



# TRANSONIQ HACKER

The Independent News Magazine for Ensoniq Users

## Sampling an Acoustic Instrument on the Ensoniq EPS

By Gary Dinsmore

Shortly after bringing home my new EPS I found that programming my own instrument voices attracted my attention, and after some very bad sounding attempts that consumed the entire memory, I finally got my copy of the EPS Advanced Applications Guide. I read a lot, bugged Clark Salisbury down at Portland Music occasionally, and tried each of the functions described. I made a couple more terrible sounding instruments and a few sound effects. I managed to prove again the old computer programmer's adage, GIGO. Specifically, you cannot take a lousy sounding tone from an instrument and create a superior sounding emulation of the instrument on the EPS.

This will be a two part series in which I'll take you step-by-step through the process of creating a fairly simple instrument. We will create an instrument in the EPS that attempts to duplicate the sound of a standard acoustic instrument like a trumpet. Each patch will be a single layer, and will contain several samples that will allow us to replicate the timbre of the instrument from its lowest to its highest registers. Layer 1 will be the natural sound of the instrument, layer 2 will be the muted sound. We will finish up the instrument by assigning key ranges to the individual wavesamples, tuning the samples to correct for any inaccuracies in the original tones, and assign the layers to individual patch buttons.

### Planning Ahead Can Save Time

Before you sit down at the keyboard, there are several things you can do to improve your odds of success. First, of course, is to get the best quality sound samples you can. I agree with Barry Carson in this area. The quality of the instrument you create can be no better

than the instrument and the artist creating the samples. Even this is limited by the quality of the microphones and recording media used. I advocate using a high quality tape machine, and good quality tape. Have the musician play a dozen or more notes at each pitch, concentrating on maintaining constant pitch and timbre. Later you can audition the tones and pick the best for sampling.

You need to decide on the limits you wish to live within in terms of memory, sound quality, and degree of faithfulness to the true instrument. If you are trying to hold the memory requirements to under 200 blocks, then a standard cassette recorder will be quite adequate. If, however, you want to create the cutting clarity of a solo instrument you need a top notch cassette recorder with metal tape, or even the extra fidelity of a big reel-to-reel machine. Don't overlook the potential of one of those high-fidelity video tape machines. They place the audio on the helical scan with the video, and provide 20-20,000 Hz fidelity. You don't need a camera, just let whatever video is there go on the tape, and plug a high quality microphone in the line inputs. You should also plan on using a high sample rate of 32.9 kHz or better. That also means the total sample time available will drop below 16 seconds even for the 2x EPS. This also means you will probably use very short samples and provide envelopes to recreate the attack and decay characteristics of the instrument.

Once you have decided what you wish to create, you can determine the physical characteristics of the instrument. You can decide the keyboard range you wish to cover. That could be limited by the natural limits of the instrument and be shorter than the Ensoniq keyboard, or it

## In This Issue...

RC030820

### MIRAGE:

Twenty-Six Free Tips  
Sam Mims ..... 9

Getting Your Hooks Into Midicaster  
Tim Martin ..... 20

### ESQ-1/SQ-80:

Sequencers and Feelings  
Bryce Inman ..... 6

Additive Synthesis  
Mike Sales ..... 7

The SQ-80 / HR-16 Connection  
Dave Caruso ..... 18

Hackerpatch  
Sam Mims & Contributors ..... 22

### EPS:

Sampling an Acoustic Instrument  
Gary Dinsmore ..... Cover

Catch the Wave  
Clark Salisbury ..... 11

Review: Keel Productions  
Kenn Lowy ..... 13

### GENERAL:

Random Notes ..... 3

Hypersoniq ..... 4

Current O.S. List ..... 4

Review: The Pedal Organizer  
Larry Church ..... 15

Converting a Volume Pedal  
C. R. Fischer ..... 17

Classifieds..... 24

The Interface..... 26