



OSCAR PROGRAMMABLE MONOPHONIC SYNTHESIZER

MONOPHONIC SYNTHESIZERS in the '80s? It may seem a little curious, but the makers of the OSCar are no doubt banking on the fact that there's still a use for monophonics despite their theoretical technological "obsolescence." In fact, the Oxford Synthesiser Company has taken advantage of advances in digital technology and included many functions that you wouldn't expect to see on a "mere" monophonic (or an inexpensive polyphonic for that matter) including sequencing, dual VCFs, MIDI, and a unique DCO design that features both analog and user-programmable digital waveforms.

At a glance, the OSCar looks like some kid's junior-high science fair project. Its yellowish-tan and black graphics and thick foam-padded side panels give the instrument an unorthodox (read that modified shoe-box) blocky look. However, a close look and one listen will convince you that the OSCar is no toy synthesizer.

The Keyboard, whose action feels pretty light, serves multiple purposes. Besides playing notes, it is used to recall programs, sequences, and waveforms, as well as to affect transpositions and set the interval between the two DCOs. To help you keep track of which key calls up which sequence, waveform, or program, there are numbers printed above each key. The keyboard's function is changed by pressing and holding the appropriate buttons on the front panel.

Left-Hand Controls include two slightly oversized wheels, one for pitch-bending and the other for modulation. They are both spring-loaded, which is rather awkward for the modulation wheel and not exactly ideal for the pitch wheel. The springs are tight enough to make it hard to reach the outer edge of the wheels' throw. The range of the pitch wheel is programmable, with the maximum being plus or minus a ninth. The mod wheel will go both positive and negative. Located just to the right of the mod wheel are two octave switches, which can be used very effectively because of their location to provide some interesting timbre shifts, via lightning fast octave changes, while you're playing lead lines or doing special effects.

The Voice is fairly standard, with a few notable exceptions. The DCOs produce triangle, sawtooth, square, and variable width pulse waves, and five preset digital waveforms, as well as five user-programmable digital waveforms. The preset digital waveforms produce harpsichord, full organ, lead, and pulse effects. The programmable waveforms work such that the keyboard is used to specify harmonics (from 1 to 24).

Osc 2 can be set to produce whatever waveform you call up on osc 1, a handy feature. You can also switch osc 1 off entirely for single-oscillator sounds. Osc 2's octave can be shifted over a 5-octave range with a rotary switch, and you can use the keyboard to set the interval between osc 1 and 2. Pulse-width modulation to both oscillators is supplied by the LFO's triangle wave. The rate is fixed, and is slightly different for each oscillator. This is a surprising limitation given some of the other features.

The section of controls located between the



oscillators and the filters is used to do things like attenuate the amount of modulation introduced by the mod wheel to the oscillators, filter, and pulse width, and set the glide rate and type (normal, auto, and glissando, with fixed rate or variable rate). The mix of the two DCOs and noise source is also set in this section.

The LFO produces triangle, sawtooth, square, and random waveforms. The rate is adjustable from one cycle every 30 seconds to 30 cycles per second. The amount of modulation from the LFO to the filter and to the oscillators is independently attenuatable, and the modulation can be inverted. There's also a control called intro—another word for LFO delay. Maximum delay between when a key is depressed and when modulation starts is about eight seconds.

The VCF arrangement is somewhat unique on the OSCar. There are actually two 12dB/octave filters, under a single set of controls. A rotary switch is used to determine whether the filters act as lowpass, highpass, or bandpass filters. A rotary pot controls the amount of

separation between the center frequencies of the two filters. With no separation, the filters combine to act as if they were a single 24dB/octave filter. With more separation (the amount is continuously variable), the lowpass rolloff slope moves towards 12dB/octave. In bandpass mode, the separation control adjusts the bandwidth. Other filter controls include Q, cutoff frequency, and keyboard tracking (which can go both negative and beyond 100%).

There is an ADSR for the VCA and another for controlling the VCFs. This second envelope generator is an ADSR with an interesting twist. When the sustain level is at 0, the release control becomes an initial delay (maximum of one second) and the whole envelope becomes a DAD envelope. Also, the attack time is adjustable from 1 millisecond to over 60 seconds (1). The modulation from this envelope generator to the filter cutoff frequency can be inverted.

There are a number of triggering options available, including single or multiple triggering and three types of repeating triggers. The first repeating option retriggers the VCA's ADSR automatically at a rate determined by a tempo control; the second retriggers the VCFs' ADSR—rate is again determined by the same tempo control; and the third retriggers both envelope generators simultaneously. You can also use an external trigger source to drive the envelopes. A gate time control is provided to allow you to adjust the amount of time between automatic triggers. This function comes in handy when used in conjunction with the sequencer.

A single rotary switch is used to select the function of the keyboard—whether it will operate normally, in arpeggiation mode, or in duophonic mode. Arpeggiation can be sustained (notes sound even if your hands are off the keyboard), and it can go up, down, or up/down. A number of front panel controls, which serve multiple purposes, are used to effect changes in the arpeggiator function. For example, a button that is used to insert rests in sequences is also used to allow you to add notes to a running arpeggio in hold mode.

The duophonic mode separates the two oscillators, making them independently address-

OSCar

Keyboard: 3-octave, C-to-C, last-note priority.

Voice: 2 DCOs, 2 12dB/oct. filters, 2 ADSRs, VCA, LFO.

Memory: 36 user-programmable presets, 12 sequences, 10 sequence chains.

Interfacing: MIDI in, out, thru. Cassette storage of patches, sequences, and waveforms.

Features: arpeggiator, sequencer, duophonic capability, DCOs with user-programmable digital waveforms, VCFs can be combined to produce 24dB/oct. LP or HP or 12dB/oct. BP.

Dimensions: 28 3/4" wide, 5" high, 14 1/4" deep, 21 lbs.

List Price: U.K.: £499.00. U.S. distribution is still being worked out. Manufacturer estimates list price at approximately \$1,000.

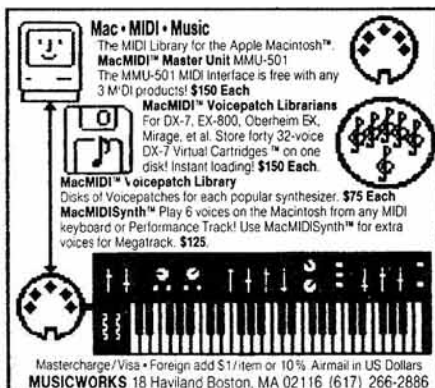
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able by the keyboard. Unfortunately, the two filters don't separate with them, so what you get is two independent pitch lines with one articulation path. The filter will track osc 1 (if filter tracking is used in the patch). This can lead to unpredictable effects, since it can be fairly hard to keep track of which note is tied to which oscillator if you're playing complex lines.

The Sequencer will store up to 1500 events in 12 memory positions. Another 10 memory positions allow you to store chains of those sequences. Programming is accomplished by playing the keyboard. Rhythms are not recorded along with notes. Ties and rests can be loaded in after the initial notes have been loaded by means of the various sequencer controls, which consist of seven or eight buttons that each serve multiple functions.

The OSCar's MIDI implementation is a recent addition to the instrument. In, out, and thru jacks are provided on the rear panel. On powering up, the pitch-bend and mod wheel data is set to transmit and receive, the program change option is off, key on/off signals are set to transmit and receive, the sequencer and arpeggiator outputs are disabled, and the unit is in omni mode. All these functions can be changed with the keyboard and the space button, which normally assigns rests in the sequence. Pressing and releasing the space button sends an all-note-off message, which is handy for those embarrassing moments when note-off messages aren't received (like when a MIDI signal is disconnected before the appropriate note off command is sent) and suddenly you've got an instrument that's playing a note forever. You

can also assign the instrument to transmit and receive on any one of the 16 MIDI channels.

Conclusions. The OSCar has a fabulous sound. It's great for punchy bass lines and non-tonal special effects. However, if you're into lead-line left-hand pitch-bending extravaganzas, you'll find the instrument somewhat lacking, because its left-hand controls are positioned where you can't get at them easily. This is due to the large rubbery side panels, which both help to protect the instrument if it gets dropped and give it that special halved-cinder-block look. The instrument is just ugly enough to be appealing in a warped way. If you like bad old horror movies, you'll love the way OSCar looks.

There are a lot of functions hidden behind just a few front panel controls, and it will take some time to get familiar with everything the instrument will do, much of which isn't apparent from the panel graphics. The dual filters make for some interesting, if subtle, effects, and the digital waveforms are nice, but not as useful as you might expect—the preset waveforms sound very analog. On the positive side, every function is programmable; just make sure to read the manual so you know what every function is.

Whether the OSCar will be a success remains to be seen. Its price is very competitive with earlier monophonic, especially given the number of features packed into the instrument. However, its projected American list price of \$1,000 is a bit steep in comparison with many of today's polyphonics. Still, if you're a firm believer in the power of monophonic instruments you'll want to check the OSCar out. ■

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