

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

So You Wanna Be a Rock n' Roll Star?

Tom Shear



Well, we all know what that means — you'd better play guitar, right? WRONG! Almost from the very beginning of synth history, there has been a misconception amongst rock guitarists

that us keyboard players don't know how to rock. All we do is smile, knowing that we are too modest to show these six-stringed Neanderthals who *really* knows how to rock! Even though we all know guitars aren't necessary to truly rock, they sure don't hurt! So, today I'm here to share some tips with all you good folks out there to help fool those guitar-types into thinking you can really tear up that fretboard.

1. The Metallica Riff technique

Although it's undeniably the easiest thing to play on a guitar, I don't think there's anything out there that rocks quite as much power chords. These usually are made by playing an open fifth, often with the octave thrown in for good measure. Anyway, I've found that I've been able to get great sounding, very convincing power chord parts complete with chuckas from only ONE sample! Many guitar samples include extra samples of the chuckas, but they've never quite sounded right to me. Well, if you can get a good sample of a fuzzed-out distorted power

chord, you won't need 'em, and that means more free disk space! So find a good power chord sound or sample one off a record. Get as good a loop as you think you can find on it and feed it through one of the distortion effects. My personal fave is ROM 12. The distortion effect should do a pretty good job of covering up any minor loop troubles.

Now comes the part that might cause a problem for a few of you, as it requires a sequencer that allows step programming. I'm using an SQ-80 for my example, but you can probably adapt this technique to any other sequencer that allows step editing. Set the tempo to about 120 BPM, and select step editing of the track. Set the resolution to 1/8th notes and punch in. Hold down a C (if you have a proper power chord, you won't need to play a chord, just play the C, your sample sounds best in) and press step twice while sustaining this key. Release the key and play four staccato notes, making sure to press the step after each. The important point for these four notes is not to be sustaining the note when you press step. Repeat this process as many times as it takes to play through your entire sequence. When you play the sequence, you should have a pretty nifty, albeit simple, metal rhythm guitar line. You can apply this to any chord line with varying rhythms once you have mastered the basic technique behind this trick. Since those four notes were played staccato, the sequencer will probably only play back the crunchy pick attack of the chords, but,

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unlike most sampled chuckas, these ones will sound in tune with the chord they are playing after!

Don't limit yourself to using this on guitar samples, though. I use this technique a lot with my SQ-80 on funky bass sounds with good results, too.

2. Become an honorary member of U2!

I have always been a fan of the early work of this Irish group, especially the amazing guitar work of Dave, The Edge, Evans. One day while discussing great guitarists with the guitar player for my band, I brought him up. My friend shook his head and insisted that The Edge wasn't necessarily a very good guitar player at all, he just knows how to use effects properly. My friend switched on his delay pedal and played a very simple arpeggio pattern. Lo and behold, there was The Edge's secret! So all you EPS-16+ users out there fire up your machine and boot up the L.A. Guitar sound. Go over to the effects section and scroll up to the DUAL DELAYS effect. Now, if you play a simple arpeggio progression (say, C to F) in time with the delays, you should recognize this familiar style from countless post-punk records. Make sure to play this pattern with a legato feel for optimum realism. In fact, I usually just press my sustain pedal down and hold it throughout the whole progression; the envelope should decay the notes in time before the whole thing sounds too muddy.

3. Make your own lead guitar sound without a guitar

In the eighties when *Miami Vice* was popular, electronic musicians everywhere were going nuts figuring out how Jan Hammer got that incredible guitar sound. What board did that sound come out of? A Fairlight? Synclavier? Would you be surprised to find out it was a Minimoog? While Hammer had access to all that expensive stuff, he found that simply by feeding a thick lead sound through distortion and guitar amps, he got a guitar lead so convincing that he and Eddie Van Halen eventually per-

formed a sort of "dueling guitars" at an awards show. So if you have access to a synth, try to find the most convincing Moog lead type sound you can find (the SQ-80 and ESQ have some good ones) and make sure it's real bright. You can get different types of lead sounds by using either sawtooth waves or square waves which will give a more hollow lead sound. Once you've sampled it and found a decent loop, experiment with the different distortion effects and listen to how cool it sounds. Yes, as always, your playing technique will either make or break you with this kind of sound, so listen to some albums and try to imitate what you hear. If you'd like to try to imitate the finger-board playing style that Mr. Van Halen likes to use so much, try putting your sound in MINIMODE (on the LAYER GLIDE MODE page) and make sure that the GLIDE TIME is set to 0. If you do this and play within the blues scale, you can get some real great speed-metal solos.

4. Turn L.A. guitar into a funk rhythm guitar

The credit for this trick must go to Scott Frankfurt who put together Ensoniq's "Club Scene Demo" for the EPS-16+ (disk ED-015). By simply adjusting envelope 2 or 3 of just about any clean guitar sound, you can get a nice, plucked/muted rhythm sound. Scott's trick is implemented as a patch select of the edited OB-8 sound used in the sequence. Set your the ENV of your choice to: HARDVEL= 99 50 00 00 00, SOFTVEL=00 00 00 00 00, and TIMES = 0 23 0 0 0. I've found this gets a nice plucked sound out of just about any sample, so don't just limit yourself to guitars!

Well, that just about wraps it up folks, but before I go, let me offer one final word of advice. Since we all know that how you play is extremely important to the realism of a sound, buy a beginner's guitar book. This is an incredibly important tool in helping you see how chords are voiced and the different performance techniques guitarists use. So get busy and show those metalheads who's boss! ■

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Front Panel

RND (🎵🎵)

Ensoniq News

TS-10— The *SP-4* SCSI interface will be ready to ship in September. The *SP-4* gives you read-only access to CD-ROM libraries and other SCSI drives for fast loading of sampled sound files. The TS-10 will also auto-load bank files from SCSI, or prompt the user for the correct floppy disks for bank loads. 60 Seq/Song files that use sampled sounds will also auto-load the sampled sounds from SCSI or floppy, and sample edits stored on floppy disks (if needed). Finally, a "context recall" feature will reload the sampled sounds that were in memory when the TS-10 was shut off, for quick restoring at the start of a new session. The *SP-4* has a suggested retail price of \$249.95 including installation. Available from any Ensoniq Authorized Repair Station.

The *TSD-1000* is the first release of sounds for the TS-10. This disk contains 120 new imaginative programs, many utilizing the Hyper-Wave™ voice architecture. Included are various Presets and demo sequences to better show off the sounds. Also includes a sound manual. Suggested retail — \$19.95.

ASR-10 — The *DI-10 Digital I/O* is ready to ship. This S/PDIF compatible interface enables direct digital in sampling at 44.1 kHz and will convert 48 kHz data as well. When a 44.1 kHz effect is used the DI-10 will also enable direct digital output of the main output signal for recording and digital signal processing applications. To support this new option we have also developed a variety of new 44.1 kHz effects algorithms which will be supplied on the O.S. disk. Suggested retail — \$399.95 including installation. Available from any Ensoniq Authorized Repair Station.

CDR-3 — this long-awaited CD-ROM of new sounds for the ASR-10 is ready to ship. CDR-3, called "Studio Essentials Vol. 1" contains over 600 Meg of large-memory sounds, the first CD release to take full advantage of the extended memory of the ASR-10. Covering a wide assortment of imitative sounds, CDR-3 also includes various new 44.1 kHz effects, individual instrument demos and special audio demos recorded on multi-track digital recording gear to let you hear these large sounds in a musical context. Suggested retail — \$199.95.

AS-5 Left Of Center — this new collection of sounds for the ASR-10 was programmed by John Greenland, and includes 18 highly imaginative sounds that take advantage of the ASR-10's resampling capabilities. Includes five HD disks, demos and a sound manual. Suggested retail — \$39.95.

Third-Party News

Rubber Chicken has moved from one corner of the country to the opposite. Their new address is: PO Box 6056, Hollywood, FL 33081-6056. Their new phone: 305-963-1783.

New Sound Music has a new phone number: (313) 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) 4805988.

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 and Fido-net. The local BBS is the Nightfly in Dallas: 214-342-2286.

SD-1 Questions — John Cox, 609-888-5519, (NJ) 6 — 8 pm EST.

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) 963-1783. 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. Eastern time zone.

HYPERSOINQ NEW PRODUCTS

Rubber Chicken Software Co. announces the introduction of the *RCS ASR-10 Sets*. All these sets are on high-density floppies and take advantage of the ASR-10's advanced effects processor. The *ASR-10 Introductory Pak* contains 5 disks of 45 sounds, containing the best samples RCS has done, with the emphasis on variety. Price is \$49.95. The second set, the *ASR-10 Microwave Set*, contains 70 Wavestation samples for \$69.95. The third set, *SD Meets ASR*, has over 90 quality VFX/SD samples for \$69.95. The fourth set is the *ASR-10 Ultimate Organs*, five disks full of Hammond B-3s and other popular organs, priced at \$59.95. And the fifth set, the *ASR-10 Renaissance/Medieval Set* contains 30 Old Age sounds for \$69.95. Free sound disk and catalog are provided upon request. Rubber Chicken Software Co. P.O. Box 6056, Hollywood, FL 33081-6056. Phone 800-8-PRO-EPS (800-877-6377) or 305-963-1783 (voice or fax.)

Tapes: "SQ-80 X 35," and "The Obsolete Man"

Artist: Arnold Mathes

Contact info: 2750 Homecrest Ave., Brooklyn, New York 11235,
718-646-3214.

Mathes's Mindjam

"SQ-80 X 35"

Equipment: SQ-80, Tascam M-208 Mixer and Fostex Model 80 8-Track

This tape really grew on me. One perturbing question occurred though, the more I listened. Why did this collection which was presumably thrown together for the *Hacker* sound so incredibly cohesive? Why did this haphazard group of songs come off like an art-rock collage that sends your mind on a journey and creates a story all its own?

This is a collection of 35 cuts from various tapes or works created by Arnold from 1988 through 1991. They arrived in a hand labeled cassette box with a tome of literature, most of which were reviews toasting Arnold's many creations.

Let's begin with Arnold's own words. "*I have not made the BIG TIME yet. I am just an underground musician who is having a lot of fun making music. My main influences are Tangerine Dream, Hawkwind, ELP, and Kraftwerk. I guess it shows in my music at times. I owned the SQ-80 for 4 years now and have not gotten sick of it yet. My very first synth was a Moog synthesizer, which was back in 1975.*" There is a definite reach back to the sounds of the Moog and onward. However, even the most dated square-wave typical sounds seem to lose that feeling you might normally expect.

I found myself being toyed with. Rhythms changed and changed again. Melodies, motifs and passages often repeated or did not repeat in ingenious ways.

With 35 pieces on a 60-minute tape it was too confusing to scroll through each song in order to be sure which track I was listening to, but overall I was impressed with the variety, the wandering, the creative experimentation and movement.

Arnold scores big reviewer points with his use of sequences (which is not exactly like Karma, but close). There are obvious sequences, but they establish a necessary rhythm without drawing attention to themselves. Or they are overtly mechanical and are the source of motion and mood. Most importantly there was never a point where I felt or heard that Arnold was tied into a repetition or sequence. At several points a segue or solo or change in tempo demonstrated that the musical idea was in control, not the synthesizer it was created on.

High Points: The music.

Low Points: The packaging, and the previous reviews (I was slightly curious to see what others said, but I couldn't decide why I was sent other reviewers reviews...).

Now, looking at what Arnold calls one of his "official tapes" — "*The Obsolete Man.*"

Equipment: SQ-80, EMS VCS3 Synthesizer, Yamaha TX-81Z Tone Generator, Alesis HR-16 Drum Machine, Roland TR-909 Drum Machine, Apple II+ Computer, Nintendo Video Game, Grundig Satellit 650 Shortwave Radio, Yamaha SPX90 Digital Effect Processor, Digitech RDS 7.6 Digital Delay, Deltalab Effectron 2 Digital Delay, Fostex A-80, Sony TCS-430 Recorder, Tapes, Voice, and Guest voices by Estee and Yuda Yefet

This is an instrumental theme-tape with Orwellian references called the *Obsolete Man*. The cover is a digitized photo that you have to be a few feet away from before you realize it is a picture of someone's (Arnold's?) face. Quite clever.

This tape is sprinkled throughout with disturbing vocal statements culled from a variety of sources. One recurrent source sounds like an episode of the *Twilight Zone*. There are also some voices slowed down having a conversation and a child being silly. And many and various screams. The mood of the various pieces range from ominous, mechanical and heavy, to hopeful.

The tape begins with a digitized voice reading the pledge of allegiance and then repeats "You are obsolete." This is followed by some science fiction dialog. We are then drawn into the adventure of the music. Arnold spends a lot of time developing each piece. While it can get very repetitive in places, he does explore the groove, layer on sounds, strip away other layers and work through some interesting leads on top.

The titles of each piece help us work through the story. Side A: *State Of Chaos, S.H.C., Augwa, Do Not Enter, Numbers, Raw of Etats, Castle of Air*. Side B: *Deathworld Jungle, Stop The Wheel, Interstellar Conveyance, Brink of Success, Doomsday Nights, Imu, Ten Parts, Total Shutdown*.

On this tape Arnold uses a full range of synthesizer sounds, some very analog wet sounds with a lot of sample-based drum and percussion sounds.

Use of sequences appeared to be a lot more obvious on this tape than on the random sampling tape that Arnold sent.

Arnold has a real talent for hinting at just enough of a musical story to let your mind wander away and invent the rest. I

imagine that if you let ten different people listen to *The Obsolete Man*, you would get (at least) ten different imagined stories. This is a very powerful tape, with the only real downfall being its repetitive nature.

If you do send away for this tape, you will also find a huge array of other tapes that Arnold has worked on as a solo artist or with others. ■



If you want your tape run through the ringer, err, Hacker, just mail it off to: Basement Tapes, *Transoniq Hacker*, 1402 SW Upland Dr., Portland OR 97221.

Bio: Daniel Mandel is a songwriter, sound designer, and has sold pro audio and keyboard equipment and produced demo tapes for local bands.

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Jazz needs to find new territory, so we're told, and Country is just a vehicle for over-production. Rock & Roll? Anybody heard the term "Classic Rock?" Music in the '90s thus far has been long on slick and short on inspiration. Artists and audience alike are bored, bored, bored.

It may not be surprising, then, that many of the sampler/synth sounds we've been approached with lately don't exactly conjure up images of Kitty Hawk. There are about two gazillion commercially available presets and patches out there and the fact of it is, is that new entries into the pool don't always tantalize.

So how does Ensoniq's SC-5 Soundcard fare in this indifferent, over-saturated state? Is it all patina and polish? Should we drop clams on it (99 and change) or spend our earnings on the writings of German Fatalists?

One thing's for sure. The SC-5 offers up a plethora of backing sounds and pads. In fact, there are so many on the SC-5, 70 pads and pad-like timbres, give or take, we'll just call it The Pad Card. Sound-alike pad-patches can be rather boring so it's almost exciting to find a card with a distinct taste to these tonal whales...

How about a padsound constructed from bass waves? "The Sender" uses plucked and acoustic bass waves tuned in 5ths to achieve its almost vocal ends. Some creative enveloping elongates the waves and allows two of them to rise and fall around the third root-position voice. The SC-4 used bass waves with long envelopes, but with less success. "Mermaids" also develops by perfect 5ths. Although like so many choir-vox sounds, it uses those pesky vocal-ooohs. Ultimately, though, it finally redeems itself by climbing gently in parallel intervals. Dense, polychordal effects are possible here.

Those of us who would rather our pads come from a place devoid of oxygen (but not intelligent life) are not left floating in the cold. "Speaketh" changes its planetary location, take-off cadence, and weapon strength depending on the velocity and length of keystrokes. If you're weary of the ever-popular Angels and Ensemble entry, you're not alone. Punch up "Re-Entry" anyway. Voice 2 is the Steam Drum

Wave exposed to a long pitch envelope. (This, in turn, acts as the patch's landing craft.) It's then reverse-faded up the keyboard to C6. This addition to the already present "Cherubs-On-Strings" bass lends a starry twist to the patch. Thus, the usually tired and plain Heavenly Host sound is rehabilitated and re-flavored: double-chocolate fudge Angels instead of vanilla.

Real analog sounds are, by definition, the prototypes. There's much attention paid as to whether or not digital, reconditioned "copsounds" are anywhere near as good as the dirty-but-warmer, mostly lowpass originals. Since I don't have an old Jupiter, Prophet or OB on hand, I can't make any really accurate calls. But if my memory is anywhere near functional (ahem), the SC-5 represents this specific group of analogs very well. What group? Like you need to ask...

"OB Force Pad" and "Prophet Pad" are both quite good and offer up much of the blush and glow that analogians crave. These pads are, of course, somewhat similar, both being built on sawtooth waves. (Matter of fact, the sawtooth wave is practically reborn on this card: it's everywhere you'd look for a sawtooth plus a few hideouts.) However, the OB changes its amplitude value over time while the Prophet patch stays fairly constant. Another subtle difference; The OB patch uses a 3 LoPass 1 HiPass pole configuration, while the Prophet sound is derived from the more "authentic" Lowpass (2Lo-2Lo) filter setting. It's worth noting that those of us without SQ-2s or pressure sensing controllers will miss out on some poly-mod like timbral variation unless we assign the filter MODSRC to something other than PRESSR.

Many of the other analog-style pads on the SC-5 are worth a serious listen. "Lilies Pad" is reminiscent of early polysynths like the PolyMoog, CS80 and OB S.E.M as it showcases polyphonic glide (quite the rage in 1976). But, unlike its great-grandparents, "Lilies' Pad" does not use the glide switch. Instead, glide is implemented by using Env 1, affording the sound considerably more latitude and playability. (Non-programmers please trust me on this.) This alternate parameter indicates intelligence in sound design (Clark Salisbury and John Greenland) at work.

Other analog sound-alikes deserve a mention. Try "Analog Crush," "Smoothie," "Klaus Schulze 1" and "Formant PPG." These patches accurately reflect their titles. "Oberheim 4V" holds your attention as it transverses its sound over several seconds. "PWM Strings" again brings to mind the Sequential Prophet series. These synths were famous for their ultra-fat strings, created in part with PWM-pulse width modulation.

The SC-5 has a couple of other very musical string sounds. "Dynamic Strings" is a sort of gritty, velocity-alive sawtooth. It'll warm up those passages that call for strings with a relatively fast attack. "Way Strings" builds on that String Ensemble wave. This sound is sweet in character yet has a strong young bod. While filter and envelope values may account for sweetness, stereo panning between two of the three voices add motion and thickness. In fact, a lot of the concepts and designs on the SC-5 result, at least in part, from good stereo programming. A mono playthrough may not give you the best idea of what its creators intended. Listen in stereo — try headphones if need be.

Lots of Hammond Bs here; 10 in all. While "Boz Organ," "Gimme Some Organ" and "R&R B3" all sound beefy, they feel a tad sluggish. This holds true for some of the bass sounds as well. The analog faves like "Moogie Moog" and "Moog Growl" do a fine job when it comes to just plain filling up a speaker. They, too, feel somewhat muddy. For more staccato styles try "Saw Bass" or "Organ 21."

The SC-5 has a healthy sampling of brass and pianos. The brass is most successful, particularly the analog brass. "MKS-80 Brass," heavily soaked in reverb, remains bright and punchy. And "Smooth Horns" can be understated nicely just under another part in the mix or added to other horn sections to improve balance and boost the mid-range area.

The pianos on this card are probably the weakest group. The acoustics are not very pragmatic and the Electrics are repeats of ideas on other cards. "Tine-O-Might" Rhodes has seen better days.

Ensoniq wisely chose to go light on guitars (3) and lighter (0) with drumsets. SQ guitars, especially the distorted ones, are sometimes overworked and there seem to be plenty of SQ drumsounds on SCs and in ROM already.

On many soundcards, the special effects and special sounds occupy the last bank. The SC-5 has almost two banks of inventive stuff. Fans of wave sequencing will appreciate "African Nights" and "African Days." With Vocal-Oooohs, Kalimba and Wood Flute Waves at their tonal center, both these patches develop complex, one keystroke rhythmic patterns while riding the multi-wave. "Mosquito" is a truly offensive sound. This is a compliment. It works.

Does the SC-5 boldly go where none have gone before? Not so much. But the pads/analog sounds on this card are simply terrific and the special effects are above the baseline. The SC-5 should please even the most dubious, jaded composer. The programmers here evidently didn't worry about breaking virgin sonic ground. Rather, they seem more interested in coming up with good, solid material. ■

Understanding Envelopes in the VFX and SD Synths

Part 4 — From Pole to Pole

Robby Berman

Now that we've got through three envelope articles, it should be clear why they're so hard to explain simply: They're not simple. Did anyone warn me how much there would be to say about the little buggers when I started us all down this long, winding path? Nah. Maybe it's just as well. My VFX-playing masseuse friend has been kind enough to Beta-test these lessons for me before I sent them in to the *Hacker*, and therefore I know that we're actually making some sense of things, however long it takes.

Before we get going here, you might find it helpful to reread the articles in this series so far (Issues #94, #96, & #98) — unless you've become so familiar with envelopes by now that you're out there madly sculpting sound like some Michaelangelo of modulation. Or a rockin' Rodin. Or maybe let's get started.

Also, get out the following envelope-wielding patches we've created (you have been saving them, right?): UP+DOWN, DULL+BRIGHT, FAT+THIN and GORIGHTWARD. And, to

start, put on your headphones. Good. Now, let's get negative.

Reflections in Still Water

As we closed last time, if you recall, I suggested you take GORIGHTWARD and set the MOD AMT on Output page 2 to -99 to make our envelope send the sound to the left in the stereo field (and back) instead of the right. So far, all of the envelopes we've been dealing with have been positive-going (except for LOUD+SOFT, which used a special subtractive envelope). Whatever our manual setting has been in a given program — whether it was a pitch played on the keyboard, a filter cutoff setting, or a pan position — we've been using our envelopes to raise it and lower it back down, etc.. The thing here is that we've been setting our MODAMTs to a positive value on our Pitch Mod, Filter or Pan screens. But suppose we want to send some poor unsuspecting manual setting downward instead? Well, no prob. Simply by using negative MODAMT values, envelope shapes can be inverted like reflections in a clear mountain lake.

Call up GORIGHTWARD. Remember how we had set up Envelope 1 to push the manual pan setting (and therefore the pan position) of 50 up and back down and so on?

Press the Output button twice to get to the Pan screen and set the MODAMT to -99. This will apply the very same envelope shape to the PAN setting in a negative-going manner, essentially turning it downright upside down. The same envelope values that we've been using to push the PAN value up will now push it down. Before you play middle C, press Env 1 again and I'll explain.

As always, what we're doing is using the envelope to change a manual setting, in this case our pan position value of 50 (dead center). Our first envelope level is 00, which will cause our pan value to change by zero, not at all. With the MODAMT set to negative territory, however, our next level, the PEAK setting of 50, will now push the manual pan setting down. This will have the effect of sending the sound halfway to the left (since a value of 99 would send it all the way). Did your eyes just roll back in your head? Hang on (though it's quite a look for you, I must say).

There're two things to cling to here if you're getting confused. Remember how we said earlier in this series that all that envelope levels represent are levels or degrees of change that an envelope will impose on something? How they're not inherently up or down in their effect, they're just amounts? That's still true. Whether they add to or subtract from a manual setting is determined simply by whether the MODAMT you're using to apply the envelope has a plus or minus sign in front of it.

More simply put: If you're using an envelope negatively you can imagine a minus sign in front of any envelope levels you have. In this case, the envelope levels now in front of you can be seen as being -00, -50, -00, -50 and -25.

Back to our story. After our PEAK level of 50 (or -50) moves the manual PAN setting halfway to the left, BREAK 1 takes over, causing the sound to return to its original center position, since the amount of change to the manual setting that BREAK 1 calls for is 00, aka none. BREAK 2 (50, or -50) moves the sound halfway to the left again. SUSTAIN's level of 25 (or -25) then brings it halfway back to the center from there (since 25 calls for only half the amount of change to the pan setting that 50 would). Play a long middle C on the keyboard and see if I'm lying. Nope, I'm not.

The Mirror Image Crack'd

Negative-going envelopes work the same way with pitch and filtering.

Call up the program UP+DOWN. Press the Pitch Mod button and change the MODAMT from +99 to -99. This'll turn UP+DOWN into DOWN+UP. Press the Env 1 button, imagine minus signs in front of all the levels, hold down a middle C and listen. See? What've we've now got, by using negative

MODAMT values instead of positive, is a mirror image of our trusty old envelope shape. What went up must go down, and vice versa (sorry, Professor Newton).

Select DULL+BRIGHT; let's turn it into BRIGHT+DULL. Press the Filters button and change the ENV 2 setting to -99 to make the lowpass filter cutoff value, our manual setting, go down and back up instead of the opposite. This means that the PEAK -50 envelope level will cause our sound to get duller as it lowers the cutoff point, lopping off more of the high frequencies of the sound, and then come back to its original brightness as the envelope values diminish back to BREAK 1's 00 level and so on. Here's a good example of how the envelope level names can be confusing, since, for instance, with negative enveloping, our PEAK causes, well, a valley in the brightness of the sound.

You can try this same shifting of the envelope's polarity with our patch FAT+THIN, though we'll have to tweak things a little bit to produce an audible result, since the highpass cutoff as is, is set so low already that reducing it further won't change the sound to any appreciable degree. Press the Filters button twice and let's raise the cutoff to 64. Now we're chopping off the whole bottom (bass) half of the frequency spectrum in our string wave. By changing ENV 2 on this page to -99, we'll be setting up our envelope to lower the cutoff value (thereby filtering out less of the bottom) and then raise it back up again (reinstating the big chop) and so on. Check out THIN+FAT.

Taming the Topography

Let's sum up the ramifications of this positive/negative polarity thang we've been playing with. We've now learned that not only can envelopes increase manual settings in that shapely way that they have, but they can lower them too. Do you want your sound to have mountains or valleys? That's the basic question.

Suppose you want both at the same time. The way to accomplish this is to set your INITIAL envelope level (the one that's in effect when you press a key down) to a point somewhere in between what you'd want your highest mountain and lowest valley to be. Let's say our INITIAL is 50. Any envelope level values we set higher than that would cause our manual setting to go up from there, and any below it would cause it to go down. The trick is to adjust your manual setting so that that INITIAL level of 50 causes your pitch, filter, volume or panning, etc. (we'll talk about pitch in a minute) to be in the right place when the note starts. Let's demonstrate this with panning.

Select GORIGHTWARD, and press Env 1. On our Output page 2 we have Envelope 1 modulating our center pan position of 50 by a value of +99. When using envelopes in the bi-polar way we're about to, whether your MODAMT values are + or — minus becomes kinda irrelevant — positive values spare you from having to imagine minus signs, though.

Since PAN values range from 0-99, let's set our envelope levels small enough to ensure that we'll have enough numerical elbow room to swing back and forth. Make INITIAL, our starting envelope level, 25. Put on your headphones and play a note — you'll notice that the sound is now starting off to the right a bit since our envelope is pushing our manual setting of 50 upward by a value of 25. Here's where we have to cheat our manual setting so that when we press the key down we start where we wanna. Go back to Output page 2. Since both envelope level and PAN values range from 0 to 99, and INITIAL's pushing our PAN up by 25, dropping our manual PAN setting down by the same amount should put us back in the center. So, set your PAN to 25. If you play a note on the keyboard, you'll find you're back in the center.

Press the Env 1 button again. Remember, any levels we set above our INITIAL level of 25 will increase the PAN value and any below will decrease it. Let's set PEAK to 50, which will push things to the right by a value of 25. Next, let's set BREAK 1 to 00, which being 25 less than our INITIAL will pull the sound that much past the center to the left. Set BREAK 2 to 50 (right of center again) and SUSTAIN to 00 (left of center). Play a note and listen to the note sliding around in the stereo field.

This same approach can be applied to filter cutoff settings and volume. The trick, again, is to set your INITIAL level to some center value and adjust your manual setting — by ear if necessary — so that even with the change called for by the INITIAL level, you start off at the desired cutoff setting or volume. After you've got that together, any envelope levels above the INITIAL will cause your manual settings to rise up, and any below will cause them to drop down. Try it, you'll like it.

Equatorial Shift

You may have noticed that I didn't mention pitch in the last paragraph. There's a special bi-polar envelope available for sending pitch hither and yon which spares you the hassle of having to readjust your manual setting to compensate for an INITIAL level's skewing, as we did above. This special envelope is mentioned in the KS-32 and TS-10 manuals, briefly, but it also exists in the VFX and SD synths. What follows is, I believe, the very first full explanation of this helpful tool to make it into print anywhere.

If you recall, back in the second article, "Into the Fray," we avoided the ENV 1 option in the bottom center of the Pitch Mod screen, instead applying our envelope through the generic MODSRC field in the top middle of the display. That's because that ENV 1 field is the doorway to this special bi-polar envelope, and let us avoid it no more.

When the software engineers at Ensoniq were designing the envelopes for the VFX, they determined that in the envelope "hard-wired" to the pitch section of the instrument (which is this ENV 1 option we're talking about) SUSTAIN should always cause the pitch to eventually settle back to the note

played on the keyboard, regardless of what kind of gyrations it went through before it got there. A valiant effort to keep this poor world in which we're living a little more in tune. They set things up so that when Envelope 1 was used as a generic modulator, the way we used it in UP+DOWN, it would function like all the other envelopes. But when it was used as the dedicated ENV 1 accessed through the Pitch Mod page, SUSTAIN would be permanently set to return the pitch to concert tuning, and its adjustability disabled.

This having been done, there was now an extra field on the screen to play with, and in Ensoniq's tradition of squeezing the maximum action out of their processors, they decided to use the space for a bidirectional option for the dedicated Env 1. Even though the bottom right field of the first Env 1 page still shows the word "SUSTAIN," that's not what it is when you're using the ENV 1 option on the Pitch Mods page. They left the "SUSTAIN" in place because you can still use the envelope to modulate something else while using it for pitch, and for that something else, SUSTAIN is still sustain.

So here's how it works: When using the hard-wired ENV 1 found on the Pitch Mod page, SUSTAIN becomes an equator-shift adjustment. Where you set it determines which envelope levels will cause the pitch to rise above a note played on the keyboard and which ones will send it below. Envelope levels equal to the "SUSTAIN" value will play the correct pitch fingered on the keyboard. Higher envelope level settings will send things up, and lower ones will send things down. If you set SUSTAIN to 00, envelope levels of 1 to 99 will all be above it and will raise the pitch. If you set it to 99, values from 1 to 98 will all be below it and will flatten notes accordingly. The interesting stuff happens when you set the equator shift somewhere in between.

For example, if you were to set SUSTAIN to, say, 50, envelope levels above 50 would send the pitch sharp, and any below 50 would send 'em down. Hmm, possibilities.

Get ahold of UP+DOWN. Press the Pitch Mods button and scroll the MODSRC field all the way up to OFF. Change MODAMT to 00, for tidiness (since MODSRC is already switched off). Select ENV 1 on the bottom of the screen and crank it to +99. Aaah, at last.

Press the black Env 1 button. That SUSTAIN setting of 25 changes everything now, since it means in this context that any envelope levels set to 25 will play at concert pitch, those above it will be, well, above it, and those below it, below. Our old envelope shape ain't gonna sound the same. Our INITIAL level of 00 will now cause the note to start way below the concert pitch of the note we're playing on the keyboard before cruising up past it to 50, then swooping back down below pitch again, and then above it once more before it settles back to our now-invisible, in-tune, real SUSTAIN level. If you change INITIAL to 25, you'll start at concert before PEAK starts making things sharpening things up. Try changing one or the other of the levels to 25 — see for yourself how that'll

bring things into tune, at least until the next envelope level kicks in. Pretty cool huh? You read it here first.

That's enuff for now. Oh, and before I forget: in our demonstrations we've been using MODAMTS of +99 and -99 and envelope levels in multiples of 25 to make the things we've been doing easier to hear and visualize. But do try other, less radical settings as well. The effects will be the same, only less extreme. And subtlety is as crucial an element in good programming as it is in any other art.

I'd also like to extend my heartfelt thanks to Bill Whipple and Bill McCutcheon at Ensoniq for taking all the time it took to explain the special hard-wired Envelope 1 to me.



Next time we'll get to the third envelope page. 'Til then... ■

Bio: Robby Berman is a musician and recording engineer living on the outskirts of Woodstock NY, which is itself on the outskirts of known reality. His latest album is "Rings and Rings."

Customer Service Capers

— From Ensoniq

Anthony Ferrara

Yo. This is Tony Ferrara once again. As always, I am using this space to answer questions that product specialists at Ensoniq have found to be frequently asked by callers to the Customer Service line.

While my last column focused on one topic (synchronization with MIDI clocks and FSK) which was relevant to many of our products, this month's was written in response to a number of specific questions asked about our new sampler, the ASR-10. First, however, I'm going to fill you in on some important data about the ASR-10's SIMMS requirements, which you may be asked if you call a mail-order or catalogue house that sells computers and peripherals.

The basic response to any questions about what type of SIMMS your ASR-10 needs can be answered by the following: 1 or 4 meg SIMMS, 30 pin, 8-bit, non-parity, commonly used in Macintosh computers. There are various configurations of RAM (random access memory) possible.

- 2 megs — come standard, shipped installed in each unit
- 4 megs — by adding two more one-meg SIMMS in the expansion slots
- 8 megs — by replacing the stock one-megs with two fours
- 10 megs — by moving the original two single-meg SIMMS to the expansion slots, moving over the jumper, and installing two four-meg SIMMS in the original slots
- 16 megs — by removing the original two, moving over the jumper, and installing four SIMMS of four meg each

SIMMS can be purchased from a variety of places, including mail-order catalogues and computer stores. While we make no specific recommendation, one particularly helpful source has been David Lampert of Custom Services at (818) 881-6185.

Keep in mind that you must match the speed of your SIMMS within the same pair. For example, you might have a configuration of 2 four meg SIMMS at 70 nanoseconds speed in the first two slots, with the original one meg SIMMS (80 ns.) in the two expansion slots. While the two pairs have different speeds, they do match within the same pair.

Another question that we are frequently asked concerns sequencing problems on the ASR-10 when appending sequences, changing tempos, and editing song steps. Does the latest software O.S. version (1.61) solve these problems? The simple answer is yes, but you will need to have ROM O.S. version 1.5 eeprom chips installed in order to run the current software version of 1.61. We are now sending the new ASR-10 ROM updates out to dealers and service centers free of charge, upon request. The only charge to the user would be the installation fee, which varies according to store policy. Please contact your dealer or authorized service center for further info.

So, boys and girls, if you have any question at all about this, give Ensoniq Customer Service a call before you make your purchase of expansion SIMMS. We'll be glad to clarify any points that might be throwing you for a loop (so to speak). See you next time with more ASR-10 questions, info on the TS-10, and some discussion on using external disk drives with the KS-32/SQ series keyboards. ■

So How Many Quadraverbs Does It Take To Match A DP/4?

Michael Harvey

When I heard the incredible rumors some 18 months ago about a new Ensoniq parallel effects processor, I placed an advance order with my dealer: four independent processors; chip designers and programmers recruited from Lexicon; true stereo effects; all from Ensoniq for under \$2000. If the box lived up to even half its advance PR, it would be a deal at any price. To date, I haven't had a single cause to regret my impulsive purchase.

The release of the DP/4 immediately raised an innocuous seeming question: just how many Quadraverbs would one need to match the capabilities of a single DP/4. As with all truly important issues, however, reality proves far more intriguing and knotty than one might hope.

The DP/4, as its name suggests, contains four independent processors, each capable of stereo multi-effects. This description suggests that each of the DP/4's four processors equals a single Quadraverb. Unfortunately, the obvious solution is not necessarily the correct one.

The Quadraverb, as its name suggests, can deliver four simultaneous effects in series from a single processor. Recreating a comparable effects chain in the DP/4 requires two of its four processors. The debate still seems easily resolved, then: it must take only two Quadraverbs to match a single DP/4. This view gains support from a simple mathematical fact: two Quadraverbs provide four inputs and outputs, the same number of holes as a DP/4. Once again, however, the easy solution is incorrect.

Let's examine some other important considerations: sound quality, programmability, the variety of algorithms offered, and, not to overlook the obvious, price. A look at the spec sheet for each unit reveals the following:

	DP/4	Quadraverb
Freq. Response	2Hz-18kHz	16Hz-20kHz
Dynamic Range	96dB	85dB
Processing Power	40 MIPS	24 MIPS
DAC/ADC	16 Bit	16 Bit
Max Single Delay Time	6.4 sec	3.3 sec
Preset Memory	400 locations	190 locations

Significant differences exist in total processing power and delay times, with the DP/4 simply having more in each case. This should come as no surprise given the DP/4's multi-processor design. The DP/4 also offers more headroom than the Quadraverb, though in practice, the difference in dynamic range proves mostly insignificant. In truth, we will not find what we're looking for on the spec sheet.

With the help of two colleagues, I staged an old-fashioned A-B listening test. We used the dry sample sounds from Ensoniq's "DP/4 Demo CD" to test each unit's workhorse routines. The

DP/4 outshined the Quadraverb hands-down in pitch effects, delivering crisp choruses and flanges, and very usable pitch shifts. The Quadraverb held some surprises for us, however. Widely disparaged as a noisy box, we were astonished to find that when its input and output levels were optimized, it was not appreciably noisier than the DP/4, despite its narrower dynamic range. And while its reverbs had a decidedly metallic edge in several algorithms, the Quadraverb's basic delays were difficult, if not impossible, to distinguish from those of the DP/4.

You may be wondering at this point why this article is appearing in the *Transoniq Hacker* rather than an Alesis newsletter. Let's settle the issue and move on to the areas where the DP/4 is truly unparalleled (even though it is a parallel effects processor).

The DP/4 offers incredible programmability of its effects — complex algorithms require 34 parameter pages! Whereas a basic reverb patch in the Quadraverb is defined in about ten button presses, the DP/4 is just getting going at this point, offering choices for room detuning, multiple early reflection levels, and decay definition. Similarly, a stereo delay on the Quadraverb offers (predictably) control over the length and feedback of the left and right delays. The DP/4 goes much further, allowing control of the panning for each delay along with cross-regeneration in which the output of the left delay can be fed back into the input of the right delay, and vice versa.

Both products offer excellent, real-time MIDI control of their effect parameters. Each supports up to eight modulation sources (pitch bend, pressure, continuous controllers, etc.) and provides (slightly different) schemes to route any modulation source to any parameter. The DP/4 also offers a few additional niceties like delays synchronized to tempos and MIDI clocks.

Turning to the effects themselves, the DP/4 offers a slew of algorithms that aren't available from a Quadraverb. These effects include Exciters, Duckers, De-essers, Noise Gates, a Vocoder, Speaker and Amplifier simulations, and Digital Distortion. As with its other effects, these DP/4 algorithms sound great. Some of the amplifier and distortion routines will take virtually any input signal and turn it into a wailing guitar sound of which Jimi (and Jimmy) would be proud. Imagine scat singing the solo to *Purple Haze* and sounding like the God of Grind!

"Real" guitar players will be similarly impressed by the DP/4. The unit provides an extra input jack on the front panel for a guitar cord. A dual footswitch attached to the rear panel provides a modulation source, an effect bypass switch, and preset selector. Effect chains can be programmed for performance situations letting a guitarist cycle through presets by using the footswitch as a stomp-box. These functions can, of course, be controlled via MIDI.

Unlike a Quadraverb, which sums and averages its input signals,

the DP/4 maintains discrete signal paths for the left and right channels, allowing it to perform individual processing on each, or combine the signal pair in unique and complex ways. One highly beneficial result is that DP/4 effects retain the stereo character of their source, resulting in spacious, crystal clear mixes.

The DP/4 can also combine the processing power of each its four units. (The Vocoder is an excellent and entertaining example.) Furthermore, routings between processors are programmable, allowing for any combination of serial and parallel effect chains. No matter how many Quadraverbs you own, you can never share delay memory, or set up complex internal mixing and feedback loops between the units. Even if you could, the signal would have to pass through multiple A-D and D-A stages between each unit. The DP/4, in contrast, handles all routing between its processors in the digital domain.

As a result of this flexible architecture, the DP/4 can be used as a single monster effect box, two stereo processors, or four individual effects processors. Regardless of the number of source signals, all outputs can be digitally mixed to a single stereo pair! It's like having a programmable digital patch bay, mixer, and four effects boxes in a single unit. For anyone working with a small mixing board, or driving toward fully automated mixing, this flexibility is an enormous boon and a tremendous value.

The above discussion might suggest that no number of Quadraverbs can match a DP/4. Before gloating too much, we should remind ourselves that the DP/4 also costs considerably more. The list price for a new DP/4 is \$1,495. By Ensoniq's reckoning, this must mean a DP/4 is worth about three Quadraverbs. Is that the answer to our question? Based solely on price, I would argue that the two products feel more or less fairly valued. Nevertheless, the DP/4 simply does things the Quadraverb cannot, making a simple division of one into the other impossible. Each musician must personally assign a value to the revolutionary capabilities and design of the DP/4.

Let me close with an interesting conundrum. Due to the DP/4's capabilities, it becomes unbearably tempting to use its full power for every processing chore. I cannot overstate the anguish of having to use "only" two processors on a lead vocal so that the other two can be used for house reverb. Perhaps I shouldn't be asking how many Quadraverbs match a DP/4. Perhaps I should be asking how many DP/4's I need to live up to the incredible potential this machine opens up to regular Joes like you and me. ■

Bio: Michael Harvey earns his living as a product manager in Microsoft's Consumer Products Division. He spends his living as the owner/operator of Moose Leap Corner Studios, a Seattle project studio specializing in song demos, audio for video, and multimedia software.

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This month I review the first set of VFX patches from Sam Mims, resident VFX/sd guru. After reading his excellent VFX Clinic in *Keyboard* last year I was ready for some new fuel for the SD, so when Jane forwarded me *Syntaur Collection Set #1* I was ready to be amazed. Programming 700+ parameters on the VFX/sd is probably as pleasurable as root canal work for most of us, so I looked forward to some pretty spectacular stuff...

Okay, load the disk. Bank 0 and 1 are "Pad Central." "Air-Glow" and "Curved Air" are as close to Wavestation sounds as I've heard, with spatial movement in the stereo field and swells and falls. Banks 2 and 3 are Vocal and Transwave patches with some very subtle wave crossfading: all you new age aficionados will simply revel in the subtleties of these pads, gentle wave motion and all. You'd think that 24 pads might be pushing the envelope a bit, but not one of them sounds like any other. Bank 2's "Cross-Blend" is more D-50 than that "R" company ever thought about.

Okay, Bank 4: brasses. Coupla representative analog brass sounds and atypical Ensoniq brass sounds with obligatory 5th's and 4th's under the patch select buttons. Bank 5's organ and basses, well, that's really Ensoniq's forte, but these patches hold their own next to Ensoniq's own "Slick-Elec" and "Cross-Bass" nails P-bass and J-bass emulations. To Sam's credit there are no effects on the bass patches (a lead many other third-party types might pick up on), so you won't have to set the effects "Dry" on the track effect page to get the plate reverb off the bass. The "Bee-Three" is more M1 "Magic Organ" than Hammond; I'd conclude this is programming convention to alert you to the fact this is an organ patch rather than a real B-3 simulation.

Bank 6: pianos and plucked strings. The acoustic pianos are more RD-300 than SD1, but there's FM waves under the patch selects, so layering electric and acoustic sounds is pretty easy to do. Bank 7's Koto and Flute of the Guitar and Plucked String group is on the money with patch select 0* giving the representative bending of koto technique so sorely lacking on every other Koto patch I've heard. Bank 8's "Brass-Bells" are a keeper; a quick tweak of filter and output pages and I had Big Ben indicating tea time.

Bank 9's "THX-Stereo" is poly portamento ala Oberheim OB8 with a long portamento time resolving into marcato strings; "Orch-Tuning" is an excellent example of pseudo wave sequencing using quantized noise as a pitch modulator (and you thought you knew your SD1 inside-out, eh?), with the reeds and brass sections under patch select control. "The End" is a similar execution of the same with a different conclusion. "It's-For-You" is a dial tone up to #60 with a phone ring above. "In-The-Mist" is an interesting example in key zoning and bell-tree emulations, with patch selects and release velocity well incepted. "Wanna-Groov" is kinda representative of the "wave sequencing as drum loop" school of thought.

Sam's spent myriad hours programming this set, and with the VFX/sd that's no mean feat. This is the first set of patches I've reviewed that use the data entry slider as a timbre modulator. You've got to appreciate the sheer man-hours Sam has put into this collection. Since they are copywritten sounds he had to start from "init patch" baselines to avoid "tweak" transgression and possible copyright violation. So if the \$39.95 sounds a bit steep, the cost probably reflects some percentage of legal retainer to protect Sam from some bored third-party guys with nothing better to do but dissect someone else's work and scream "foul" when one parameter of Sam's patches matches their own. That's the reflected cost of doing business; there's some litigious brain police out there...

All of the patches utilize the original VFX wavetable, so they'll work in any of the VFX series. I'd bet Sam offers a ROM/RAM cartridge for all of you original flavor VFX'ers out there. This collection is an excellent-sounding first-time offering: you can hear the time spent in the subtleties and stereo spread and stage of these sounds.

In summary I wouldn't consider this a set of patches to tweak or take off from, as they're far too specific in nature and too highly focused to be considered grist for the mill. No slammin' here. Very ethereal pads with little, if any, duplication. As critically acclaimed a musician as Sam is I'm truly surprised a couple of representative sequences that really show off the sonic power of these patches weren't included. A "system-setup" file to switch the data entry slider to "Timbre" would have been nice, although the documentation briefly mentions timbre as a modulator. More documentation would have been nice too, although, to be fair, I myself barely have the organizational skills to label a disk. Don't be disturbed if you don't get an Ensoniq-like booklet with patch select descriptions; you'll have to notate variations yourself. Give it a listen... ■

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If you've been reading the *Hacker* for a while you probably know that I'm a strong advocate of getting the most bang for your buck. Okay, okay, who isn't, right? But since I'm presently unemployed and have student loans to think about, I *really* need to get a lot for my money! Even if you are able to sample lots of stuff from your album collection or borrow a friend's equipment as I have, you probably still want more sounds. Third party sounds are usually very good, but many of them are too pricey for my bones. One extremely cost effective way to get a lot of sounds for relatively cheap, is to purchase CDs of nothing but isolated sounds to sample and edit yourself. If you're familiar with the looping and synthesis functions of your sampler, you can save a lot of dough. Which brings me to this month's article where I'll let you know about two such CDs I got recently.

The Sampling Collection 600 (Volume 3 of the Masterbits collection) consists of a wide variety of synth and drums sounds. It starts out with a short demo which is nothing special, and not all that helpful since it doesn't tell which sounds were used to make it. From here, we go into a selection of sounds from the Korg T1. These are all quite nice and atmospheric, but most of them are a bear to loop, so be ready to roll up your sleeves and dig in. Most of these sounds are reminiscent of the M1 with lots of tinkling bell/woodblock loops. This is followed by some sounds from the Emu Proteus-XR. Almost all the basics are covered here with some very nice strings, brass, guitar, piano, choir, and bass sounds. As with almost all of the sounds, each instrument is given in several different octaves for multi-sampling.

We follow this with some pretty Kawai K4 sounds along the lines of the T1, and some sounds from the Akai S-1000. Here, I found some great violins and violas, some interesting digital bell sounds, and some nice orchestra hits like the ones in the breakdown of the Cars' old hit, "Hello Again." Next we are given a nice selection of very good drums and percussions from the T1 and Proteus. Most of these are very electronic-sounding/processed and would be right at home in any kind of dance-oriented music.

The next section was one of my favorites. It consists of a few loops, and then all the individual sounds from Roland's classic CR-78 drum machine. These are incredibly cheesy, totally

low-tech analog drum imitations, but there's something great about them...It's hard to explain, but I really like these sounds. For Genesis/Phil Collins fans, two of the drum loops at the beginning of this section are from the classic, "In The Air," which made use of the CR-78.

From here, we go into a selection of sounds from Ensoniq's own VFX-sd, including a sound called Full ROM which presumably consists of all or most of the onboard waves and attacks together in rapid succession. If you have the time, you could conceivably pull out individual attacks and waves and edit them into your own resynthesized VFX sounds (I haven't tried this, so don't hold me to it, but it seems like it should be possible...). After this, there are some Prophet VS sounds. These are mostly presets and most are pretty good, but there were a few sounds they left out that I felt would've been much better than some of the duller entries here. A good hybrid of analog and digital timbres.

The most disappointing sections for me were the next two. The first one consists of sounds from the Waldorf Microwave. Now, I've heard the Microwave in action, and with the exception of the Techno Bass sound, the sounds they put on this CD are lame. They could have easily been produced on any number of old analog synths and don't showcase the really unusual sounds the Microwave does so well. The next disappointment was the Oberheim X-Pander sounds. All of these sounded like they could have been easily done on a Matrix 6 or a lesser analog synth. Anyone who wants to hear a wonderful example of the incredible, thick, aggressive sounds this synth is capable of need only pick up the *Belief* album by the group Nitzer Ebb which was recorded almost entirely with the X-Pander. The sounds represented here are weak and wimpy. I was very disappointed.

Finally, we end with a few more drum and percussion selections from both the T1 and the Proteus. Good stuff yet again.

The next CD (Sampling Collection 900), consists of sounds from the Yamaha SY-99, Korg 01/W, Roland JD-800, and Emu ProCussion. After a short demo song, the collection goes into a variety of "FIRST B.A.S.E." edited Syn-Stacks and percussion. I'm not sure what FIRST B.A.S.E. is, but these sounds seem to exhibit a lot of spatial movement and would sound great on a stereo sampler. All of the stacks are given in various octaves, and in a single chord. I'm not sure why they included the chord, but I guess as long as the single notes are included, it's not important. These sounds are all very atmospheric and big-sounding. Along with more traditional melodic sounds, some creepy effects along the lines of a

sci-fi soundtrack are included. These are also very difficult to loop, so be ready to spend some time on it. The SY-99, O1/W, and JD-800 sounds are all very similar in mood, but are easier to loop than the stacks. If you're looking for a selection of very big, high-tech digital sounds to sample, this would be a good place to start. Enough chiffs, bells, and pads to keep you busy for a while.

As for the Emu ProCussion sounds, suffice it to say that if you want drum sounds, you could do a lot worse than to look here. I don't know if these are all the sounds on the ProCussion unit, but there are a heck of a lot of them. Most are extremely punchy and crisp even without adding your own EQ. Just about anything you might need is included here, so it's hard to go wrong. The quality of these sounds makes it worth the price alone.

Finally, we are provided with some special "bonus tracks" and a final demo. Most of these are original creations from Valhalla on machines such as the Korg M1, the Yamaha SY-77, and Kawai K4 including some pianos and electronic basses. I especially enjoyed the variations on a Korg wave sequence given here. Very cool and very funky.

So what's the word? Well, it's hard to say. Both CDs have

some great sounds on them, but both have some big flaws. Overall, if you need synth sounds, the 600 collection is for you. If drum sounds are more important, go with the 900. All the sounds are cleanly recorded (the CDs are both DDD) and easy to sample (editing them is another matter... try looping a synth pad with swirling windchimes built in and heavy reverb and chorusing if you're ever feeling terribly masochistic). My big beef here, as usual, is the sound names. What does the name "Slam Punk" suggest to you? A harsh, distorted guitar sound? That's what I assumed, but instead I got an Orchestra Hit. No self-respecting punk I know would *ever* use a cliched orchestra hit sound! What gives? I'm sure you readers are getting tired of hearing us writers complain about this, but until manufacturers stop doing it, I'll be right here complaining about it. 'Nuff said. ■

Bio: Tom Shear would like to thank Cindy Crawford whose vocals on that "Charlie" commercial made him feel like his singing wasn't all that bad.

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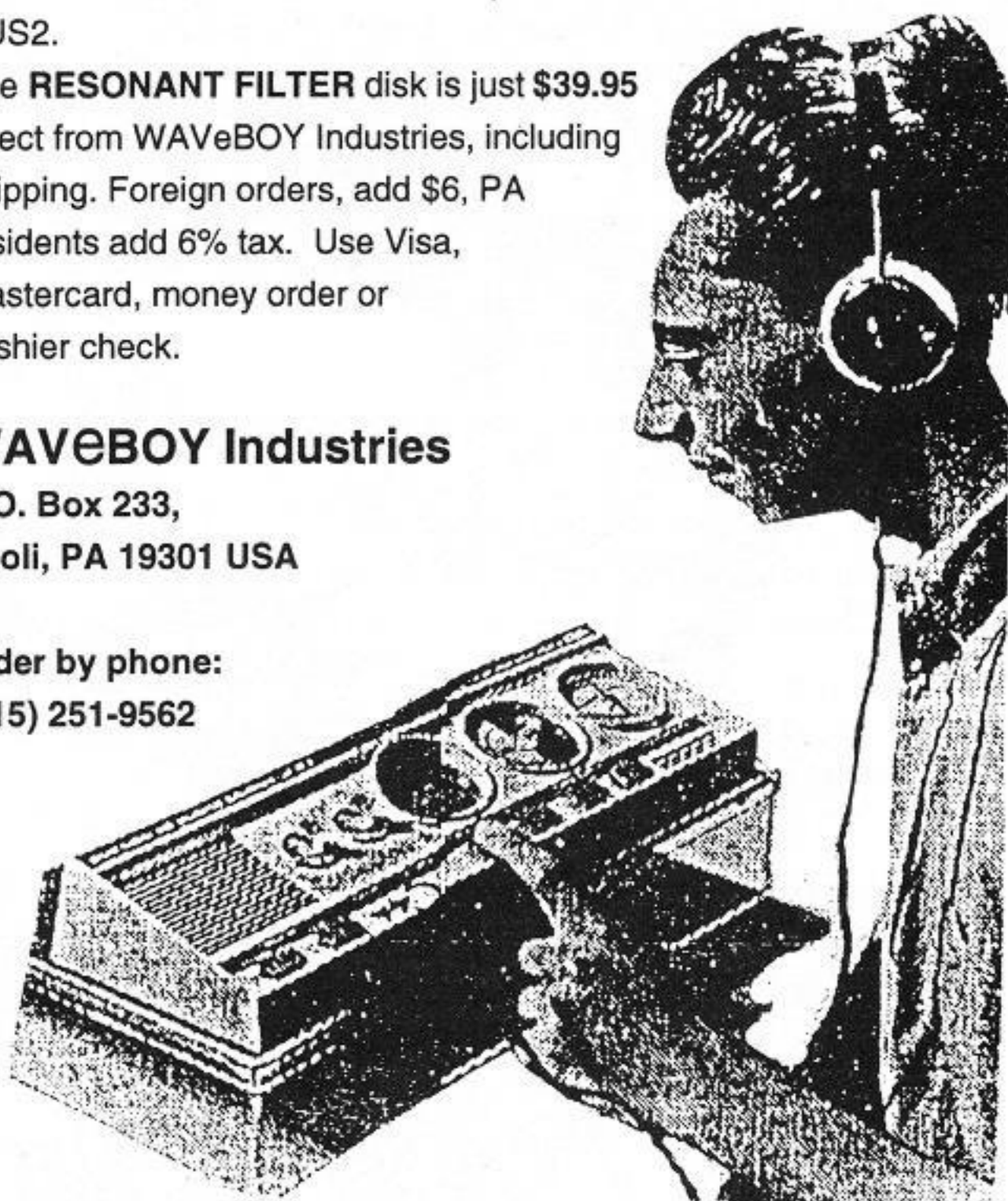
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Sonic Images #1: Percussion
Sonic Images #2: Percussion Special
Sonic Images #3: Stack Sounds A
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VS-1: Brass Tacks
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Constellation

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VS Strings II
VS Strings III

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SY-4: VS Pads II

Oberheim Pads
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EG-2: Fender Strat - Distort
Scholz Rockman
Gibson ES-335

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Telecaster Metal
Fender Rhodes 88"

EG-4: (req memory expander)
Steinberger Bass Deluxe
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WB-1: Takamine 12-String
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WB-2: Koto
Temple Bells
Bata Drums

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High Saxophone
Clavichord

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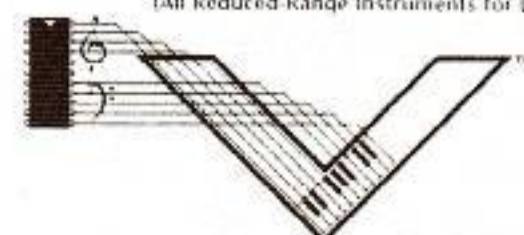
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Effects and Sequencing on the EPS-16 Plus

Bryce Inman

The feature that was most instrumental in persuading me to upgrade from an EPS to an EPS-16 Plus was the on-board effects. My initial excitement with the effects abated somewhat as I began to discover some of the restrictions that applied to their use. After learning how to work around these restrictions, however, I'm once again thrilled with all that my new keyboard has to offer.

The most recent trick I learned involves the use of multiple effects while sequencing. Here was my situation: I was using the effect CHOR+REV+DDL (my favorite). For one of the sounds I had loaded I wanted to use the chorus and reverb in one sequence and the digital delay in another sequence. It seemed to me that the best way to do this would be to set the output routing for that Instrument/Track to BUS 1, CHORUS+REVERB in one sequence and BUS 3, DELAY LINE in the other sequence. I learned real fast that this doesn't work. Although the volume and pan on a particular track can have a different setting for each sequence, the output routing has to remain the same for all sequences. This is due to the fact that the output routing is saved with a Bank, not with a Song or Sequence.

As you may have guessed, I did manage to find a way to accomplish this task — two ways, actually. What follows is a quick explanation of the two solutions and their advantages and disadvantages.

Not only do these methods make it possible to route a sound to different busses between sequences but also within a sequence. Although these methods work for any of the effects, for this example we will use the effect CHOR+REV+DDL, sending the sound alternately to BUS 1, CHORUS+REVERB and BUS 3, DELAY LINE.

Solution #1

The first method for routing a sound to more than one effect bus is to simply copy the sound to a vacant Instrument/Track and set the output routing of the original track to BUS 1, CHORUS+REVERB and the output routing of the copy to BUS 3, DELAY LINE.

Advantages: 1) This is a quick, simple solution. 2) This allows the sound to make use of two effects at the same time.

Disadvantages: 1) Obviously, you can't do this if you don't have any unused Instruments. 2) This method can be awkward if you want to change effects quickly or wish to have the sound switch effects several times within a sequence.

Solution #2

This method involves changing effects by using layers within the Instrument rather than multiple tracks and requires making changes to the Instrument.

Let's suppose you have an instrument that consists of one wavesample in Layer 1.

1. Create Layer 2 and copy the wavesample from Layer 1 to Layer 2.
2. Set the patch select so that when neither of the patch selects is depressed only Layer 1 is played and when the left patch button is depressed only Layer 2 plays.
3. Set the output routing of the wavesample of Layer 1 to REVERB+CHORUS and the output routing of the wavesample copy in Layer 2 to DELAY LINE.
4. Be sure to save these changes by saving the Instrument.

Now, recording with no patch buttons depressed sends the sound through the REV+CHOR and recording with the left patch button depressed sends the sound through the DDL. (Additionally, you could create a third Layer which could be routed to Bus 2.)

Advantages: 1) This doesn't require the use of extra tracks. 2) This method is extremely flexible. Changing effects is as easy as switching patch selects.

Disadvantages: 1) There is a bit more work involved when setting up this arrangement. If you're only dealing with one layer it's not that hard, but if the sound depends on multiple layers this process can be a bit more time consuming. 2) You can't do

this if all 8 layers in the Instrument are already in use. 3) The sound can only be routed to one effect at a time — unless you set up a patch that plays both Layer 1 and Layer 2 (which, by the way, opens the door for some interesting variations). ■



Bio: Bryce Inman is a free-lance music editor and arranger for Word, Inc. in Irving, TX.

TS-10 Hackerpatch

TS-10 Prog:

By:

Notes & Special Settings:

This is the usual blank Hackerpatch form that appears shortly after the introduction of a new instrument. This particular form was created by Dr. Brad Kaufman (who also has some TS-10 Hackerpatches in the works). Just blank out this little note area and feel free to make hundreds of copies. (What many readers do is to use an enlarging photocopier and blow these suckers up about 1.5 to 2X.)

WAVES	1	2	3	4	5	6
Wave						
Wave Class						
Delay						
Shift/Index						
Dirac/Modsrc						
Modamt						
Sample Start						
Start Modsrc						
Modamt						

MOD MIXER	1	2	3	4	5	6
Src-1						
Src-2						
Src-2 Scale						
Shape						

PITCH	1	2	3	4	5	6
Octave						
Semitone						
Fine						
Glidemode						
Glidettime						

PITCH MODS	1	2	3	4	5	6
Modsrc						
Modamt						
Bend						
PitchTb1						
Env1						
LFO						

FILTER 1	1	2	3	4	5	6
Mode						
Cutoff						
Kbd						
Modsrc						
Modamt						
Env2						

FILTER 2	1	2	3	4	5	6
Mode						
Cutoff						
Kbd						
Modsrc						
Modamt						
Env2						

OUTPUT	1	2	3	4	5	6
Kbd Scale						
Lo/Hi Key						
Vol (db)						
Modsrc						
Modamt						
Dest Bus						
Pan						
Modsrc						
Modamt						
Voice Prior						
Vel-Window						
Lo						
Hi						

LFO	1	2	3	4	5	6
Rate						
Modsrc						
Modamt						
Depth						
Modsrc						
Modamt						
Waveshape						
Restr Mode						
Phase						
Delay						
Noise Rate						

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

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

ENV3	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						

PGM CONTROL (Page 1)

Type	
Option	
Press	
Patch	
Restrike	

PGM CONTROL (Pages 2 & 3)

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

EFFECTS

Effect #	
Variation #	

Prog: CalypsoSteel

By: Jack Carder, Springfield, VT

Notes: Get fast, repeated hits on long notes by using the wheel.
C2-G2 plays "whistle."

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	TunedPerc	TunedPerc	Expan
Wave	SteelDrum	SteelDrum	Whistle
Delay Time	00	00	00
Wave Direction	Forward	Forward	Forward
Start Index	0	0	0
MODSCR	LFO	LFO	LFO
MODAMT	0	0	0
Restrk Decay	0	0	0

PITCH	1	2	3
Octave	+1	00	00
Semitone	00	00	+03
Fine	+12	-06	00
ENV1	00	00	00
LFO	00	00	00
MODSCR	Veloc	LFO	Noise2
MODAMT	00	00	00
KBD Pch Track	On	On	Off
Glide	Off	Off	Off
Glide Time	00	00	00

ENV1	1	2	3
Initial	99	99	27
Peak	99	99	00
Break	99	95	00
Sustain	99	00	00
Attack	20	00	00
Decay 1	20	40	00
Decay 2	20	99	00
Release	10	70	00
Vel-Level	0	0	0
Vel-Attack	0	0	0
Vel Curve	Convex	Linear	Linear
Mode	Norm	Norm	Norm
KBD Track	0	+42	0

LFO	1	2	3
LFO Speed	60	60	17
Noise Rate	00	00	46
Level	00	00	19
Delay	00	00	19
MODSRC	Wheel	Wheel	Off
Wave	Tri	Tri	Sine
Restart	On	On	Off

FILTER	1	2	3
Filter 1	2Lo	2Lo	2Lo
Filter 2	2Hi	2Lo	2Lo
FC1 Cutoff	055	055	112
ENV 2	+44	+44	+02
FC1 KBD	+16	00	00
MODSCR	Veloc	Veloc	Wheel
MODAMT	00	00	00
FC2 Cutoff	000	127	127
ENV2	00	00	00
FC2 KBD	00	00	00
FC1MOD-FC2	Off	Off	Off

ENV2	1	2	3
Initial	99	99	00
Peak	60	73	46
Break	35	36	61
Sustain	00	00	36
Attack	36	17	46
Decay 1	45	45	30
Decay 2	48	64	68
Release	50	50	57
Vel-Level	93	93	13
Vel-Attack	00	00	79
Vel Curve	Linear	Linear	Quik
Mode	Norm	Norm	Norm
KBD Track	00	+14	-84

AMP	1	2	3
Initial	94	94	99
Peak	99	99	99
Break	70	70	9
Sustain	00	00	99
Attack	23	23	20
Decay 1	67	67	20
Decay 2	73	73	20
Release	38	38	10
Vel-Level	06	06	33
Vel-Attack	46	33	00
Vel Curve	Convex	Linear	Linear
Mode	Norm	Norm	Norm
KBD Track	00	00	00

OUTPUT	1	2	3
VOL	76	82	76
Boost	On	On	On
MODSRC	LFO	LFO	Off
MODAMT	-21	-08	00
KBD Scale	Zone	Zone	Zone
Key Range	B2-C7	B2-C7	C2-G2
Output Bus	FX1	FX1	FX1
Priority	Med	Med	Med
Pan	+56	-56	00
Vel window	000	000	000

EFFECTS — CONCERT REVERB

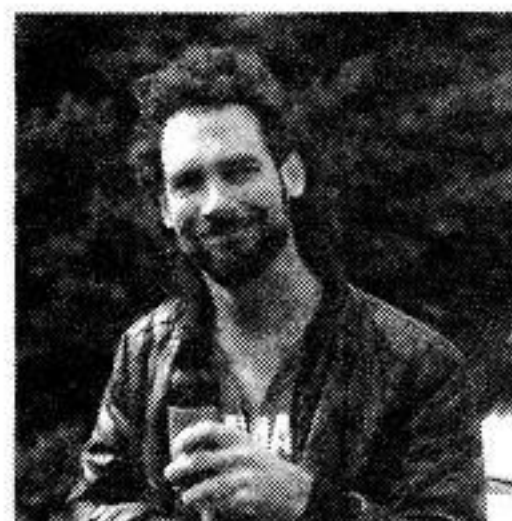
FX-1	30	LF Decay	+06
FX-2	25	MOD (Dest)	FX1Mix
Decay Time	33	BY (MODSRC)	Pedal
Diffusion	00	MODAMT	00
Detune Rate	27		
Detune Depth	08		
HF Damping	13		
HF Bandwidth	99		

The Hack: Jack say he's *really* interested to know what my hack-up of his patch might be. Jack, you're a really gutsy guy — never let me have *too* much slicing and slashing room! Here, then, you asked for it....

The whistle (Voice 3) is really optional. Turn it off or on, our focus is going to be on Voices 1 and 2. You may prefer to have both Pans (drums) in the same octave. In the Pitch Section, drop Voice 1's Octave to +0. Some may like "fast, repeated hits" brought in by the modwheel, but, in general, I find that this sort of percussive motion is best left to a quality sampler. Instead, use the wheel to bring in some additional detuning and movement between the two pans. For both voices turn the LFO Speed to 0 in the LFO Section. In Voice 2's Pitch Section, set ENV1 to +06, MODSCR to Wheel, and MODAMT to +20. The attack and decay characteristics can also be altered some. Since no two Pans are the same, the Amp Section (final) Envelopes for Voices 1

and 2 should differ slightly. Voice 1/2: Initial=90/94, Peak=89/94, Break=63/56, Sustain=07/12, Attack=07/12, Decay1=36/45, Decay2=60/65, and Release=45/38. The Reverb effect could be somewhat more prevalent. Go to the Effects Section and change Decay Time to 60 and Diffusion to 40. Thanks for the entry Jack, and thanks for your good nature.

Jeffrey Rhoads



Bio: Jeffrey Rhoads has been a keyboardist/composer on the Philadelphia Jazz and R + B scene for a period of time resembling forever. He has an interest in cinema and has developed some film courses. Jeff still believes in magic and longs for city lights.

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

Pending Hacker-Requests: SQ-1/2 — An "Elton John" Oberheim Bass patch — like in *Rocket Man*.
SD/VFX — A sitar patch.

SQ-80 PROG: JAZORG

By: Charles R. Fischer

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	00	00	4OCT5	LFO1	+01	-	-
OSC 2	-1	00	00	4OCT5	LFO2	+01	LFO3	+01
OSC 3	+2	07	00	SINE	-	-	-	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	63	ON	-	-	-	-
DCA 2	63	ON	-	-	-	-
DCA 3	00	ON	ENV2	+63	-	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	054	18	19	-	-	-	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	38	08	LFO3	+08

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	21	OFF	OFF	TRI	00	00	00	PRESS
LFO 2	22	OFF	OFF	TRI	00	00	00	PRESS
LFO 3	08	OFF	OFF	TRI	21	00	21	-

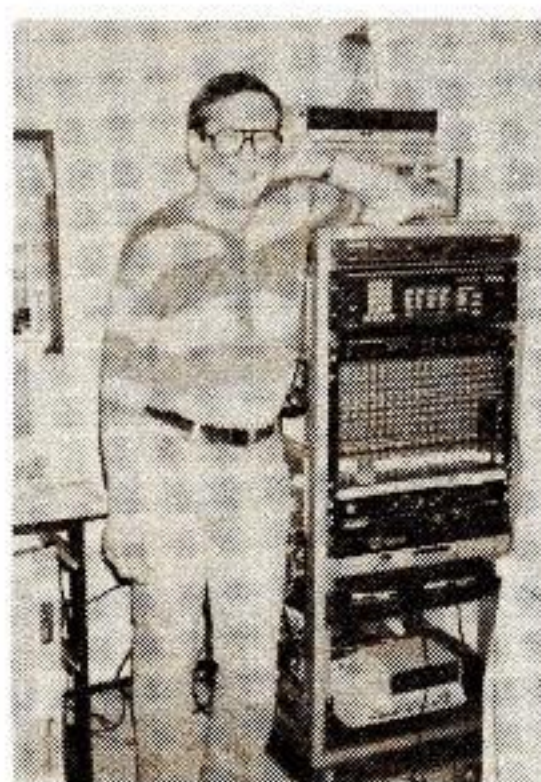
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	+63	+55	+00	00L	00	00	00	18	04	00
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+50	+50	00L	00	00	02	32	04	00

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	OFF	OFF	OFF	00	ON	OFF	OFF	OFF

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

The Hack:

JAZORG is a highly expressive organ patch especially useful for jazz, rock, and blues. Aftertouch brings in vibrato to simulate the effect of a Leslie speaker. Try it with outboard distortion, rotary speakers, reverb, and exciters. It's still better than the organ patches in my newer instruments!



Bio: Charles R. Fischer works as a test technician for AKG Acoustics, Inc. He has written more than 70 articles on electronics and music technology for a variety of magazines, designs custom MIDI controllers, and has played keyboards and synthesizers professionally.



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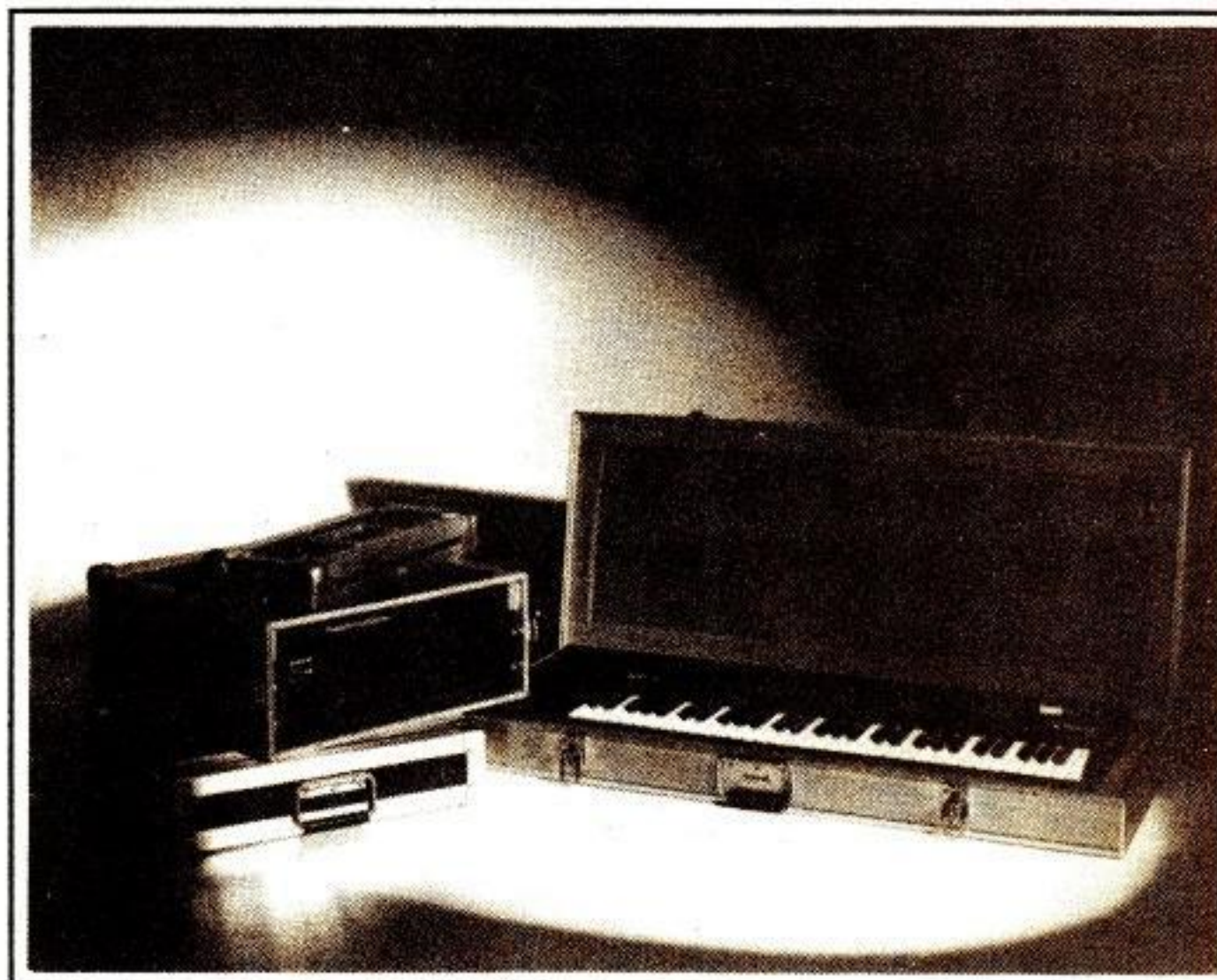
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SD & VFX Prog: SWEEPER

By: Steve Munro, Guilderland Center, NY

NOTES: This patch is made up of all transwaves. As the name suggests, the transwaves are swept by envelopes, pressure, and the mod wheel. ENV 1 parameters can be used to pan Voices 2, 3, and 4, and to pitch modulate Voices 5 and 6.

THE HACK: I like the ENV 1 effects that Steve suggests, and I wonder why he didn't program them in. For the panning effects, set the PAN MODSRC (on the second Output page) to ENV 1 on Voices 2, 3, and 4, and try a MODAMT of +99 for Voices 2 and 4, and -99 for Voice 3. For the pitch mod effect, I liked a subtle setting of ENV 1=+03 on the Pitch Mod page of Voices 5 and 6.

WAVES	1	2	3	4	5	6
Wave	Resnt4	Resnt3	Resnt2	Resnt1	SpectriX	ESQBellX
Wave Class	Transwave	Transwave	Transwave	Transwave	Transwave	Transwave
Delay	KeyUp	0	0	0	0	0
Start	99	99	0	0	0	0
MODSRC	Mixer	Mixer	Mixer	Mixer	Mixer	Mixer
MODAMT	-99	-99	+99	+99	+99	+99

MOD MIXER	1	2	3	4	5	6
SRC-1	Env1	Press	*Off*	Press	Env2	Env2
SRC-2	LFO	Wheel	Wheel	Wheel	Wheel	Wheel
SRC-2 Scale	1.5	1.0	1.0	1.0	1.0	1.0
SRC-2 Shape	Quant16	Quant16	Quant16	Quant16	Quant16	Quant16

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

PITCH MODS	1	2	3	4	5	6
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	*Off*
MODAMT	0	0	0	0	0	0
Glide	None	None	None	None	None	None
ENV1	0	0	0	0	+2	+2
LFO1	0	+5	+4	+5	+5	+5

FILTER 1	1	2	3	4	5	6
Mode	2LP	2LP	2LP	2LP	2LP	2LP
Cutoff	100	100	100	100	100	100
KBD	0	0	0	0	0	0
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	*Off*
MODAMT	0	0	0	0	0	0
ENV2	0	0	0	0	0	0

FILTER 2	1	2	3	4	5	6
Mode	2HP	2HP	2HP	2HP	2HP	2HP
Cutoff	30	30	30	30	30	30
KBD	0	0	0	0	0	0
MODSRC	*Off*	*Off*	*Off*	*Off*	*Off*	*Off*
MODAMT	0	0	0	0	0	0
ENV2	0	0	0	0	0	0

OUTPUT	1	2	3	4	5	6
VOL	84	84	88	84	99	99
MODSRC	*Off*	Press	*Off*	*Off*	*Off*	*Off*
MODAMT	0	-8	0	0	0	0
KBD Scale	0	0	0	0	0	0
LO/HI Key	A0/A0	A0/A0	A0/A0	A0/A0	A0/A0	A0/A0
Dest Bus	FX1	FX1	FX1	FX1	FX2	FX2
Pan	50	50	50	50	50	50
MODSRC	*Off*	Env1	Env1	*Off*	LFO	LFO
MODAMT	0	-99	+99	0	+25	-25
Pre-Gain	Off	Off	Off	Off	Off	Off
Voice Prior	Medium	Medium	Medium	Medium	Medium	Medium
Vel Thresh	0	0	0	0	0	0

LFO	1	2	3	4	5	6
Rate	25	28	28	28	28	28
MODSRC	*Off*	Press	Press	Press	Press	Press
MODAMT	0	+13	+13	+13	+13	+13
Level	99	0	0	0	0	0
MODSRC	*Off*	Press	Press	Press	Press	Press
Delay	0	0	0	0	0	0
Waveshape	Square	Sine	Sine	Sine	Sine	Sine
Restart	Off	Off	Off	Off	Off	Off
Noise SRC RT	10	40	40	40	40	40

I thought the 3-octave tuning spread of the 00 patch select was a bit wide, so I changed OCTAVE to -1 on the Voice 3 Pitch page.

The key-up sound of Voice 1 in the ** patch select is extremely cool. I just wanted to point out that you can throw that in with the other patch selects as well. Of course, you can simply enable Voice 1 for the other patches, but you can also press and hold both patch select buttons while you're holding a note, and this will kick it in on the note release.

- Sam Mims

SELECT VOICE

00	2	3			
0*	2	3			6
*0			4	5	6
**			4		6

ENV1	1	2	3	4	5	6
Initial	99	0	0	0	0	0
Peak	99	50	50	50	50	50
Break 1	0	50	50	50	50	50
Break 2	0	50	50	50	50	50
Sustain	0	0	0	0	0	0
Attack	10	15	15	15	15	15
Decay 1	62	15	15	15	15	15
Decay 2	20	0	0	0	0	0
Decay 3	17	15	15	15	15	15
Release	54	0*	0*	0*	0*	0*
KBD Track	0	0	0	0	0	0
Vel Curve	Qkrise	Cnvx1	Cnvx1	Cnvx1	Cnvx1	Cnvx1
Mode	Normal	Normal	Normal	Normal	Normal	Normal
Vel-Level	0	0	0	0	0	0
Vel-Attack	0	0	0	0	0	0

ENV2	1	2	3	4	5	6
Initial	-	-	-	-	0	0
Peak	-	-	-	-	99	99
Break 1	-	-	-	-	0	0
Break 2	-	-	-	-	99	99
Sustain	-	-	-	-	0	0
Attack	-	-	-	-	40	40
Decay 1	-	-	-	-	40	40
Decay 2	-	-	-	-	40	40
Decay 3	-	-	-	-	40	40
Release	-	-	-	-	40	40
KBD Track	-	-	-	-	0	0
Vel Curve	-	-	-	-	Cnvx2	Cnvx2
Mode	-	-	-	-	Repeat	Repeat
Vel-Level	-	-	-	-	0	0
Vel-Attack	-	-	-	-	0	0

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	99	89	89
Break 2	99	99	99	99	92	92
Sustain	99	99	99	99	99	99
Attack	20	20	20	20	20	20
Decay 1	20	20	20	20	20	20
Decay 2	20	20	20	20	25	25
Decay 3	20	20	20	20	25	25
Release	70	10	10	10	25	25
KBD Track	0	0	0	0	0	0
Vel Curve	Cnvx1	Cnvx1	Cnvx1	Cnvx1	Cnvx1	Cnvx1
Mode	Normal	Normal	Normal	Normal	Normal	Normal
Vel-Level	0	0	0	0	0	0
Vel-Attack	0	0	0	0	0	0

PGM CONTROL

Pitch Table	Off
Bend Range	2
Delay	X1
Restrike	40
Glide Time	0

EFFECTS (1)

Effect	Chorus & Reverb1
Decay	62
FX1 Mix	31
FX2 Mix	43

EFFECTS (2)

Rate	18
Depth	15
Delay	20
RateMod	0
DepthMod	0
Mix	39

EFFECTS (3)

Waveshape	Sine
MODSRC	Modwheel
HF Cut	Off

PERFORMANCE

Timbre	0
Release	0
Pressure	Key

Classifieds

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MIRAGE	3.2	SQ-2 32	2.03
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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.

Hi,

Couple of questions I was wondering maybe you could help me and others out with here. I have been doing quite a bit of experimenting with the ASR-10 and SCSI drives and found out a few things but need help with some others.

Drives I currently have installed:

Quantum ELS127 (127Mb) = SCSI ID#6
(too lazy to change the default)

Maxtor LTX213S (213Mb) = SCSI ID#1

Texel DM-5024 (CD-ROM) = SCSI ID#2

I have also used a Quantum LPS 40mb and a Fujitsu M2464S 520Mb SCSI. All these drives have worked perfectly with the ASR-10.

First, I recently did a backup from the Quantum (my main work and boot drive) to the Maxtor. During the process the display went all crazy and kept flashing FILE 38 - NEWDIRECTORY throughout the entire process. Also, when completed, if I press LOAD/SYSTEM*MIDI, File #1 says "BACKUP FILE," File #2 is MACRO-FILE 1 and File #38 is NEWDIREC-TORY. If I press INSTRUMENT, there are actual copies of samples for files 1-37 which I can actually load. I cannot however save anything to the rest of the disk even though there are over 200,000 free disk blocks. I am just curious what all this is about. The actual backup process worked fine and I have since had to do a restore and that went without a hitch.

Second, any word on the Digital I/O Option? I would like to back up my samples to DAT and free up the Maxtor drive from a backup drive to another work drive. Initially, when I called Ensoniq I was told a June or July release with no pricing available. Was wondering if a list price has been set. Please tell Ensoniq to be nice...

Third, if I leave an IBM type CD (or Audio CD - it plays those, too) in the CD-Rom player (I swap the SCSI cables on the back between the ASR-10 and my PC... I tried hooking them all up at once but it fried the Quantum. Good thing I had

the backup on the Maxtor), I get a message "NOT AN _EPS_ SCSI DEVICE." I guess that's a part of the code ported from the EPS to the ASR. When I have no disk in it at all, it correctly says "DISK DRIVE NOT READY."

Thanks,
Joe Santacroce
Newburgh, New York

[CS - First, when you do a backup of your ASR SCSI disk, the ASR will write the files to the backup drive sequentially. Since there is a maximum limitation of 38 files per directory, the ASR writes the first 37 files to disk, then creates a new directory. It then writes the next 37 files into the new directory, and creates another new directory, and so on until all the files have been written to the backup disk. You can actually navigate through these directories and find all of your files, if need be. And as you have discovered, when you restore a disk from your backup, all the files are re-written back to their original locations.

Second, Ensoniq's working on the digital I/O for the ASR - perhaps they can clue us in to when to expect it.

Third, when the ASR-10 encounters a SCSI device not intended for it, it does indeed display "NOT AN EPS SCSI DEVICE." This is a bit of code left over from the original EPS software, and while it might be a bit cleaner if it said "NOT AN ASR SCSI DEVICE," the meaning is the same.]

[Ensoniq - 2) See our announcement in the Front Panel for info on the DI-10 - we hope you feel that we were nice...

We do have plans for backup to DAT through the DI-10, but it will not be part of the initial software release. We expect it to be available in late 93-early 94.]

Hi Hacker People,

Just want to thank Ensoniq for creating the TS-10. I read in the German *Keyboards* that there is a ROM-Expansion Slot for sequencer memory and for ROM wave-

samples. What's the true story on that? Also a tip for your next update: MIDI control over the hyperwaves (MIDI clock sync).

Thanks,
Patrick Voes
Belgium

[CS - There is a sequencer memory expander currently available for the TS-10; I believe it's called the SQX-32 (or something like that - I'm sure Ensoniq will correct me if I'm wrong). Sequencer memory and ROM wave memory are two completely separate things, though. I know of no way to expand the ROM wave set in the TS-10. You can, of course, access hundreds of megabytes of wavedata for the TS-10 by loading EPS and ASR samples.]

[Ensoniq - The sequencer expander for the TS-10 is the SQX-70, the same kit that we use for the VFX-SD/SD-1/SQ/KS synths. It will give you 97,000 note sequencer memory and expanded MIDI SysEx recording space.

ROM wavesamples are another story. In many of our newer products we have chosen to leave a "hook" for future expansion if we deem it necessary or desired. In this way we can enhance a product without a costly board swap. It costs little to leave the space available on the board.

We do not have any current active plans to populate this slot, but if we do you'll hear about it here in the Hacker in the future.]

Dear InYerFace:

Brad Reynolds, in the June issue, was hunting for a simple way to store KS-32 patches in his PC. As Clark's response suggested, there are indeed a number of generic sysex librarians for IBM compatibles that will store any sort of sysex data from any MIDI instrument. With a modem, you can probably find these on MIDI bulletin boards, or just give me a call, and I'll be happy to fix you up.

In general, it's a simple procedure. Run the

program in receive mode, then initiate the data transfer from the instrument. I don't have a KS-32, but on the SD-1 (which should be fairly similar) you first press the Storage button, select MIDI SYS-EX, then choose ALL, PROGRAMS, PRESETS, or SEQUENCER. After choosing PROGRAMS, for instance, you are then given the option to send either the CURRENT PROGRAM, or the entire INTERNAL BANK, and with the press of that button, the data is sent. Then tell the computer you're done (usually by pressing Enter), name the file, and save it.

Some trouble spots: Make sure that, on the keyboard, the MIDI SYS-EX parameter is set to ON. Secondly, to load back into the keyboard, the board must be set to the same MIDI channel as it was when the data was saved.

This method works great, and it's cheaper than RAM cards (it's either free or shareware). All of this is assuming your MIDI interface is MPU-401 compatible.

In the same issue, Deaton Jones aired his complaints against 61-note keyboards. Ever try to fly a 76- or 88-note board anywhere? My SD-1 in its case weighs 78 pounds — three more than most airlines allow. That puts it in the "Okay, we'll let it go this time" range. If it were heavier, it would have to go air freight, which (a) is

ridiculously expensive, and (b) would guarantee its arrival just after the gig. Sure, I'd love another octave or two, but getting my stuff to the gig is more important. I hope Ensoniq continues to give us a choice of keyboard sizes, but to abandon 61-note boards would be naughty.

Sam Mims,
Syntaur Productions
(713) 965-9041

Dear Hacker Interface,

I have an incredibly frustrating problem involving my ASR-10, my computer MIDI interface, and my software. I read about a similar problem in issue number 97 but I have found no hope in solving mine.

To give you the basic rundown — I have an ASR-10 and an IBM 286 running at 12 MHz (I'm pretty sure), a Key Midiator MS-124 and Cadenza v2.0 running under Windows v3.1. My computer has 2 megs of RAM, I'm not running SMARTDrive or any disk emulators and the only thing loaded into high memory is DOS. The Midiator is connected to the one serial port that my computer (PS/2 model 50 Z) has.

Here comes the problem. To take the load off my system, I use my ASR-10 internal clock to do all sequencing since the Cadenza timer puts too much stress on my measly computer. Whenever I real-time anything or try to step notes using my ASR-10 into my computer, the notes hang because either my software or hardware loses the note off

command. The notes do not hang when Cadenza plays back notes which I've inserted (not stepped) into a track. I've talked to Key Electronics and they told me that Windows is causing the problem due to slow hardware interrupts which give priority but the problem still occurs and this happens randomly. When I run the driver test, sometimes it passes and sometimes it fails. I've tried different cables and have also tried other keyboards and the problem is still there. Microsoft says it's not their software and Key tells me they're working on the problem which only occurs in 1% of the machines running Cadenza (just my luck).

Please, please help me. I'll be your slave for life.

Sincerely,
Christian Hresko
Bel Air, Maryland

[CS- With all the variables involved in a computer/sequencing system of the type you describe, it's pretty much impossible to even guess at what might be giving you trouble. I think it's possible that you're just asking too much of your 286 system, but it's also interesting that you are apparently not the only one experiencing stuck notes when using a Key Midiator (see Paul Thomas' letter below). I suspect that you'll have the best results if you attempt to work out these problems in concert with the service people at the company that produces the Key Midiator, and possibly those who work at the company that produces Cadenza as well.]

Dear Hacker,

First off — I want you to know I think your publication is great and I've been a sub-

Tested and Approved Hard Drives for the EPSs

The drives listed below are known to be compatible with the EPS and EPS-16 PLUS at the time of testing. Changes in firmware or hardware by drive manufacturers may make later versions incompatible (with the exception of PS Systems, Ramtek (Eltek), and Frontera whose drives are configured to work specifically with Ensoniq products). Drives not included on this list may also work just fine. For up-to-date information about specific drives call Ensoniq Customer Service: 215-647-3930.

MANUFACTURER	MODEL
Dynatek	All Models
Frontera	All Models
PS Systems	All Models
Ramtek (Eltek)	All Models
Rodime	45plus, 60plus, 100plus, 140plus
Microtech	R45, N20, N40, N80, N100, N150
PL1	45 Meg Removable
Mass Micro	Datapack 45

Drives Reported to Work by Readers

The following drives have been reported to work satisfactorily with reader's EPS systems. No guarantees — but they'll probably work with yours. Try to try before you buy.

Jasmine Direct Drive 100	Quantum 100M, 210M
PowerDrive44	Seagate 80M
Syquest 555 (removable)	Tech Data Model 60e

BACK ISSUES

Back issues are \$2.00 each. (Overseas: \$3 each.) Issues 1–38, 61, 67–72, and 82–84 are no longer available. Subscriptions will be extended an equal number of issues for any issues paid for that are not available at the time we receive your order. ESQ-1 coverage started with Issue #13. SQ-80 coverage started with #29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage got going with #35 (and also applies to the ASR-10). VFX coverage (which also applies to the SDs) got started in #48. The SQs got going in #63. (SQ articles also apply to the KS-32.) DP/4 coverage started in #88 (much of which also applies to the ASR-10). TS-10 owners should check out sample reviews (EPS/ASR) and SD & VFX programming tips. Permission has been given to photocopy issues that we no longer have available — check the classifieds for people offering them. A free back issue index is available which contains the tables of content for all issues since Number 43.

scriber for a couple of years now. I also am a long time fan and user of Ensoniq products but I have a couple of problems to air.

The ASR-10 is a great sampler and works perfectly fine in mono but not in stereo. If you listen to the factory stereo snare drum samples with the L+R outputs panned to center you can hear the two stereo layers go in and out of phase with each other as you play at different velocities. This is not a problem with the factory disk but a problem with the ASR-10 (and not my unit only as I found the same problem with the ASR-10 at my local dealer, Stan's Music, in Naples, Florida). After sampling some stereo background vocals I found the same problem. I fear that it's a timing problem where one of the two stereo layers plays back a few milliseconds after the other causing the two halves of the stereo sound to be out of phase. This is made worse if you try to time compress a stereo sound.

The other problem I have found with the VFX, '16+ and the ASR-10 is MIDI velocity output. All of these keyboards output

velocities unevenly at higher velocities. At higher velocities, the values jump around and it's hard to play evenly or get a smooth or consistent increase in velocity output. This was verified and reported by an Ensoniq authorized repair person (Rick Lange in Ft. Meyers, Florida) for the 16+ and the VFX over a year ago and has not been fixed in the ASR-10. I have to use a MIDI processor to smooth out the velocity output to my other keyboards. This problem can also be "seen" if your computer sequencer can show velocity levels. Try to either play a steady velocity at a higher level or do a smooth increase from soft to loud. The computer will show the velocities jump at higher levels. This makes the ASR-10 a problem master keyboard for me. (By the way, for some reason this doesn't happen playing internal sounds, just external keyboards, modules, etc.)

One other quick thing - I love my DP/4 but can Ensoniq implement a 3-unit preset so that I could have a 2-source config with one 3-unit preset and one 1-unit preset? I like a lot of the 1-source 4-unit vocal chains and have an external EQ and compressor so I could eliminate that from the chain, make a 3-unit preset and still have one unit to spare for a snare drum reverb or something.

Thanks for listening and I hope we can all benefit from a response.

Sincerely,
Robert George
Robert George Productions
Naples, Florida

[CS - According to Ensoniq, the ASR should maintain phase coherency to within one sample between the left and right channels (the phase-shift would be on the order of 1/44100th of a second, not milliseconds). While this is pretty good, it is possible to hear some subtle notch-filtering effects when playing stereo samples back in mono. This will probably be less of a problem if you use the ASR panning controls to place your sample in mono, rather than panning to center the two inputs on your mixer that the ASR is plugged into.

If you are experiencing more radical phase-shift effects, check to make sure what the ASR effects are doing before concluding that the sample itself is playing back out of phase; a number of ASR effects

are meant to be used in stereo, and phase-shifting problems can occur when these are played back in mono (again, sending a mono mix from the ASR will work better than centering your mixer inputs).

As far as velocities of Ensoniq keyboards goes, we've seldom had complaints here, so I'm not sure what to tell you. It may simply be that you have a much more precise playing technique than most of our readers. Perhaps Ensoniq will have a comment...

I agree that it could be handy to have 3-Unit Preset in the DP/4. One possible workaround, though - try using a 3-source Config in the DP/4, and use a patch cord to physically patch one of the DP/4 outputs back to another DP/4 input. For example, if you want a 3-unit preset consisting of Compressor-EQ, Guitar Amp, and Reverb, assign the Compressor-EQ algorithm to Unit B (in a single-Unit configuration), and the the Guitar Amp and Reverb algorithms to Units C and D (in a two-Unit configuration). Now use a cable to patch the output of Unit B to the input(s) of Unit C and D (Unit A can be used for another completely independent effect). Voilà - a 3-Unit Preset!]

[Ensoniq - 2) We don't quite follow your reasoning for the velocity generation from our products. The same data is generated and sent to the internal sounds as goes out MIDI. If the internal sounds respond correctly then perhaps the problem is with your external modules. What gear specifically are you using? We have had many reports over the years about the response of Yamaha FM gear when driven at high velocity levels. That is why we even offer on the SD-1 and TS-10 a velocity limit on the Master page to keep from "overdriving" those products. The best thing you could do is call our Customer Service department at (215) 647-3930 to discuss this further.]

Hey everybody!!!

I have a few questions regarding cross-compatibility among the EPS-16+, the ASR-10 and the TS-10. I know that the EPS, the EPS-16+ and the ASR-10 can all share sounds and that the TS-10 can read sounds by all of them. It seems to follow, since the effects are saved with the instrument, that all of these boards (except the

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[Garth Hjelle, TH, July '93]

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EPS Classic, which has no effects) ought to be able to use each others' effects algorithms. Could someone please verify whether this is actually the case? If so, I would like to ask Ensoniq whether they plan to release the TS-10 and ASR-10 effects algorithms on a disk so that all of us EPS-16+ owners can upgrade the effects on our boards. If they are compatible, this would be very easy to do.

I appreciate your help on these questions. I would have run down to the music dealer with a disk and just try these ideas out, but I didn't want to infringe on any copyrights or such stuff. Many thanks to both Ensoniq and the Hacker for your fine products!

Happy hacking,
Jack Schieffer
Dallas, Texas

[Ensoniq – While the EPS-16 PLUS, ASR-10 and TS-10 can all share sampled sound data, the effects are a different story. First, the TS-10 cannot load effects off disk. Period. When it loads a sampled sound it points to one of its internal effects algorithms and does a conversion of parameters to achieve a similar, although not identical, effect.]

Because the TS-10 runs at a different clock speed it has more instructions for its DSP code than the EPS-16 PLUS, so converting the algorithms would be a major rewrite. The ASR-10 algorithms are also different than the EPS-16 PLUS, so it would involve code rewrite. We have no current plans to undertake this major type of effort. If you were to take an ASR-10 sound, save it to a DD disk and then load it into an EPS-16 PLUS the 16 PLUS would not recognize the effect and would default to a Hall Reverb.]

Dear Hacker,

As a '16+ owner, I find the factory sounds very well done for the most part, but I often turn to 3rd party software to fill those inevitable gaps in an otherwise well-rounded library. I find the Hacker reviews of this software invaluable since I don't have the luxury of auditioning these sounds prior to purchasing.

I realize your monthly issues cannot cover everything, but being at the mercy of these 3rd party companies makes me wonder if

any publications exist that watchdog these companies by providing in-depth reviews of their software and services. In fact, I'd gladly pay you for an annual publication that exclusively reviews 3rd party software for all Ensoniq instruments as well as airing customer grievances.

For example, I have bought both excellent and not-so-excellent sounds from Rubber Chicken and replacements of faulty disks have never been a problem. However, after purchasing a one year subscription to the *Chicken Chronicle* newsletter last year, I have received only one issue of what is advertised as a monthly publication. I realize it's only \$10, but after leaving three messages on their 800 line and one on their direct line (at my expense) over the course of four months, I have received no response. I have even encouraged them to call me collect to resolve the problem. This situation perplexes me when a company pledges to "do things for the customer the same way you would want to be treated..." (*Business As Unusual* in TH, April, '93) Anyway, it looks good in print.

Excluding the fine work by Keith Thomas, who actually answers his phone, I have been less than thrilled with the quality of software from places like Valhala or Greysounds. I realize that some samples are subjective, but it seems to me that a 2-disk set titled "Stereo Brass" weighing in at a hefty \$29.95 should at least be reminiscent of a brass section.

I'm curious if anyone else has had similar problems. I would appreciate any thoughts the Hacker might have on this subject.

Sincerely,
Glenn Vandervoort
Altamonte Springs, Fl

[Garth Hjelte of Rubber Chicken replies – We've had some trouble for some time getting the Chicken Chronicle issues out. I apologize for not having gotten back in touch with Mr. Vandervoort and I have since resolved the issue with him personally. If you are a subscriber to the Chicken Chronicle, as you are reading this, an issue of the Chronicle should be in your mailbox. If you have not received it, please contact us – and we will call back. Our subscription commitment is for 12 issues and we plan to fulfill those commitments.]

[TH – We're going to be forever trying to

catch up with reviews. There's more in this issue and more to come. Also, unless one of our reviewers volunteers, we depend on the third-party people to send in their wares for review.]

Dear TH,

I've just read one too many articles on guitar sounds, claiming that pitchbend is always upwards on any fretted instrument (*How Sounds Work* by Mark Clifton, Issue #96).

Rubbish!

Watch any classical or Spanish/Flamenco guitarist! Vibrato can be produced by the change in string tension caused by "pushing" the string toward or away from the bridge, i.e., along the neck, not across it. If the string is fretted slightly further behind the fret this allows the slight extra space required. You won't see a real classical guitarist produce vibrato along the neck!

Also, obviously the top strings sustain less, but not because they're stretched tighter than the lower ones. They're smaller strings, needing a lower tension than a larger one for the same pitch, but they play a higher pitch so the tension is raised again. Although it might be complicated to program, non-guitarists should note that a separate "sound" for each string is needed for any hope of realism. For example, 3rd string, 7th fret (D) sounds very different from a D on the 2nd string – even more so if the 3rd string is wound!

Some "roundness" of pitch is probably also a requirement since slightly more or less tension can easily be inadvertently applied to the string as mentioned previously.

Yours faithfully,
Andy Ball
Emsworth, England

[CS – I agree. As a guitarist, patches which use strictly positive-going modulation always sound somehow wrong to my ear. For my own guitar sounds, I normally use modulation that swings the pitch both positive and negative. As a guitarist, though, I can easily control vibrato that moves only up, only down, or both directions.]

To the Interface (Clark Salisbury),

Maybe my last letter was too long, so I'll shorten it in hopes of some answers this time.

Is it normal for my ASR-10 to run very warm (hot)? I upgraded it to ten megs. When I called to Ensoniq they informed me that it's normal to run that warm. I'm a little concerned it'll cook the components. Why didn't they put a couple of cooling vents on the side and top? I would also like to find some sample editing software for my Atari Mega STe. All the companies I've called have been unable or unwilling to tell me if their software for the EPS-16+ will work on the ASR-10 or if they have any new stuff out.

Was that short enough on vitriol? And as you can see I didn't even make any uncomfortable comments this time. My loyalty is to my music, not Ensoniq or any other company. If you are unwilling to print letters other than those proclaiming Ensoniq as the best thing going since white

bread, then you're doing your readers a great disservice. Companies make improvements and correct quality control problems because of customer heat, not because they're treated with kid gloves. If more letters would be printed complaining about some of the units' drawbacks maybe they would correct and improve upon their product. I don't want you to think that I'm complaining, I'm only suggesting that sometimes people who like a product or company see it with a different view than those of us out here who buy many brands for use.

I have over \$30,000 in equipment in my studio and have had problems with ALL the brands. I'm telling you this so you'll know that I'm not just having problems with one company. Ensoniq is a good company and the ASR-10 is a fine product, but, like any product, it could be improved upon. If you read my first letter then you would see that I had some real complaints about their quality control. Five of the screws supposed to be holding the main board were out and rolling around inside. They didn't seem to be concerned about

this. Would you be?

Well, if you got through all that, Clark, then you deserve a raise. Oh, and by the way, if you can't or won't print my letter would you at least give me a collect call with some answers?

Thank you,
Roger Wilson
Thunderbird Studios

[TH - This is what happens when someone who probably hasn't read many issues of the Hacker or given much thought to turn-around times assumes the worst and shoots from the hip. Roger, we've had many letters much worse than yours. (Although you were the first to worry about your warranty being cancelled and then to accuse us of running a sham... That's okay - it spices up the column.) Your letter and response appeared last month. Please feel free to write whenever something's bothering you - or just to chat.]

[Ensoniq - This is a perfect example of what to use the Hacker Interface for and what not to. If you want to talk to Ensoniq and get a quick reply, don't write to the Hacker, call us directly. It won't take the probable three month turn-around that is inherent in this process.

If you want to have dialog with other Ensoniq users, ask operational questions that are not time dependent, share product tips and tricks, share your views with the world etc. then please use the Interface. That's what it's for.

As to your question, please rest assured that we spend considerable time developing, and testing the products we sell. While the ASR-10 runs warm, it will not harm the components in any way.]

[TH - Actually, the 3-month turn-around is typical for normal magazines. Here at the Hacker, all letters received by about the first Monday of the month get entered into the letters file, sent to Clark by Wednesday (via modem), returned (with answers) from Clark and sent to Ensoniq the following Wednesday (via modem), returned from Ensoniq one week later (Wednesday), and are at the printer late the next day. We get the issues back from the printer the next Monday or Tuesday and they're down at the mailer the same day. (Then the Post Office... Oh, well.) So the

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total time from receipt of the letter to being down at the Post Office is about three weeks and a day or two. If you just miss the cutoff, it'll be a month and three weeks – although some "rush-type" letters may get entered into this cycle in mid-stream.]

Dear Hackers,

I have a question. On many synthesizers, you can control the L/R panning of a sound by transmitting control-change events to the MIDI channel assigned to the instrument. For example, on the Roland D-110, you can transmit different values of Controller #10, and the sound will move from left to right. I haven't been able to get this working on my Ensoniq SQ-R+. Is it possible? In that case, please let me know which controller number I can use or what I have to do to my Sound, Preset, or Track! I have also read somewhere that Controller #8 is "Balance Control." Is this the same thing as the Roland "Pan Control" (#10)?

Bjorn Lynne
Norway

[CS – Sorry, the SQ series of instruments does not support any type of dynamic panning. If you absolutely must have dynamic panning, the workaround is to program a 2 voice sound, with each voice identical, but one panned left and the other right. You can then assign the controller of your choice to modulate the volume of both voices, but in opposite directions. You could assign the mod wheel, for example, to turn down the volume of the voice that's panned left while turning up the volume of the voice that's panned right.]

Dear TH,

I have a problem with my Digidesign Sound Designer program (version 1.5) when connected to the EPS-16+ with a SCSI interface. The Soundesigner program runs perfectly with a '16+ without SCSI, but the moment I hook it up to the '16+ with SCSI the computer and the sampler will not communicate. I have tried this with both a 16+ module and keyboard with SCSI using OS 1.30 and 1.10. And they just do not communicate. I am running Soundesigner on an Atari ST. I also have a Turbosynth program and the problem is

there also. Can you help me with this?

I plan to buy an ASR-10 module before the year is out. Can you recommend the best sampling software editor for the Atari that will work with the ASR-10 or EPS-16+ with SCSI?

Thank you for your assistance and great magazine.

Sincerely,
Ernest Caisey
Bermuda

[CS – This is a question that frequently crops up for new users of the Mac version of Sound Designer, and the fix for that version may relate to your problem as well.

When you create a new file in Sound Designer to work with your EPS or ASR, you'd logically assume that since the EPS/ASR has a device ID of 1 and a SCSI ID of 3, that you should set Sound Designer accordingly (from the SETUP menu, select SAMPLER, then select Ensoniq EPS and SCSI). Not so, DSP breath. The ID numbers in Sound Designer begin with 1, rather than the more common 0 that the EPS/ASR use, so in Sound Designer, set the device ID to 2, and the SCSI ID to 4 for communicating with the EPS/ASR.]

Dear Clark, TH,

I started subscribing to TH right after I bought my ASR-10 and it's a great magazine. I am new to Ensoniq instruments since I am used to Korg, Roland, etc. But don't get me wrong, I love the ASR-10. I have a few questions for you and I would appreciate it if you could answer them:

1. I was in the market for an external CD-ROM that is compatible with the ASR-10. I talked to the tech people at Ensoniq and they advised me to get a Sony brand. I want to know if the Sony CDU-7205 (external) is compatible with it. Also, could you give me certain specs that are required for compatibility such as – drive mechanism, access time, transfer rate, buffer size, interface cable, and pin configuration on the drive.

2. I have a laptop computer with Key Midiator connected to the ASR only. I am using Cakewalk Pro. When I am recording from the ASR to the Cakewalk Sequencer,

some of the notes seem to be stuck and then I have to hit the panic button on the computer and start all over again. Is there any way to get rid of this?

3. There is a Delay Times/Tempo BPM Chart in the manual for the ASR. Could you give me a good example of how to create a unique poly-rhythm in real time using this chart?

4. I would appreciate it if you could include more articles on ASR sampling tricks and tips. Are there any books available that include these tricks?

5. There is a mini-SCSI cable (by Trantor) for my laptop which can be connected to a CD-ROM. I would like to know if the ASR can be connected to my computer through this cable. If yes, can the ASR access the samples from the hard drive of my computer?

Sincerely yours,
Paul Thomas
Somewhere in Maryland

[CS – 1. My understanding is that any Sony drive should work. Hopefully, Ensoniq will be kind enough to verify this.

2. See Christian Hresko's letter above.

3. You can use the Delay Times/Tempo BPM Chart thusly:

Let's say you are working in 4/4 time at a tempo of 120 BPM. By looking in the Delay Times/Tempo BPM Chart, you'll find that a delay time of 0.500 (500 milliseconds) will produce echoes at the rate of 120 BPM. This will provide echoes that will fall on even quarter-note divisions of the measure. If you halve the delay time (set it to 0.250), you'll generate echoes twice as often. This will produce eighth note pulses. If you divide a delay setting of 0.500 by 3, (the resulting number is 0.167, rounded off), you'll generate eighth-note triplet pulses. Divide by other numbers to get other poly-rhythmic subdivisions of the beat.

The ASR manual also mentions that you can use a controller, such as the mod wheel, to vary delay times in real time. If you want to try this out, select the ROM effect MULTITAP DDL (ROM-25). Press EDIT, then EFFECTS, and scroll. For now, set the level for DLY 2, DLY 3, and

DLY 4 to 0 (to help avoid confusion, I suggest working with only 1 of the delay lines at first). Continue to scroll until you reach MOD SRC1=OFF, and set it to WHEEL. Scroll again to DST1=BUS1 MIX, and change this to DLY1 TIME. Scroll again to MIN1=, and set this to 500 (this sets the delay time when the wheel is at 0 to 500 ms.). Scroll again, and set the value for MAX1= to 167 (this sets the delay time when the wheel is at its maximum to 167 ms – eighth-note triplets at 120 BPM). Now try playing some stuff at 120 BPM while varying the position of the mod wheel – you'll be able to generate cross-rhythms anywhere from 1/4 notes to 1/8 note triplets, depending on where you set the mod wheel.

4. Back issues of the Hacker can be a good source of information regarding sampling tips and techniques. Another good source for publications is the Mix Bookshelf (6400 Hollis Street, Suite #12-S, Emeryville, CA 94608 (510) 653-3307).

5. Don't know. If the cable will work with Macintosh-compatible disk drives, it should work with the ASR-10.]

[Ensoniq – 1) The ASR-10 will work with Sony, Toshiba and Chinon CD-ROM mechanisms. The Sony CDU-7205 you mention will work fine. We do not have greatly detailed specs available for compatibility, but we know that those above mechanisms will work.]

Dear Hacker,

How time flies when you're having fun. It's six months since I bought my ASR-10, and five since I got my first copy of the *Hacker*, and it seems like a good time to write and share a few thoughts.

Let's begin by saying thanks to you folks at the *Hacker* for producing a great publication, having a sense of humor (I loved the Wordsynth), and for being serious about supporting readers outside the USA.

I ought to tell you that I'm a guitarist rather than a keyboard player, and that the ASR-10 is the first keyboard I've owned, the first sampler I've used, and the first sequencer I've used. The learning curve was a bit steep, but I'm getting there (it's a good thing that Ensoniq can write a decent manual). The ASR got my money in preference to buying a good multitrack

reel-to-reel tape machine when I realized that I could sample whole guitar riffs, 4, 8 or even more bars at a time, and sequence them up with drums, bass and keyboard parts. If I MIDI it to the keyboard player's rig we can record whole backing tracks. Get the vocalist singing along, record direct onto a two-track master, and you've got a very high quality recording. Of course, you need a sampler that can be expanded with lots of memory (I've got 8 meg), you need timestretching, a good sequencer with event editing and track slipping, the ability to sample whilst playing sequences, good effects processing, and resampling is probably a good idea. Well done, Ensoniq, for making it all available in one box, at a reasonable price.

I read Robert Presant's letter and found myself agreeing with a lot of his ideas for ASR improvements (especially the idea of a tempo track), but I have a few more – which I'm guessing could be implemented without hardware changes. Here goes:

1. Some way of finding out what version of the ROM and OS you have loaded.
2. A command to display the label of the disk currently in the drive.
3. Making it impossible to have multiple (and maybe different) copies of the same named sequence loaded simultaneously. (This has given me lots of grief on a couple of occasions.)
4. Ability to read, and maybe write, other sampler disks, such as Akai.
5. Ability to read standard MIDI sequence files.
6. Support for the MIDI Sample Dump Standard (and over SCSI too).

These last three could maybe be loaded only when required from the OS disk.

Other improvements would most likely require new hardware, but maybe the next generation of instruments will have:

1. Resonant filters (and a big thank you to Waveboy for their wonderful Rez Filter disk in the meantime).
2. An add-in card to allow you to use an external VGA monitor and a mouse for editing.

3. Use EEPROM so that ROM upgrades can be supplied as software. (I wasn't impressed when I found out that the ROMs had been upgraded so soon after the ASR came out.)

4. As ever, more polyphony, more multi-timbrality, more sequencer tracks, more simultaneous effects, etc., etc.

After all this, I'd like to finish off with a question. I'm thinking about getting a computer, maybe an Apple Mac. What software is available for editing ASR sample data and/or patch data? Any ideas would be welcome. Also, has anyone written Mac software to convert standard MIDI files to Ensoniq sequences?

Yours,
John Hoyland
Swindon, England

[CS – 1. To display ROM and OS versions, press COMMAND, then ENV1 (the ASR display will show NO COMMANDS ON PAGE – it's lying). Scroll twice to the right, until you see SOFTWARE INFORMATION. Press ENTER; the ASR will display the OS version currently loaded. Press ENTER again (or scroll right) to display the ROM version; a final scroll or press of the ENTER key will display the keyboard version.

2. To display the label of the disk currently residing in the ASR disk drive, press COMMAND, then SYSTEM, then 6, (or scroll). The ASR will display "WRITE DISK LABEL." Press ENTER; the ASR will display "USE CURRENT LABEL?" Press ENTER. The ASR will show the label for the current disk; read it and press CANCEL.

3. Agreed.

4. Agreed.

5. Definitely agreed.

As far as I know, there are no Mac-based patch editors for the ASR-10 (or any other sampler, for that matter). For the longest time, there were two sample editing programs available for the Mac, though – Alchemy (from Passport Designs) and Sound Designer (from Digidesign). Unfortunately, Alchemy (which I use and love) has been discontinued. Apparently, not enough of us who use the program actually bothered attending to the minor detail of

paying for our copy. Passport found that they weren't selling enough copies of the program to justify supporting it, leaving those of us who prefer it as a sample editor SOL.

On the other hand, Digidesign has been evolving Sound Designer for use as the front end to their hard-disk recording systems. I'm not sure how well the program actually works as a product specific sample-editor at this point, or even if it will

work separately from the hard-disk recording hardware. Contact Digidesign for more information.]

[Ensoniq - #1] We must warn you that if you use the Command Env 1 access to the ROM and O.S. versions please do not go any further and change any of the values that are displayed in the test section. You can "bring down" your ASR-10 with the wrong values and they are not there for any user-controllable functionality.

Thanks for your many other suggestions. It's always good to get input. Of course we can't just read a letter in the Hacker and go, "Why didn't we think of that? Let's go do that tomorrow." (I know you all wish we would - sorry). We will strive to keep improving our products and your commentary is an important part of our process. If enough of you say that something is important, we take that very seriously. Stay tuned.]

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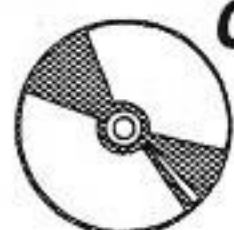
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