

OBERHEIM DPX-1 RACK MOUNT SAMPLE PLAYER

SAMPLING MACHINES, whether they cost an arm and a leg or merely a few gold fillings, all have one thing in common: They need sounds from the outside before they'll spit out as much as an anemic radar blip. With bad sounds, even the highest-ticket dream machine will sound like your stomach feels after a couple of MacDonald's hamburgers. So no matter what sampler you've got your eye on, it makes sense to ask yourself: Where *am* I going to get all those dynamite sounds?

Well, some players have access to a state-of-the-art recording studio and about 30 close friends, 29 of who play the violin. (The other one is a virtuoso at everything from castanets to doing Three Stooges impersonations.) Other people are willing to live with a limited library of sounds created by the manufacturer and third-party developers; in return they get the freedom to record, filter, invert, truncate, and otherwise mutilate their own samples. But a sizeable number of key board players don't really want to spend valuable time searching for the perfect zero crossing. All they're looking for is the widest choice of sounds. These folks, if they've craned their necks just a bit, have probably already spotted Oberheim's DPX-1 on the horizon.

In a world of more capabilities, more features, and more confusion, the DPX-1 is deliberately designed to offer less. It's not a sampler. It doesn't have user sampling, on-board editing of samples and analog processing parameters, velocity cross-fading, or a sequencer. Rather, it's a sample *player*. All it's designed to do is play samples intended for other machines.

The beauty of this concept is twofold. For one thing, it eliminates a wide range of sophisticated waveform-editing functions that, to many musicians, are superfluous. And second, it widens the range of available sounds, since DPX-1 owners can reap the fruits of third-party software developers who are providing sounds for a number of popular machines. At the moment, the unit supports disks made for the Sequential Prophet 2000/2002, the Ensoniq Mirage, and the E-mu Emulator II. It will also receive sounds transmitted via the MIDI sample dump standard. There's every reason to expect that its soft ware will grow to accommodate sounds from other instruments as well. The conclusion is inescapable: The largest sound library available is for the DPX-1.

But hold onto your SK-1's, friends. The DPX-1 approach isn't without its drawbacks. Picture this: You're at an album date with your trusty DPX-1 and a million disks, each of which you've diligently catalogued. The producer speaks to you for the first time in the four

months you've been in the studio. "Let's have a sitar on the melody during the bridge, babe," he suggests. "That's the magic we need to turn this piece of trash into a hit" You search the disks for a sitar, find it, and load it into the DPX-1. You hit a low note, and it sure sounds sweet. The tape rolls, and you begin to groove. Just as the song reaches its climax, you hit the high 0, and bwoisssshhhh - it's that amazing Chinese gong the sample company assigned to the upper range of the keyboard. The producer stares at you with bulging eyes that would scare Marty Feldman. Can you rearrange the multi-sample to put the sitar into the proper range for the melody?

Not for all the status bytes in MIDI Land.

OBERHEIM DPX-1

Tone Generation:

Eight-voice, 12-bit linear sample playback.

Memory:

100 patch locations, 1 MB of internal RAM

Interfacing:

MIDI IN, OUT and THRU

1/4" Audio Output

Optional CD-ROM port and eight 1/4" audio outputs.

Features:

Reproduction of E-mu Emulator II, Sequential Prophet 2000, and Ensoniq Mirage sounds with all programmed parameters intact, MIDI sample dump standard transmitted and received, samples stored to disk, MIDI program change commands transmitted from front panel, dual mode on/off for Mirage samples, rack-mount design, 80dB s/n ratio, 72dB dynamic range.

Dimensions: 14" x 19" x 3 1/2", 18 1/2 lbs.

List Price: \$1,995.00.

Optional rear panel with CD-ROM port and eight audio outputs (price to be announced).

Contact:

Oberheim/ECC, 11650 Olympic Blvd., Los Angeles, CA, 90064. (213) 479-4948

Still, Oberheim has added a number of substantial new capabilities with the most recent software update (version 1.3), so if you looked at a DPX-1 a couple of months ago, you haven't really seen all the unit can do. We had the new operating software for this review, but we didn't get to see the optional rear panel (more on that later). That said, let's take a closer look.

Design & Operation: The DPX-1 has one of the sparest front panels we've seen in a while. Basically, the machine is just a couple of rack-mounted disk drives and a hefty chunk of tone-generation circuitry, so there isn't much need for a lot of knobs, buttons, or displays. A volume slider controls the unit's overall audio output level. There are two disk

drives, one for 5 1/4" Emulator II floppies and the other for 3 1/2" Mirage, Prophet, and DPX1 disks. A single button tells the unit to load a disk (if both drives are occupied, the 3 1/2" drive takes precedence). Samples play back in eight-voice polyphony. The machine's own playback resolution is 12-bit linear, although it routinely reads samples recorded at a lower resolution.

Programming facilities for the DPX-1's small number of options reside on the other side of the panel, where a column of LED's corresponds to six function headings: patch select, MIDI channel, fine tune, data dump (this includes write-to-disk commands), MIDI controller, and extended functions. A key beneath the LED's causes them to light sequentially, indicating which function heading is currently active. A pair of increment/decrement buttons allows you to page through the options under each heading (for the data dump and extended functions headings), or through possible values (for MIDI channel, patch select, and so forth). Holding down either button scrolls you through the possible values or options. The values and options wrap around, which is a nice touch - that is, the next program number after 99 is 00.

Values and options are shown on a two-character LED display, the latter in cryptic abbreviations that, as it turns out, are easily learned. Whenever you page through options or values, a dot appears in the display. It disappears when you press the enter key, making your selection official. When you call up an empty memory location, the unit simply flashes the error LED and continues to play the last sound selected. The rear panel is even tidier. Besides MIDI in, out, and thru jacks and an AC port, all you'll find there is a single audio output. (Oberheim offers an option for eight audio outputs and a CD-ROM port which we didn't get a chance to see, but which is explained below.)

As you can see, everything is nice and simple, so it's not surprising to find that operating the DPX-1 is simplicity itself. We've already told you just about everything you need to know to get the machine up and running - no kidding. When you put a disk in the drive and press the load button, the DPX1 knows what kind of disk it is and tells you via the display. It translates the sample data from the disk into its own language, storing each sound (keyboard setup, preset, patch, or whatever lingo you're used to) in one of its 100 memory locations. Since sampled sounds use a lot of memory, it's rare that a disk will fill all 100 memory locations. Generally, it will use only three or four.

While the disk is loading, an LED marked "busy" lights; if a disk problem is encountered, the "error" light flashes, but the DPX-1 loads it anyway, to the extent that it can. Loading of Mirage and E-II sound stakes a few moments longer than it would with the original instruments, since the DPX-1 translates their eight-bit formats into 12-bit. Disks converted to and written in DPX-1 format, though, load more quickly. In addition, it's quite convenient to have all the sounds on a Mirage disk available in the patch memory at once, rather than having to load each bank separately.

In recalling a sound, the DPX-1 configures its filter and amplitude envelopes to reflect the sound as it was stored on disk. If the sound is a multi-sample, the unit distributes the various samples across the keyboard as they were originally intended. It even mimics the continuous controller assignments programmed into the sound, including the enabling and range of modulation and pitch-bend.

All of those things the DPX-1 does with out any input from you. What does the machine need you for? Well, you have to select a MIDI channel (or omni mode) on which the unit will receive performance commands and receive and transmit program change messages. The overall pitch can be fine-tuned by a quarter-tone in either direction. And you can enable or disable the reception of MIDI continuous controller data *en masse*, including pitch-bend, modulation, after-touch, volume, and sustain pedal.

It's important to remember that any of these controllers may be disabled in the programming of a sample itself. In that case the DPX-1 obeys orders without question. Even if the DPX-1 is set to receive controllers, a sound won't respond to modulation if it has been programmed not to.

There are a few more choices, although they're pretty esoteric. You can turn the unit's four-pole low pass filters on or off, allowing any aliasing in the sample(s) to ring out loud and clear. (We're betting you won't find many reasons to do this.) You can also turn *off* the dual oscillator mode, which kicks in automatically when called for by a Mirage disk. In the Mirage, dual mode (called "mix mode" and "chorus mode") provides layering and detuning effects. In the DPX-1, it uses up twice the usual number of oscillators, turning the unit into a four-voice instrument and thus giving you ample reason to disable it.

Multiple Outputs: The standard DPX-1 comes with a single monophonic output. At first glance, this seems to have been a major design oversight. Playing a drum kit from your sampler becomes a much less attractive option when all of the drums are premixed to mono. But when you consider that the unit doesn't allow you to set voice assignments for various outputs, a single output starts to look more sensible. That is if the person who

put together the drum kit assigned the outputs in a way that doesn't suit your needs, you almost might as well have mono. Fortunately, you can have it either way, since Oberheim offers an optional rear panel providing eight audio outputs. The price of the option, which we didn't get a chance to try out, has yet to be determined at press time.

With the multiple outputs option, the DPX-1 generally allocates voices to the out puts as they were originally programmed. To accommodate the various architectures of the Mirage, E-II, and Prophet, Oberheim has had to interpret the voice assignments a little differently in a few cases; for instance, a Prophet 2000's left keyboard map feeds out puts 1 through 4, and the right map feeds 5 through 8. If no maps are selected, each voice is given its own output. In fact, a DPX-1 with multiple outputs allows you to play Mirage samples in stereo, either split right and left or one-voice-per-output, depending on how the sound has been programmed. By and large, Oberheim's *translations* make good sense, and the mono output is always active if you'd rather go that route.

CD-ROM: CD-ROM is a data-storage innovation capable of holding 550 mega bytes of read-only binary code on a compact disk. CD-ROM players (different from CD players) are manufactured by a company known as Optical Media International, which also offers a two-volume sample library called the Universe Of Sound. Each volume contains over 4,000 sounds, including a variety of orchestral instruments, ethnic percussion, synthesizer sounds, and sound effects. Until recently, the Emulator II was the only sampler capable of reading Optical Media's data format, but now Oberheim offers a CD-ROM port as part of the multiple-outputs option.

We didn't get an opportunity to give the CD-ROM interface a test drive, but Oberheim's documentation indicates that the DPX-1 treats the CD-ROM player as though it were another disk drive (except that the load command is given from the CD-ROM player). Optical Media assures us that the Universe Of Sound library was compiled using high-quality digital recordings, which were tailored for playback using Digidesign Sound Designer. The system isn't an expensive proposition: The first volume of sounds sells for \$795, the second for \$995, and the CDS3 CD-ROM drive for \$1,995. (Optical Media can be contacted at 485 Alberto Way, Los Gatos, CA 95030; (408) 395-4332.)

SDS Implementation: Only two kinds of MIDI data ever leave the DPX-1's MIDI out port: front-panel program changes and sample dumps. Oberheim's inclusion of sample dump standard (SDS) implementation adds a substantial amount of power to the unit.

The SDS allows you to port in raw samples from any machine that transmits sample data in the standard format, and to send this data to any machine equipped to receive it. In this

way, the DPX-1's sound library is as large as the combined libraries of all machines capable of speaking in SDS lingo. Originally, the unit could only send and receive bulk sample dumps, but software version 1.3 allows it to deal with samples one at a time via SDS. This makes the DPX-1 a convenient medium for the digital transfer of samples between CD ROM and samplers that speak SDS but are not equipped with the CD-ROM option.

Interestingly, the standard provides for the transmission of sample data only, and not for the settings of analog devices commonly used to modify sampled sounds. These may include amplifier and filter envelopes, LFO routings and amounts, velocity routings and amounts, and keyboard setups. This definitely limits the usefulness of sample dumps as far as the DPX-1 is concerned, although it's conceivable that Oberheim might eventually come up with a system-exclusive implementation that would allow you to modify dumped-in sample with the unit's internal filters and amplifiers. Given the design of the SDS, the DPX-1 keeps its filters and amplifiers wide open for samples that come via MIDI. Middle C is automatically assigned to play the sample back at its original rate, and, of course, the sample's pitch is distributed properly over the MIDI note range. (It's also worth noting that the standard allows for only one loop, and that Prophet samples may have two. If so, only the sustain loop is transmitted/received.)

Write-To-Disk Capability: The 1.3 software also allows the DPX-1 to write to 3½" disks in its own format. The combination of this with SDS enhances the unit's potential in a big way. There are a few reasons why write-to-disk capability is important, the simplest being that it permits you to make DPX-1 backups of Mirage, Prophet, and E-II sounds. Also, it makes it possible to store sounds ported in from CD-ROM and SDS. Without the ability to make a disk copy of the sounds, they would always have to be loaded from the CD-ROM drive or from the transmitting instrument.

Along with sample data, front-panel settings can be saved to disk. That way backups, sample dumps, and CD-ROM sounds translated into DPX-1 format can be recalled with filter on/off, dual-mode, MIDI channel, controller enable/disable, and fine-tuning settings intact.

Sound Quality: Our listening test confirmed that the DPX-1 sounds as good as or better than the instruments whose disks it reads. It has a clean, quiet sound (provided you feed it good samples), and the filter tracks smoothly up the keyboard. Digital noise is well under control in the lower range. The Emulator II we checked it against sounded dull by comparison, and had some grungy lower mid-range noise. Our Prophet 2000 was brighter on some sounds than the DPX-1, probably because of differences in the filter characteristics of the two instruments. And the DPX-1's reproduction of Mirage samples was a great improvement over the gritty tone of the original. Although it's hard to know whether the differences were due to the individual instruments we happened to have on hand, by and large we found them to be significant.

Conclusions: Along with ease of use and compact size, what the original version of the DPX-1 had going for it was the large number of sounds it was capable of playing. At nearly twice the price of a Mirage, it offered no user sampling, no waveform editing, and no key board, and its monophonic output barred it from many common applications. With the latest software and options, the basic presets-only concept remains, but some significant things have changed. One is that the number of available sounds has increased dramatically, thanks to CD-ROM interfacing and write-to-disk capability for samples ported in via SDS. Another is the possibility - we'd venture to say that it's a probability - that third-party software developers might create waveform editing software for the DPX-1, thanks again to its ability to save sounds to disk. And now you can have eight outputs, if you want to pop for them.

There is one kind of customer to whom we can recommend the DPX-1 without qualification: those who already have an Emulator II or a Prophet 2000, and who want another one, for whatever reason. A DPX-1 can increase the Prophet's polyphony to 16 voices via the latter's MIDI mode 3B while still providing an expanded range of sounds, and makes a handy and vastly less expensive substitute for a spare E-II.

For those who simply want a huge sample library, the DPX-1's basic drawback - lack of editing capabilities - isn't so irrelevant as it may look at first glance. When it comes to functions that shape the sounds themselves, we're willing to believe that the majority of musicians won't miss them. But when you consider assigning the sounds to key ranges and to individual outputs, a little flexibility can make a big difference. Using mostly K-Muse and Sampleware disks, we found that percussion and other basically un-pitched sounds usually aren't a problem, since in most situations you only need one, or at most three or four, pitches per sample. Also, E-II percussion multi-samples often come with each sample assigned to a separate output, which, if you have a DPX-1 with the multi-output option, is probably how you're going to want them. But melodic and accompaniment instruments, including strings, winds, and so forth, are often given limited ranges, probably with the intention that you'll rearrange them to suit your needs.

With a DPX-1, if you find that the samples you have on disk seem to be in the wrong registers or assigned to the wrong outputs, the only alternative is to find a software supplier who puts together disks in the most general way - with only one kind of instrument over the range of the keyboard, and multiple-sound setups set up in such a way that each sample has its own output. As we've already mentioned, we hope to see these limitations overcome, but they are inherent in the DPX1 concept.

The DPX-1 does exactly what it was designed to do, and does it very cleverly. It couldn't be easier to operate, and in some ways it even out-performs the instruments it emulates. And it does put the largest possible number of samples at your disposal. We feel that you're taking a chance on finding sounds that are set up to fit your needs - but then, you're taking a similar kind of chance with any sampler. The DPX-1 doesn't quite solve this problem, but it does give you more choices.

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