

Transoniq Hacker

The Independent News
Magazine for Ensoniq Users

The Player's the Thing

Bill Lewis



Product: Loop Classics CD.
For: EPSs, Mirage, any samplers.
From: MIDI Mark Productions, Box 217,
Whittier, CA 90608, phone: (310) 699-0095.
Price: \$49.95 + \$3 s/h.

When is a drummer not a drummer?
When it's a CD player, that's when.

Take some of the hippest hip-hop rhythms and coolest percussion sounds around, put them on a CD audio disc with the attendant bpm markings, and you've got the makings of "Loop Classics" from MIDI Mark Productions. There are 75 re-mastered loop-grooves on this disc without any bass or vocals, and they range in tempo from 92 to 129 bpm. All could be termed dance and/or house beats.

The concept here is that those of us without the sounds, chops or inclination to write our own dance grooves can simply

sample drum beats and get on with the music making, sans percussion perspicacity. It works, but then I have to ask — why?

The most striking element of the grooves on the disc is that I couldn't help thinking, "Gee, I could have done that." Not that the beats aren't "happening," but there's not a sound or rhythm that I couldn't coax out of my sampler if I'd put a bit of thought, time and effort into it. Then again, that's probably the point: effortless hip-hop.

So maybe you're not a drum programmer or don't have those way cool house sounds in your sample library. Loop Classics could be your admission ticket. All the sounds are isolated enough somewhere on the disc so as to enable creation of a kit out of pieces you've lifted from it. And sampling a loop is even easier. Simply record a few measures and move sample start and loop points until the beat is on target. Most of the items are two measure grooves and there's plenty of time in them for a margin of "recording" error. One need only have a sequencer that will play fractional bpm markings (107.5 for example) in order to sequence with all the grooves. And, for those without fractional capability, 51 loop on whole number multiples.

There are a number of possible methods for placing these grooves in a sequence. One is to play a very long tied whole note. I discovered that the EPS will only hold a note for 64 measures doing this, so

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I simply replayed the note on the downbeat of 65. Then of course you could hold a selected key down in real time like I did one night when "Heavy Dee" just happened to be in the club and wanted to rap for his buddies. It was a 1992 version of the *One Note Samba*. How about mixing it up groove to groove with multiple samples in a single instrument. Just make sure they all have the same tempo. Then again, nobody says you have to maintain tempo. Speaking of which, it's possible to change tempo within a single sample by using something other than the root key. This works within a range, but munchinizes beyond a third or fifth in either direction.

Sample quality is excellent, almost too good as one fellow musician commented — "They sound like they were digital recordings of digital recordings." Sometimes, especially in dance music, I like to go for the grunge — it adds a sense of honesty. And then, when you're looking for the cleanest of the clean, the components in your system will decide on their own to add "honesty." Pro audio can be a neverending battle for clarity between silicone and plasma.

Loop Classics is fun, and less than the price of dinner at a decent Sushi restaurant. It's a limited edition, has NO rights reserved and was created by Dat-man from Germany. At \$49.95, it may be your dance card. ■

Bio: Bill Lewis is a partner in Break-Out Music, a NY music

production house which specializes in music and sound design for radio, TV, film and records.

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, Eltekon, 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
Eltekon	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

"Genius at Work kind of product..."

...I can't imagine any EPS-16 PLUS owner who wouldn't want to have this disk..."

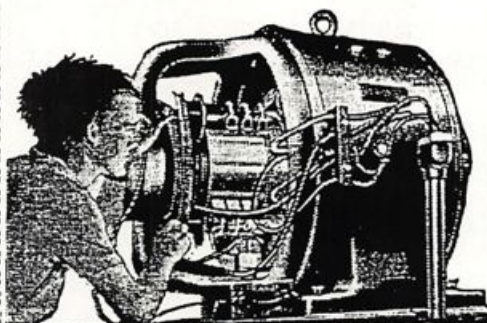
— Craig Anderton
TH review, April, '92

The WAVEBOY Parallel Effects Disk contains astounding new effects combinations. These algorithms load right in — just like a sound. But they go way beyond the 13 effects that come with the EPS 16 plus. You get four different effects **at once**. Imagine flanging the bass, adding a warm chorus to the flute, putting the guitar through a preamp, a speaker simulator *and* a digital delay, and still having a dense reverb to use for drums! Or think what you could do with four different reverbs at once. Or four stereo bounce delays... you get the idea. This one disk will improve all your sounds, your sequences, and your life. Lots of parameters and innovative features like lfo modulation of delay times and separate pan control of wet and dry. You can't *live* without it.

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Front Panel

RND (🎵🎵)

Ensoniq News

Ensoniq Introduces KS-32 Weighted Action MIDI Studio

Malvern, PA. Ensoniq Corp has introduced a new 76-key weighted action synthesizer, the KS-32. Designed with the performing pianist, church musician and educator in mind, the KS-32 features a newly designed weighted action keyboard with velocity and channel pressure response. The feel of this new keyboard is sure to appeal to anyone looking for a true piano action in a workstation or MIDI controller keyboard.

The KS-32 is 32-note polyphonic, with up to three oscillators per Sound. There are 3 Megabytes of mostly 16-bit wave memory, comprising 168 different multisampled waveforms. The 180 onboard sounds cover a wide assortment of acoustic and electric pianos, jazz, rock and classical organs, clavinet, harpsichord, orchestral and pop instruments. There are 20 dedicated drum kits in the KS-32 as well, with support for both the Ensoniq and General MIDI methods of drum mapping. With an external RAM or ROM card the KS-32 can access 340 sounds, and it is compatible with cards developed for any of the Ensoniq SQ keyboards.

An onboard 24-bit dynamic effects processor provides 13 different effects algorithms, including reverbs, chorusing, phasing, flanging, roto-speaker simulation, distortion and combination effects. Up to 16 internal and external sounds can be combined in split and layered setups to create a Performance Preset, with control over volume, panning, transposition, key range, effects bussing and other parameters for each sound. For MIDI control, any track can be used to control both internal and external sounds, or be set to transmit over MIDI exclusively. A special "Make Default Preset" button makes working with external MIDI gear easy for any user. With one button push the user can go from playing a single internal sound to having an instant Performance Preset, with sound layering and split points already defined. The KS-32 holds up to 100 Performance Presets in internal memory. The KS-32 also features a 16-track sequencer with 96 PPQ resolution, with 8,500 note memory standard, expandable to 58,000 with the optional SQX-70. Real-time and step-entry recording is supported, and extensive editing control is provided with the ability to audition every important edit to hear the results before deciding which to save. The KS-32 can hold up to 70 sequences and 30 songs, and sequences can be saved to RAM cards or via MIDI System Exclusive.

With its slim design and light weight (49 lbs.) the KS-32 is a very portable solution to the keyboardist who needs a weighted action keyboard workstation. The suggested retail price of the KS-32 Weighted Action MIDI Studio is \$2195.00 (US). For more information contact: Ensoniq Corp, 155 Great Valley Parkway, Malvern, PA 19355, phone: (215) 647-3930.

EPS-16 PLUS/EPS Sounds

SL-15: A collection of acoustic/electric guitars recorded at the Power Station, in New York. Features Ramirez, Guild, Gibson,

D'Angelico and Bradshaw instruments. 5 disk collection with sound manual. Suggested retail: \$39.95.

SL-16: New, evocative synth textures that highlight the EPS's capabilities as a true synthesizer. 5 disk collection with sound manual. Suggested retail: \$39.95.

SQ 32 Voice/SQ Series Sounds

SC-6: Another great collection of 160 sounds programmed for Ensoniq by Eye & I Productions. Spans imitative and imaginative programming. Compatible with all SQ products, with an asterisk denoting that a sound uses the new waveforms found in the 32 Voice products. Suggested retail: \$99.95.

SD-1/VFX-SD products

Ensoniq is pleased to announce the creation of the Ensoniq Music Collection, a series of sequence disks to enhance your enjoyment and performance with the full line of SD and VFX products. The first volume in this collection (EMC-1) is the release of Trivia-tons™, from the Michael Ford Archives. Ensoniq has taken over distribution of this collection, and will be releasing multiple volumes of these entertaining recreations of favorite TV and movie themes. Volume 1 includes *Twentieth Century Fox Theme*, *American Bandstand*, *Looney Tunes (Bugs Bunny Theme)*, *I Love Lucy* and the *Three Stooges*. This disk can be used by any version of the SD-1 (32 Voice and regular) as well as Versions I and II of the VFX-SD. Suggested retail: \$24.95.

Hacker News

Oops: In last month's *Basement Tapes* column we gave an old address for the Mueller tape. The new and improved address is: Dean Mueller, 292 Handy St., Attleboro, MA 02703.

HYPERSOINQ NEW PRODUCTS

New Sound Music has announced the release of two new products — *Jazz Through MIDI – The Performance Series* and *Rock Through MIDI*. The new *Performance Series*, while still being a great learning and development tool, has been specifically arranged for use in live performance. Each of the ten popular Jazz standards is performed with the melody on the first chorus followed by a solo on the second chorus and the melody once again on the third and final chorus. The new *Rock Through MIDI* is a must for all players who want to develop a style for playing rock piano. The unique instruction method analyzes over 40 classic keyboard riffs in the styles of the all time masters. The sequences are available in all Ensoniq formats. Lead sheets are provided for all of the sequences. Retail price: \$39.95 each. For more information, contact: New Sound Music, PO Box 37363, Oak Park, MI 48237, phone: 313-355-3643.

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.

SD-1 QUESTIONS – John Cox, 609-888-5519, 6 – 8 pm EST.

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

HARD DRIVES & DRIVE SYSTEM – Rob Feiner, Cinetunes. 914-963-5818. 11 am – 3 pm EST.

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

EPS & EPS-16 PLUS QUESTIONS – Garth Hjelte. Rubber Chicken Software. Pacific Time (WA). Call anytime. If message, 24-hour callback. (206) 467-5668.

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

ESQ-1 QUESTIONS – Jim Johnson, (503) 684-0942. 8 am to 5 pm Pacific Time (OR).

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, (201) 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.

SD-1, sound programming, sequencing, & MIDI – Eric Olsen, Pegasus Sounds, (616) 676-0863. Mon, Tues, Thurs, Fri: 4 pm to 9:30 pm Eastern Time. Sat: 12 to 10 pm. *(No calls on Wednesday please!)*

SQ-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.

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KB-2: Hohner Clavinet
Hammond B3 Jazz
Hammond B3 Rock

KB-3: VS Strings I
VS Strings II
Moog Bass

SY-1: XPander Brass
Moog Lead I
Moog Lead II

SY-2: VS Pads I

SY-3:

VS Pads II

Oberheim Pads
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Multi-Stack II

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Gibson Les Paul - Drive

EG-2: Fender Strat - Clean
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EG-3: Gibson ES-335
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Telecaster Metal

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X-2: Steinberger Bass Deluxe
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(req memory expander)

WB-1: Shakhachi
Koto

WB-2: Temple Bells
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Log Drums

WB-3: African Shakers
Talking Drums
Rock Kit

WB-4: Simmons Kit
Jazz Kit
Traps 2

WB-5: Processed Kit
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Fender Jazz Bass

WB-6: Steinberger XL Bass
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Timbales

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Latin Shakers
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Tremolo Viola

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High Saxophone
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WW-4: Celeste
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Gamelan

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Nylon String Guitar
Jazz Bass

WB-4: Bowled Bass
Mandolin
Dobro

WB-5: Flugelhorn
Cornet
Trumpet

WB-6: Mute Trumpet
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Lush Brass

WB-7: Trombone
Sharp Brass
Bugle

WB-8:

WB-9:

WB-10:

X-3:

Royal French Horn
(req memory expander)

X-5: Concert Grand Piano
(req memory expander)

X-6: Orchestral Strings
(req memory expander)

OP-1: Marimba
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Gongs

OP-2: Vibraphone
Xylophone
Brake Drums

OP-3: Tubular Bells
Timpani
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Traps 1

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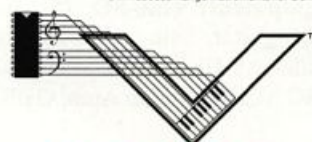
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Gentle Images / Severe Chops

Daniel Mandel

Tape: *Indianance*.

Artist: J.C. Sebastian.

Contact info: Totally Synthesized Music, 5714 Rockhill Rd., Kansas City, MO 64110.

Equipment: SQ-1.

The first thing that must be said of John Sebastian's tape is that he definitely has a handle on packaging. *Indianance* has very simple cover art in black and white on brown paper. It is a very good looking package.

The overall sound is flowing and liquid. John's sound palette is very light. I almost floated away several times listening to these songs. The collection is entirely instrumental and most easily categorized as New Age. John uses a lot of bells, strings and an occasional oboe/flute sound. Most of the sounds are very electronic, the only thing that seemed to be lacking is a set of bass instruments to widen out the sound. Yet, overall it works as a very soft and gentle group of instruments. John might try for some contrast as well. The only actual criticism I would have is that a couple of the bell sounds distorted on the loud end. Be careful when you are setting recording levels. These sounds are velocity sensitive and it is apparent. The first song, *Indianance*, and the last, *Reprise*, use a low hand drum in a sparse manner that was a nice touch.

The themes are very beautiful and understated. Here are the titles that show some of the work's imagery: *Indianance*, *Prairie Dawn*, *Snow Mountain*, *The Green Earth*, *Electric Rain*, *Inconstant Moon*, *Lost Spirits*, *Reprise*.

Tape: Anthony Ferrara. *Contemporary Guitarist*.

Artist: Anthony Ferrara.

Contact info: P.O. Box 14503, Philadelphia, PA 19115-9998.

Cost: \$4

Equipment: VFX-SD, Tascam 644 MIDI Studio, Casio 510 Midi-guitar, Shure SM 57, Pearce G-1 guitar pre-amp, Alesis Midi-verb III, Roland GP-16 Digital Guitar, Effects Processor, QSC MX700 Stereo Amp, Gallien-Krueger Stereo Cabinet, etc.

Here's another nice cover — a smooth looking knees-up picture of Anthony with his guitar and sunglasses. Based on this picture we should probably call him Mr. Ferrara (I'm only jesting here because I'm so intimidated by this man's resume that he sent along with his tape. Bachelor of Music in Jazz Performance from Temple University, Master of Music in Composition from Temple and Post Graduate composition studies!)

This is, to date, the best example of a demo tape that I have

reviewed for the *Hacker*. There are four songs. These four songs show off Anthony's guitar playing and composition skills. Anthony describes his music as fusion, and fusion it is (how could I argue with all those degrees?). By the way, Anthony went all the way and had his tape mixed and mastered at a real studio, Philadelphia International Records, by a real engineer, Jim Gallagher.

In Anthony's words: "This was, obviously, a completely solo project, attempting to get labels and management interested in my latest music. If any of your readers would like a copy, I would be happy to send them one for four bucks, as this would help defray the costs of recording, mailing, and duplication, not to mention the constant updating of my gear. I have already sold my synth and bought an EPS-16 Plus, with plans to purchase an SD-1 in the near future."

The first side has two pieces. *Living City* features Anthony flying pell mell across his frets while his VFX cranks on the drums, bass and keyboards. *Piece Number One* from *Three Pieces For Guitar* is performed on a nylon string guitar.

The second side also has two pieces, *Metropolis*, another romping guitarfest with a more regular beat than *Living City*. *Duet* features Anthony's composition, rather than his guitar solos, opening with what I assume is Anthony's Casio MIDI guitar which is complemented by a bellish keyboard sound. Then almost out of nowhere enters the Moog sound from days gone by. This song, to me, did not maintain the style or the feel of the other three, and with the odd collection of sounds seemed a bit intense.

Anthony obviously has the speed, the phrasing and the overall feel for this kind of music. This tape is a great example of a demo tape. It's hot music. It's four songs. Most of all it shows off the talents of Anthony Ferrara. ■

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.

The SD-1 Power Primer

(Part II)

Tony Thomas

One of the endearing qualities of the SD-1 is its uncanny ability to sound like a meaty analog synth one moment, a delicate digital synth the next and a stunningly realistic sampler the next. This chameleon-like quality is due to the fact that those wonderful people in Malvern loaded its ROM with plenty (3.5 megabytes) of samples, analog waveforms, digital waveforms and what Ensoniq calls transwaves. By understanding these sonic building blocks, you will begin to realize the SD-1's true music making potential.

Let's Make Waves

Unlike many other synthesizers which utilize numbers or cryptic names to identify the waveforms and samples contained in ROM, Ensoniq has assigned waveforms and samples to "classes," thereby enabling you to find the sound you want quickly and easily.

It also takes a lot of the guesswork out of sound creation. If you need a piano sound, you simply check out the various piano waveforms. Need a string patch? Go to the string group. Just about any type of sound you need is there.

Listening to the waveforms inside the SD-1 isn't as straightforward as punching up a preset patch, so you'll have to do a few things in preparation. First of all, select the POP GRAND patch (Internal #12). Next, hit the voice select button and select the PIANO-16 waveform. Double-click on this wave (hit the soft button twice in rapid succession). Then, hit the filter button and change the cutoff parameter to 127. Finally, go to the Wave page. There, you will be able to select the waveforms with the top left soft button and the wave group with the top middle soft button and use the slider to run through them.

Catch A Wave

After you enter the wave page, you will find yourself at the PIANO-16 waveform which is a member of the PIANO-SOUND wave class or category. The SD-1 has sixteen wave classes — Strings, Brass, Bass, Breath, Tuned Percussion, Percussion, Transwave, (Synth) Waveform, Inharmonic, Multi-Wave, Drums, Multi-Drum, Piano, Hip-Percussion, Misc. Samples and Drum-Map. Within these wave classes you can probably find just about any kind of instrument you are looking for and then some! By my count, there are 168 different waveforms/wavesamples to choose from.

Take some time to go through each wave class and individual instrument. Become intimately familiar with each timbre and try to envision how each one can be utilized in a musical context. It will also become apparent that these waveforms are not

finished sounds in themselves (except for the percussion sounds). They will need envelopes (start/sustain/release characteristics) filtering and scaling to bring them to life.

Some of the waves contain only the attack portions of the sounds they represent and must be used in conjunction with waves that sustain. Yet, it is much easier to develop sounds on the SD-1 than with most other synthesizers since you don't have to build your sounds from scratch. Plus, since most of the waves are actual sampled sounds, they have the realism that you just can't get from imitative synthesis techniques.

Riding The Crest

There are four basic parameters associated with the wave page. They are WAVE DELAY which allows you to control how long it takes to hear the sound after you hit the key (useful for bringing in parts of the sound gradually), START which enables to you decide where within the wavesample it will start playing, VEL-STARTMOD which allows you to change the START point using key velocity (both forwards and backwards), and FORWARD which toggles play waves backwards.

For transwaves, the last two parameters change to MODSRC (Modulation Source) and MODAMT (Modulation Amount). For the MULTI-WAVE parameter, they change to length (determines the number of waves that will be played in the loop) and Forward, which toggles between Forward and Reverse. For the Waveform and Inharmonic classes, the bottom line is blank since these are static single-cycle waves.

By spending time in the wave page and learning the waveforms in the instrument, you will be laying the foundation that will enable you to quickly edit patches and even program the SD-1. It will also take much of the guesswork out of programming since you'll be able to go to the exact sound you want in just seconds. We'll build on that foundation in coming articles.



Bio: Tony Thomas is a veteran journalist who has contributed to several national magazines including Mix, Electronic Musician, Music Computers and Software, AV/Video and REP. An avid MIDI enthusiast, Tony is the former Executive Editor of The MIDI Insider. He is also an established recording engineer, producer, composer and keyboard player.

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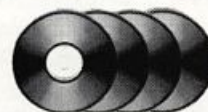
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Review: Valhala Sampling CDs

Tom Shear

For: Mirage, EPS, EPS-16+ or any other sampler.

Product: Sampling CDs.

Price: *Digital Excellence Collection*: \$55, *Uberschall Sampling CD #1*: \$60, *Pascal Gabriel Dance Samples*: \$85.

From: Valhala, Box 20157, Ferndale, MI, 48220. Phone: (313) 548-9360.

Even the most sample-happy EPS enthusiasts like myself sometimes run out of sources for new sounds. In cases like these, sampling CDs can be a Godsend. There are several advantages to buying sounds in this format. 1) It's a lot cheaper than buying pre-sampled sounds on disk. 2) Since most of these are mastered from DAT, you get high-quality, noiseless sounds that would be difficult for the musician on a budget to achieve. 3) You can listen to the sounds beforehand and sample only the ones you like. 4) And they give you access to sounds you probably wouldn't be able to hunt down to do your own samples from scratch. Like how often do you take your submersible DAT with you to record whale sounds? These advantages are, of course, coupled with some problems. You will have to roll up your sleeves and sample the sounds off the CD player and do whatever surgery is necessary to whack them into shape, and despite cost efficiency, they still are kinda pricey. Because of this, I thought I'd share my findings on three such CDs distributed by Valhala.

Ironically, the CD I had the highest hopes for turned out to be the weakest of the three. While the *Digital Excellence Collection* wasn't awful, it was somewhat disappointing. Most of this was due to the ad which boasted its "gothic death screeches" and "industrial percussion." From what the ad said, these sounded like pretty awesome, mind-blowing sounds. Since these are the types of sounds I really enjoy, I figured this would be a dream come true. Wrong.

While there is some interesting industrial percussion, most of it is silly-sounding synth sounds that are by no means "industrial." The "gothic death screeches" are nothing but some guy making noises on his guitar through lots of effects. In fact, my biggest beef with this collection was the misleading names. The "guitars" that start off the CD are in many instances what sound like really weak synthesized guitar imitations, not real guitars. (There *are* some real guitars, but a large number are not). The "Dream Guitar With Harsh Stereo Pan" sounds like a Roland D-5 piano patch clipping the mixer; not very useful. Another track promised "Various Monsters Yelling In An Oil Drum," but what you get is someone striking the oil drum. While this is a good sound, I can't imagine how they came up with the "monsters yelling" part.

In terms of sound quality, it sounded like a sizable chunk of these sounds are coming from an 8-bit sampler. Maybe they're not, but they sure sound that way, and even though this is a

fully digital recording, all that's going to do is give you a faithful reproduction of a poor sound. A lot of these sounds are fed through bizarre effects which might make it appealing to those of you who don't have access to an effects processor. There are some great sounds here if you're willing to dig, but in general, the sounds seemed more like special effects you might use occasionally or perhaps to score an eerie film. If you have everything else, you might want to check it out, but personally, I'd spend my money elsewhere.

Next in line is the *Aberschall Sampling CD Volume 1*. This one interested me because the ad mentioned the use of Synclaviers, Fairlights, Emulator IIIs and other really expensive toys in making these sounds. This one was much more useful. This collection touched briefly on just about every kind of sound you might need, M1 and D-50 sounds, Yamaha DX sounds, classic analog sounds, Mellotron sounds, huge, gorgeous soundtracks, great multi-sampled guitars for every style, other multi-sampled acoustic instruments such as steel drums, grand piano, strings, and Fender Rhodes, some fantastic sound effects (including an amazing stereo Supersonic Jet), and rounding it all off, various drums and percussion. The sounds were, with very few exceptions, perfectly recorded with no audible noise at all. If you have access to software that can handle stereo samples, many of these are in stereo as well. A good place to start and a well-rounded selection with emphasis on synthesized sounds. BUT...

By far my favorite of all of these was *Pascal Gabriel's Dance Samples*. Not having ever heard of him before, I was slightly skeptical, but boy was I ever pleasantly surprised! Turns out Mr. Gabriel has done production and remixes for groups like EMF, Erasure, and S'Express. If you need something new to sample, this collection has literally got it all.

After a studio test tone, it starts out with a generous selection of excellent drum and percussion loops which are helpfully marked with BPMs after their names. From here it goes into a huge, killer selection of single drums with nearly fifty different kicks, 65 snares, several dozen hi-hat sounds and enough acoustic and electronic percussion to keep you sampling for weeks. After this we have "Assorted Single Hits" which would make interesting alternatives to normal percussion, various brass sounds (most are special effects), some funky guitar riffs and effects, spoken phrases in both real and computerized voices, male and female sung vox, a section of orchestral sounds featuring some beautiful stereo orchestra hits to die for, a varied selection of sound FX, some "stops and stabs," synth sounds including effects and melodic sounds, and finally, fantastic (mostly electronic) bass sounds.

Another thing Mr. Gabriel does in the helpful documentation (by far the best of the three) is to list what key any sampled

riffs or sung phrases are in. This way, you'll know ahead of time if it'll fit in smoothly with your new song. There is a section after this that features an assortment of the sounds recorded with Roland Sound Space recording, but a stereo sampler is necessary to take advantage of these. If you do any kind of pop, dance, or industrial tracks, I urge you to put your money down for this CD now! There are some lower-quality sounds, but they are far outnumbered by the huge amount of quality, useful, and let's face it... fun samples.

So there you go, kids. Lotsa great sounds for an affordable price. To sum it up: if you do any kind of contemporary music in the rock/pop/rap/dance/funk/rave/industrial styles, check out

Gabriel's CD, it's a killer. Aberschall has more of an emphasis on the synth sounds that aren't as prevalent in Gabriel's collection, which means they complement each other perfectly, and is of near flawless recording quality. As for *Digital Excellence*... well, use your own judgment, but if I had to do it all again, I think I could probably live without it. ■



Bio: Tom Shear has fallen and he can't get up.

For All Your Outback Gigs

Ensoniq's ISD-3

Daniel Mandel

Product: ISD-3 *The Australian Collection*.

For: VFX/sd, SD-1s.

Price: \$19.95.

From Ensoniq Corp., 155 Great Valley Parkway, Malvern, PA 19355 or contact your local Ensoniq dealer.

I myself know a handful of Australians and they claim that the thought of barbecuing crustaceans has never once crossed their minds. More to the point — whatever happened to Colin Hay?

One of the oddest things about this collection is the idea itself. When one thinks of the music of Africa, a plethora of percussion springs to mind. If I mentioned Latin America, there's always Salsa. Jamaica has its Reggae. The Caribbean has its, well, Caribbean style music. The Far East has its own unique instruments and even different modes and scales than Western music. But Australia?

Okay, let's not be completely ethnocentric — certainly this country has developed its own indigenous culture and music and its native people do have some wondrous instruments. All countries do. Yet, when was the last time you thought, "Boy, this song's great but I just wish it could sound, well, you know — more, Australian."? Even the accompanying booklet tells us that the main influx, not to be confused with influence, comes to Australia from American and Britain.

The developer, Roger Mason, has also been all around the world and has an impressive set of credits playing with bands. His synth experience goes all the way back to the ARP Odyssey.

So that's the background, now on to the sounds themselves. I listened to each sound and wrote down its characteristics and then I grouped the sounds under common themes. There were,

as usual, a total of 60 sounds.

GOOD – VERY GOOD	= 13
WEIRD	= 18
REPEATING/ECHO	= 10
NOISY	= 5
FILLER/STANDARD	= 14

Good – Very Good

These sounds really captured me — very expressive and playable. A couple that must be mentioned are the MELODY DRUM, very resonant and velocity responsive. GTR+STRING is a beautiful sound which, as it is aptly named, brings in the string section just behind the guitar arpeggio. BALI-MODWHL will provide you with endless days of percussive extravagance. RADIO ROME is a very full, rich sound, strongly sustained with a built-in glide. BIG BLUE could be deceiving at first. It appeared to be just a bigger fill pad than usual. However, as I experimented, I found a lot of different textures when I played different styles. WET METAL sounds as good as the name.

Weird

Now, of course, these are all my opinions and what I think is weird may inspire you to the heights of great artistry — or they might just sit in your synth unused. SWEET VIBES, for example, seems only to really work in the middle octaves because of the timing of one of the backward voices. The higher you play, the quicker the reverse envelope. Even in the middle octave where the reverse voice is not that disturbing, it would only work if the song or the sounds were build around this one octave. SPACE KORDS used a rather eclectic combination of voices that sounded odd when thrown together. DANSGRUBE also was a mixture of unrelated voices. SPACE BRASS was just downright unplayable.

Repeating/Echo

I found that when I looked back over my notes that there was a theme. Many of these sounds use a digital delay, or a repeating note or an offset start for several voices in one form or another. In some cases it was used as a very clever effect. NOVA RATTLE for instance used repeats in a very innovative way. XOTIQUE was chirpy and nasal and downright annoying. A-TENSION was a unique yet obscure sound that used repeats and I really enjoyed listening to it. OFF-CENTRE was a bit disturbing, and very busy sounding with descending, detuning and repeating all going on at the same time.

Noisy

I used to be confused by why people were so down on the VFX for how noisy it is. The more you try to record and listen and compare, you will begin to hear how noisy an instrument the VFX can be. One of the signs of a good programmer is how well they can keep a sound from being noisy. Roger did a fair job, as you can see most of these sounds are not noisy. Yet a few are embarrassingly so. Two that have noise in the name are really an insult to our intelligence. I know how difficult it is to create a good sound from scratch. I've tried. I've owned an ESQ-1 and a VFX/sd. The easiest thing in the world to do is to create a digital noise patch the blurps and splashes randomly around the keyboard. These patches should not be part of a commercial package.

Filler/Standard

This category would have had the most sounds if there weren't so many weird sounds. CARIBEORGAN was a good example of a sustaining steel drum sound, very usable. HOFNER BASS sounded fine, however it is too quiet to cut through the mix and the patch selects were not what I would have chosen. There were many in this category that worked and sounded good as background, or musical beds for songs.

I could not review this set without bringing up the one really arguably Australian sound DIGERIDOO. I've heard these beasts live and they look as magical as they sound. Basically they are a large hollowed out branch that one blows into. It involves one's entire body to play the thing, and the sound is big and boomy. In Western instruments it's similar to a bassoon. The VFX version here sounds quite good and when mixed with patches like the BALI-MODWHL you can get some real out-back jams happening.

Like with any collection, there were some great sounds and some that made you wonder what they were thinking. Unfortunately I don't think this country theme really works as much as sensible categories that musicians know and use. This collection could easily have been called OBSCURE/HOUSE MUSIC SOUNDS. ■

Mics and Mic Techniques for Sampling

Michael Castronovo

If you're like many of us who own a sampler our emotions swing from both pleased to perplexed. Sure, playing back the sounds we bought have been fun but our thoughts (and fantasies) soon dream of that unique ONE-OF-A-KIND sound that only you can find. Except every time you try to sample using your microphone, the results are, as they say, less than desirable.

Mics and microphone techniques are key elements in the sampling process, yet most keyboardists know little about how to select the right mic or how to use them effectively. As the owner of a full time recording studio, I work with microphones on a daily basis. The first keyboard I had in my studio was a Mirage, and that was replaced two years ago with an EPS (with a 4x memory). After numerous attempts at sampling I realized that how a sound goes into the sampler effects how it comes out. That's what this article is about, getting more out of your sampler by understanding how to use microphones effectively.

First let's look at what general types of mics are available. The three most widely used mics are dynamic, condenser, and ribbon. There are very few ribbon mics currently in production

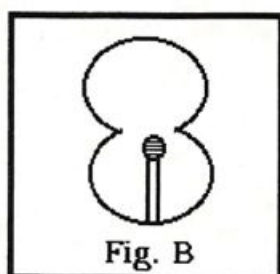
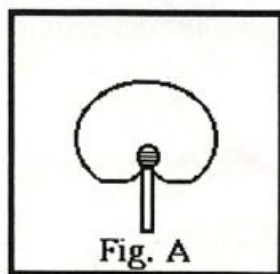
(though Fostex does make one), usually much older ('50s and '60s) and because of the technology back then, are usually not as good for authentic reproduction as those in current production. Though known to have a warm/smooth sound, they require more delicate handling and can be expensive to repair.

The second type of mic is the electrically powered condenser mic. Condenser mics often have a greater hi-frequency range than the other two types, but not always. Again like the ribbon mics the condensers are easily damaged if dropped or abused. Condensers also can easily be distorted by loud volume levels (unless they are specially designed with large pickup diaphragms like the A.K.G. 414. If you are planning to sample at the upper sampling rates (44.1 kHz and above), and can control your signal volume well, then a condenser mic may work out the best. Many companies like Shure, Electro-voice, A.K.G., Peavy, etc. make these — the prices can range anywhere from \$75-to-\$1500.

The third type of mic (and probably the most common) is the dynamic mic. These mics are the most durable for handling, and need no power supply. Most musicians who are on the road

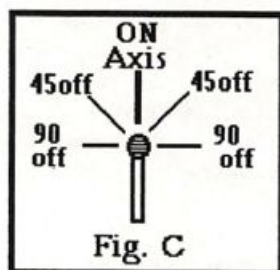
have a variety of these types around. The most well-known is the Shure SM-58. Again there is a wide variety of companies that make them and the prices vary just as they do for the condenser mics. Since most keyboardists probably have this general type available I'll direct my comments to the dynamic mic. Unless I note some exception the procedures will probably work with all three types. Large diaphragm dynamics that I use are the E.V. RE-20 and the Sennheiser MD-421. These work especially well for loud instruments. The RE-20 has an added benefit, it is built with a special design that eliminates the Proximity Effect inherent with most mics that's what gives that extra bassiness when you get closer to the mic. This effect can work for or against you when sampling. More about that later...

There are three main characteristics about mics that are important to understand if you are to use them properly. The first is the mics' pattern. The pattern is the directional area around the mic diaphragm that is designed to be the best area for the sound to be picked up in. There are different patterns useful for different applications. For example a cardioid (or heart shaped pattern as in Fig. A), is best suited for sounds coming directly from in front of the mic. A figure 8 pattern (as shown in Fig. B), is best suited for sounds coming from 2 directions around



the mic. Understanding the difference in how these work could help your sampling greatly. Suppose, for example, you want to sample a solo violin, the figure 8 patterned mic would add distracting room noise to the recording and possibly make the violin sound distant. However selecting the cardioid mic will eliminate this problem, as long as the position and axis is set properly.

This brings us to our second mic trait..the axis, which can be thought of as a direct line aimed right into the microphone diaphragm. When a sound is aimed in line with the On Axis position (as in Fig. C) you will get the most fullness from that mic. The Off Axis positions (also marked as 45 and 90 degrees in Fig. C), will make the sound thinner. This On-Axis/Off-Axis arrangement can help you color the sound without the use of a tone control. Since plugging a mic directly into the EPS (or Mirage), does not offer you an E.Q. adjustment during the sampling stage, this axis adjustment can start you out with a better sound. Later it will be easier to fine tune when you get into



your filter adjustments. Kind of solving the problem before it happens.

The third mic trait that is important to understand is the proximity effect. Simply put, this is the term used to describe the tonal change that occurs when a sound source (especially a human voice) moves closer or farther away from the microphone. As the source gets closer to a mic diaphragm there is usually a bass frequency boost. Again this can work to your advantage when sampling a vocal part that sounds too thin. Just have your talent move closer to the mic until you start to hear the depth in the voice you want. Radio DJs use this proximity effect to their advantage all the time. Usually on the average cardioid dynamic mic to get the most natural sound maintain a distance of 3 to 5 inches away from the mic. There are some mics produced that have very little proximity effect like the E.V. RE-20, but these mics usually cost a bit more than the ones you find at your local music store outlets (\$300-\$500).

By combining the characteristics of the types of mics, as well as the pick-up traits of mics overall, you can start to build your knowledge of which mic to use for what sampling situation. One small point that should be mentioned also is the wind screen. This is usually only a \$3-\$5 item that can be purchased at most music stores (or Radio Shack) and will help greatly if you're doing vocal sampling. They cut down on breath noise without any obvious coloration of the sound quality. If you ever decide to start a sound effects collection for your EPS and plan to sample outdoors, you will find that a wind screen eliminates wind noises that will totally destroy your sample.

Well, that should give you enough to get a handle on the basics about the mysterious microphone. Next time we'll look at a few specific examples, as well as talk about how the use of a tape recorder can speed up your sampling session. Also I hope to be able to take a look at creating a "True Stereo" sample using a combinations of the ideas we've covered. ■

Bio: Mike Castronovo owns a full time 16-track recording studio, Studio "B". He has been a keyboardist since the Stone Age and along with loving his wife Deb and two daughters, Lisa and Amy, he has a special place in his heart for his EPS.

BACK ISSUES

Back issues are \$2.00 each. (Overseas: \$3 each.) Issues 1-9, 11, 13-23, 27, 29, 30, 35-38, and 67-71 are no longer available. Subscriptions will be extended an equal number of issues for any issues ordered that are not available at the time we receive your order. ESQ-1 coverage started with Issue Number 13. SQ-80 coverage started with Number 29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage started with Number 30. (But didn't really get going till Number 35.) VFX coverage (which also applies to the SDs) got started in Number 48. The SQs got going in Number 63. 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.

Orchestral Percussion Secrets on the SQ-1

Part III — Playing (Aarghhh) Like a Percussionist

Mark Clifton

Well, now we've come to the final installment of our little miniseries on the wondrous world of orchestral percussion. The last few months I've focused mainly on programming the sound parameters, so first I'll go over setting up the basic performance parameters.

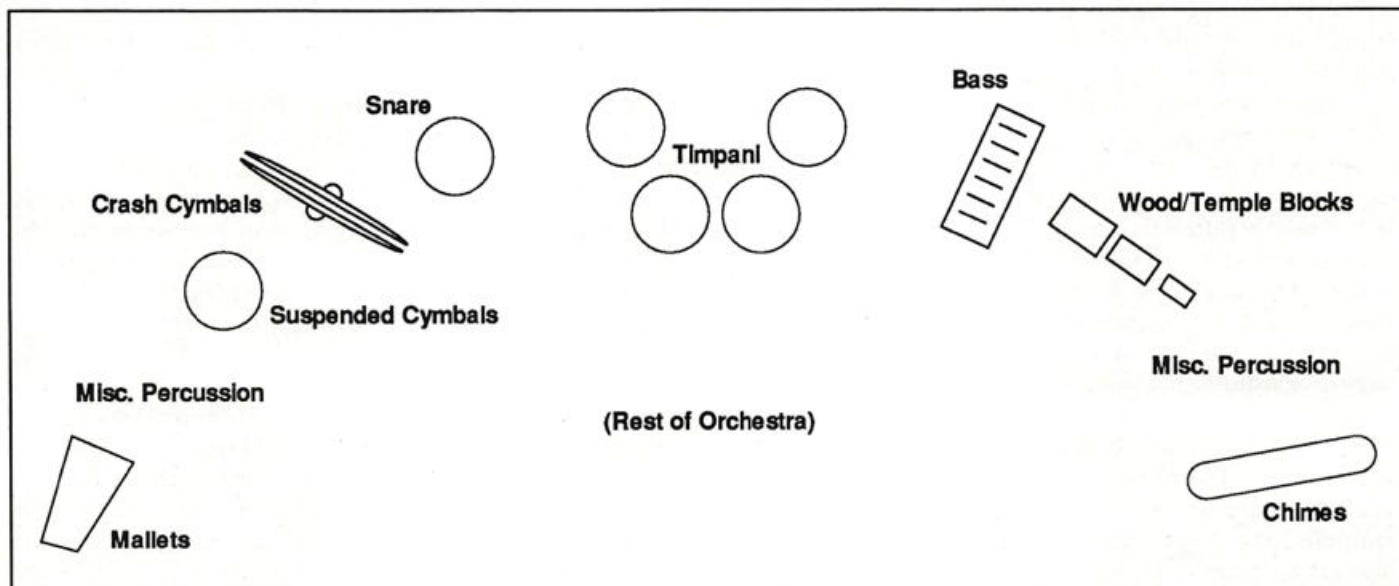
First of all, some general rules that should be implemented on almost all of your percussion sounds. First, make sure that all of your envelopes are set to **FINISH**. A drum with sound with **NORMAL** envelopes will sound awkward when played staccato, since the sound should always sustain the same amount with full envelopes no matter how it's struck (unless you use some kind of special effect). Second, pitch modulation should be controlled by velocity on the **PITCH MODS** page. This simulates a natural bending up of pitch caused by the head stretching tighter the harder it's struck. The amount really depends on the characteristics of the sound you're using, as long as it's a positive value. I find that a value of +30 works well on unpitched instruments and a value of +20 or so is good for mallet sounds. Finally, allow yourself plenty of control over dynamics. You should be able to have very subtle control over filters and volume. The percussion section has a much wider dynamic range than the rest of the orchestra, and you should be able to go from pianissimo to fortissimo without touching the volume slider.

Now for a little tip on doing timpani rolls. There are four commonly used sizes of timpani in professional orchestras.

These are the 30-inch, 28-inch, 25-inch, and 23-inch sizes. All these sizes combined give the timpani player a range of an octave and a fifth stretching from low D to A. Individually, each one has a range of only a fifth of an octave and it's rare that the whole timpani part ever covers more than an octave. It's also good to remember that it's only possible for four timpani to be used at any one time, with each tuned to a single note. These notes usually never change in a score since it's extremely difficult to accurately retune in the middle of a song. Retuning is possible, though, if the player has a long enough rest to reset the tuning peddle. This should take no more than 30 seconds or so.

Since the timpani is an instrument of definite pitch, it's difficult to do realistic rolls with the sound mapped normally across the keyboard since that would call for a single key to be struck repeatedly extremely quickly. If you look at the timpani program I went over in part I, you'll notice that it uses only two oscillators, one with a timbale wave and another with a noise loop wave. Since you don't need a five octave keyboard to play a one octave timpani part, the following is an easy method to map the keys so that a roll can easily be played quickly.

First, zone the oscillator with the timbale wave to the octave of your choice. Don't worry about the noise loop wave since it should play the same pitch across the whole keyboard. Next, take the as-of-yet unused oscillator and make a dupli-



Orchestra Percussion Layout Example

cate of the timbale wave and all of its parameters, except tune it down an octave lower than the original. Then just zone the new oscillator to the octave directly above the old one. This way, you should have two identical octaves with one mapped above the other. To play a roll, just play a tremelo between the two keyboard zones. It should sound like you're hitting a single note over and over again at a speed that would be inhuman for a live keyboardist, but typical for a percussionist. This method can, of course, be applied to any pitched percussion as long as it's used within the range of the instrument.

Here's another good technique for playing mallet sounds realistically. Remember that mallet players usually have only one stick in each hand. This means that to a person who's playing a keyboard, their playing response is rather slow. So to keep from getting carried away and playing passages that would be impossible for a mallet player, play the part with one finger on each hand. This way you restrict yourself to the playing technique of the lowly mallet player. The only exception to the two stick/two finger rule is that in some applications, especially with jazz vibe players, the player will hold two mallets in each hand, allowing the playing of up to four-note chords.

The final thing to remember is panning the sounds. Almost

every conductor has a different way of playing the percussion section. This diagram shows approximate placement of instruments in the generally accepted style. Most conductors will stick with this kind of setup with minor variations. The placement of extra percussion instruments, especially those that aren't normally used, is up, as they say, to you. ■

Bio: Mark Clifton is 16 years old and a composer of synthesized and orchestral works. He is the owner of a lone SQ-1 with dreams for more Ensoniq pets, so he writes articles for this magazine while his parents beg him to get a job.

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Waveform Mutilation 101 for SQs

Part 4: Power Windows

Jack Stephen Tolin

Ever since the beginning of sound synthesis, many people have wanted to continue playing tennis. Of course, the evidence for this is clear — if you hit the ball harder (that is, faster) with the racket and deeper (that is, closer to where the ball would hit the base line), or softer (that is, slower) and lob it just over the net, then chances are better for gaining a point. The same has not always been true with the synthesizer. In fact, the first batch of them were quite heavy — not exactly the Agassi favorite. On top of that, velocity sensitivity was a thing of the future, an object of people's dreams, a technological advancement yet unheard of, a zebra before getting its stripes. Consequently, if one were to use synthesizers in creating music, they would have to create emotion relying purely on the sounds they could make, utilization of pitch and modulation wheel or by using other electric or acoustic instruments.

Fortunately, we can now look back on all of this and breathe a sigh of relief. Thanks to a couple of guys from Commodore who decided to be smart, stay on top of the field, and make multiple technological advancements to help make the synthesizer something more useful and practical for the musician. As a result, we the musicians, in order to form a more aesthetic soundscape, are now able to make use of something exciting

called velocity windows (amongst other things). And that is what this month's focus is upon.

First, type in the "Mitsubishi Pluk(Y)" program across the way into your SQ-1(+), SQ-2, or SQ-R(+). Here we have a simple example of such a "power window" effect. Note that the key to our focus is the Velocity Window parameter found in the Output bank. I have placed the value at "108" for Voices 1 and 2. These voices make up the, hold on now, dichotomous synthesisization to display the power window. In other words, if you play (relatively) hard, then you will hear them; if you play (relatively) light, then you will hear only Voice 3. Feel free to adjust this particular parameter if you find that 1 and 2 come in too easily or too difficultly.

This ability provides much versatility for a single program. In our example, Voice 3, the Guitar Harmonic, provides a guitar-like sound in the lower octaves and an organ-like sound in the higher octaves (try the mod wheel!) with a light touch. Voices 1 and 2, Marimba and Chiff Flute, respectively, provide the now typical D-50 emulation to be used as either a nice addition or a lead sound. You may even want to step the CV pedal forward for deletion of Voice 3. Putting together such a pro-

SQ-1 & 2 Prog: Mitsubishi Pluk¥

By: Jack Stephen Tolin

WAVE	1	2	3
Select Voice	On	On	On
Wave Class	TunedPerc	Breath	String
Wave	Marimba	ChiffFlute	Harmonic
Delay Time	000	000	000
Wave Direction	Forward	Forward	Forward
Start Index	00	00	00
MODSCR	Off	Off	Off
MODAMT	-	-	-
Restrk Decay	00	00	00

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

FILTER	1	2	3
Filter 1	2Lo	2Lo	2Lo
Filter 2	2Lo	2Hi	2Hi
FC1 Cutoff	055	127	075
ENV 2	+44	+00	+00
FC1 KBD	+16	+00	+00
MODSCR	Off	Off	Off
MODAMT	-	-	-
FC2 Cutoff	127	000	000
ENV2	+00	+00	+00
FC2 KBD	+00	+00	+00
FC1MOD-FC2	Off	Off	Off

PITCH	1	2	3
Octave	+0	+0	+0
Semitone	+00	+00	+00
Fine	+00	+00	-02
ENV1	+00	+00	+00
LFO	+00	+00	+00
MODSCR	Veloc	Off	Pressr
MODAMT	+10	-	+50
KBD Pch Track	On	On	On
Glide	Off	Off	Off
Glide Time	-	-	-

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

ENV2	1	2	3
Initial	99		
Peak	60		
Break	35		
Sustain	00		
Attack	36		
Decay 1	45		
Decay 2	48		
Release	50		
Vel-Level	93		
Vel-Attack	00		
Vel Curve	Linear		
Mode	Normal		
KBD Track	+00		

AMP	1	2	3
Initial	99	94	99
Peak	99	99	89
Break	70	70	89
Sustain	00	00	89
Attack	23	23	25
Decay 1	67	67	00
Decay 2	73	73	00
Release	38	38	50
Vel-Level	06	06	00
Vel-Attack	46	33	00
Vel Curve	Convex	Linear	-
Mode	Normal	Normal	Normal
KBD Track	+00	+00	+00

OUTPUT	1	2	3
VOL	64	60	60
Boost	On	On	On
MODSRC	Veloc	Veloc	Pedal
MODAMT	+10	+14	-60
KBD Scale	+00	+00	+00
Key Range	A0 C8	A0 C8	A0 C8
Output Bus	FX2	FX1	FX1
Priority	Med	Med	Med
Pan	+00	+00	+00
Vel window	108	108	000

CHORUS AND REVERB

FX-1	15
FX-2	25
Decay time	35
HF Damping	40
Chorus Rate	20
Chorus Depth	20
Chorus Center	50
Feedback	+00
Chorus Level	59
MOD (Dest)	Rate
BY (MODSRC)	Modwheel
MODAMT	+10

gram in a like manner would allow one to play and/or sequence a song with just one patch.

The Effects Programming can be sparkles on the frosting. Although the effect I achieved was a subtle one, it demonstrates my idea. The Chiff Flute and the Guitar Harmonic have FX1 as their Output Bus; the Marimba has FX2. The reason I did this was to make Voices 2 and 3 more expansive — since they are, basically, functioning as pads (and why put reverb on a pad?) — while retaining the attack for the dichotomous synthesization provided by Voice 1 for a solid, simple and reverberated Initial. (For this reason, you may want to make sure that the Initial in the Amp bank is set to "99") And, as a matter of fact, it is the Rate of the Chorus which is modulated by the mod wheel which produces the subtle wiggly organ effect. You may choose to replace the "Chorus and Reverb" with the "Rotary Speaker & Verb" if you don't care for the stereo effect from the effects section and desire a more realistic rotary speaker effect. Then again, mess around with any parameters as much as your heart desires!

You may ultimately want to integrate such power windows with frying pans (Part III), waveform warfare (Part II), or backward masking (Part I). That is, in an extreme example, a velocity window can be programmed to bring in a/two back-

ward sample/s panned hard right completely different from the forward sample(s) panned hard left while shutting down the Output of the other at the same velocity. (In doing this, one may prefer — or may be forced to face — alternatives, e.g. a preset type of configuration.) The possibilities are quite numerous.

That's all for now. Keep practicing your backhand! ■



Bio: Jack Tolin is currently a Psychology major at Eastern Nazarene College in Quincy, MA and sometimes performs for the Coffee House. It is said that, many a time, you can hear very loud and strange noises coming out of his dorm room. It is also said that, in a fit of despair, he traded his SQ-R in for an SQ-1+.



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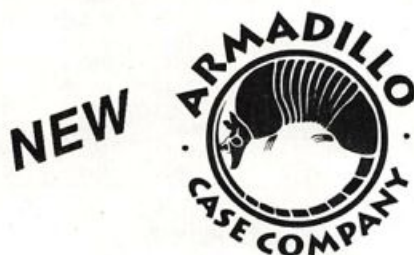
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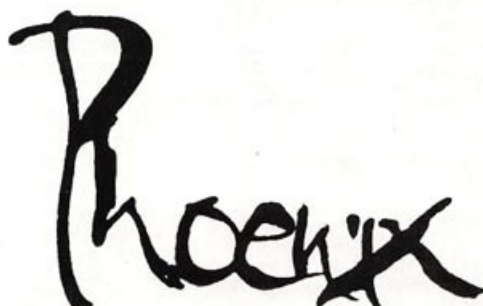
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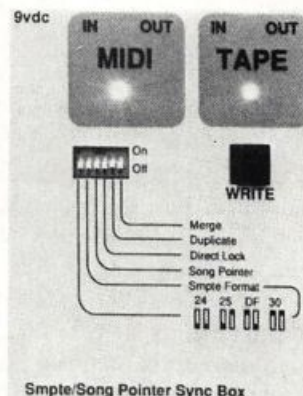
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Multitudinous Bangs for the Buck

Tim O'Connor

Product: *1200 Sound Drum Sampling CD#1.*

For: EPSs and Mirage (all samplers).

From: 3D Sounds, PO Box 114, Station C, Kitchener, Ontario, Canada N2G 3W9.

Price: \$40.

Product: *Sample Source Disk* — 600 samples of the Emu Proteus and Roland U220.

For: EPSs and Mirage (all samplers).

From: Digitelesis, 8667 Via Mallorca #76, La Jolla, CA 92037.

Price: \$14.95.

I love drums. Drums and percussion. It seems I can never satisfy my craving for high quality drum and percussion samples. This may seem strange since I am not a drummer nor do I have a strong desire to become one. I just think that the non-harmonic frequency content gives percussion instruments a more interesting sound than many "melodic" instruments. I am more excited by the sound of an African balafon than a Steinway. It was with eager anticipation, then, that I cracked open and started listening to in what, in my opinion, is the definitive collection of sampled drum and percussion sounds available to samplemaniacs like myself. This is the *Drum Sample CD #1* from 3D Sounds.

To begin, the selection of drum sounds is nearly overwhelming. The CD, over 71 minutes long, contains over 1200 drum, cymbal and percussion sounds arranged into 57 kits. Nearly every popular drum machine and drum sound module is represented here, along with the drum samples from some popular samplers (you will recognize Power Drums, for instance). The list includes the XR-10, R8, RY-30, DR-550, HR-16, DDD-1, Drumtracks, Emu Drumulator, the Roland TR-505, 606, 707, 808 and 909, Simmons, Linn Drum, SP-12, TX-16W, and other electronic, processed, jazz, Latin, African and ethnic percussion as well as a varied collection of sound effects. One track consists of 43 snare drum sounds alone! There are, in fact, so many samples on this recording to choose from that I cannot see myself systematically sampling each and every one — this would take weeks — but, instead, pulling off an individual sound or kit when I need it.

Since the recordings were made directly from the outputs (I assume) of the various modules the quality of the recordings is very high. The one exception to this is the Sequential Circuits Drumtraks, but I believe this is a reflection of the sound of the original instrument, which was, after all, invented during Druid times. There are 57 tracks on the CD, each one typically corresponding to a kit. The accompanying booklet clearly labels each track and gives the name of each sample in the track. The location times are not given, which for some of the very large kits this is an inconvenience since you must listen to all of the

preceding samples on a track to find the one you are looking for. In most cases, however, this is not a big deal since drum samples are by nature short and this does not take much time. Though rare, I did notice a few duplicate sounds, but this just demonstrates that a given manufacturer will often include some of the same sounds in their various models.

Sampling CDs are a great idea in general. I enjoy doing my own sampling, and I would much prefer to have the raw sound than one that was sampled and edited by someone else. For one thing, they are machine independent. I can create 13-bit samples today, and when I eventually upgrade to an EPS 16+ I can resample them at 16-bit fidelity. And when Ensoniq comes out with their 48-bit 256-voice quadraphonic hard disk holographic virtual reality machine, I'll be prepared for that, too (or be slurping Maalox in a rest home). Another thing sampling CDs offer is the ability to sample the sounds through an effects box to achieve those "onboard" digital effects. And by carefully sampling each channel of a stereo CD, true stereo reproduction is possible.

Many of the sampling CDs we see advertised are priced in the hundreds of dollars. This one from 3D sounds goes for just \$40, which works out to about 3-1/3 cents per sound. This is amazing. In all fairness to other CD manufactures, though, recording electronic instruments directly from their outputs is much easier and cheaper to do than to record real acoustic instruments in a recording studio.

Speaking of dirt cheap sampling CDs, some time ago I ordered the *Sample Source* disk from Digitelesis which contains 600 samples of the Emu Proteus and the Roland U220 sound modules. I haven't seen it advertised in the *Hacker* recently, but it sold for only \$14.95 and is great! Each sound is sampled once per octave, so really the 600 samples comprise 108 instrument sounds (the bass sounds have fewer samples).

Again, since the samples are recorded directly from the instruments' outputs, they are very clean. Because they were sampled from electronic instruments, most of the pitches are rock-steady and easy to loop. For the sounds that require long loops, it is often obvious with a visual editor where they were looped in the original instrument and you can use the same loop points. I don't know if this collection comprises all the sounds of the Proteus and the U220, but there are quite a few. They are grouped on the CD by sound category. Track one contains bass sounds, track two is brass, etc. In addition there are strings, voices, reeds, flutes, plucked strings, synthesizers, pianos, guitars and organs. Location times are given for each instrument so they can be quickly located on the disk. Some of the samples were unnecessary, for example a synth or brass sound might be recorded six times, once per octave, when it was obvious that it was just a single sample being transposed anyway.

For those of us who have been collecting samples for some time, many of the more traditional sounds on this disk are a bit superfluous, after all, how many brass, string and piano sounds do we really need? But at \$14.95, it's well worth getting for just the unusual synth sounds (of which there are about twenty).

When digital sampling keyboards first became inexpensive and therefore popular, and third party vendors began to provide ready made sound disks for the various brands (all incompatible with each other, of course), I thought it would be a great idea if companies would produce compact disks of sounds that

users could sample themselves. However, I never actually believed it would happen because of the limited market (which explains the high price of most sampling CDs). I am glad I was wrong, and hope the trend of low-priced CDs continues. And with the advent of the Digital Compact Cassette format, which will probably become the standard home recording format, we should expect an explosion of user-generated digital sampling tapes that we will sell and trade with each other. ■

Bio: Tim O'Conner is a professional software nerd by day and a frustrated songwriter by night. His favorite color cannot be seen by humans.

Night of the Living Pulse Widths

Kirk Slinkard

Once, in the distant past, in a time shrouded by the mists of antiquity, the SQ-80 had just come out into the world and was being fiercely challenged by some other beasts, one especially, called the M-1. The time had come for me to obtain a modern (at that time) synthesizer, so I explored the SQ-80 and found three oscillators per voice like the majestic Memorymoog, but with greater polyphony, and at less than half the cost, along with audio-frequency amplitude modulation and hard synchronization, and of course, many more waveforms than the Memorymoog had. Then, at the press of a button, it wielded an impressive eight-track sequencer.

I was quite astounded by all this power. And then I scrutinized the M-1. It basically just played samples and waves through effects with only the most rudimentary synthesis capability, and with a somewhat less impressive sequencer. It appeared to be little more than an organ and I puzzled how so many people could be raving about it (admittedly, a subjective viewpoint).

So I acquired the SQ-80 and experimented with features that I had never been able to use before. Among the armaments included in my new keyboard was a waveform labelled "PULSE." I listened to it, expecting the sound of a narrow pulse wave that I had been hearing for years on other synthesizers, but that isn't exactly what I heard. I recall saying to myself "Gee, this waveform stinks!" I found that I could console myself by thinking of this particular waveform as one of the NOISE family of waves (which is where I believe it really belongs), but this left only the "SQUARE" wave in the pulse family of waves.

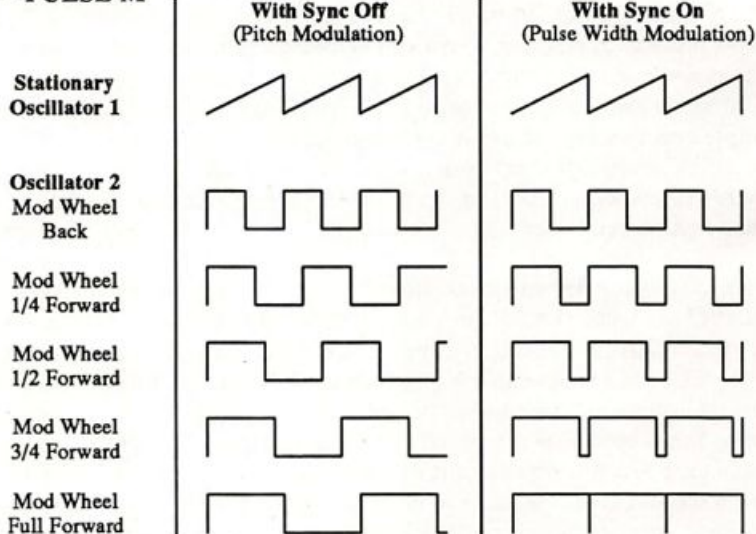
I also started to miss the pulse width modulation found in oscillators of most of the better synthesizers of the past, but then I conceived the idea that by using the SYNC feature on

the "SQUARE" wave, I could get an impressive variable-width pulse wave with more modulation versatility than the older synths could get. There was a certain specific range of modulation that I had to formulate here, though. The ESQs and SQ-80 can effortlessly go way beyond this range for some nefarious sounds, but I was just trying to duplicate the traditional P.W.M. available on the older analog oscillators.

PULSEM

So I worked out a reference patch, PULSEM, that uses the mod wheel to move oscillator 2 (with 1 and 3 turned off) through half of the pulse width range by diminishing its frequency as much as an octave while it is SYNCed to a stationary oscillator 1. The chart shows what happens to oscillator 2 when you move the mod wheel. Since they are initially tuned to the same frequency, this ends up keeping oscillator 2's pitch constant while changing only the waveshape, or in this particular case,

Patch - PULSE M



ESQ-1 PROG: Pulse M

BY: Kirk Silinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	SAW	OFF	-	OFF	-
OSC 2	-1	0	0	SQUARE	WHEEL	-24	OFF	-
OSC 3	-	-	-	-	-	-	-	-

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

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	0	0	OFF	-	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	-	-	-	-	-	-	-
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+63	+63	0	0	0	0	0	0	0

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

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

ESQ-1 PROG: LFO PWM

BY: Kirk Silinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	SAW	OFF	-	LFO2	+12
OSC 2	-2	05	0	SQUARE	LFO1	+14	LFO2	+12
OSC 3	-	-	-	-	-	-	-	-

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

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	127	0	0	OFF	-	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	8	OFF	OFF	TRI	63	0	-	OFF
LFO 2	30	OFF	OFF	TRI	0	0	-	WHEEL
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+63	+63	0	0	5	0	0	18	0

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	ON	OFF	ON	16	OFF	OFF	ON	OFF

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

ESQ-1 PROG: PWM BRS

BY: Kirk Silinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	0	0	0	SAW	LFO1	+1	OFF	-
OSC 2	-1	0	0	SQUARE	LFO1	+1	ENV1	+19
OSC 3	-	-	-	-	-	-	-	-

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

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	77	0	0	VEL	+50	OFF	-

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	OFF	-

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	25	OFF	OFF	TRI	0	0	-	WHEEL
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+63	+20	+63	40	7	28	44	44	51	9
ENV 2	-	-	-	-	-	-	-	-	-	-
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	+51	+63	0	17	19	19	32	19	9

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

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

ESQ-1 PROG: PWM HPC

BY: Kirk Silinkard

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	-1	0	0	SAW	OFF	-	OFF	-
OSC 2	-2	1	0	SQUARE	ENV1	-1	OFF	-
OSC 3	0	0	1	PULSE	OFF	-	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	-	OFF	-	-	-	-
DCA 2	63	ON	OFF	-	OFF	-
DCA 3	0	ON	WHEEL	+63	OFF	-

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	68	0	41	ENV2	+63	ENV2	+63

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	8	KBD2	+63

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	-	-	-	-	-	-	-	-
LFO 2	-	-	-	-	-	-	-	-
LFO 3	-	-	-	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	+63	-63	-63	0	0	0	50	63	63	11
ENV 2	0	-8	-63	0	0	0	3	59	0	11
ENV 3	-	-	-	-	-	-	-	-	-	-
ENV 4	+63	0	0	0	0	0	55	0	11	20

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

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

the pulse width. When the wheel is all the way toward you, you get a 50% duty cycle, or a normal square wave (for information on duty cycles, see Clark Salisbury's transwave article in Issue #77). As you move the wheel forward, the duty cycle increases to nearly 100% to give a really narrow pulse wave. Whenever it travels further away from 50% (in our particular case it only goes higher, up to 100%), the fundamental frequency and lower harmonics start to dwindle, and the upper harmonics increasingly dominate.

I should mention here that the pulse width range of 50% to 100% sounds exactly the same as the 50% to 0% range, so by only having half of the full range to work with doesn't really take anything away from the sound at all. This P.W.M. setup has a wider modulation range and a more complete harmonic content (brighter) than the PULSE... transwaves on the more recent Ensoniq synthesizers (the VFXs, the SDs, and the newer SQs). On the negative side, the low-resolution digital nature of the waveforms makes the narrower pulse widths subject to digital distortions, especially on the higher notes and on pitch bends and modulations.

To give this patch a more static duty cycle, just turn off the mod wheel and tune oscillator two somewhere between zero and one octave below oscillator one. Where oscillator two is tuned will determine the pulse width. You should be warned that if you tune it more than an octave lower than oscillator 1, you will probably get the sound of silence whenever you try to play it. This would actually give you a pulse wave that is trying to go higher than a 100% duty cycle, and you would end up with only the upper D.C. voltage of the original square wave, and D.C. voltages are really boring to listen to.

LFOPWM, PWBRAS, and PWHPCD

I thought that I might as well include some more finished patches here as examples of P.W.M. applications. "LFOPWM" (low-frequency oscillator pulse width modulation) uses the LFO to slowly modulate oscillator 2 through some of its pulse width range, giving it a big chorus-like sound. This is a "dinosaur" patch that uses only primordial techniques, just like it was done on old monophonic Moogs and Arps. The mod wheel gives a seventies-style vibrato that can get a bit extreme if you move it all the way forward. Play a note in the lowest octave for a powerful bass sound that was popular on the earliest stage synthesizers.

"PWMBRS" (Pulse Width Modulation Brass) uses an envelope to modulate the pulse width, mostly on the attack, to give a synthesizer brass sound. The mod wheel brings in a more subtle vibrato.

The "PWMHPC" (Pulse Width Modulation Harpsichord) patch uses a more subtle modulation throughout the sound in an attempt to simulate a harpsichord. Mostly, it just depends on the narrow pulse width sound to get the predominant higher harmonics, or brighter tone. Here, the mod wheel brings in oscillator 3 to add an upper octave (just a static oscillator sound here, though).

Hard or Soft

The SYNC feature found on these older Ensoniqs is technically referred to as "hard synchronization." "Soft synchronization" is a feature that helps to keep oscillators exactly in tune with each other. All you have to do with this is to tune two oscillators reasonably close together and then activate soft sync on one of them, using the other one as a reference frequency, then they would stay perfectly in tune, relatively speaking.

With the digital tuning accuracy of most modern synths, this particular feature isn't seen too often any more. Hard sync is an extreme version of this that stops the slave oscillator (#2 in our case) wherever it is in its waveform cycle, and starts it over at the beginning every time the master oscillator (#1) starts over in its cycle. This not only keeps them perfectly in tune with each other, but modifies the slave (#2) oscillator's waveshape, unless #2 is exactly in tune with #1, or tuned exactly one or more octaves up from #1. When this is used on an oscillator whose frequency is being modulated, all sorts of dynamically moving waveforms become possible. So this feature lets you turn any ESQ/SQ-80 wave into something very close to a TRANSWAVE.

Screaming Yellow Square Waves

Let's go back to a hit by the Cars for a slight variation on the pulse width modulation technique. On the PULSEM patch, go to the oscillator 2 page and change MOD 1's level from -24 to +63. This causes oscillator 2's pitch to rise with the wheel rather than fall, thus causing a different sort of SYNC effect. Now play something while you are moving the mod wheel. Does this remind you of a lead synth sound you've heard before? Even though oscillator 1 is still turned off, this variation combines the sounds of both oscillators 1 and 2 in a way that has some characteristics in common with the wah-wah effect. You may want to save this as a separate reference patch under a different name. It's such a slight modification that I didn't want to include it here as a whole different patch.

Epilogue

You could literally make banks of extraordinary patches based solely on this pulse width modulation technique. And when you add the technique from the previous paragraph and all the different waveforms on the ESQ/SQ-80, you have virtually an infinite variety of dynamically changeable waveforms to work with (not just a handful of the more limited Transwaves). And of course, that's before any filters or amplifiers are applied. For some more hints, check past articles and Hackerpatches for patches that have SYNC turned on at their MODES pages. So the next time anyone tells you that the ESQ or SQ-80 is too old or obsolete, you can tell them that the realm of synthesizers has one thing in common with the animal kingdom: some of the most powerful and ferocious beasts ever to walk the earth were the dinosaurs. Mod you later. ■

Bio: Kirk Slinkard hangs out near Denver and plays synth. His favorite color is ultraviolet.

Classifieds

EQUIPMENT

Kurzweil 1000 SX Module. Upgraded with HX block and Version 5 software. 6 Meg of orchestral strings, brass, woodwinds & more. Good condition. Original List: \$2000. Sell for \$700. (708) 427-1615.

Will trade Mirage, EPS, or 16+ libraries for 1960's vintage combo organs. Barry Carson (315) 379-9763.

EPS with 4x expander, excellent condition, \$1000. Call (708) 474-3422 anytime.

I want to trade an Ensoniq DSP-1 keyboard for a DSP-1 rack. If interested, call Bruce at (503) 244-9616.

SAMPLES

Want to trade samples for the EPS-16+? Give Jay a call at 203-652-2174, 9-5 pm, Eastern. Also, Connecticut-based EPS sample obsessives note that there is a free local users group for this great ax. Call for more details.

ECCENTRIC SAMPLES (Mirage and EPS). Ethnic, Ancient Greek, Medieval instruments; Patch creations; Industrial Percussion & more. Mirage demo tape: \$3. EPS demo tapes (Vol. II or Vol. III): \$6 each. U.S. funds only. Demo tapes include disk list. For lists alone, send SASE to: NIGHTWIND Sound, 170 Mar Monte Ave., La Selva, CA 95076.

Mirage samples: Plus moving wavesamples all over. 7 sounds in one bank, much more. Listings: \$1.00. Demo tape: \$6.00 (includes listings). Mr. Wavesample, 162 Maple Place, Keyport, NJ 07735. 908-264-3512. Make checks payable to Jack C. Loesch.

SoundProcess/Mirage Library for sale. 6 disks, all with the SoundProcess Run-time OS, for \$80 including postage, or \$15 each plus \$1 postage. Specify Lush, X, DeMiTy, Addy, Turbo, or Keyboard. Each disk has approx 110 sounds on it. Bob Spencer, 703 Weatherby Ln., Greensboro, NC 27406.

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SOUND EFFECTS for EPS-16 Plus and EPS, very high fidelity, ideal for studio and post-production work. All effects are original digital recordings sampled at 16 bit, 44.6 kHz, with mono and stereo patch selects. Disks are \$5.95 each, or \$5.45 each for six or more. Send SASE for free listing to: Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602, or call (818) 769-4395.

PATCHES/SOUNDS

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120 High-Quality SD-1 Sounds! Vol. 1 has: classic analog synths, keyboards, guitars, brass, strings, and others. Vol. 2 has: basses, Kurzweil, drums, atmospheric, and more. Send check for \$25 to: Eric Olsen, 6050 Adaway Ct., Grand Rapids, MI 49546.

60 VFX-sd patches created by Jim Grote. Wide variety of sounds with complete documentation. Call for free Information Packet, or send \$30 for VFX-sd disk to: Jim Grote, 3721 Frances Ave., Cincinnati, OH 45211. Phone: 513-661-8885.

NEW SQ-80 SOUNDS from the Hacker's Sam Mims! Soundset 4 takes full advantage of the SQ-80's unique waveforms, and brings "hidden waveforms" to the SQ-80 for the first time. Forty patches on disk, with 22-page booklet of programming notes and performance tips, \$17.95. Syntaur Productions, 11116 Aqua Vista #2, North Hollywood, CA 91602, (818) 769-4395.

SOFTWARE

Midicaster is still available. The way-cool operating system that turns your Mirage into a very capable System Exclusive data librarian, a 20,000-note sequence player, a disk copier/formatter, and wave-draw synthesizer is still available for a limited time. For more information, or to order, contact Tim Martin, 1510 S 5th W, Missoula, MT 59801. Phone: 406-542-0280 And thank you for your support.

WANTED

Wanted - ElectroVoice Model S15-3 Stage Speaker Cabinets. Old style with aluminum trim. Mike Kuk, 652 8th Ave. South, Clinton, IA 52732. Phone: 319-242-0224.

Wanted: VFX-SD-1 programmers to trade ORIGINAL VFX-SD-1 patches. (I have 120 hi-fi sounds, wide variety.) No tweaks or copyrighted sounds please! Send VFX-SD-1 or Alesis Data-Disk format to: Brad Kaufman, 11-26 Saddle River Road, Fair Lawn, NJ 07410.

LOOKING FOR WORK

High school student seeks work as SQ-1 sound programmer. Contact Mark Clifton II, 11972 Homeguard Dr., Woodbridge, VA 22192. Phone: 703-494-5432.

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M.U.G. will provide Out-of-Print issues for cost of materials and postage. M.U.G. Hotline: 212-465-3430 or write: G-4 Productions, PO Box 615TH, Yonkers, NY 10703. Attn: TH Back Issues. Phone: (212) 465-3430.

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Folks in the New York City area can get copies of unavailable back issues of the Hacker - call Jordan Scott, 212-995-0989.

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SD & VFX Hackerpatch

Sam Mims

SD & VFX Prog: Rhodes Tine

By: Walter Cooper, Latter Sound

NOTES: Rhodes Tine is a straightforward Rhodes piano. You can add some bite to this sound with velocity. Since the essence of this patch is transwaves, full velocity causes some weird ringing — but I like it.

THE HACK: Here's one to add to the piano bank. This patch is a bit more synthesized sounding than a real Rhodes, but it's nice. You can get closer to the real thing by changing the waveform of Voice 3. Try using the transwave ESQBELL-X for a nice round sound. It's also interesting using other attack waveforms here for different effects; my faves were MARIMBA, DOORBELL, PNO-PING, and

WAVES	1	2	3	4	5	6
Wave		SynchroX	InharmX	SynchroX		DigiPiano
Delay		0	0	0		0
Direction						Forward
Start		0	93	99		6
Vel Start Mod						0
ModScr		LFO	Keybd	Keybd		
ModAmt		0	+60	-64		

MOD MIXER	1	2	3	4	5	6
SRC-1		*Off*	Timbr			
SRC-2		Veloc	Press			
SRC-2 Scale		0.7	1.0			
SRC-2 Shape		QuikRise	Linear			

PITCH	1	2	3	4	5	6
Octave		0	-1	0		-1
Semitone		0	0	0		0
Fine		0	0	-6		+12
Pitch Table		System	System	System		System

PITCH MODS	1	2	3	4	5	6
MODSRC		Noise	LFO	Noise		Env1
MODAMT		+2	0	+5		+62
Glide		None	None	None		None
ENV1		0	0	0		0
LFO1		0	+10	0		0

FILTER 1	1	2	3	4	5	6
Mode		2LP	2LP	2LP		3LP
Cutoff		25	127	127		9
KBD		0	+25	-54		0
MODSRC		*Off*	Mixer	*Off*		*Off*
MODAMT		0	+29	0		0
ENV2		+68	+50	0		+72

FILTER 2	1	2	3	4	5	6
Mode		2HP	2HP	2HP		1HP
Cutoff		0	0	0		0
KBD		0	0	-99		0
MODSRC		Env1	Timbr	Env1		Env1
MODAMT		0	0	0		0
ENV2		0	0	0		0

OUTPUT	1	2	3	4	5	6
VOL		86	76	50		64
MODSRC		Mixer	LFO	Keybd		Mixer
MODAMT		-1	0	-30		0
KBD Scale		Zone	0	Zone		Zone
LO/HI Key		A0/C7	C3/C6	A0/C8		A5/C8
Dest Bus		FX2	FX2	FX2		FX2
Pan		43	50	43		43
MODSRC		Keybd	LFO	Keybd		Keybd
MODAMT		+35	0	+35		+35
Pre-Gain		ON	Off	Off		On
Voice Prior		Medium	Medium	Medium		Medium
Vel Thresh		0	0	+52		+96

LFO	1	2	3	4	5	6
Rate			43			
MODSRC			*Off*			
MODAMT			0			
Level			0			
MODSRC			Press			
Delay			0			
Waveshape			Triangle			
Restart			On			
Noise SRC RT		85		91		

GTR-HARMO (with the Pitch OCTave set to 0 or +1 for these last three.

I also found an interesting but subtle variation by switching the Effects setting to the stock PHASER+REVERB.

— Sam Mims

SELECT VOICE

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

ENV1	1	2	3	4	5	6
Initial						255
Peak						99
Break 1						99
Break 2						99
Sustain						99
Attack						99
Decay 1						99
Decay 2						99
Decay 3						99
Release						23*
KBD Track						0
Vel Curve						Cnvx2
Mode						Finish
Vel-Level						0
Vel-Attack						0

ENV2	1	2	3	4	5	6
Initial		99	99			99
Peak		99	75			99
Break 1		54	50			54
Break 2		42	25			42
Sustain		0	0			0
Attack		0	50			0
Decay 1		31	50			31
Decay 2		58	50			58
Decay 3		72	50			72
Release		43*	50*			43*
KBD Track		10	0			16
Vel Curve		Linear	Cnvx2			Cnvx2
Mode		Normal	Normal			Normal
Vel-Level		66	50			70
Vel-Attack		0	0			0

ENV3	1	2	3	4	5	6
Initial		94	99	99		99
Peak		99	86	93		99
Break 1		85	0	85		85
Break 2		70	0	70		70
Sustain		0	0	0		0
Attack		27	19	16		0
Decay 1		45	51	45		45
Decay 2		47	27	48		60
Decay 3		74	0	80		80
Release		36*	30*	43*		36*
KBD Track		28	0	57		28
Vel Curve		Cnvx1	Cnvx1	Cncave2		Cnvx2
Mode		Normal	Normal	Normal		Normal
Vel-Level		26	45	39		21
Vel-Attack		0	0	0		0

PGM CONTROL

Pitch Table	Off
Bend Range	2
Delay	x4
Restrike	24
Glide Time	0

EFFECTS (1)

Effect	Chorus & Reverb 1
Decay	58
FX1	25
FX2	22

EFFECTS (2)

Rate	19
Depth	13
Delay	53
Rate Mod	0
Depth Mod	0
Mix	30

EFFECTS (3)

Waveshape	Sine
ModSrc	*Off*
HF Cut	Off

PERFORMANCE

Timbre	0
Release	0

SQ-1 & 2 Hackerpatch

Jeffrey Rhoads

Prog: Breath Soul

By: Bivel Sylvain

WAVE	1	2	3
Select Voice	On		
Wave Class	Breath Wave		
Wave	Vocal Ensemble		
Delay Time	000		
Wave Direction	Forward		
Start Index	00		
MODSCR	LFO		
MODAMT	00		
Restrk Decay	41		

PITCH	1	2	3
Octave	0		
Semitone	0		
Fine	0		
ENV1	0		
LFO	20		
MODSCR	Off		
MODAMT	00		
KBD Pch Track	On		
Glide	Off		
Glide Time	00		

ENV1	1	2	3
Initial	28		
Peak	28		
Break	31		
Sustain	75		
Attack	26		
Decay 1	47		
Decay 2	17		
Release	70		
Vel-Level	00		
Vel-Attack	00		
Vel Curve	Convex		
Mode	Normal		
KBD Track	00		

LFO	1	2	3
LFO Speed	38		
Noise Rate	00		
Level	00		
Delay	53		
MODSRC	Off		
Wave	Pos/Tri		
Restart	On		

FILTER	1	2	3
Filter 1	3 LoPass		
Filter 2	1 Hi Pass		
FC1 Cutoff	50		
ENV 2	94		
FC1 KBD	36		
MODSCR	LFO		
MODAMT	10		
FC2 Cutoff	37		
ENV2	-20		
FC2 KBD	+99		
FC1MOD-FC2	On		

ENV2	1	2	3
Initial	24		
Peak	43		
Break	60		
Sustain	96		
Attack	27		
Decay 1	56		
Decay 2	87		
Release	99		
Vel-Level	00		
Vel-Attack	00		
Vel Curve	Convex		
Mode	Normal		
KBD Track	+98		

AMP	1	2	3
Initial	85		
Peak	88		
Break	87		
Sustain	93		
Attack	42		
Decay 1	39		
Decay 2	84		
Release	50		
Vel-Level	13		
Vel-Attack	00		
Vel Curve	Quikrise		
Mode	Normal		
KBD Track	+98		

OUTPUT	1	2	3
VOL	99		
Boost	On		
MODSRC	Wheel		
MODAMT	-30		
KBD Scale	00		
Key Range	A0 A0		
Output Bus	FX2		
Priority	High		
Pan	+00		
Vel window	124		

Standard
Sound
Programming

Effects Programming

(To save space, only those effects utilized are listed. A complete blank form was published in Issue #68.)

8-VOICE CHORUS

FX-1	62
FX-2	56
Chorus Rate	20
Chorus Depth	24
Chorus Center	60
Feedback	00
MOD (Dest)	FX1-Mix
BY (MODSRC)	Off
MODAMT	-

The Hack: Breath Soul seems, at first, to be a sort of entry-level vocal pad. As it stands, it certainly works on that level; i.e. New Age, soundtracks, etc. However, minor tweaking of some parameters that haven't been taken advantage of will give Breath Soul the "soul" it needs. You can create a slight pitch shift at key release by adjusting ENV 1 to +03 in the Pitch Section. Also in the Pitch Section, set LFO to +02. Then go to the LFO Section and turn the LEVEL to 08 and change LFO SPEED to 25. This will add a hint of tremelo. In the Output Section, correct VEL WINDOW to 000 and use +08 for the MODAMT. This will add brightness as the wheel is applied, instead of fading the voice. Finally, try boosting the Chorus. In the Effects Section, change CHORUS DEPTH to 40 and switch FEEDBACK on to 35.



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.

SQ-1 & 2 Hackerpatches are published with the same constraints and understandings as the ESQ, SQ-80, and VFX patches. The hacking and mutilating part is being handled by Jeffrey Rhoads.

The Interface

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

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

Electronic mail - GENie Network: TRANSONIQ, CompuServe: 73260,3353, PAN: TRANSONIQ, 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.

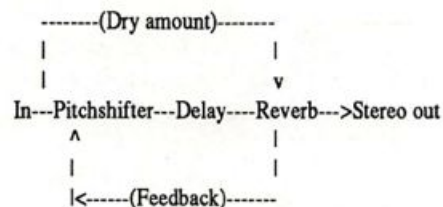
Greetings TH, CS and Hackers,

One of the exciting things about the **EPS-16 Plus** is that its FX chip (ESP chip) is driven by software loaded from floppy. Bill Mauchly has taken advantage of this with the release of WaveBoy's "*Parallel Effects Disk 1.0*." Craig Anderton's review of the PED-1 was great to see. Unfortunately Craig was too early to review another algorithm that WaveBoy has released and that is a **PITCH SHIFTER**. Having struggled to get the EPS to do this in my article in TH #79 it was of special interest to see this capability implemented (properly) in the FX chip.

WaveBoy's pitch-shifter is great. You can transpose +/- 36 semitones with a minimum resolution of 1 cent. Pitch shift amount may be fixed or modulated by the keyboard. The input to the pitch shifter can come from the internal samples, or, **CHECK THIS OUT**, the "audio-in" jack on the back of the EPS-16 Plus.

Exciting times we live in. I'd hope to see all the FX with this capability at some stage in the future. You'd have considerable low-level control over all the major insides/parts of the algorithm.

The pitch shifter path I had to work out as it's not shown in the manual. Here's what I think's going on...



Note the pitch-shifted signal can be delayed and fed back into the input of the pitch-shifter - great for spiralling UP/DOWN pitch effects.

At the risk of sounding like I have shares in WaveBoy (which I don't) I can't rave enough about the PED-1 (which now comes with the pitch shifter as a bonus). Second only to TH on the "essential accessory list" for the EPS. Do it now - go buy it.

One thing I would like to see is Bill Mauchly or someone else at Ensoniq write a series of articles on the ESP chip similar to those of Gary Giebler on the Ensoniq disk format. Gary's articles have been the inspiration for a number of software projects that I know are now underway in the 3rd party domain (watch TH for further info...) At the risk of creating competition for himself, how about Bill releasing a ESP chip "Developer's Kit" so we all can have a go at programming FX. Presently there are a few people around looking at the code for the FX that is stored on floppies... a long slow process.

Scott Fisher [scott@wapsy.uwa.oz]
Department of Psychology
University of Western Australia.
Nedlands, 6009. PERTH, W.A.

[TH - That'd be neat.]

Dear T.H. Interface,

I am a definite believer in **Ensoniq samplers**. I first owned a Mirage and now an EPS for my business, Studio "B". Because of my full time occupation, I must closely follow the music industry trends for future studio equipment needs. It seems to me that a new sampling keyboard should be out from Ensoniq soon. I say that because the trend has been a **NEW RELEASE** (like the Mirage or EPS) then approximately two years later an **UP-GRADE VERSION...** (like the Mirage DSK or the EPS-16+). Well, if I'm right, we should soon be seeing the **NEXT GENERATION Ensoniq sampler**.

Based on what I see happening with sampler trends, and how Ensoniq likes to keep two steps ahead of the pack, I thought I might project what I perceive the next unit to be. It should be a true stereo unit that will be compatible with all EPS samples. It'll have built in 4 or 6 outputs, with optional SCSI interface. The interface won't be as popular because it'll also have an optional **BUILT IN HARD DISK DRIVE OF 40-130 Meg**. Standard would be 2M of RAM expandable (with standard **SIMMS CHIPS**) to approximately 20 MEG. I'm not sure if these specks quite

match, but I suspect it'll have a max sampling time of about three minutes. Best of all (and here's where the two steps ahead of the pack comes), It'll have 76 keys and a 24-track sequencer!! And what do you suppose they'll call this beauty? How about the "ESS" which they'll say means "Ensoniq Stereo Sampler" but I think means "Ensoniq Super Sampler!!"

Well that's my expectation. I hope I'm close and that it'll still be under \$2999 so I can afford one. If I'm right, how about sending me one to review? I promise to give it back (unless I buy it first!)

Thanks for the time and space.

Sincerely,
Mike Castronovo
Studio "B" Recording
Rockford, IL

[CS - It will also be available with custom tuck-n-roll upholstery on the front panel and built-in drink holder, ashtray and air-bag as the "ESS Brougham."]

Dear Hacker,

As you've probably suspected, there are a number of us whose uses for Ensoniq axes go beyond the usual pop/rock styles. As a full-time church musician, I use my **VFX-SD Version 2** in a typical church "contemporary ensemble" context, and in some more conventional uses with the pipe organ. But I've also realized some quasi-New-Age sounds emulating the gamelan for some more avant-garde choral music. These have been wonderful opportunities to learn the ins and out of the Ensoniq sequencer - a terrific tool for most uses.

The big limits of the Ensoniq onboard sequencer, of course, are lack of tempo control and inability to do multiple meters within a piece. That has led me to start playing around with Performer on my Mac. (Setup details: Mac SE with Dove 68030 accelerator, Performer version 3.61, Apple MIDI interface, Ensoniq OS v. 2.1). Though it's a powerful program, I hope to avoid lugging the computer around for every gig, so I'm experimenting with load-

ing the finished sequences back into the VFX-SD for performance (not synced to the internal beat).

Some questions for the gurus:

1) When the material is dumped back into the VFX-SD, I apparently lose poly key pressure information. I hear it going into Performer (and see it, too – like an army of ants crawling across my screen!), and it plays back into the VFX fine, but when playing back from the VFX sequencer it's gone! This happens both in Multi Record mode (all tracks at once) and when I try to record the tracks one at a time. Volume and timbre controllers seem to come through okay.

2) Also, if I want to use percussion sound as a "click track" that reflects my rubatos and meter changes, I risk using up some of those valuable 21 voices (I like dense, sustained New Age textures). Is the "click" sound in the sequencer generated separately from the other voices, and if so, is it accessible separately somehow?

3) I'd love to get in touch with anyone who has retrofitted a fully flexible 2-way MIDI interface to a decent sized pipe organ. I know the gear exists, but my local pipe organ people don't know the details and are dependent on the shoddy documentation or antiquated technology of the few folks who deal with this (admittedly limited) market. The documentation I've seen is pathetic, and makes me appreciate the clarity of the Ensoniq manuals for my VFX!

4) Did I read somewhere that somebody got an SD-1 upgrade for \$150 after having upgraded to the VFX-SD Version 2? Does that mean us VFX-SD Version 2 owners get that rate, or the oft-quoted \$600?

Thanks for the rag. You make me want to buy an EPS when my ship comes in!

Sincerely,
John Seboldt
Minneapolis, MN
CompuServe 72521,641

[CS – 1) The only thing I can think of is that you may have individual tracks in your VFX-SD either set for the wrong kind of pressure, or else have pressure reception disabled altogether. If this is not the case, I'd suggest calling Ensoniq Customer Service (215/647-3930) directly – they should be able to help you track down

the source of your difficulties.

2) Actually, the click sound is not generated separately from the other VFX voices – it plays an internal woodblock sample (or something like that), so there is no advantage in trying to access it via MIDI. You're just as well off using a voice of your own choosing to produce a metronome track for your sequences.

3) Rumor has it that such an interface does exist – I once did some consulting for Rogers Organ when they were first attempting to MIDI up their electronic and pipe organs. Of course, Rogers is now owned by Roland Corp., so maybe they'd have some ideas. Also, Bill McCutcheon (Exalted Scientist, Sound Designer, and General Answer Dude at Ensoniq) thinks he knows of one. Check with him at Ensoniq.

4) Yes, you did. And I don't know.]

[Ensoniq – If a customer has already spent \$699.00 to upgrade their original VFX-SD to a VFX-SD Version II (with the Mega-Piano waves), or to a regular (21 voice) SD-1, we will not to charge them another

\$699.00 to upgrade again. The lower price is in recognition of the money already spent on the first upgrade. If you have never upgraded your instrument, no matter what the version you currently own, the price will be \$699.00.]

Dear Sir,

I have owned an SD-1 for one year. It's a great musical instrument.

Is it possible to store sounds in my Mac Quadra computer via Editor/Librarian software? Can you suggest some companies that support the SD-1? And is it possible to install a SCSI interface on my SD-1?

I look forward to your reply.

Yours sincerely,
Jean-Luc Berthelot
Drancy, France

[CS – You should be able to use your Quadra to store SD-1 sounds. A number of companies make editor and or librarian programs for Macintosh format computers – I've had good luck with Galaxy from Op-

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code systems, but other programs exist (and shouldn't be hard to locate).

The main question is, "Will the program run on a Quadra?" The Quadra is a spunky brand new fancy-schmancy high-end computer from Apple, meaning that pioneers like yourself are the first brave few who will blaze the trail into the land of strange incompatibilities and mysterious high-tech hiccups, forging the path for the rest of us who won't be able to afford these money-sucking collections of chips and dip switches until something new comes along to entice you and your money-market into the next greatest thing, making the current greatest thing passe and available as used (read: boring) hardware at a substantial cost savings. The slogan for us middle income earners? "The power to be second best." But hey - I'm not envious or anything. Why, I don't even know the meaning of the word "succinct."

Before you buy any software, contact the manufacturer (via phone, FAX or satellite uplink) and ask them if their software will work on your machine. And if it doesn't, just remember - pioneers don't whine.

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I know of no way to install a SCSI interface on your SD-1. Bear in mind that most of the information that you might be bussing around a computer system from your SD-1 takes up so little memory (comparatively), that MIDI ought to work just fine - putting a SCSI interface on your SD-1 might be kinda like installing an electric garage door onto your second bathroom - it would work, but it might be overdoing it just a teensy bit.]

[Ensoniq - We also know that Dr. T's Music Software has X-Or for the Mac, which includes SD support. They can be reached at 1-800-989-MIDI. Sound Quest also lists VFX support, they can be reached at 1-800-667-3998. Interval Music also has a stand-alone VFX editor (which was reviewed a while ago in the Hacker), and they can be reached at (310) 478-3956.]

Dear Hackers:

Well it happened. My !@#\$\$%^* 210-Meg Quantum attached to my EPS-16+ had a massive seizure.

I run everything off a Tripplite LC 1800 Line Voltage Conditioner and have taken great care to never overwrite files. Hard drive hardware failure is the tech's diagnosis.

Anyway, my only solution is to wait for my new drive (it is on warranty) and reload all floppies. We are talking 160+ floppies - about 650+ sound files. Oh, what a feeling!

Ensoniq's upcoming new operating system with its backup features would have helped me a little. As it is now, all my banks I so fastidiously saved separately to floppies will no longer load the appropriate sounds from my new hard drive unless I get the hard drive to look EXACTLY like the old one. Easily TWO LONG days of work.

Ensoniq, PLEASE don't stop at simple file backup to floppies on the new OS. Who in their right mind wants to have a floppy backup of 160 disks? There must be a way to backup to tape. No muss, no fuss. Every "sane" LARGE hard disk computer user uses tape backups. We need a tape-drive-capable backup so it would be an easy thing to reformat and reload. A hard disk utility program would also be nice but give us the EPS FASTBACKUP FIRST.

With a little effort we can use an existing computer diagnostic/utility program and then reformat and reload FAST from tape.

Any current half hour reload tips would be greatly appreciated.

Yours truly,
Orion Engar
Dorian Research Corp.
Sardis, BC Canada

[CS - Actually, EPS-16+ OS 1.10 includes a "Copy SCSI Drive" utility which will allow you to backup the contents of one SCSI device to another. You should be able to get this OS at your local dealer if you don't already have it. Of course, that's not much help after the fact, but it's my job to point these things out.]

Dear TH,

Answer to Mike Engh's problem in Issue #82, question #3:

I found a way to get around the "loop off / loop on" syndrome. I read that article and previous articles about this problem on song or sequence mode. I tried Record Add on an empty track and then I tried Add On "loop off" like everybody else.

Well, here's the answer. You start with a new sequence, put it to "loop off." Don't change it, it worked. So then I tried another sequence and it worked. Then I put the sequence in Song Mode and it worked. So success came to my EPS-16+.

Another thing that I do is that if I have an old sequence that I have left with Loop On I use an Alesis Data-Disk. Save the sequence to Data-Disk and then put the 16+ on Multi Record sequence back to the 16+ and put "loop off" before I record anything. To make sure I shut my hard drive and my 16+ off. I booted both back up and it remembered the "loop off."

Does Ensoniq need any help in Pennsylvania?

Donald Suite
Holliday, Utah

[CS - Donald, I think you may have misunderstood the problem that Mike was referring to. Yes, it is true that the EPS-16+ does remember the setting for the loop switch for individual sequences.

The difficulty Mike was having is that the EPS-16+ does not remember the loop setting for songs. As far as songs are concerned, the loop setting is global – if you turn the loop on, it will stay on for any subsequent songs, no matter what setting was used for the song originally. Additionally, the default condition for the song loop setting is "On," so if you want song looping off, you have to remember to manually turn it off each time you fire up the EPS-16+.

Also, I think you may be taking the long way around for re-setting the loop switch on your earlier sequences. If you want to make a permanent change to the loop setting for an individual sequence, simply change the loop switch to the desired setting and re-save the sequence. The loop setting will be stored along with the rest of the sequence file.

And as far as this loop thing goes, my understanding is that Ensoniq, realizing that a number of customers want to be able to save the loop setting along with their song files, has decided to add this function into an upcoming OS version – so stay tuned.]

Dear TH,

First of all I'm glad I have the possibility to ask my questions here – not too many people around where I live can help me. I own the following gear – a Mirage, an ESQ-1, an SQ-2, a Roland TR-505 and of course a DX-7 (as everybody has one).

I don't use the Mirage as a sound module very much but as a storage medium for the ESQ-1. It does a good job. The SQ-2 is my favorite and my master of course, but I can't get it exactly where I want it.

First of all, can I dump sequence data directly from the SQ-2 to the Mirage as I can with the ESQ-1? Can I also load patches the same way? I also have Portastudio 244. The ESQ-1 has the tape-sync feature which makes life easier for me. Can I use this option in any way from the SQ-2? I guess this is elementary stuff for the pros but I haven't been able to obtain this information through the manuals or by asking the people at my local dealership.

And a final question: The SQ-2 has a beautiful piano. I like it a lot. But for some reason it is one octave higher than the other voices. I have transposed it down so everything is okay, but do you have any

idea why it was programmed to be higher?

Thanks for all the help.
S. Asphaug
Trondhjem, Norway

[CS – The Mirage can be used as a data storage device for nearly anything that's capable of sending data via MIDI sysex – the SQ-2 included. A number of alternative operating systems were once available to add this capability to the Mirage, but the only one I know of that's still available is the excellent Midicaster program from Tim Martin (1510 S. 5th West, Missoula, MT 59801, 406/542-0280). This program should allow you to store sequences, patches and presets to Mirage disks.

As far as tape syncing goes, you should be able to use your ESQ-1 as an interface between your tape deck and the sequencer in your SQ-2. What you'll need to do is set up a blank sequence in your ESQ-1 – perhaps a short sequence set to loop will suffice. Next, run a MIDI cable from the MIDI out of your ESQ-1 to the MIDI in of your SQ-2, and switch the SQ-2 sequencer clock from "Internal" to "MIDI." Finally, synchronize your ESQ-1 to the tape deck in the normal fashion, and you should be in business. The ESQ-1 will now recover the sync code from tape and translate it into MIDI clock information readable by the SQ-2.

Finally, my understanding is that since there is no agreed-upon standard for octaves ranges of sounds produced by electronic instruments, Ensoniq generally tries to place sounds on the keyboard so as to maximize the usable range of an instrument. As you've discovered, this may not be the instrument range that works best for everybody, so Ensoniq's tried to make it as easy as possible to change instrument transpositions.]

Hackeroonies,

Try this out. Get Joey DeFrancesca's (sp?) B-3 EPS collection. Load disk 1 to instrument 1 and disk 2 to instrument 2 (AFTER you copy instrument 1 on instruments 3 – 4 – 5 – 6 – 7 – 8. Transpose Instrument 1 two octaves, Instrument 3 a fifth down and don't transpose Instrument 4. On Instrument 5 transpose one octave up and Instrument 6 an octave plus a third. Transpose Instrument 7 up an octave plus a fifth and Instrument 8 up two octaves. With this setup you can use the individual instru-

ment volume slider to control each "drawbar" when all instruments are double clicked. Hot-cha-cha. Instant B-3. Well, almost.

I'm working on a Jimmy Smith sound, still trying to simulate the attack. Anyone with any ideas please write me. Also trying to simulate the Leslie chorusing. Any ideas, Ensoniq?

Al Trautman
P O Box 172
Lydia, LA 70569

[CS – Great tip, Al – thanks!

Since you ask about simulating the Leslie effect, I must assume you're using an EPS classic – the one without the built-in effects. About the only suggestion I might make regarding the simulation of chorusing effects would be to copy the primary layer of your basic organ instrument, and use the LFO to do a fairly subtle pitch-shifting of the copied layer. When these two layers are played back together, you should be able to get a pretty good approximation of a standard chorusing effect – albeit at only one speed. To simulate a two speed Leslie, you might try copying



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the primary layer again, and using the LFO once more to control pitch-shifting of this third layer, but this time set the LFO for a faster rate. You could then use pressure, the modwheel, or some other controller to cross-fade between layers two and three, allowing you to switch between slow and fast chorusing. It probably won't sound 100% like the real thing, but it should be closer to the effect you want than nothing at all.]

Letter to the Editor,

Money back guarantee?

This is a helpful reminder for people dealing with mail order companies. If you return a product for a refund, be sure to send it registered mail. I recently ordered \$200 worth of Korg M1 sounds in the Galaxy software format from Many Midi Products in Beverly Hills, CA. I was not satisfied with the collection so I sent the original software disks back through the regular US mail. Many Midi claimed that they never received the disks and I could not prove I sent them so NO REFUND. Since the true value of the disks was

probably less than \$2, I had hoped that Many Midi would trust me. But No!

They did send me another copy of the lost disks so I got something for my money, but not what I wanted.

Be careful out there,
Denis Hulett
Sebastopol, CA

[CS – The vast majority of mail order companies are reputable, with some even providing better service and support than local dealers. Still, when ordering products through the mail it pays to be just a little extra careful – keep good records, and if asked for a credit card number, try to determine if the product will be shipped before the credit card is charged. And if you have any questions at all about a company's ability to deliver the merchandise, insist on paying COD. If the company will not accept COD payment, shop elsewhere.]

[TH – Unless, of course, you're renewing your sub to the Hacker.

Actually, (as anyone in the mail order or

publishing biz will tell you) the only culprit in this case was the good ol' postal monopoly. Every month we can count on getting at least a dozen calls from people whose issues somehow made it to outer space. At this point, Many Midi has no way to distinguish between people who just call and say, "I sent back the disks, send me my money" and people who actually did. Oh well, maybe your disks will eventually show up.]

Dear Hacker,

When I am sequencing with my SQ-2 and I am using the Dynamic Grand, the sound of the piano changes. Why doesn't it sound the same as when I am just playing the piano sound alone?

John Crandall
Camarillo, CA

[CS – Most likely the Dynamic Grand sounds different because you haven't copied its effect into the sequence along with the sound. You see, the SQ sequencer can use an effect that's totally independent of whatever sounds are being used.

Try this – press the "Select Sounds" button and use the "Bank" and "Screen" buttons to locate the piano sound. Then, press and hold the "Edit Sequences/Presets" button, and while continuing to hold it down, press one of the eight "Track" buttons (to select the track into which you wish to place the piano and its effect. Finally, press the "Select Sequences/Presets" button to return to normal sequencer operation.]

Dear Hacker,

This is in response to Jerry Kovarsky's "errata" published in the May, '92 Hacker. I'm glad that he's offered to verify facts for future articles. I will certainly take advantage of it. At the time my article was written, no such support was available. Ensoniq's Customer Service line was my only point of contact and unable to answer such technically detailed questions reliably. In fact, as recently as March, 1992, Bob O'Donnell, editor of *Electronic Musician*, was told by Ensoniq itself that all samples transferred over MIDI or SCSI to the EPS Classic were 16 bit when saved to disk! Only after I made some rather rude insinuations on the PAN Network did he investigate further to get the real facts from



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Jerry Kovarsky.

As another example of the lack of hardcore technical support, in January 1992 I called Ensoniq Customer Service to ask about some seeming discrepancies between Ensoniq's *EPS External Command Specification* and my actual results with SYSEX communications. Their reply was that all those commands had been tested and verified (!) and phone contact with the software group was not possible. The suggested recourse was to write a letter. I sent the letter on January 13 and as of May 9 have not yet received a reply. My project is an EPS/16+ template for Sound Quest's MIDI Quest Generic Editor/Librarian, which would make an EPS/16+ parameter editor available for the Mac, PC/Windows, Atari ST and Amiga platforms. Despite this, Ensoniq seems unwilling to help by even confirming or denying my problems, among them, the EPS's inability to respond to EDIT WAVESAMPLE ALL SYSEX commands or LAYER PITCH-TABLE SYSEX commands as documented in their own publication.

The editor is correct in suggesting that I did not "downplay" the other features and improvements of the EPS-16+, I simply avoided addressing them altogether since that's a subjective judgement without a good spectrum analyzer.

In retrospect, I should not have arrived at the conclusion that *all* Ensoniq EPS sound sets were 13 bit from my examination of the disk library shipped with all EPSs. But if you really think about it, this mess could have been avoided altogether if Ensoniq had responded to the April 1991 *Electronic Musician* EPS-16 PLUS review that claimed "original EPS library disks reveal full 16-bit quality when loaded into the 16 PLUS." With Ensoniq now admitting that only 2 out of the 26 EPS sound sets are 16 bit, I'd say that until my *Hacker* article and PAN messages forced the issue I came a lot closer to the truth than the other parties involved.

Sincerely,
John Loffink
First Generation
Cocoa, FL

[TH - Well, at least it's all straightened out now. We know we'll never forget it...]

Dear Clark, TH and Ensoniq

I have a few questions and comments which I hope will be helpful.

1. I've tried to set up a preset on the SD-1 using the patches Rude-Guitar (killer patch!) and Elec-Bass (a ROM killer patch). When I double click the two sounds together and try to split the range (bass in the left hand, guitar in the right) the Rude-Guitar continues to sound in the range of the bass. I believe the patch name to be a total coincidence. I've done many presets and splits and this is the first time I've come across this problem. How can I accomplish this split and keep the Rude-Guitar in its place?

2. I don't want to sound like a broken record but why oh why doesn't Ensoniq take the patches in the SQ-1 and offer a series for the SD-1/VFXsd owners. They would probably expand the sales market for these patches (or are they concerned they'll sell SQ-1 patches and not SQ-1s?) There are many great patches on the SQ-1 but who really has the time to translate them all to the SD-1?

3. It is my hope that in the next SD-1 upgrade or next generation synth from Ensoniq could include patches and waveforms to match or beat the sound quality of the Roland D-70's factory internal grand piano and grand piano-string patches. They are sensational and extremely useful - the acoustic guitars are awfully good too.

There is another patch out of the Roland D-50 which is extremely useful called Chorused Strat. These would be great sound additions to the already way great arsenal of sounds in the SD-1. The strats in the SD-1 and VFX are excellent for playing easy listening music. Rude-Guitar is super for hard rock. The Chorused Strat patch would be a great in-between sound with some bite and punch but not too much. I can just hear the Ensoniq engineers now all chorusing:

Bitch and gripe,
Bitch and gripe,
All you do
Is bitch and gripe.

Of course, Roland's user-friendliness, at least for the D-70, leaves lots to be desired. And I should mention that I own an SD-1, a D-70, an M-1REX (plays M-1 and T-series sounds), an SQ-80 and an EPS-16+. If I had to recommend the best all around value for a synth-workstation it would be the SD-1, hands down.



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[CS — Actually, the "Rude Guitar" patch is working fine. What I think is happening is that when you create a preset using the "Rude Guitar" as the first patch, the distortion effect that's set up as part of the "Rude Guitar" voice becomes the effect for the preset. Any sound that you then run through this effect tends to take on enough of the character of the distortion effect as to start sounding pretty similar to the "Rude Guitar" patch. Try this:

Set up your preset as usual, with "Rude Guitar" in one keyboard range, and "Elec Bass" in another keyboard range. When you've done this, hit the "Effects" button in the "Performance" (Sequencer/Preset) section. Select the bass sound, and change its effect setting from "CNTRL" (or whatever it is) to "FX2." The bass should now be routed only through the reverb section of the effects processor. To adjust the reverb amount for the bass sound, hit the "Effects" button again, and adjust the "FX2=XX" control.]

Transoniq Hacker:

Great mag, dudes! I have a few questions regarding some of Ensoniq's products. Now that almost all of the keyboards are 32-note polyphony why not make the EPS-16+ 32 notes? Also, how about an SD-1 rack?

On the EPS-16+ the effects are software definable. Is it that way on the SD-1? Exactly what is software definable on the SD-1? And are there any programs to let us computer nuts hack at the operating system?

Hey! If there are any SD-1 users who would like to trade sounds write to me at:

Eric Olsen
6050 Adaway Ct
Grand Rapids, MI 49546
(616) 676-0863

[CS — The effects in the SD-1 (as well as the other synthesizers made by Ensoniq) are stored in ROM on-board, and as such are not accessible to the mortal musician.]

[Ensoniq — Unfortunately the EPS-16 PLUS can't be modified in the same way that our synths have been to achieve 32

note polyphony. But we will certainly strive to have all new products be 32 notes or greater in the future.

We have discussed the potential viability of higher priced racks many times in this forum, suffice it to say that we have no plans for an SD-1 rack. We will not, however rule out the possibility of producing higher priced racks in the future. (I know, we could be running for office with this sort of line!) Right now, the SQ-R PLUS 32 Voice offers a great value for the money, with 32 note polyphony, 3 Meg of waveform ROM, 180 internal program (340 with a card), a large library of sounds, and great MIDI functionality. All this for only \$995.00 Suggested Retail.]

Dear Hacker folks,

I've got an SD-1 (3.0 ROM-OS) and can't say enough great things about it. I used to have a VFX-SD before I got the SD-1 and, after struggling with its quirks for what seems like forever, it's nice to have a stable box for a change. But, as always, there is a small wish list of enhancements. Ensoniq, are you listening?

First of all, when using the scale function it would be nice to be able to also set an upper and lower threshold. The reason is simple; sometimes, especially on keyboard velocity, there are errant peaks that are a pain to adjust (especially if there are many) using event edit.

Second, how about allowing us to load a bank of sounds from disk to cartridge instead of only to internal memory. When you're working on a tune and have all the sounds you are using in internal memory, it's inconvenient to copy them to cartridge just to load a new bank so you can find another sound.

Another usable function would be to be able to generate controller values automatically from a start time to an end time with a beginning and ending value. This would be very useful when you want to add volume controllers for a smooth fade out and don't want to use the CV pedal. This way you could tell the SD-1 to automatically go from volume controller value 127 to 0 over a period of 8 bars for example. Pretty slick, don't you think?

On a simpler side, since you can assign a base MIDI channel, how about allowing us to enter a value of 0 if we don't want the

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