 | 18 |
| Break 2 | 05 | 05 | 05 | 01 | 01 | 05 |
| Sustain | 02 | 02 | 02 | 00 | 00 | 02 |
| Attack | 00 | 00 | 00 | 20 | 20 | 00 |
| Decay 1 | 26 | 26 | 26 | 17 | 17 | 26 |
| Decay 2 | 10 | 10 | 10 | 01 | 01 | 10 |
| Decay 3 | 02 | 02 | 02 | 00 | 00 | 02 |
| Release | 05* | 05* | 05* | 05* | 05* | 05* |
| KBD Track | 00 | 00 | 00 | 00 | 00 | 00 |
| Vel Curve | Linear | Linear | Linear | Linear | Linear | Linear |
| Mode | Finish | Finish | Finish | Finish | Finish | Finish |
| Vel-Level | 55 | 55 | 55 | 55 | 55 | 55 |
| Vel-Attack | 00 | 00 | 00 | 00 | 00 | 00 |

| ENV3 | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|--------|--------|--------|--------|--------|--------|
| Initial | 99 | 99 | 99 | 99 | 99 | 99 |
| Peak | 99 | 99 | 99 | 99 | 99 | 99 |
| Break 1 | 99 | 99 | 99 | 83 | 83 | 99 |
| Break 2 | 99 | 99 | 99 | 23 | 23 | 99 |
| Sustain | 99 | 99 | 99 | 00 | 00 | 99 |
| Attack | 00 | 00 | 00 | 00 | 00 | 00 |
| Decay 1 | 50 | 50 | 50 | 26 | 26 | 50 |
| Decay 2 | 50 | 50 | 50 | 18 | 18 | 50 |
| Decay 3 | 50 | 50 | 50 | 12 | 12 | 50 |
| Release | 38* | 38* | 38* | 21* | 21* | 38* |
| KBD Track | 00 | 00 | 00 | 00 | 00 | 00 |
| Vel Curve | Linear | Linear | Linear | Linear | Linear | Linear |
| Mode | Normal | Normal | Normal | Finish | Finish | Normal |
| Vel-Level | 12 | 12 | 12 | 06 | 06 | 12 |
| Vel-Attack | 00 | 00 | 00 | 00 | 00 | 00 |

| PGM CONTROL | |
|-------------|-----|
| Pitch Table | Off |
| Bend Range | ** |
| Delay | x4 |
| Restrike | 37 |
| Glide Time | 00 |

| EFFECTS (1) | |
|-------------|-------------------|
| Effect | Small Hall Reverb |
| Decay Time | 00 |
| FX1 | 40 |
| FX2 | 00 |

| EFFECTS (2) | |
|------------------|-----|
| Pre-Delay | 203 |
| Early Refl Level | 99 |

| EFFECTS (3) | |
|-------------------|------------------|
| FX2 Mode | Norm Stereo Send |
| Reverb HF Damping | 99 |

| PERFORMANCE | |
|-------------|-----|
| Timbre | 00 |
| Release | 00 |
| Pressure | Key |

The Interface

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

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

Electronic mail - GENIE Network: TRANSONIQ, CompuServe: 73260,3353, Internet (via CS): 73260.3353@compuserve.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 the Interface:

I was just reading the February issue and learned of at least one new computer software application for organizing/editing samples for my ASR-10.

Unfortunately, the software is for the PC. I thought I would write in and plead desperately for someone to PLEASE write something like this for those of us using Macs. I would do it in an instant if I could, but alas...

I can get all sorts of editor librarians for synths, but they use Sysex and don't support "program change scripting" for loading sounds from a hard disk, for instance. I love my ASR-10, but the floppy swapping nightmare would be greatly reduced with a librarian...and thus I would appreciate it even more.

While I'm writing, I might as well mention that I had been interested in the "transforming" effect that people have written a little about lately. The techniques described are not exactly what I need to be able to do. You see, what would really be nice is to transform a long sample (say a vocal ooooooh, or the like) without retriggering.

Try to follow me. You play the sample and hold it down... While it is oooooohing, the effect that I want is to cut the "volume" up and down rhythmically (and sharply) but without starting the sample over - just cutting the volume up and down.

The only way I have been able to come up with a solution that sounds right is by using a repeating amplitude filter (suggested by an Ensoniq dude). Unfortunately, it is difficult to get complex rhythms using this method.

Someday, I will figure this out. Any new ideas would be appreciated. So far, I've tried (unsuccessfully) to use a "silent" sample to mask an already playing one. This would be just right if I could get it to work. I suppose I will just have to deal with using keyed compression like this has been done in the past until a better idea comes along.

Thanks folks...and for all of you with computer mail, talk to me at hallcb@wfu.edu about these things and synthesis/sampling in general. Printed media is slow and cumbersome.

Christian Hall
Cincinnati, OH

[CS - Unless I'm misunderstanding what it is you're trying to do, there may be a couple of other things to try. First, if you want a cyclic change in volume (like tremolo), you might simply try routing an LFO to the sample's AMP. Use a sine or triangle wave on the LFO for smooth fades, or a square wave for more abrupt amplitude changes.

If you are using an external sequencer, it should be relatively easy to write strings of volume change messages (controller #7) to control the amplitude of a sound (you could also write volume change messages directly into the ASR's sequencer, in step-edit mode, but it might be a bit more cumbersome). Amplitude changes could be synchronized with the sequence, and with any rhythmic movement you'd like.

Another idea might be to make several copies of the sample you're working with, and make the sample start time a bit later on each of the successive copies. If you then assign these samples to adjacent keys (tuning them so they are all playing at the same pitch), you can produce some great effects just by running a finger up and down those keys. Of course, this allows you to trigger the sample from several different start points, as well.]

[Ensoniq - Another approach is to use ROM algorithm 48, called KEYED EXPANDER, which acts as a gate which can be triggered to open by an input signal of your choice. The manual explains its parameters and functions, but here is a brief explanation.

Any signal that is run through this algorithm panned left will be expanded by the signal that is panned to the right. So you would take your vocal sample (which is INSTRUMENT 1) and pan it to the left. Sequence a track that has this part sustaining for the whole piece, or triggered to sustain for 4 bars, re-triggered to sustain for 4 bars etc. Now take a second instrument (INSTRUMENT 2) which can be a short blip, or percussive part panned to the right, and play it in time with the sequence. Voilà, you have a controlled opening and closing of the expander. You can sequence INSTRUMENT 2 to capture your performance, or even use a copy of a drum track or other part if desired.]

Dear TH,

I recently bought a TS-12 which I am using

primarily as a digital piano for solo classical piano music. I love the keyboard action, but I'm not too impressed with the onboard piano sample. I bought a 3165 block recording of a Steinway from Greysounds which I think sounds a lot better (after I spent 4-5 hours setting the filters and envelopes I might add), but I'm still looking for a larger sample. Are there any 8-meg piano samples available for the TS-12 yet? And if so which ones come with reasonable filter and envelope settings?

I also have a couple of questions I'd like to address to Ensoniq concerning what I consider oddities in the design of the TS-12: 1) Why limit the TS-12 to 8-meg of sample memory when the ASR-10 can handle 16? Was there some technical problem involved in allowing the TS-12 to take 16-meg?

2) Why did you leave the option to save sample waveform memory out of the TS-12 operating system? I would think that most people would like to be able to organize their data by saving waveform memory along with the settings and/or sequence data.

And one last related question for Transoniq Hacker. Is there any third-party software available which will allow me to take waveform data from a low density disk and save it onto a high density disk? My Steinway sample from Greysounds should fit on one high density disk, but since I can't save the waveform data from the TS-12 I have to put up with low density disks and swap the disks every time I turn the machine on.

Thanks,
David Hurtubise
Stanford CA
GENIE: D.HURTUBISE

[CS - Afraid I know of no software which will allow you to save sampled data for the TS-12 to disk. The best suggestion I can come up with is to see if you can prevail on your local Ensoniq dealer to let you have a few minutes on an ASR-10 to perform the disk transfers you want.]

[Ensoniq - The TS can hold approximately 4 Meg per Bank when the memory is expanded. To get a sample larger than that it has to be divided into two Instruments (like low key and high key versions), and then stacked as a Preset in the TS. We have some larger piano samples coming for the ASR-10 and TS Series, which will be 4-Meg versions. We have a preliminary

version of an 8-Meg version of the Yamaha grand from our CDR-3 (the Westlake Piano) which we may release, but it takes 6 HD disks to do it on floppies. Stay tuned...

1) The TS sample RAM is limited to 8 Meg because the other memory that the chip can address is used for the ROM waveforms. The ASR-10 has no waveform ROM so all the memory space can be used for sample RAM.

2) We viewed the ability to load sampled sounds as access to more libraries of sounds, not as a complete sample editing and storage function. It would have taken a lot more time and resources to add that function. With the intelligent loading of sampled sounds that was added in OS 2.02 you can easily combine synth sounds, sampled sounds, sample edits, and sequencer data into an auto-loading Bank that will prompt you for the needed sample disks, or automatically retrieve the sounds if you use SCSI and a CD-ROM or previously created hard drive.]

Dear Hacker,

I must say, this is one exemplary mag you have here. I mean, you've got the coolest publishers, along with the hippest writers, authors, and musicians all under one cover. Beautifully done.

This is partly a letter of information and a letter of thanks to the publishers and editors of the *Hacker*, the P.R. guys at Ensoniq, and the fine folks here locally at Portland Music Co. I had a real situation, and you all came through for me.

I bought my KS-32 in January '93, and experienced many problems with it in the weeks to follow. One of them was a mysterious "Unexpected Event #129." I'd talked to Ensoniq, and they said it was caused by bad MIDI data. Hmm. My keyboard's MIDI setting was on MULTI, and I was using Bars & Pipes Pro 2.0 on the Amiga 500 w/AMAS MIDI interface. Also, after some time running, it would corrupt some screens, and some track select lights would come on in batches by themselves, often fading on and off.

I took it back and had the motherboard replaced, but to no avail. All the problems still went on. I was stuck.

I called Ensoniq again, and they sent me back to the shop (Inner Sound, also here in Portland) with the board again. It stayed there for three weeks. Fred couldn't seem to get it to screw up at all, and we were really at kind of a stand-off. I didn't want my board back the way it was, and he didn't think it could be

fixed, or that it even needed to be fixed.

In the meantime, I wrote you guys a LONG, LONG letter. I guess you must have sent it to both Portland Music Co. and Ensoniq, because within about a week, my keyboard was in Pennsylvania, running test sequences, and Portland Music Co. gave me a loaner. Wow!! What action!!

Ensoniq has since given me the loaner keyboard (which works flawlessly, by the way) for good, permanently. They told me they wanted me to be happy with what I get out of it, and I am definitely on cloud nine.

Just so the people out there know, it does help to talk to the right people at times, and the Hacker and Ensoniq, as well as Portland Music Co., know how to please! Thank you all for your wonderful help!!

Sincerely,
Bryce L. Tomlinson
of "System Exclusive"
Portland, OR
Bryce_Tomlinson@amwbbs.rain.com

[TH - Generally, when we get a letter that looks like a crisis is in the works, we pass it along to the people involved so it can get resolved while the letter is slowing winding its way through the regular Interface channels. How well this works really depends on the people to whom we pass the letters. We're glad this worked out so well.]

[CS - I've forwarded a copy of your letter to Portland Music Company (my old stomping grounds) - thanks for writing!]

[Ensoniq - We're glad that we were finally able to successfully resolve your problem. Sometimes it takes a while to fully qualify a problem, but the important thing is to stick with it. With the Hacker having the good judgement to forward letters like yours to us right away we can get to work helping you much quicker than waiting to read it in print. In general we always recommend that if you want fast action contact us directly, don't wait for publishing cycles.]

Dear Sirs,

First, many thanks for the monthly *Transoniq Hacker*. It is a delight to receive such professional support for my EPS-16+.

I would appreciate some help to enable me to use the Macro File facility with my hard disk drive. I have successfully loaded 20 files under Factory Sounds at the appropriate sounds in these files. I regret I have failed to

include the macrofiles to facilitate rapid loading. Can you help please? I managed to set up Macrofile 2 but cannot allocate the 20 files of sounds.

Second point. I really like the excellent instrument sounds. However I particularly enjoy Wurlitzer Theatre Organ voices. You have the world's best in the US but I cannot find any sampled Wurlitzer Voices. Is there a technical problem, lack of interest or have I failed to find the source?

Yours sincerely,
Tom McWiggan
Surrey, England

[CS - I'm not sure I completely understand your question, but the use of macro files with a hard disk drive is pretty straightforward.

Basically, there are two steps involved in creating macro files: assigning the individual macros, and saving a file containing your macro assignments.

To assign a macro, first locate the file (Instrument, song, sequence, or whatever) that you want the macro to take you to; the file should be showing in the display, just as if you were preparing to load it. While the file is showing, hold down the LOAD button, type any number from 1 to 28, and press ENTER*YES. Now whenever you hold LOAD, type the number you just assigned, and release LOAD, you will be returned to this same location on your hard drive. You can then load the file simply by pressing ENTER*YES.

Since you can use any number from 1 to 28 for a macro, you can have up to 28 macros available in memory at any one time. These macro files, however, are forgotten when you turn the ASR-10 off, so you'll probably want to store them on disk so you can use them again later. You can save macro files pretty much anywhere on the disk that you want, but it's probably a good idea to keep them all located in the same place to facilitate finding them again later on. To save your macro file, press COMMAND, then SYSTEM*MIDI, then scroll to SAVE MACRO FILE. Press ENTER*YES; you'll be given the opportunity to rename the macro file. Pressing ENTER*YES again will save the macro file to the currently selected storage device (probably your hard drive).

Note that macro 0 (zero) is a special macro that you can't edit. Invoking it will always take you back to the location of the last macro file that you've loaded. If you keep all your macro files in the same place, you can use this macro to return to this location whenever you wish to load a new set of macros.

As to the Theater Organ sounds, rumor has it that Ensoniq may be looking into doing some sampling sessions to acquire just such types of sounds.]

To the Interface,

First of all a very big thanks to Ensoniq for their latest ASR-10 OS release. It has become (finally) available in Germany now and I really enjoy working with it. All those bugs that made it a little hard to use (for instance, deleting wavesamples resulted in deletion of the whole instrument...) seem now to be fixed. That's great!

But still there's one question left open which is very important to me and probably to other ASR-10 users as well. Will Ensoniq ever provide the opportunity to read AKAI samples either from CD-ROM or disk? Here in Germany we have many sounds in every style on CD-ROM, unfortunately they're available only in the S1000 format. If you're looking for ASR-10 CD-ROMS here you can count 'em on one hand - and all of them are much more expensive than those available for the S1000. So the only way is to sample the audio parts (if available) and that's not much fun if you can have those perfectly looped ready-to-play sounds.

If you take a look at other manufacturers you will find EMU systems, Dynacord, Kurzweil and now even Roland products able to read Akai samples from either media. It seems to be a matter of fact that Akai has created some kind of industry standard for sampling, so, please Ensoniq, we would appreciate so much if you could make this feature available soon to us ASR-10 users - even if it's not a free update.

Thanks again for your support and keep on improving your products.

Thomas Bleicher
Germany

[Ensoniq - We're glad you're enjoying the new OS! We recognize the desirability of loading other sample formats, but we cannot promise you this type of function at this time. We do work very hard to evangelize third-party companies to support our format, and I expect you will see more growth of ASR libraries in the near future.]

Hackerdudes,

Thought I'd check in with a few comments.

A while back a request was made for a

VFX-sd patch "Better Than Classic Piano." I have the answer and if you have your OS disk handy, you'll be playing it in no time. Just load the 30 seq/song file named "ADD-VFX-ROM" and locate "PIANO-HI" and "PIANO-LO." Amazing! It actually sounds like a real piano! Why these sounds weren't included in the factory ROM instead of "BIG PIANO" and "BRIGHT-PNO2" is beyond me. Here's a hint - if you load in "PIANO-HI" and rename it "STEINWAY" it sounds even better.

Some of you EPS-16+ hackers out there have written about unreliable bank load operation. I have experienced some of these problems myself and with the help of Garth Hjelte (by the way, how do you pronounce Hjelte?) at Rubber Chicken Software, I was able to solve the problem. I work from floppies and my banks and instruments are all on different disks. I would set up my bank and save it, but when I want to reload it the EPS would not ask for all the disks. So only a part of the bank would load, as the display would read defiantly "Bank Load Completed." I have it when that happens! After trying just about everything I could think of and a call or two to Rubber Chicken's Tech line, I ended up copying the offending instruments to different disks and it works perfectly. so, if you're having trouble with bank loads, it's something else to try.

I was recently looking around for a high quality outboard reverb for my recording rig when I realized I already have one! I love it when that happens! I just boot up my EPS-16+ and load in Waveboy's Audio-In Effects Disk and there you have it - instant studio quality reverbs, delays to process vocals, guitars or whatever. Not a DP/4, but sure is a lot cheaper.

In closing I'd like to make a comment/suggestion for the Hacker. I'm not sure how everyone else feels about Basement Tapes, but I, for one, do not find it very useful. Obviously, if we readers could hear the music being reviewed it would be much more beneficial. How about using the space for readers' tips or articles on readers' studios or other unique applications that Ensoniq users are doing? Just a thought.

Hack on, dudes,
Jerry McKenzie
Anaheim, California

[CS - I like your ideas for articles on readers studios and readers tips and applications, but I don't think the problem is space allocation as much as it is simply having the material to publish (my editor will surely correct me if I'm mistaken). If we were to get some well-written (meaning legible) articles of the type you men-

tion, I'm sure we could find space for them. Possibly even in the Hacker.

In the meantime, if you don't find the Basement Tapes column (or anything else in the Hacker) pertinent to your situation, the solution is simple. Just turn the page (unless, of course, you're reading the Interface).]

[TH - Actually, we get pretty favorable feedback on the Basement Tapes section, and we always provide information on how to obtain the tape being reviewed. We figure one little page to show what all this gear is actually being used for isn't excessive. And regarding the pronunciation of Mr. Hjelte's last name - he says everybody wants to know that. "It's pronounced 'an-der-ton' - no, no, I'm kidding. Really, it's pronounced 'yell-tee.'"]

[Ensoniq - You can sometimes have problems with Bank loads when the disks you are using are older Ensoniq disks, before we started using Disk Labels as in the original EPS libraries. You can easily check to see if this is the problem. Insert the disk of your choice into the EPS-16 PLUS and press Command, then System. Scroll until you find the command WRITE DISK LABEL. Press ENTER, and if the display shows DISK LABEL=DISK000 this is



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an unlabeled disk. Give it a name of your choice. If the display asks USE CURRENT LABEL?, then this disk is already labelled and is okay. Once you have labelled all your older disks you will not have this problem any more. ASR-10 and TS owners needn't worry about this issue as their products don't have this type of Bank loading problem.]

Dear Transoniq Hacker,

In Issue #101 Mr. Complainer expressed concern over his ASR heating up. Where exactly? The right-hand side by the Ensoniq ASR-10 logo? The AC transformer and SIMM chips are underneath there. A box with no ventilation tends to get hot after several hours of continuous use, so I removed the bottom panel to investigate. After deciding not to probe around looking for the right voltage I installed a 12-Vdc power transformer to power a 3" cooling fan mounted outside of the case right over the hole left by the memory access plate. The dc transformer gets its power from the power switch - cute but effective. Yes, I did read Ensoniq's response - and I can see their point of view. It's a simple solution, but it does throw out the warranty and it will definitely get the attention of Ensoniq's technicians should your

unit need servicing.

At least I have the satisfaction of knowing that after 12 hours of use my ASR hasn't become nearly as hot as it used to get.

Thanks for the soapbox,
Ivan Quicker
Kenner, Louisiana

[CS - Thanks for writing. It does bear repeating, though - performing this type of modification will void your warranty, so be forewarned.]

[Ensoniq - If you work in a dusty/smoky environment, this might cause problems with your disk drive by drawing dust into the unit. We can't recommend it as a solution.]

[TH - Never too late to add some air filters...]

Dear Hack,

You have a nice magazine and I have enjoyed it very much as I have moved into the high tech world. Articles like Sam Mimms' "Creating Pads" and Berman's "Envelopes" and "Event Editor" have been exceptionally helpful. Plus the Hackerpatches. A good, good show.

I would like to hear how best to use my SD-1 with the Aux Output as mentioned in the manual. I now have a Mackie Mixer and an inexpensive effects unit but I don't have a clue as to what sounds to put thru Aux and whether to leave them dry or add some effects. I do have an old Sound Generator and the Effects unit brought it to life and MIDI is running it quite well. Maybe someone can write up a crash course.

Also, I have just been with Ensoniq the last two years and I am sure that I missed some good things in the *Hackers* prior to that time and I see that a back issue index is available. Please send it along.

Thank you,
Paul Adams
Fresno, California

[CS - Any sounds that you route to the AUX outs on the SD-1 will appear dry. While there's no real rule about what sounds you should route to the AUX outs, it seems to me that the most likely candidates for you would be sounds that you want to process through your external effects device (rather than the SD-1's on-board effects), or sounds that you might think would benefit from the EQ offered on your mixer.]

Dear Transoniq Hacker,

I am an SD-1 owner and would like to know if there is an easier way to fade out a song without having to mix down each individual track.

Sincerely,
Mike Koelzer
Grand Rapids, Michigan

[CS - The only shortcut that springs to mind is that once you've recorded the fade for one song track, it's a pretty simple matter to copy the fade to the other song tracks. This should prove quicker (and more accurate) than trying to manually reproduce the fade for each individual song track.]

[Ensoniq - Another solution would apply if you are recording your songs to cassette or to DAT. Simply bring down the volume slider for a very effective global fade-out or fade-in.]

Dear TH,

Before asking for your guidance I'd like to say that I'm an enthusiastic, productive owner of an SD-1. This no-nonsense machine allows me to quickly experiment with the concept and feel of a given song, then take it through to completion. No wonder it's the centerpiece of my studio. I only wish that the path to my current setup could have been smoother.

First, I bought the VFX-sd. These five are letters forever etched into the region of my brain which holds traumatic experiences, childhood falls, bicycle accidents, etc.) because that keyboard and its replacements worked wondrously in the toasty warm music shop, but not in my chilly New England home. Surge protectors, keyboard recalibrations - nothing could exorcise the gremlins contained therein. Yet my Zenith computer, stored next to it, never, ever failed.

In disgust, I got a Yamaha SY77. I very much appreciated my dealer's going out of his way to make an even trade for a brand which he didn't even carry. Still, the SY77 proved not to be the Holy Grail. When assembling tracks, phase cancellation soon got in the way. The modulation wheel wouldn't track properly when recording. Worst of all, like Donald Fagen said of some synths (without naming names) to my ears, several of the presets were, indeed, out of tune. This keyboard which the magazines hailed so, did not notice these problems in their reviews, as I had not through cursory explorations at the dealer's. I began to romanticize the VFX-sd... If only it worked!

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The SD-1 came out, the heir to the VFX-sd. New? Surely. Improved? I wanted to find out. So, I wrote a letter to Ensoniq. I explained my experiences with the VFX and the Yamaha SY77 and said that if they would assure me that they had instituted a real quality control program in making the SD-1, I would buy one. After waiting a reasonable time, during and after which no reply was received, I went to a dealer in Tokyo and checked it out for myself. Crossing all my fingers and toes, I traded in the SY77 for one.

My SD-1 was shipped to me with an effects algorithm problem. The Leslie effect would start, then die. I kept my cool and shipped it back. The only other problem I've had in almost two years has been that it keeps wanting to reinitialize if the room is cool (perhaps condensation is in there.) So I have been very satisfied with the SD-1's performance.

Now for my question. I want to take the advice given in Jeffrey Fisher's excellent columns regarding organizing sounds into templates. However, my favorite sounds are found not only in ROM banks, but also are in the various collections (German, Japanese, Australian, etc.) I'd like to make templates or custom-assembled "60 program" banks using sounds from all of these sources, putting them together in a group. Is this possible with or without an editor/librarian?

Name Withheld

[Initials Withheld - Sure. It's a bit easier to organize sounds using a librarian, but it's not essential.

First, collect the sounds from the various external sources, and save sounds you wish to include in a custom bank as single-program or 6-program files. For example: load the German collection, and copy six of the sounds you wish to use into the six program locations in the SD-1 (this would be bank 0). Save this bank to disk as a 6-program file. Copy the next six sounds you want, and save this as a second 6-program file; and so on, until you've gathered all the sounds you want from this collection. Load the next collection of sounds (Japanese, or whatever) and repeat the process. What you'll end up with is a bunch of 6-program files containing your favorite sounds. These can then be loaded into bank locations in the SD-1 that you specify - the first 6-program file could be loaded into bank 0, the second into bank 1, and so on. Once you've filled the 60 program slots, you can save the whole thing as a 60-program file, or a 60 seq/song file.

If you want to include ROM sounds, these can be copied into RAM and stored on disk the

same as the sounds from your other various collections. However, if you are using presets or sequences as templates, you probably don't need to do this as a preset or sequence can use both RAM and ROM sounds simultaneously. You could, for example, load your 60-program file containing the custom collection you've just created, then set up sequencer templates use whatever combination of RAM and ROM sounds you like, and save the results as a 60 seq/song file. If you make sure to SAVE 60 PROGRAMS IN SEQ FILE (as the SD-1 so directly puts it), you can easily recall the entire setup at any time by simply loading the 60 seq/song file.]

[Ensoniq - We just wanted to apologize for not responding to your letter. We can't say that we ever saw it but we don't like inquiries to go unanswered. We're glad to hear that you have re-joined the Ensoniq family!]

Dear T.H.,

In Issues 101 and 103 the subject of sample editors has been raised. I work for a music retailer, and the only third-party sample editors we have in our catalogues are for the Atari platform. (That doesn't mean to say that others don't exist.) As Clark has indicated on page 26 of Issue 103, editors have been on the decline recently. I know of two sample editors capable of talking to Ensoniq's family of samplers - Avalon by Steinberg-Jones, and Eze by Gelva. Avalon is a generic editor and I have never used it. Eze is a specific editor for the EPS classic and I have used it extensively. The author of Eze now works for a synthesizer manufacturer who is not Ensoniq, consequently there will be no updates or revisions to this program. Oh well... you get that.

Eze was distributed by The Electric Factory here in Australia, who also wholesales Ensoniq products. They may still have some stock. We have one left on our shelves and it retails for \$299 Aus.

Eze worked on Atari's 1040 range of computers. I used a 1040STe with 4Meg, and Hires monitor. Sample transfers via MIDI are not quick, but all the operations that didn't require this function worked fine. The windows are laid out to accommodate the EPS style, of Instrument, Layer, Wavesample. So the program was familiar and quick to use. On the instrument page the patch selects are laid out graphically, showing key down/up info at a glance. All envelopes are displayed and manipulated graphically. There is a crossfade window to help find zero crossings visually, and loads of other features. I've had it working with a 16+, and an ASR, but it works best on an EPS, for the same reason that EPS

sample disks do. (No pre-tweak necessary.) I would often run it along with Notator SL, under Softlink, using 1.5 Meg for Notator, and 1 Meg for Eze, with the rest left over for a word processor or a RAM disk.

I believe it does the same with Cubase under MROS. I found it to be particularly useful for finding empty space in a wavesample and truncating it, finding zero crossing points for surgery, adjusting any parameter that had a number or character in it, and for getting an overview of the instrument. You know those layer and wavesample naming options that you never bothered to use because you were too busy with manipulating the sample itself? Well their use becomes very apparent when using an "on screen" editor! Sadly I sold my Eze along with my 1040 and a bunch of other stuff when the Atari Falcon was released here. As Ensoniq pointed out in a previous issue, backwards compatibility ain't necessarily a good thing! I'm now running a 4-Meg Falcon with TOS 4.04, Notator Logic 1.7, and an ASR-10 with 16 Meg, talking to a Seagate 248-Meg fixed drive. The Seagate is fast, and holds the complete Ensoniq library up to but not including the AS-xx series, with some of the extra stuff that turns up on factory demos and some hacker samples as well, with about

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11Meg left over.

Speaking of hard drives and Logic, Ensoniq samplers have the ability to skim through a drives directory structure, and load a file using external program changes. I use a different directory structure to the option thoughtfully provided by Ensoniq. I imagine most will eventually customize their own setups. There are five major directories in the Root directory, one of these directories Sounds contains... all the sounds! Well not actually, it contains the major families of instrument as 19 subdirectories, sorted as per the Ensoniq library with some additions. From here the next level is 4 subdirectories within each of the 19, sorted to physical attribute (acoustic, electronic, hybrid, analog, etc.) These contain the instrument files.

Ensoniq allows only 38 files in a directory, hence the reason to divide into 19, then into 4. The point is none of these numbers exceeds the magic MIDI number of 127 (128). Notator Logic allows you to save an instruments MIDI setup for future recall, including patches librarian style. If you open a multi instrument in Logics' environment page, you can assign program change numbers to the ASR's directory moves. Save that as a separate icon to

your normal ASR instrument, and it will be available anytime you are recording without interfering with other tracks, with the added bonus that when you are editing events the program changes tell you where in the directory structure they are! Ensoniq uses program change #0 to exit directories. My directory structure has three levels, which means that 3x program change #0's always gets me back to the root directory. 1 program change gets me from root to 19 subs. One program change gets me from subs to the divisions. And the third program change gets me the instrument in question.

If you have assigned Macros on the ASR, prg ch #'s 101 to 127 can call the Macros. So the data sequence to load an instrument looks like this:

```
Bar 1 -
Program Change #000 - Exit Directory (you can't assume )
Program Change #000 - Exit Directory (your position upon )
Program Change #000 - Exit Directory (entering a sequence !)
Program Change #117 - Drum Kits (Macro 17)
Program Change #003 - Electronic Kits(3rd sub directory )
Program Change #006 - Dinosaur drum (6th file in the sub.)
```

At this point the instrument "Dinosaur drum" is loaded into the sampler on the channel # described in the program change. The sampler should be in MULTI mode, with the above ch # available in the setup. So if you send a program change on channel 4, an instrument should be loaded into instrument # 4, if Base ch = 1, and MIDI in mode = Multi. Remember to enable all the external MIDI controls on the Edit MIDI page.

All my Macros are in the "upper" directories. You could put them as far down as you like, all the way to instrument level, but you only have 28, so you have to use them wisely. Macros have the advantage that they automatically exit to the Root directory themselves so that after the start, it's not necessary to use the 3 x prg ch# 0's.

```
Bar 1 -
Program Change #000 - Exit Directory (you can't assume )
Program Change #000 - Exit Directory (your position upon )
Program Change #000 - Exit Directory (entering a sequence !)
Program Change #117 - Drum Kits (Macro 17)
Program Change #003 - Electronic Kits(3rd sub directory )
Program Change #006 - Dinosaur drum (6th file in the sub.)
```

```
Bar 2 -
Program Change #127 - Vocal (Macro 27)
Program Change #001 - Choir (1st sub directory )
Program Change #013 - Monks (13th file in the sub.)
```

Space the events at least 1/16th apart, and much longer for the actual load. Each instrument must finish loading before a new command is sent. Using a Macro to call a Bank

from a hard drive is the fastest way I know of loading up the ASR's memory.

```
Bar 1 -
Program Change #000 - Exit Directory (you can't assume )
Program Change #000 - Exit Directory (your position upon )
Program Change #000 - Exit Directory (entering a sequence !)
Program Change #103 - Banks A (Macro 3)
Program Change #002 - My Bank (8 instruments, presets, effects files, sequences, etc.)
```

If you have loaded a Preset, you have to have an instrument selected. Then type in the Presets number before the Preset is active. This can be automated using Sysex messages:

```
Dec. 240 15 03 00 64 00 00 eox
      240 15 03 00 64 00 49 eox
Hex. F0 0F 03 00 40 00 00 eox
      F0 0F 03 00 40 00 31 eox
```

this selects instrument 1, and presses Preset #1 for you.

```
Dec. 240 15 03 00 64 00 01 eox
      240 15 03 00 64 00 56 eox
Hex. F0 0F 03 00 40 00 01 eox
      F0 0F 03 00 40 00 38 eox
```

this selects instrument 2, and presses Preset #8.

While I'm talking Sysex, you can delete instruments from an external sequencer, before loading a Bank:

```
Dec. 240 15 03 00 28 00 00 00 00 01 eox,
Hex. F0 0F 03 00 1C 00 00 00 00 01 eox.
```

This deletes instrument 1. A clear load hands-free can be achieved combining the above ideas:

```
Bar 1-
F0 0F 03 00 1C 00 00 00 00 01 eox.(delete instrument 1.)
F0 0F 03 00 1C 00 01 00 00 01 eox.(delete instrument 2.)
F0 0F 03 00 1C 00 02 00 00 01 eox.(delete instrument 3.)
F0 0F 03 00 1C 00 03 00 00 01 eox.(delete instrument 4.)
F0 0F 03 00 1C 00 04 00 00 01 eox.(delete instrument 5.)
F0 0F 03 00 1C 00 05 00 00 01 eox.(delete instrument 6.)
F0 0F 03 00 1C 00 06 00 00 01 eox.(delete instrument 7.)
F0 0F 03 00 1C 00 07 00 00 01 eox.(delete instrument 8.)
F0 0F 03 00 40 00 14 eox (select Load..Because.)
```

```
Bar 2-
Program Change #000 - Exit Directory (you can't assume )
Program Change #000 - Exit Directory (your position upon )
Program Change #000 - Exit Directory (entering a sequence !)
Program Change #103 - Banks A (Macro 3)
Program Change #002 - My Bank (2nd file)
```

```
Bar 5-
F0 0F 03 00 40 00 00 eox (select instrument 1.)
F0 0F 03 00 40 00 31 eox (select preset 1. )
```

Refer to page 28, Issue 103. People encountering Gerry Leone's problem could use this as an alternative tactic if they have an external

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sequencer at their disposal. Well... it works on my ASR. I hope the above info has been of some use to somebody. Cheers!

1. eox = \$F7, Dec. 247

2. Whatever happened to the International MIDI Association? I have a copy of the SCI MIDI spec. It contains the MIDI 1.0 spec. dated 5/8/1983. Does anyone know where I can obtain revisions, updates, amendments, etc.?

3. Who can I write to for information regarding Ensoniq's disk operating system, particularly the ASR-10's?

Thanks!
Ben Musgrove
18 Clarendon St,
Loganholme 4129,
Australia

[CS - Thanks for writing, but don't be afraid to get a little technical if you think it would help.]

I don't know what happened to the IMA, but I'll bet someone at Ensoniq does. And as for info regarding their disk operating systems, I don't think that info's generally available to the mortal man, but then again, Ensoniq could clarify. \$F7.]

[Ensoniq - 2) The IMA is alive and well. They can be contacted at 5306 W 57th Street, Los Angeles, CA 90056-1339. (310) 649-6434 voice, (310) 215-3380 fax. They may be available on some computer networks/forums as well but we're not sure.]

3) We're not sure what you mean, but the current OS is version 2.]

Dear TH:

For the past few months I have enjoyed reading this excellent newsletter, although my experiences with Ensoniq equipment have been a mixed bag. I thought I would share a bit of these with other users and with CS and the crew in Malvern. I hope that the latter will take this in the spirit in which it is offered: constructive criticism.

Back in July, 1993, I purchased my first two pieces of Ensoniq gear: a DP/4 and a KS-32. My decisions to buy these units were heavily influenced by their cost effectiveness and, ultimately, the sound. The DP/4 continues to amaze me with its versatility. Except for the initial turn-on transient, I have yet to observe anything problematic in its operation. In short, it lives up to its reputation and the great CD that Ensoniq put together to showcase the unit.

Unfortunately, I have had little time to explore the DP/4 due to numerous and persistent problems with the KS-32.

This keyboard seemed like a dream come true with its wide variety of great sounds, super action, and potential as a MIDI controller. However, it is in this last respect that I experienced most of my difficulties. In summary, most of the problems fell into two categories: difficulties transmitting sys-ex and spontaneous reboots. Due to the fact that my leisure time is limited and I prefer not to have to deal with endless equipment hassles, I decided to negotiate with my dealer for a return of the unit for credit - which they very graciously agreed to do. On the basis of these experiences, I'd like to suggest some issues for Ensoniq to consider.

First, in the area of system design, I would strongly suggest that some more detailed set of diagnostics be available to users. The cryptic "Unexpected Error #XXX" does not provide much help to end users. A brief listing of these errors and what they might mean in troubleshooting should be included in the back of the manual. I realize that system diagnosis is constrained by the KS-32's user interface, but that would seem to make full documentation of system errors even more essential.

Second, the two KS-32s I owned would spontaneously reinitialize unpredictably, wiping out all preset and sequencer data. I found that the KS-32 would spontaneously reboot in response to a number of problematic states including when nearing its sequencer memory limitations and upon receipt of unexpected sys-ex data. The KS-32's propensity to reboot in response to system problems is particularly troublesome given difficulties in transferring sys-ex. I use a fairly common PC-based sequencing package (Cakewalk) to store synth patches and other information from modules of several other manufacturers. I was never able to get the KS-32 to transfer any sys-ex data successfully with this package or with a public domain MIDI Sys-ex Patch Librarian. My main point here is that it is especially crucial for systems that have idiosyncrasies (such as special sys-ex needs) to degrade gracefully rather than reinitialize themselves. Having worked in the computer industry for several years I am aware that there is a complex balance between building robust, feature-filled systems and keeping these products reasonably priced. However, I am also aware that there are alternatives to systems rebooting in response to problematic hardware or software states.

Finally, although I found the customer service staff friendly and wanting to be helpful, I would suggest that they make certain that they fully understand the customer's problem

before they suggest possible solutions. I never got the feeling that the service reps I spoke to really heard and understood what I was experiencing with the unit. This is a common difficulty that many service departments struggle with. It is aggravated by the pressure for limited staff to handle numerous incoming calls as expeditiously as possible. However, in my opinion, the key to effective customer service is fully understanding the nature of the problem *the first time*, in order to suggest the right solution.

I have noticed a tendency toward defensiveness in some of the responses to letters discussing problems with Ensoniq gear and I hope that this letter does not trigger such a response. Despite the problems, I think the KS-32 is a great keyboard synth for anyone who needs great sounds, nice action, and who can live with its limitations as a true keyboard controller. I also hope that Ensoniq continues to produce innovative gear like the DP/4 that can keep the American company at the forefront of electronic music.

Sincerely,
William Allen,
St. Paul, MN

[CS - Defensive? Who's defensive? Do I sound defensive? Well, I'm not defensive. Not a bit. You don't really think I'm defensive, do you? Well, I'm not. Really. Not at all. Defensive, I mean.]

I'm sorry you've had problems with your unit. As a developer, I've worked with a number of SQ- and KS-series instruments, and have found no difficulty working with SysEx data in the Macintosh environment, so I haven't any really good comment to make regarding your problems. As far as the error codes go, though, this question has come up enough times that I know the answer pretty well. And it is this: the error code numbers do not necessarily mean anything specific, and almost certainly mean nothing that would prove useful to a user. We get so many letters about this that I sometimes wish that Ensoniq products wouldn't include numbers at all in their error messages. So many readers mistakenly think that these numbers contain some kind of coded information that might give them a clue to rectifying a software problem, or to avoiding software problems altogether, and it just ain't so.

Oh well. I guess if the answer to everything were simple and obvious, I'd be out of a gig. Thanks for writing.]

[Ensoniq - As Clark writes, our error codes do not really point out anything that you, the user, could react to. The real goal is not to better define error codes, but to minimize the number of times and circumstances that errors

happen. When working with MIDI systems where we are not in control of all the elements this is a difficult situation. We certainly agree that re-initializing is not desirable, and it only should happen in situations where data has gotten so corrupted, or the system so confused that purging is the only solution.

In your situation (sending SysEx from Cakewalk) we have learned that the problem was that Cakewalk has no provision for putting any pauses into its messages that are being sent. Hence the header for the dump is sent, and before the KS-32 can respond to that message the data starts to be sent. This causes an overload to the MIDI input buffer. We have heard from Twelve Tone Systems that they are fixing this problem and intend to have a new revision available for all users shortly. On our end we are striving to create more robust software that can handle errors of this sort more gracefully.

P.S. We don't intend to sound defensive in our responses, but many times when one is asked, "Why don't you do things differently than you do?" there aren't many choices. But we'll try to be more sensitive to the tone of our responses in the future. How did we do on this one?]

Dear Transoniq,

More questions from across the ocean:

I own an ASR-10, and I've had some problems when looking for SIMM modules. Music shops don't seem to have them and at the computer shops they need more information than my manual provides. 1 x 8 and 4 x 8, non-parity SIMMs are used in Motorola-engineered computers such as Apple, but which one do I need? They seem to come in all kinds of colors and flavors. 80, 70, or 60 ns? For Mac II, IIx, Powerbook? Strawberry or vanilla?

By the way, the manual warns me that parity SIMMs (1 x 9 or 4 x 9) "...may not operate properly, and may cause damage to the ASR-10." An electronics-wizard friend of mine tells me this is nonsense. He sees no reason why they shouldn't work, and would also like to know in what way a parity SIMM could damage my sampler. I need some arguments here to stand up to him.

Finally, I'd like to ask other Belgium ASR-10 owners (if there are any) to contact me to swap sounds, tips, wives...

Thanks!
Dirk Maes
Harenberg 226, 1130 Brussels, Belgium

[Ensoniq - We support 30-pin DRAM SIMMs. Anything faster than 100ns (that's less than 100ns) will be fine. We do not support the use of composite SIMMs either. The main difference in SIMMs for the Mac is 30 pin or 72 pin (as used in the PowerBooks and newer models) and the speed. This is an oversimplification but addresses the main issues.

1 x 9 and 4 x 9 SIMMs cause more loading on both the power supply and on the address bus of the processor. Too much address loading can cause erratic operation, and too much power loading can damage the power supply.]

Transoniq Hacker:

In response to Tony Mayrant's letter in TH #103 (Jan '94); the ESQ-1/SQ-80 manuals explain how to gang two units together. Sixteen-note polyphony is obtained by setting MIDI page OVERFLOW=ON on the master unit. Sixteen-track sequencing is obtained by setting the sequencer CLOCK=MIDI on the slave unit. Other MIDI page parameters must be correctly set and the desired patches must be in equivalent locations. I use my ESQ-1/SQ-80 combination for more oscillators per patch.

Also, check whether Maartists has any RAM cartridges left. I believe they made one more production run after they advertised that they were stopping.

Yours truly,
Preston Bricker
Broadview, IL

[TH - Preston also included some Hacker-patches along with some comments on Kirk Slinkard's VOX articles. These show up in this month's Hackerpatch column.

Maartists confirms that they do indeed have about 25 memory expanders and that they're letting them go for around \$100. They can be

reached at 404-623-1410.]

Dear CS/TH,

I read with some surprise the TS-10 disk review (Issue #103) and comments made about what is preferable for third-party sound companies to offer on the patch select buttons. Obviously performance of certain parameters within a sound patch are subjective. Therefore, it seems to me that third-parties that offer alternative instruments via the patch-select buttons (up to three extra voicings) are giving us excellent value. Especially as user memory on the TS-10 is limited. And, after all, we are paying for instrument sounds. Provided a sound has good control via the mod wheel and foot pedal - what more could we want? Perhaps, where a voice benefits from a particular or unusual performance effect, a slip of paper with program instructions could be enclosed to be used by the customer if desired. This, of course, is also true of sample disks.

Which brings me to a possible improvement that could be made to the TS-10 patch (performance) buttons: If the buttons had a simple, quick, click-on and click-off operation, we could bypass the need to select alternative instruments via the "held" status (sample playing section) page. Also, in normal memory (on-board instruments), this would mean we could engage the different sound before playing (for both hands on the keyboard with no compromise to playing). Any loss to "performance" usage of the buttons (to bring in a nuance or effect, etc.) would be negligible as the function of the buttons is not immediate as they are at present. These ideas are not to relegate the "performance" aspect of the buttons, but to offer maximum flexibility. Also, if we put a red diode in the left button and a yellow diode in the right button for "on" status, we would have extra and immediate warning/visibility for stage use.

Many thanks to Rubber Chicken for their splendid catalog, sample disk, and prompt reply. I will be placing an order presently.

Regards to all at the Hacker,
Mr. C. Peglar
Westmids, England

[TH - Readers interested in the counter argu-

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ment on the use of patch selection buttons should check Dave Blickstein's review back in #103. Basically, Dave was referring to emulations of real instruments and performance situations where ease of access to expression variations are more important than packing in as many sounds as possible.]

[CS - If you're suggesting that the patch select buttons be set up to always latch on (or off, as the case may be), I suspect you'll encounter a good deal of resistance from any

number of users who actually use the patch selects for performance control. Frankly, I find it surprising that other keyboard manufacturers haven't devised methods for giving users instantaneous access to program variations (subtle or otherwise). It seems like such a limitation to have only one version of an instrument (particularly in the case of solo instruments) available at one time. And if you need hands-free operation, Ensoniq's dual footswitch can be used to put the patch selects under the control of your feet.]

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