Products of Interest

Cycling '74 Max 6

Cycling '74 has announced the release of Max 6, a major upgrade to their visual programming application for music and multimedia. The main improvements are reported to be in the areas of performance, quality, and workflow. Accessibility through new price plans, tutorials, videos, and new online resources are also features of this software release.

The performance of Max patches has been re-vamped with the use of what the Cycling '74 calls code generation. Each patch the user creates is translated into text-based source code and compiled automatically, allowing for optimization of the entire patch. New low-level 64-bit floating-point precision signal processing operators are included. These allow the user to create recursive filters, delays, spectral processors, and sound generators. It is reported that algorithms can be implemented up to fifteen times faster than with the equivalent MSP objects. The code generation approach also allows for high-performance image processing algorithms to be created graphically in the Max environment.

The audio quality has been improved by the use of a new 16 K wavetable for the cycle~ object. This produces an enhanced signal-to-noise ratio and gives users a choice of sample rate. All audio is processed with 64-bit precision in Max 6, but 32-bit objects will remain compatible.

The interface now provides curved path cords. If changes are made during the performance of a patch, Max will now crossfade between the old and new values. Controls have been added to the toolbar of every patch to adjust gain and mute the audio signal, so that the user no longer has to add objects to achieve this.

A new toolset for rendering 3-D objects has been added and increased support for cameras and lighting is also available. A new physics engine, hierarchical animation, and rendering tools have also been added.

Significant changes to the documentation and help features have also been introduced into this new version of the software. The user does not have to remember the name of objects to create one. Feedback is provided as the user types in a message box to indicate the types of messages that correspond to nearby objects. A new attribute monitoring and editing object is also included. Help files now all feature a similar layout, displaying around five of the most important things the user needs to know about the object in question. Advanced help features can be accessed through a tabbed interface. A new Project feature has been added to manage patches, code, and media files. It allows multiple versions of files to be stored and makes sharing and backing up work easier.

Max 6 is listed for US$ 499, with discounts available to existing customers. Contact: Cycling '74, 730 Clementina Street, San Francisco, California 94103, USA; telephone (+1) 415-974-1818; fax (+1) 800-683-9735; electronic mail info@cycling74.com; Web cycling74.com/.

Keith McMillen Instruments 12 Step Foot Controller

The 12 Step from Keith McMillen Instruments is a chromatic keyboard foot controller. The controller works with USB and MIDI, with an optional MIDI Expander device, to control MIDI keyboards, sound modules, and software synthesizers. It features twelve foot keys, arranged in piano keyboard layout. Each key is polyphonic and can play up to five notes simultaneously. Pressure and key tilt can be mapped to pitch bend or any continuous controller message. An octave shift feature provides a three-octave range of pitches, but multiple units can be used together to increase the range of pitches that are available simultaneously without octave switching. The controller has three performance modes. Legato mode allows for continuous, smooth playing of notes. In Latch mode notes and chords are sustained, and Toggle mode turns notes and chords on and off.

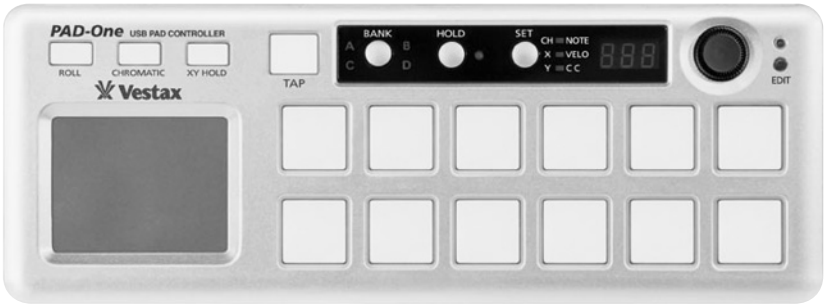
The keys are LED backlit. An input jack is provided for expression pedal or control voltage input. The 12 Step controller is a class compliant device that does not require drivers. It measures 17.5 × 4 × .75 in. and weighs 1 lb. A software editor running on Macintosh and Windows platforms is available.

The 12 Step controller is listed for US$ 289. Contact: Keith McMillen Instruments; telephone (+1) 877-812-0408; electronic mail contact@keithmcmillen.com; Web www.keithmcmillen.com/.

Vestax PAD-One MIDI Pad Controller

PAD-One is a MIDI controller with twelve velocity- and pressure-sensitive pads, an *x*–*y* touchpad, and four banks of settings (see Figure 1). The chassis of the controller is constructed from solid aluminium. The twelve pads are backlit and can individually be assigned MIDI messages on the fly. A seven-segment indicator shows the MIDI value of the selected pad. They can be set to send a MIDI message only when struck, or to keep sending the same MIDI message once the pad has been struck. Because the pads are pressure sensitive, they send an after-touch message and this can be used to trigger a MIDI message when the pad is struck, with another based on aftertouch. Four banks of settings are available and different

Figure 1. The PAD-One MIDI controller from Vestax.



colors are used for each bank. A key lock feature is also available.

A real-time *x*–*y* touchpad is also provided on the PAD-One. Roll, Chromatic, and Tap keys are provided to control the continuous sending of messages from a pad. Roll switches on and off the sending of the MIDI message and Tap controls the time intervals at which each message is sent. This feature can be used to automatically trigger a stream of notes in fast succession.

The PAD-One measures 302 × 111 × 30 mm and weighs 750 g. It is powered by USB from a computer and is compatible with Mac OS X 10.4.11 and higher, and Windows XP(SP2), Vista (SP1), and Windows 7. A video demonstration of the controller is available on the Vestax Web site.

The PAD-One is listed for US$ 199. Contact: Vestax, 1-18-6 Wakabayashi Setagaya- Ku, Tokyo, Japan 154-0023; telephone (+81) 334-127-011, US customers (+1) 866-362-8774; fax (+81) 334-127-013; electronic mail csg@vestax.jp; Web www.vestax.com/v/.

Drawmer HQ Monitor Pre-Ampifier, Volume Controller, and D-A Convertor

Drawmer's HQ is a combination high-precision monitor pre-amplifier, volume controller, and D-A convertor. It is designed as a high-fidelity audio device for use with digital and analog sources and, according to the manufacturer, offers extremely low inter-channel crosstalk.

Rotary controls for volume and source selection are located on the front panel. A third, smaller control here allows the user to quickly switch between two sets of loudspeakers for A/B comparisons, or to drive both sets of loudspeakers at the same time. All three controls are backlit. The volume control uses the company's Seamless Relay Volume Control. This technology provides smooth, continuous potentiometer operation, combined with the accuracy of a precision relay volume control. The output channels are balanced to within 0.05 dB across the volume range. The HQ has balanced XLR and unbalanced phono analog inputs, an RIAA input for use with turntables, digital AES inputs of up to 192 kHz on XLR ports, TOSlink on an RCA jack, and AES3id on a BNC port. A USB-B connector also allows audio to be streamed from a computer. Individual gain settings are available for all of the inputs. Mixed audio can be simultaneously sent to balanced and unbalanced analog outputs. A dedicated S/PDIF digital output and dual headphone outputs are also built-in.The D-A convertor features –100 dB total harmonic distortion. The crosstalk level is reported as less than 100 dB for 20 Hz to 20 kHz and the dynamic range is 113.5 dB, unweighted. Digital inputs with sample rates up to 192 kHz and 24-bit resolution are supported, with jitter reduction used. The device features an internal linear power supply with multi-stage regulation.

A remote control is available for the HQ. It features nine backlit buttons for input-source selection, three speaker-selection buttons, a large volume control, two user-defined volume level presets, a master volume display, and mute, monophonic/stereo, and intelligent dim controls. If multiple HQ units are linked, the remote control can serve as a master volume controller.

The Drawmer HQ is listed for US$ 3999.95. Contact: Drawmer, Charlotte Street Business Centre, Charlotte Street, Wakefield, West Yorkshire WF1 1UH, UK; telephone (+44) 192-437-8669; fax (+44) 192-429-0460; electronic mail sales@drawmer.com; Web www.drawmer.com/.

PreSonus AudioBox VSL-Series Interfaces

PreSonus has announced the release of three new AudioBox VSL-Series Interfaces, each of which is compact and rack-mountable (see Figure 2). They use high-headroom Class A XMAX preamplifiers with phantom power and offer 24-bit, 96-kHz convertors and a 114-dB dynamic range. MIDI input/output and zero latency monitor mixing is also provided. The Fat Channel compressor, limiter, three-band semi-parametric equalizer, and high-pass filter from their StudioLive 16.0.2 mixer is available, along with reveberation, delay, and effects buses using the supplied Virtual StudioLive (VSL) software. The low latency

Figure 2. The PreSonus AudioBox 22VSL, 44VSL, and 1818VSL interfaces.

Figure 3. The JoeCo BlackBox BBR-DANTE Recorder.

software also provides editor functions and more than 50 professionally programmed Fat Channel presets. The interfaces are also shipped with the PreSonus Studio On Artist software and they support Code Audio and ASIO formats.

The smallest of the interfaces, the AudioBox 22VSL, features two combination microphone/instrument inputs on the front panel, and two balanced outputs and a headphone output on the rear panel. Controls for input level, main output level, headphone level, and mixer control are all located on the front panel. A clip indicator is included for each channel. When used with the VSL software, this interface provides two stereo effects buses with reverberation and delay, along with Fat Channel dynamics processors, equalization, and a high pass filter on the inputs and DAW returns. It is bus-powered. This model is a 1/3-size rack-mountable unit with a steel case.

The 44VSL model extends the functionality of the 22VSL to four inputs and outputs. This interface is a half-size rack-mount unit with two combination microphone/line inputs and two combination microphone/instrument inputs. Two balanced main outputs and a further four balanced line outputs are provided. The VSL software provides an 8 × 4 software mixer, as well as the features mentioned for the 22VSL software.

The final model in this set of releases is the AudioBox 1818VSL interface. It has two microphone/instrument inputs and six microphone/line inputs, all of which have XMAX preamplifiers. An eight-channel ADAT input/output, stereo S/PDIF input/output, MIDI input/output, and a Word clock output are all available on the interface. When used with the VSL software this provides the user with a 26 × 18 mixer at 88.1 kHz sampling rate or a 22 × 14 mixer and the higher sample rate of 96 kHz. This interface is a full rack-mount unit in size.

The AudioBox 22VSL is listed for US$ 199, the 44VSL for US$ 299, and the 1818VSL for US$ 499. Contact: PreSonus Audio Electronics, 7257 Florida Blvd., Baton Rouge, Louisiana 70806, USA; telephone (+1) 225-216-7887; fax (+1) 225-926-8347; electronic mail info@presonus.com; Web www.presonus.com/.

JoeCo BlackBox Recorder for Live Performance and New BBR-Dante Version

The JoeCo BlackBox Recorder is a large-scale multi-channel recorder for live performance. It is available in digital and analog versions with a range of interfaces for use with live mixing consoles. Up to 24 channels of 24-bit, 96-kHz audio can be recorded in Broadcast WAV format. Multiple units can be linked together to provide a greater number of channels. The recorded audio is stored directly onto a removeable USB2 disk drive or USB Flash drive. The audio files are transferred from there to a Macintosh- or Windows-based DAW for editing and re-mixing.

The front panel of the recorder features a color screen user interface with menus and record time display, touch-sensitive transport controls, a data wheel, and function buttons. A footswitch input is available for hand-free operation of the record functions. LED meters are also provided on the front panel and include a sticky peak feature. A keyboard interface and Name Manager are available for modifying track names and creating templates. Shortcuts are also available for the menu options and transport controls. Support for iXML, 23.98 fps time code, and 9-pin connection for edit controllers are provided for film, TV, and broadcast applications. A recover function allows recorded audio files to be recovered in the event of loss of power or switching off the recorder before stopping recording.

The BBR-DANTE is a new version of the BlackBox Recorder, designed to connect to the Dante network for connecting to Allen&Heath, Yamaha, MIDAS, DiGiCo, Focusrite, and other supporting consoles (see Figure 3). It offers the user 32-channel recording at sample rates of 44.1 and 48 kHz at bit-depths of 16 and 24 bits, to Broadcast WAV on an external USB2 drive. The user can record eight analog channels on balanced line inputs, along with 24 channels of Dante audio. Sample rates up to 96 kHz are available with a reduced number of tracks. This recorder can lock to Word clock or the incoming Dante audio stream and

Figure 4. AETA Audio Systems' 4Minx multi-track recorder.

can generate Word clock. Individual channels or pairs of channels can be monitored on a pre-fade listen bus. This version also features a full-color LCD screen and LED level metering.

Keyboard and footswitch inputs, and Word clock input/output are provided on the rear panel. An RJ45 ethernet port is provided for the Dante input/output. The audio recovery function from the original BlackBox Recorder is also included here, and tracks, songs, and folders can be named. The unit can be remotely controlled using a QWERTY keyboard, MIDI, or Sony 9-pin. The recorder is a 19-in. 1U rack-mount unit and weighs 2.1 kg.

The Dante BlackBox Recorder is listed for US$ 4,295. Contact: JoeCo, 135 Histon Road, Cottenham, Cambridge CB24 8UQ, UK; telephone (+44) 122-391-1000; electronic mail info@joeco.co.uk; Web www.joeco.co.uk/.

AETA Audio Systems 4Minx Multi-Track Recorder

The 4Minx recorder from AETA Audio Systems is a multi-track recorder with analog and digital interfaces, hardware controls, and a TFT color screen (see Figure 4).

The recorder has four combination microphone/line inputs, two stereo line inputs on XLR ports, two AES3/AES42 digital inputs, two stereo line outputs, two auxilliary outputs, and three AES3 digital outputs. The microphone/line inputs offer gain up to 90 dB, trim, phantom power, and a low-cut filter. The maximum line output level is –9 to +22 dBu. Up to four channels can be recorded and mixed. Among the digital processing available on the 4Minx are pan, filters, M/S encoding and decoding, mixing, stereo mixdown with master fader, and flexible routing.

A 3-in. color TFT display features software menus and bar graph metering of inputs and outputs. Four programmable function keys, transport controls, and a rotary encoder are provided on the front panel.

The recorder saves audio to SD/SDHC flash memory cards in 24-bit Broadcast WAV files. Synchronization via AES was available at the time of writing with announcements to come regarding Video/Word clock and time-code.

The 4Minx can use 7.2 V DV Lithium-ion batteries for more than 6 hours operating time and features an integrated charger. External power can also be used. An ethernet connection is included for remote control. The recorder measures 260 × 75 × 195 mm and weighs 1.9 kg.

The 4Minx recorder is listed for US$ 6,200. Contact: Parc Technologique - Kepler 4, 18-22, avenue Edouard Herriot, 92350 Le Plessis Robinson, France; telephone (+33) 141-361-200; fax (+33) 141-361-269; Web www.aeta-audio.com/.

Roland R-26 Portable Field Recorder

The R-26 from Roland is a portable field recorder with two types of built-in stereo microphones, external microphone/line inputs, a USB interface, and on-board editing (see Figure 5).

Figure 5. Roland's R-26 portable field recorder.

The top panel of the recorder features built-in dual stereo microphones, an omni-directional pair and an *x*–*y* pair for directional recording. Combinations of these microphones can be mixed together. Two combination XLR/TRS connectors on the bottom of the recorder can supply phantom power for external microphone connection. The side panel features a further mini input for stereo plug-in powered microphones. The microphone pre-amplifiers are those from the company's R-44 professional recorder. Up to six monophonic channels and three stereo channels can be recorded simultaneously.

Linear PCM recording at a sample rate of 96 kHz with 24-bit resolution is supported. Audio can also be stored in WAV, Broadcast WAV, and MP3 formats. The audio recording is saved to SD/SDHC cards. A limiter is included to reduce distortion on input levels and a low-cut filter can be used to remove voice, wind, and other environmental noises. Cut-off frequencies of 100, 200, and 400 Hz are available.

An AUTO-SENS function can be used to automatically set the input levels. The user indicates the type of sound they are recording and the recorder then analyzes the audio and displays the recommended level. A pre-record feature allows recording to commence two seconds before the user presses record, to avoid missing the start of the recording. The user can edit their recording using select, copy, move, delete, split, merge, and trim functions. Markers can be set for playback, a voice memo function allows the user to add up to 30 seconds or audio to an existing recording, playback speed can be adjusted by 50 to 150 percent, and a repair function is available for damaged audio files.

A large high-resolution backlit LCD touchscreen is used for navigation of settings. A graphic meter is also displayed on the screen and waveforms can be displayed for editing. Two large knobs are provided for control of the input levels. A preview monitor on the side panel of the recorder allows the user to check their recordings without connecting headphones.

The R-26 can function as a USB audio interface, allowing audio to be directly sent to a connected Windows or Macintosh computer, for use with a DAW or for Internet streaming. The recorder can be powered by four AA batteries, external batteries, or the included AC adaptor. A threaded hole on the rear panel of the R-26 allows for mounting on a tripod or stand. It measures 82 × 180 × 41 mm and weighs 370 g.

The R-26 is listed for US$ 599. Contact: Roland Systems Group, 801 West Orchard Drive, Suite 3, Bellingham, Washington 98225, USA; telephone (+1) 360-594-4282; electronic mail sales@rolandsystemsgroup.com; Web www.rolandsystemsgroup.com/.

Neumann Digital Vocal and Shotgun Microphones and Portable Digital Interface

Neumann has released digital versions of their KMS 104 and 105 dynamic vocal microphones, their KMR 81i shotgun microphone, and a portable two channel digital microphone interface, the DMI-2.

The KMS 104D has a cardioid pattern, and the KMS 105D a supercadioid pattern. Among the advantages of the digital version, according to Neumann, are an extended dynamic range, more robust operation, and integrated peak limiters to prevent clipping. The dynamic range is 125 dB, with self-generated noise of 16 dBA. Sound pressure levels are 141/159 dB, with 18 dB pre-attenuation. Both microphones are optimised for close proximity speech and vocal miking, with an integrated peak limiter/compressor/de-esser. A –3 dB (at 80 Hz) high-pass filter is also built-in.

The KMR 81 D is a digital shotgun microphone for broadcasting, file and video, long-distance recording, and shotgun microphone applications in noisy locations. It features a 114 dB dynamic range and low self-noise of 9 dBA. Sound pressure levels are 123/141 dB, with 18 dB pre-attenuation. An integrated peak limiter/compressor/de-esser is also included with this model. It is lightweight, weighing just 3.2 oz and suitable for handheld and boom operation.

The DMI-2 portable is a digital interface for broadcasting and field recording applications. The interface can be used with two digital microphone and provides gain, pre-attenuation, and low-cut filters. Two push switch rotary encoders control the digital microphone settings. A front panel display shows the gain, signal level, and gain reduction using bargraphs. Eight microphone presets can also be stored and recalled on the interface. Two AES 42 inputs and an AES EBU output are built-in and a Word clock input/output is provided on the rear panel.

Contact: Georg Neumann GmbH, Ollenhauerstr. 98, 13403 Berlin, Germany; telephone (+49) 304-177-240; fax (+49) 304-177-2450; electronic mail sales@neumann.com; Web www.neumann.com/. Customers in the United States contact: Neumann USA, 1 Enterprise Drive, Old Lyme, Conneticut 06371, USA; telephone (+1) 860-434-9190; fax (+1) 860)-434-1759; electronic mail neumann-help@neumannusa.com; Web www.neumannusa.com/.

Blue Microphones Reactor Multi-Pattern Microphone

Blue Microphones' Reactor microphone is designed to fit a number of recording situations, with multiple patterns and a swivelling capsule head (see Figure 6). A large-diaphragm condenser capsule is used in the Reactor and the user can choose an omni-directional, cardioid, or bi-directional pattern. The record pattern selector features LED backlit pattern indicators. The head can rotate through a range of 90 degrees for flexible placement and different

Figure 6. Blue Microphones' Reactor, a multi-pattern, swivel-head microphone.

Figure 7. V-MODA's Crossfade M-80 headphones.

microphone setups. Fully discreet, Class A solid state components have been used to construct the microphone.

The frequency response of the microphone is 20 Hz to 20 kHz and the maximum SPL is 135 dB, with 0.5 percent total harmonic distortion. The signal-to-noise ratio is listed as 88 dB, A-weighted, and the dynamic range is 123 dB.

The Reactor microphone is packaged with a metal case, custom shockmount, and a custom pop filter.

Reactor is listed for US$ 499.99. Contact: Blue Microphones, 5706 Corsa Avenue, #102 Westlake Village, California 91362-4057; USA; telephone (+1) 818-879-5200; fax (+1) 818-879-7258; electronic mail orders@bluemic.com; Web www.bluemic.com/.

V-MODA Crossfade M-80 Headphones

The Crossfade M-80 from V-MODA is a set of rugged, ergonomic headphones, less than half the size of their Crossfade LP headphones (see Figure 7). They feature a steel frame, STEELFLEX headband, brushed metal shields, and replaceable memory cushions. Two Kevlar-reinforced microphone cables enable the headphones to be used with smartphones and they feature dual-diaphragm 40-mm drivers. A specially tuned V-PORT V3 airflow system, with the frequency response curve set using a 31-band equalizer, is integrated for natural noise isolation. The headphones are designed for comfortable use during long-play situations and offer a tailored fit, without gaps and with minimal pressure on the head and ears. The microfiber suede-covered headband is constructed from STEELFLEX and has tactile arms extensions. The foam cushions are replaceable and the ear shields are interchangeable with a range of color, designs, and custom artwork available.

The Crossfade M-80 has been tested under ML-STD-810G military testing which includes high and low temperatures, humidity, salt spray, and UV exposure. The Kevlar reinforced detachable cables have a 24k gold-plated plug and the plug strain relief are reported by V-MODA to be capable of bending more than 1 million times, which the company indicates is more than 100 times the industry standard. The headphones can survive 70+ drops on concrete from 6 ft and the headband can bend flat without breaking and retain its shape more than 10 times.

The headphones weigh 180g. A hard exoskeleton carrying case is included. The headphones have a V-MODA premier warranty. The Crossfade M-80 is listed for US$ 230. Contact: V-MODA; Web www .v-moda.com/.

CEDAR Audio Cambridge 7

CEDAR Audio produces a range of software tools for audio restoration. This includes a set of filters designed for forensic work and tools for cleaning up film sountracks. CEDAR Cambridge 7 is a set of software modules for audio restoration and speech enhancement based on the company's Cambridge Series III hardware.

In this latest version, cue points have been added to allow users to attach text to points in the audio. The cue data are saved in WAV file metadata chunks allowing it to be read by other software. Multiple regions can be set up for rendering and hot keys can be created for the computer keyboard and foot pedals. MP3 and video support have also been added. A new report generator has been included to save details of the audio processes carried out on a file. The user can choose a report of the current process chain or a history of the actions carried out since the file was opened and they can choose between generating a HTML or XML

report. Spectrogram and waveform views are also available.

The Retouch module is designed to allow the user to remove not only clicks, scratches, buzzes, and pops, but noises such as audience coughs, squeaky chairs, and car horns. A variety of time and frequency editing features are provided to allow manipulation of the temporal and spectral domains of the audio file. The user is not confined to marking rectangular areas of the spectrogram, but is provided with image manipulation–like tools that allow more complex shapes to be marked. The marked, unwanted sounds only are then replaced with audio from the surrounding signal. An improved interpolator has been used to reduce the problem of traces or artefacts in the audio.

The new Respeed module is designed to correct speed errors caused by situations such as tapes sticking, faulty recorder transports, and batteries running flat in recording devices. It identifies unwanted pitch changes in the audio and corrects them.

The Manual Declick 'B' is another new module that removes extended clicks without altering the background audio. It has a maximum click length of 2,048 samples at 44.2 to 96 kHz.

A De-Thump module is designed for removing thumps that are too long and low in frequency for traditional de-clicking processes and filters to handle. The user identifies the section of audio that contains the thump. The low frequencies around this area of the audio is then analyzed and the low frequencies only restored, leaving the high frequency components as they are. The maximum length of a thump is 50,000 samples at 44.1 kHz and 100,000 samples at 96 kHz.

Changes to the DNS module are based on those made in the DNS One plug-in, with improved handling of low sample rate audio. The user-interface of the NR4 and NR5 noise reduction modules has been updated to make the modules quicker and easier for the user to apply. The Adaptive Limiter now has an oversampling function and an automatic mode has been added to Vintage Decrackle.

Windows 7 Ultimate 64-bit is recommended for use with this update of the software.

This update is free for existing users. Prices of individual modules range from approximately US$ 2,368 to US$ 5,525. Contact: CEDAR Audio Ltd, 20 Home End, Fulbourn, Cambridge CB21 5BS, UK; telephone (+44) 122-388-1771; fax (+44) 122-388-1778; electronic mail info@cedaraudio.com; Web www.cedaraudio.com/. Customers in the United States contact: CEDAR Audio USA, 43 Deerfield Road, Portland, Maine 04101-1805, USA; telephone (+1) 207-828-0024; fax (+1) 207-773-2422; electronic mail cedarusa@cedaraudio.com.

Konkreet Labs Performer Multi-Touch Control Appplication

Konkreet Labs' Performer is an iPad application for controlling DAW and DJ software using MIDI signals and a multi-touch interface. It also features a visual output module called Visualiser.

An abstract graphic control object comprising of ten nodes forms the core of the interface. The object can be moved, turned, thrown, distorted, reshaped across the screen, and zoomed in and out. Up to three graphical layers can be combined to create the appearance of the object. A single finger tap of a node can send up to seven different control messages simultaneously. The shape and position of objects can be saved into eight banks or eight snapshots.

A multi-touch ribbon controller is also provided and can be used simultaneously to the main Performer object. Visualiser is a wireless Macintosh/Windows application that displays the iPad screen for use with large displays for performance.

The latest release of Performer, version 1.2, includes an inertia control to allow smooth morphing transitions. Inertia values are automatically used for nodes when dragging the control object and for moving between saved snapshots. The inertia feature can be disabled by selecting a value of zero, set to fast and responsive, or set to maximum inertia of 100 for very slow movement. The control can be set from a perferences screen or using the ribbon controller.

Instructions for using Performer with a range of software including Native Instruments' Reaktor, Kore, Ableton Live, and other OSC and MIDI software are available on the product Web site.

Performer is listed for US$ 24.99 on the iTunes app store. Contact: Konkreet Labs, Dipl.-Ing. Gwydion ap Dafydd, Solmsstr 30, D-10961 Berlin, Germany; telephone (+49) 178-146-6964; electronic mail info@konkreetlabs.com; Web konkreetlabs.com/.

IanniX Graphical Sequencer

IanniX is a cross-platform, open-source graphical sequencer based on the work of Iannis Xenakis (see Figure 8). It is intended for use with a variety of software and hardware tools, using Open Sound Control (OSC) for communication. It operates and can be modified in real-time.

Figure 8. Screenshots from the IanniX graphical sequencer.

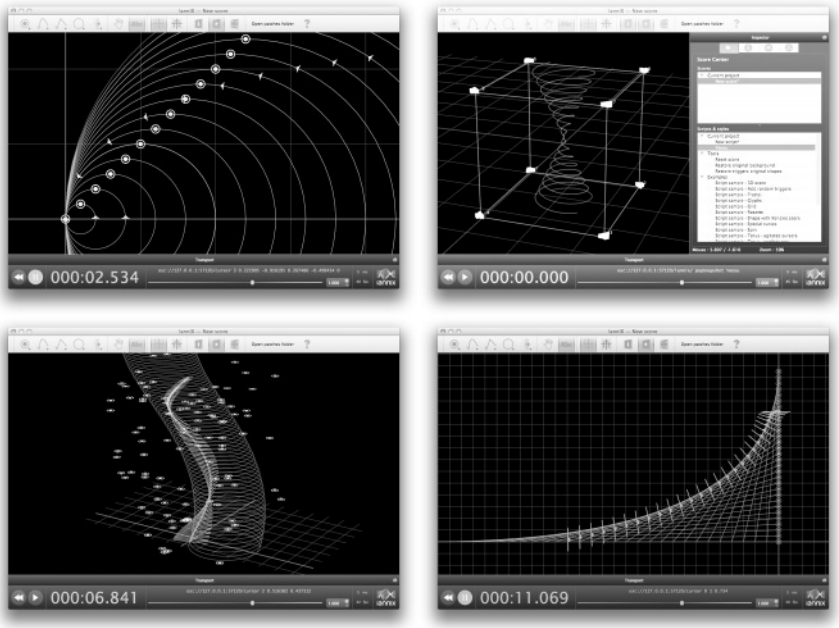


Figure 9. The JAM guitar interface and Mic compact USB microphone from Apogee.

An IanniX score comprises three elements or objects; triggers are events in space that are activated when a playback cursor moves over them, cursors set off discrete (triggers) and continuous events and are similar to tape heads, and curves are point sets in space and give the cursors a trajectory. There are three methods available to the user to set an object in space—a graphic interface with toolbar, software interfaces like OSC, and generative scores can be created using Javascript. Each object has a unique identifier and objects can be grouped to allow control of multiple objects simultaneously.

The graphical interface in IanniX includes functions to add triggers, circles, and cursors. The user can draw freehand curves, point-by-point curves, lock the position of objects, and snap to grid. The size and color of objects can be set by the user and text can be added. An inspector is available to view all the settings of objects. The user can play, fast rewind, and set the playback speed of the score. Examples of creating and configuring objects using script are included in the downloadable documentation.

IanniX is licensed for free under GPL 3 and source code is available for Linux, Windows, and Mac OS X. A community forum, facebook page, newsletter, and example video are available for current and potential users.

Contact: IanniX; electronic mail contact@iannix.org; Web iannix.org/en/.

Apogee Jam Guitar Interface for iPad, iPhone, and Macintosh Computers

The Apogee JAM is a pocket-sized instrument interface for use with iPad, iPhone, and Macintosh computers (see Figure 9). It is a plug-and-play device, with no configuration necessary. JAM circuitry was designed for use with guitar and bass instrument and features a PureDIGITAL digital convertor that supports 44.1 kHz sampling at 24-bit resolution.

A multicolor LED is provided for status indication and input level monitoring. A rotary wheel gain control is located on the side of the interface for easy thumb operation. The instrument input is located on the bottom panel of the device and a locking output on the top panel. Cables are provided for connecting the interface directly to an iPad or iPhone, and to the USB port of a Macintosh computer. The JAM interface is powered by the device to which it is connected.

The company also produces Mic, a compact USB microphone for iPad, iPhone, and Macintosh computer. It also uses PureDIGITAL technology and is a plug-and-play device. Input levels can be adjusted at the microphone and a multicolor LED is provided for status indication and

Figure 10. The Fostex AR-4i audio interface for iPhone.

input pevel. A desktop stand is packaged with the microphone.

JAM is listed for US$ 99 and Mic for US$ 109. Contact: Apogee Electronics Corp., 1715 Berkeley St., Santa Monica, California 90404, USA; telephone (+1) 310-584-9394; fax (+1) 310-584-9385; Web www.apogeedigital.com/.

Fostex AR-4i Audio Interface for iPhone

The AR-4i, from Fostex, is an audio interface for the iPhone, with line and microphone inputs, two microphones, level metering, and gain control (see Figure 10). The interface has an A-D/D-A convertor for audio recording and playback. It features three stereo line/microphone inputs. Two plug-in–powered condenser microphones with a cardioid recording pattern are provided, though third-party microphones can also be used. Pop-shields are included for the microphones. Gain is controlled by a thumb wheel on the side of the interface and a four-dot LED level meter is provided for input monitoring. An iPhone application is available for free from the iTunes app store and can be used to set pan, low-cut filter, limiter, and equalization. A mini-headphone output is also provided on the interface. The frequency response is reported as 20 Hz to 20 kHz, ±4 dB and the signal-to-noise ratio is more than 73 dB.

Two AAA alkaline batteries give an operating time of 8–10 hours, or a USB B-type connector can be used to power the interface from a computer. A hand grip is supplied and two threaded mounts on the bottom and the side of the interface enable it to be used with tripods in horizontal and vertical postions. The interface measures 735 × 106 × 50 mm and weighs about 200 g. A carrying bag is included with purchase.

The AR-4i recorder is listed for US$ 199. Contact: Fostex, 3-2-35 Musashino, Akishima, Tokyo, Japan 196-0021; telephone (+81) 425-464-974; fax (+81) 425-469-222; electronic mail info_sales@fostex.jp; Web www.fostex.com/.

Yamaha CoreMIDI Applications for iPad and iPhone

Yamaha also offer the user a range of CoreMIDI iPad and iPhone applications on the iTunes app store. Their i-MX1 cable interface can be used to connect iPads and iPhones to MIDI devices and instruments (see Figure 11).

Faders & XY Pad is an application designed to control external MIDI devices using eight faders and an *x*–*y* pad. Each fader can be assigned a control change number, parameter range, and channel number, with minimum and maximum values assignable for each control change. A MIDI learn mode can be used to automatically assign parameters by sending a signal from a MIDI device

Figure 11. Yamaha's i-MX1 cable interface for iPad and iPhone.

to the application. The *x*–*y* pad allows the user to control multiple faders at once. A graphical ball object is displayed and the user can control the speed and movement of the ball on the *x*–*y* pad; touching the ball with two fingers moves it iteratively, while using three fingers causes the ball to move in a circle. The user can choose the look of the faders, panel, scribble strip, and scale using customizable skins.

Faders is a four-fader application that sends MIDI control messages from an iPad or iPhone to a MIDI devices and operates in the same manner as the previous application.

Set List Organizer can be used to edit and display set lists for live performance, sending MIDI program change messages for each song. Set List Mode provides controls for setting the MIDI channel, bank, program number, and volume for each song. A MIDI learn feature can be used to configure the settings from a MIDI device. The order of songs can be easily changed with a single finger. Memo List Mode displays the notes for each song which can include introductory text, lyrics, and chords. The font and wallpaper for each song and songlist can be customized.

Keyboard Arp & Drum Pad is an iPad application with a keyboard, arpeggiator, and drum pads that transmits MIDI note messages to external MIDI instruments and devices.

Figure 12. The iConnectivity MIDI interface for iPad, iPhone, and computer.

The user can play the built-in keyboard, trigger arpeggios, or play drum, keyboard, guitar, and instrument patterns. A range of intstrument categories provides 342 arpeggios. Each phrase can be modified in real-time for swing, beat stretch, octave range, and variation. Sixteen drum pads can be assigned up to five notes and velocities, allowing chords or layered percussion to be played with a single pad. The pads can be split to assign different notes or velocities to the left and right sides of the pad. A learn mode for use with Yamaha's MOTIF XF synthesizer is built-in. A Tap Tempo features allows the user to set the tempo or the arpeggios and a ribbon controller can be used to control velocity, pitch, and two assignable parameters.

The Performance Editor application is designed to allow the user to control a Yamaha synthesizer from their iPad. In Voice Select Mode the user can set up layers and splits by selecting the voice and note limit for each part. MEQ Mode offers graphical manipulation of a five-band equalizer using select, pinch, and spread finger movements. Switch, chorus, reverbation, and master effect parameters can be controlled in Effect Mode. Sends, returns, and panning can also be controlled. A single arpeggiatior display also allows the user to configure the arpeggiator setting for each part. An *x*–*y* pad is also included in the Performance Editor. Up to five parameters can be assigned and controlled from this pad, each sending a control change message to the connected MIDI device.

Voice Editor Essential is another application for editing Yamaha synthesizer parameters. The user can select and edit the insert and system effects, arpeggiator, equalization, and routing, sends, and returns for all of the effects used for a voice. Finally, the Multi Editor Essential is designed

for Yamaha synthesizer songs and patterns on an iPad. The user can control volume, pan, chorus, reverberation, mix effects, the master equalization, and transport controls.

The applications are available for US$ 3.99 on the iTunes app store. The iMX1 is listed for US$ 119. Contact: Yamaha Corporation of America6600 Orangethorpe Ave., Buena Park, California 90620, USA; Web www.yamaha.com/.

iConnectivity MIDI Interface for iOS Devices and Personal Computers

The iConnectMIDI from iConnectivity is a MIDI interface that can be used with iPhone, iPad, and iPod Touch, through the use of CoreMIDI, and with Windows, Macintosh, and Linux computers through the use of regular MIDI drivers (see Figure 12). The device provides twelve MIDI ports to the user in a compact 4.3 × 2.75 × 1.4 in portable unit. Two mini USB ports support full-speed 12 Mbps USB and can be used with iOS devices and computers. A USB-A host port supports USB MIDI 1.0, operates at 12 Mbps and can supply 500 mA power, allowing it to support a powered USB hub with up to eight devices connected. These connections are located on the front panel of the interface for easy access. Two pairs of classic MIDI DIN ports and the 5-V DC power connection are located on the rear panel. LED indicators for power status and each of the MIDI connections are located on the front panel.

The interface can be used used in a number of ways. It can function without a computer to connect USB MIDI 1.0 devices together or to MIDI DIN devices. Two or more MIDI inputs can be merged to a single output port, with a buffer for each port and multiple merge routes available. It can be used as a MIDI Thru device with multiple routes possible. Events can be muted from the MIDI input or output stream. Internal memory is available for storing the iConnectMIDI configuration.

Firmware updates will be available for download from the product Web site. The interface weighs 0.7 lbs.

iConnectMIDI is listed for US$ 199.99. Contact: iConnectivity, #3, 1915 30th Ave NE, Calgary, AB T2E 6Z5, Canada; telephone (+1) 403-457-1122; fax (+1) 403-775-4168; electronic mail info@iConnectivity.com; Web www.iconnectmidi.com/.

Nokia Play 360º Portable Bluetooth Speaker

Nokia's Play 360º is a compact wireless speaker that connects to mobile phones, laptops, and MP3 players using a Bluetooth network, or by connecting devices by cable to the built-in mini-jack port (see Figure 13). The speaker uses Near Field Communication (NFC) to pair the device to the speaker. This means that a user with an NFC-enabled phone can simply tap the speaker to pair the devices through Bluetooth instantly and automatically. Two speakers can be paired to provide stereo audio. If paired to a phone, the speaker automatically mutes if a phone call is taken.

Figure 13. Nokia's Play 360º portable Bluetooth speaker.

The speaker delivers 360-degree audio and according to the manufacturer, has an upward-directing design which allows the small speaker to fill a room with sound. The unit is constructed from aluminium and has a curved shape. It is 110 × 110 × 124 mm in size and weighs 514 g. An on/off switch, volume control, and LED status indicator are provided on the body of the speaker. The range of operation for Bluetooth is 10–100 m, depending on the environment. The NFC range is 15 mm. The frequency response of the speaker is reported as 86 Hz to 21 kHz. The speaker delivers 2.1 W of power and maximum output is 75 dB at 1 m anechoic or 81 dB at 1 m half-plane.

The speaker can be powered by rechargeable battery (Nokia BL-5C), which can be recharged by a computer using a micro USB cable. This gives 21 hours operating time. It can also be mains powered. The speaker automatically shuts down after one hour of inactivity. The package includes a battery, charger, 3.5 mm audio cable, and a user guide.

The Nokia Play 360º is listed for US$ 214. Contact: Nokia, 102 Corporate Park Drive, White Plains New York 10604, USA; telephone (+1) 914-368-0400; fax (+1) 914-368-0501; Web accessories.nokia.com/.

Jawbone JAMBOX Compact Bluetooth Speaker

JAMBOX is a compact portable wireless speaker capable of delivering 85 dB of audio and 10 hours of play time. It can be used to play music from laptops, mobile devices, and phones using Bluetooth, or as a speaker phone for online phone calls and for conference calls using the built-in microphone. A stereo mini-jack input is also provided for connection to devices. The controls include a small on/off switch, rubber buttons for volume control, and a further button for receiving calls or for a spoken indication of battery status.

The speaker features a moving-wall passive bass radiator and an airtight enclosure. The frequency response of the JAMBOX is 60 Hz to 20 kHz and the output level is 85 dB at 0.5 m.

It is made from stainless steel with an industrial-weight molded rubber casing, weighs 347 g, and measures 151 × 57 × 40 mm. It is available in four designs: Black Diamond, Blue Wave, Grey Hex, and Red Dot. A rechargeable Lithium-ion battery is built-in to the speaker and a micro-USB cable is used for charging. The range of wireless operation is at least 33 feet.

The company's MyTALK online platform can be used to download applications, new features, and software upgrades, and personalize settings such as connections, device names, and preferences. LiveAudio is a new feature available through MyTALK. It is designed to enhance the spatial imagery of the audio and can be turned on or off using the volume controls.

The speaker is bundled with 60-in. and 12.5-in. micro-USB charging cables, a 36-in. stereo mini-jack cable, a carrying case, wall charger, and a user guide. The speaker software is compatible with Windows 7, Vista, and XP, and with Mac OSX 10.5 and higher.

The JAMBOX is listed for US$ 199. Contact: Jawbone, 99 Rhode Island Street, 3rd Floor, San Francisco, California 94103, USA; telephone (+1) 877-254-7426; fax (+1) 415-813-6084; Web www.jawbone.com/.

New Releases

Publications

Dan Hosken: *Music Technology and the Project Studio: Synthesis and Sampling* (softcover/hardcover, 2012, ISBN 978-0-415-99723-2/978-0-415-87828-9, New York and London: Routledge, www.routledge.com/textbooks/9780415997232).

Scott Wilson, David Cottle, and Nick Collins, editors: *The SuperCollider Book* (hardcover, 2011, ISBN 978-0262232692, Cambridge, MA: The MIT Press, http://mitpress.mit.edu).

Recordings

Amanda Bayley and Michael Clarke: *Evolution and Collaboration: The Composition, Rehearsal, and Performance of Finnissy's Second String Quartet* (Multimedia Software DVD, 2011, Amanda Bayley and Michael Clarke).