


Cheap thrills

 Music making needn't be an expensive occupation; we round up the best freeware and shareware on the net...

 **On the DVD**
CHEAP THRILLS
 We've saved you all that download time – you'll find 35 of the utilities mentioned in this feature on the DVD in the **Cheap Thrills** folder

Shareware's quaint, 'Try it and if you find it useful please donate' approach has always made an appealing way to get hold of music software. The shareware movement has allowed small developers to really connect with musicians and present a wealth of software options, many of which would not otherwise be available. Recently, though, the development of the internet has changed the dynamic somewhat: downloadable demos of just about every application and plug-in on the market are readily available, and easier electronic payment has pulled a lot of shareware more into the demoware category. Still, some unique and affordable music software remains – you just have to know where to look. For this feature, we've selected titles with broad appeal and catered for both Windows and Mac users. A few of these things are free, the rest very affordable, and all can be tried out after a quick and easy download. Everything here fits into one of three categories:

- Freeware** – full featured, no payment is required
- Shareware** – a few features are omitted

but the software is still useful even if unregistered, although you are ultimately expected to do so
Demoware – gives you a taste of its capabilities but you'll need to buy the full version to get any practical usage
 Don't let a program being free or shareware deceive you as to its viability in your studio: there's freeware out there that rivals even the best commercial software. Oh, and if you do find a particular piece of shareware useful, do please seriously consider registering it. Many a promising application has slipped into obscurity because the author could no longer afford to do what they do – it simply ends up being charity work. **cm**

DOWNLOADABLE DEMOS OF JUST ABOUT EVERY APPLICATION ON THE MARKET ARE READILY AVAILABLE

Sequencing

But what about plug-ins and sequencers?

You'll probably notice that we haven't included 'conventional' sequencers or plug-ins in our round-up. With regard to sequencers, this is because commercial entry-level sequencers from the major publishers deliver incredible feature sets at very low prices and are hard for the small developer to top. When they try, they're prone to 'going commercial' (FL Studio, for example) or getting bought out by another company (such as Traktion, now owned by Mackie). The plug-in scene, on the other hand, offers an embarrassment of riches, too bountiful to be relegated to a mere subplot. We'll be addressing that particular topic in a dedicated feature later in the year, but in the meantime check out the ever-definitive source of info on such matters, www.kvraudio.com.

Forget your Cubases, Sonars and Logics – this little lot are what you might call 'different'...

Numerology (Five 12)

PC Mac **SHAREWARE: \$85**

Jim Coker, Mr Five 12, is a developer and performing musician. Numerology was born out of his frustrations with the software and hardware sequencers then available for live performance. It excels as a performance sequencing instrument, yet is very much a studio power tool as well. Numerology is a modular sequencing studio. The closest analogy would be a rack-full of analogue step sequencers and other control modules. It features various sequencer modules that you connect up to construct your personal composition or performance setup. Your 'sequencing machines' can control Audio Units instruments and

effects, as well as external MIDI devices. Its MIDI output can be routed to, and recorded by, a MIDI sequencer. You work with a 'session' that consists of a number of 'groups'. A group comprises a collection of modules, plus an optional software instrument with effects. You can save a snapshot of a group's settings into one of 64 presets. These can be recalled manually, or automatically in the Tracks view – Numerology's song sequencer. You can use MIDI to directly control Numerology modules or play software instruments, making the software a useful Audio Units host. Numerology is actively developed, and if you register you can join Jim and



many users trading hints on its Yahoo forum. The unregistered version is capable of handling small sequencing needs or hosting a single Audio Units instrument. If you try it, be warned: the numbers say that a Numerology purchase will be in your future! www.five12.com

Energy XT (Jørgen Aase)

PC Mac

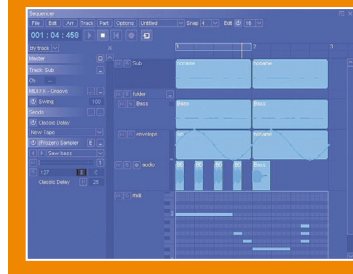
DEMOWARE: £28

Have you ever been frustrated by the limitations of your sequencer, wished for a more flexible software studio or craved interactive live performance features? If your answer is yes, then try energyXT.

energyXT is a shape-shifter that can act as a fully-featured VST host, a 'super plug-in' used to create your own devices by combining VST instruments and effects, a live performance instrument, a MIDI processor and router, and an audio/MIDI multitrack sequencer construction kit. Its modular

environment lets you connect VST instruments and effects to your MIDI and audio system. energyXT embodies the virtual studio ideal: a set of virtual modules and processors that you patch together to make the studio of your dreams. It's also a handy problem solver. Want to add step sequencing to your favourite VST filter plug-in? No problem. Need a standalone rack of VST instruments? Wire it up in energyXT.

The built-in sequencer module is capable and a good basis for creating your ideal sequencing tool. You can wire



up plug-ins and energyXT modules in unique ways to make a truly personal, powerful sequencing workstation.

www.xt-hq.com

ALSO TRY...

HammerHead Rhythm Station

PC Freeware
Bram Bos: www.threecords.com/hammerhead

Bram Bos' aged sampling drum machine is still a worthy download.

Building Blocks

PC Demoware: \$80
AuReality: www.midworld.org/aureality/products/buildingblocks/buildingblocks.html

Modular MIDI sequencing and processing toolkit.

AmbiLoop

PC Freeware
Evenfall: www.evenfall.com/ambiloop/index.html

Real-time multitrack sample looper modelled after the long digital delay loopers made famous by guitar superstar Robert Fripp.

Doggiebox

Mac Shareware: \$46
Zygoat: www.doggiebox.com

A different take on the sampling drum machine idea, offering easy pattern sequencing and song assembly.

Tu2 (Bram Bos)

PC Mac

SHAREWARE: \$35

Bram Bos is something of a music freeware/shareware legend. His freeware HammerHead Rhythm Station, a sampling drum machine released in 1997, was one of the first successful software instruments.

Tu2 is a sampling workstation that excels at creating samples and loops and assembling them into songs. You can use prefab samples or make your own using Tu2's instruments, step sequencers and effects.

Up to 12 different samples can be used in a single pattern. Patterns are one bar long, with 16 steps per bar. A series of patterns are used to make a song, and long samples can be sustained across patterns. This lets you blend standard pattern-based sequencing with a more linear approach.

The free version is very full-featured, but registration brings useful additions, so fire up that browser and see if this Tu2 fits.

www.brambos.com

Renoise

PC Mac

SHAREWARE: €50

There have always been two parallel dimensions in the computer music universe: MIDI sequencers and trackers. Each has its own features, and whatever cross-pollination occurred was usually a tracker user venturing into MIDI waters.

Modern trackers have much to offer though, and Renoise is a 21st Century tracker in every sense. It blends traditional tracker features with VST plug-ins and real-time MIDI control. It

works comfortably with external MIDI devices, yet it still excels at getting the most out of a handful of samples. Its user interface is a proper blend of mouse-driven GUI and the classic tracker keyboard interface.

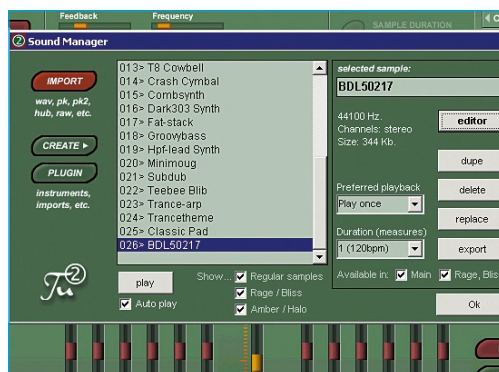
The concepts are easy to grasp, and the best way is to study Renoise's excellent demonstration and tutorial songs. The free version is remarkably well-featured – enough to put together complete tracks, certainly.

www.renoise.com

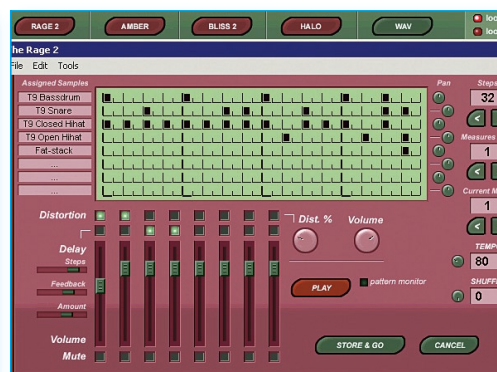
PRO TIP

SOUND DESIGN
A sample sequencer like Tu2 or Renoise can offer an effective way of creating interesting sounds by layering, sequencing and processing a handful of samples. Think of it as both a sound design and composition tool.

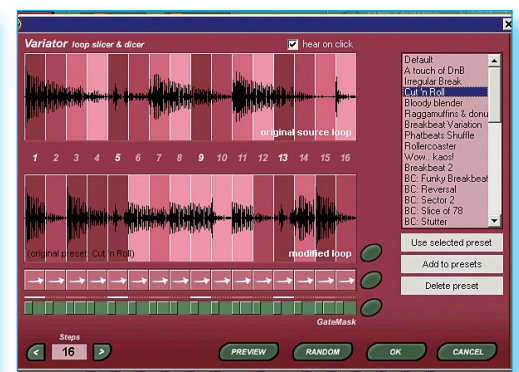
STEP BY STEP Exploring Bram Bos' Tu2



1 Samples are selected in the **Sound Manager**. You can import existing samples or create new ones using the four software instruments. Optional Tu2 plug-ins offer additional ways to add samples, and there's even a handy wave editor. >>



2 Each of the four software instruments comes with its own step sequencer. Rage2 (shown) is a sampling drum machine; Amber is a monophonic virtual analogue; Bliss is a polyphonic sampler; and Halo is a monophonic FM synth. Sounds are rendered as samples but saved as patches that you can later edit. >>



3 Each sample slot has four 'step processors'. Pan, Filter and Distortion let you add step-sequenced automation to each respective effect, but the crown jewel is the Variator (shown here). This lets you slice and rearrange your loops by dragging and dropping. You can reverse slices, and repeat and gate them.

Multitrack audio editing

Cut up your samples or compose full tracks using these very capable audio editors...

ALSO TRY...

Amadeus II

► Mac ► Shareware: \$30
HairerSoft:
www.hairersoft.com
Stereo wave editor that supports Audio Units effects.

AudioSuite

► PC ► Shareware: \$100
Glowing Coast Technology:
www.glowingcoast.co.uk/glowingcoast/audio/index.htm

A combination wave editor and multitrack audio file mixer with effects.

Sample Wrench

► PC ► Demoware: \$49-\$149
Dissidents:
www.dissidents.com

Popular stereo wave editor with some hardware sampler support.

HyperEngine-AV (Arboretum)

PC Mac

FREWARE

Once a commercial product, HyperEngine-AV is now offered as freeware as an inducement to buy Arboretum's excellent plug-ins. It's 'trackless' so you can place audio clips anywhere you see fit on the arrange page. It's also a video and text editor, but musicians may care to ignore those features.

The trackless approach means that each audio clip can have its own effects. Effects are applied during playback, or you can render an effected audio clip to a new file. Unfortunately,

Arboretum have to make their money somewhere, and HyperEngine-AV uses a special plug-in format that only they cater for. So you may find you end up spending some serious cash if you decide you want to use more than just the included effects.

HyperEngine-AV certainly won't replace your sequencer but it is handy for assembling samples or making quick audio recordings and work-ups. And who knows, you might even think of something clever to do with those video editing features...



Find out more about HyperEngine-AV now at the address below.

www.arboretum.com

Kristal (Kreatives.org)

PC Mac

FREWARE: €25 for commercial use

Kristal Audio Engine from Kreatives.org is a 16-track digital audio workstation that handles sample rates up to 192kHz, uses 32-bit floating point processing, and supports VST plug-ins. It works to the familiar multitrack/mixing desk metaphor, with fully featured mixer channels.

Kristal lets you work non-destructively with audio parts that you

freely arrange, split, splice and copy. Audio parts have their own simple level envelopes, but the program lacks sophisticated editing and processing, so you still need a wave editor.

It is a very serviceable multitrack recorder, though, that could be for you if you only work with audio or use another program for MIDI sequencing.

www.kreatives.org

Audacity

PC Mac

FREWARE

If you need a multitrack audio editor that's compatible with a large number of file formats, then don't miss Audacity. Each of its tracks can operate at different sample rates, and it handles all the conversion for you during playback and mixing. It also offers DSP processing commands, and supports VST plug-in effects.

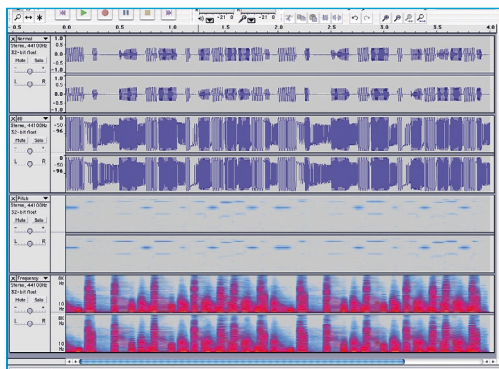
Audacity lets you record 32-bit

floating point audio files for minimal signal degradation through heavy processing, and you can export samples or complete projects in more standard 16-bit and 24-bit formats.

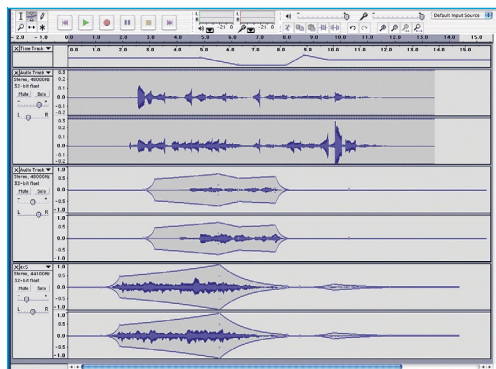
Audacity is a very capable multitrack recorder and wave editor. If you do a lot of sound design, or don't want a full-on sequencer, you'll find it endlessly useful.

<http://audacity.sourceforge.net>

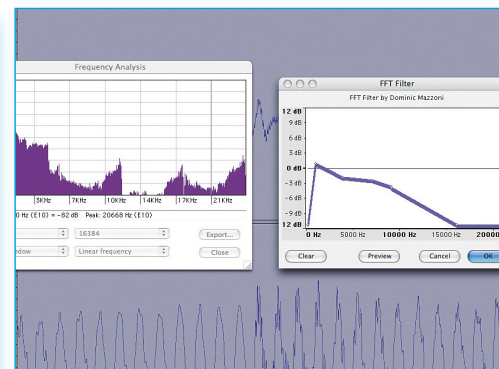
STEP BY STEP Audio editing with Audacity



1 Audacity can display tracks in four different ways. The same bass riff is shown as (top to bottom) a conventional waveform envelope, the envelope in dB, the fundamental pitch, and the spectral frequency content. »



2 You can use Audacity for intricate sample editing. Note the use of level envelopes, and that 48kHz and 44.1kHz recordings are being freely mixed in a 96kHz project. Also note the Time Track (top), which is used to slow down and speed up playback. »



3 Audacity lets you edit audio right down to the level of a single sample. It also features helpful frequency editing aids like the spectral analysis graph and the FFT Filter DSP command.

Audio processing

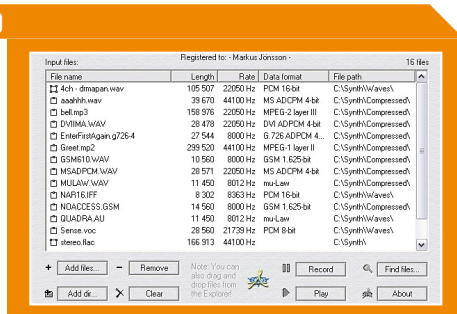
File conversion, batch operation and more – and all without breaking the bank...

Awave Audio (FMJ Software)

PC Mac DEMOWARE: \$50

A batch processor that enables you to apply DSP processing to a group of files, Awave Audio understands and can convert between a wide range of formats. It handles high sample rates (up to 192kHz) and many different bit-rates. Processing is always done at 32-bit floating point quality.

It only takes three steps to use Awave Audio. First, invoke the File dialog to gather the individual files or folders of files that you want to process. Next, specify where you want the new files stashed, any format changes, and which built-in commands and DirectX plug-ins you want applied. If you need multiple copies in different formats,



that can be done too. Finally, start Awave Audio, sit back and watch it do its thing.

www.fmjsoft.com

Sample Manager (Audiofile Engineering)

PC Mac SHAREWARE: \$70

Sample Manager offers powerful batch processing of a wide variety of audio file formats through a simple interface. It can convert between a number of formats, including Acidized WAV to Apple Loops, and offers a broad range of DSP processing commands, as well as bit- and sample rate conversion.

You can also use Sample Manager to rename groups of files, and samples can be automatically trimmed, have their levels changed and fades

applied at either end. A group of files can be mixed together, or assembled end-to-end, and you can even apply chains of Audio Units effects.

The user interface makes it easy to select files, and they're auditioned by simply clicking on them or playing a connected MIDI keyboard. If you're so inclined, you can control Sample Manager with AppleScript – perfect for automating those frequently-used command sequences.

www.audiofile-engineering.com

SoX (SoX)

PC Mac FREWARE

SoX is a powerful software utility that was developed as part of the open source initiative, meaning that the actual source code is available for anyone to improve.

This is an old-school program that shuns the flashy graphical user interface in favour of command line operation. Don't be put off, though: SoX is easy to use and can do very powerful

things in conjunction with OS X's shell scripts or Windows' batch command files.

SoX converts files from one format to another. You can apply DSP processing, alter sample rates, and change bit resolution. If your wave editor lacks a critical DSP feature, or you need to convert a lot of files, SoX is worth getting to grips with.

<http://sox.sourceforge.net>

ALSO TRY: Amazing Slow Downer

Mac/PC ▶ Demoware: \$45
Roni Music:
www.ronimusic.com

As the name suggests, this lets you play an audio file at a fraction of its normal speed. Perfect for analysing and copying those classic riffs.

AudioMulch

PC ▶ Shareware: \$50

Audiomulch:
www.audiomulch.com

This powerhouse audio processing toolkit and DIY synth/effects maker presents limitless sound design options. Be sure to check out the outstanding envelope control curves!

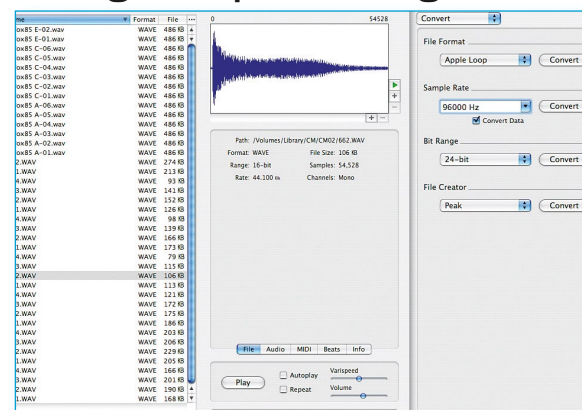
SoundHack

Mac ▶ Freeware

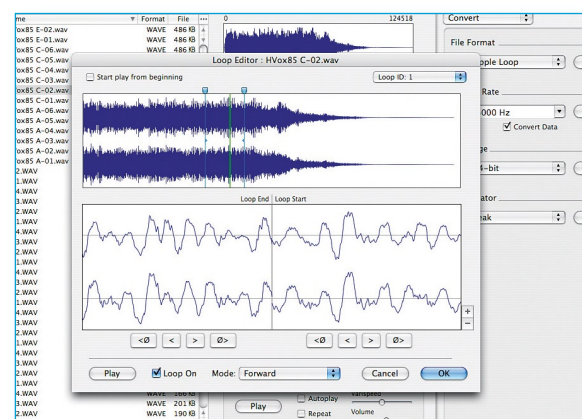
SoundHack:
www.soundhack.com

SoundHack is a comprehensive collection of DSP processing commands that has been a favourite of Mac-based sound designers for many years.

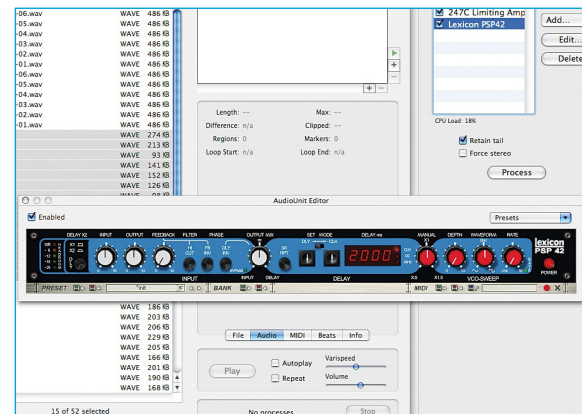
STEP BY STEP Using Sample Manager



1 You can collect files using a dialog, or by dragging them from the Finder or another program. Click on a file to hear it play and see one of five information panels. Highlighted files can be processed with a variety of operations. >>



2 Sample Manager makes it easy to work with all types of samples and loops, including instrument samples destined for a sampler. You can use your MIDI keyboard to trigger and transpose file playback, and a built-in loop editor helps set up multiple loops. >>



3 You can modify selected files with Sample Manager's rich command set, and one particularly creative feature is the ability to build Audio Units effects chains.

MIDI Tools

Take control of your MIDI setup with these backroom utilities and signal flow tools...

PRO TIP

MIDI UTILITY USAGE
You can use MIDI-OX or MIDI Pipe to create keyboard splits, convert one message into another, or change a message's MIDI channel.

ALSO TRY...

MIDI Clock

► Mac ► Freeware
Granted Software:
www.grantedsw.com
A tempo-adjustable MIDI clock source.

MidiPatchbay

► Mac ► Freeware
Pete Yandell: pete.yandell.com/software
Another capable MIDI patchbay.

MIDI-OX & MIDI Yoke

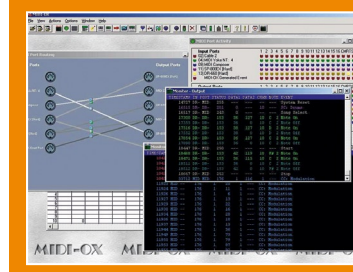
PC Mac

SHAREWARE: Free for non commercial use; MIDI-OX - \$49, MIDI Yoke - \$12

Designed by by Jamie O'Connell and Jerry Jorgenrud, MIDI-OX, is a 'Swiss army knife' package that brings together a number of useful utilities. MIDI monitor shows MIDI activity on any port; the SysEx file manager lets you send, receive, load and save SysEx messages (great for backing up patch data); and the software can also play MIDI files.

The patchbay feature, however, is the real heart of MIDI-OX. With it you can filter messages and connect any input to any output. A typical use for it is to

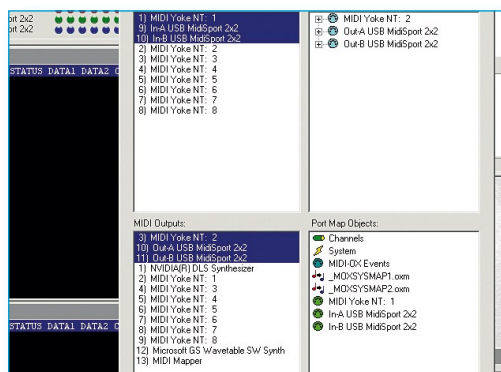
allow a MIDI controller or keyboard to operate a MIDI synth without having to launch a sequencer. MIDI Yoke adds virtual MIDI ports to your system so that applications can pass MIDI information between each other. It appears to the applications as a MIDI driver but behaves like a patch cable: one application selects a MIDI Yoke port for output and the second uses the same port for input. MIDI Yoke ports are multi-client, so up to four applications can send data to the same destination. You can use MIDI Yoke and MIDI-OX



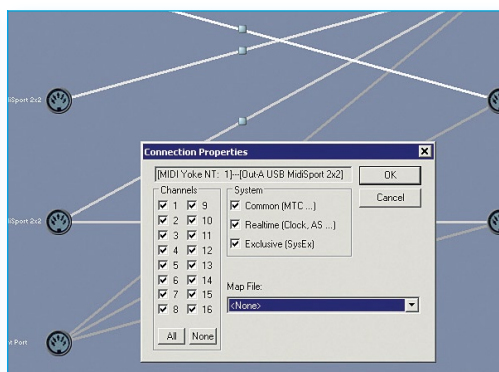
patching features together to create elaborate MIDI routing solutions.

www.midiox.com

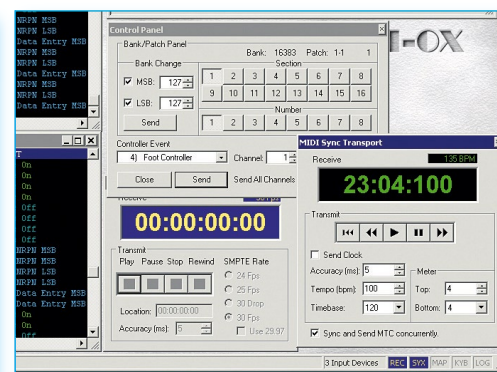
STEP BY STEP MIDI routing with MIDI-OX



1 Start by informing MIDI-OX which ports you wish to patch and process. This example shows USB ports and a pair of MIDI Yoke ports. MIDI Yoke1 will be shared by two applications so that they can send MIDI to the same USB output. »



2 Connect ports with the graphical MIDI Port Routing panel. Just click an input and drag to an output. If you click the square on a patch cord, you'll get the dialog above. Use this to disable channels or translate control messages with the Map file. »



3 MIDI-OX can serve other needs beyond patching port connections or transforming MIDI data – it also offers an excellent activity monitor, logs time-stamped MIDI events, and lets you receive or send SysEx data. There are transport controls, and easy ways to send MIDI messages.

MIDI Pipe (Subtlesoft)

PC Mac

FREWARE: Donations requested

MIDI Pipe from Subtlesoft is a programmable MIDI patchbay that's capable of effectively filtering, processing and routing MIDI data. Some of its other features include a MIDI file player, an on-screen virtual keyboard, and monitoring windows. Not bad for a freebie.

The idea behind this software is that you create 'pipes' connecting input and output MIDI ports, both real and virtual. Each pipe can contain multiple

processing steps with which to transform data, and a MIDI Pipe session can have any number of these pipes within it. In addition to this, the patchbay can also trigger and run AppleScript routines in order to generate or process MIDI, or change MIDI Pipe's operation. Visit the address below to download it for free (although a small donation is appreciated).

homepage.mac.com/nicowald/
SubtleSoft

MIDI Monitor and SysEx Librarian (Snoize)

PC Mac

FREWARE

MIDI Monitor, from the enigmatically named Snoize, enables you to view MIDI data as it flows in and out of your physical MIDI ports or between applications. You can choose which ports to display and filter out unwanted information.

SysEx Librarian lets you capture System Exclusive (SysEx) messages sent by MIDI devices and save them as files.

Its file format is compatible with other SysEx utilities, so you can use SysEx Librarian to share MIDI data dumps with others. Many manufacturers update their MIDI products using SysEx files, and SysEx Librarian is great for avoiding the common problems encountered when trying to use a sequencer to implement such updates.

www.snoize.com

Plug-in hosting

You don't need a sequencer to use your favourite plug-ins - one of these will do...

VSTHost and SaviHost (Hermann Steib)

PC Mac

FREWARE

These two sibling programs offer an important and useful service - they run VST instruments without the hassle of using a host sequencer. They can be particularly handy for using software instruments on stage, or if you just want to play for fun or practice.

VSTHost is the more conventional of the two. Simply start the application and select a plug-in to run from within your VST plug-ins folder. You can load multiple instruments to create layers or multitimbral setups, and VST effects chains can be added and applied to

any of the instruments.

SaviHost is very straightforward to use once it's been set up. You copy it to your VST plug-ins folder and rename it the same as the instrument's .dll file name. For example, renaming it Atmosphere.exe will host the Atmosphere VSTi when you run it. You simply repeat this for each of your individual VSTi instruments.

Both programs support plug-in presets and banks, and each has a helpful on-screen mini-keyboard that lets you play the instrument with your



mouse or from your computer's QWERTY keyboard.

www.hermannseib.com/english

ALSO TRY...

Chainer

► PC ► Shareware: \$60

Xlutop: www.xlutop.com

A powerful VST/VSTi host that can be used as a VST plug-in.

Virtual Mixing Console

► PC ► Demoware: \$59

Spin Audio:

www.spinaudio.com

A multichannel VST/VSTi host that behaves like a mixing desk.

Console

► PC ► Demoware: \$54

Art Teknika Inc: www.console.jp/eng/index.html

A modular VST/VSTi host.

MiniHost (Tobybear Productions)

PC Mac

SHAREWARE: \$20

MiniHost offers all the usual hosting features but adds external audio processing, WAV file recording, an audio file player, a MIDI file player, a preset browser and organiser, and a nifty preset randomiser for those moments of creative constipation. It's fully functional without payment, except for a 'nag' screen that disappears when

you register.

If that was all MiniHost did, it would be a great little application, but there's also an arpeggiator, step sequencer, one-key chord player, and a control gater for modulating plug-in settings. These can be controlled via MIDI input, the on-screen keyboard, your computer keyboard, or a MIDI file. Nice.

www.tobybear.de

Rax (Granted Software)

PC Mac

SHAREWARE: \$30

Rax lets you create a rack of Audio Units software instruments and effects. Each of 16 mixer channels can be assigned an Audio Units instrument and a chain of Audio Units effects plug-ins. It can also run up to eight send effect chains, plus a final master output chain. The rack's output can be recorded to an audio file.

You can control the rack with MIDI

hardware, or virtual MIDI ports. Each mixer channel has its own port, MIDI channel and key range settings. A MIDI learn system links your MIDI control surface to plug-in controls.

The unregistered installation is restricted to a single instrument and lacks recording, but at this price why not go for the full version?

www.grantedsw.com

STEP BY STEP VST hosting with MiniHost



1 You can load any single VST instrument or effect into MiniHost by selecting from your list of plug-ins. Once loaded, you can select presets and make adjustments using the plug-in panel controls. >>



2 MiniHost has some unique programmable MIDI tools. The Chord Maker provides one-key chord play; the Arpeggiator offers a variety of arpeggiation patterns; the Step Sequencer plays simple single-note sequences transformed by the input notes; and MIDI CC Gate lets you modulate a single plug-in parameter. >>



3 You can also load MiniHost with a single VST plug-in effect to process external audio or an audio file. The built-in recorder captures the processed output, including any real-time changes that you make to the effect's settings.

Sample organisation

Got a lot of samples? Then get a few of these and stay on top of your sound library...

Audio Finder (Iced Audio)

PC Mac

SHAREWARE: \$60

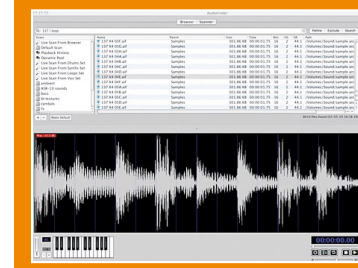
Audio Finder locates, organises, auditions and processes your audio files elegantly and intuitively. It's a program that'll have a dramatic affect on your studio workflow.

Audio Finder provides two views of your sounds: the Browser helps you locate files by navigating your drive's folder structure, while the Scanner automatically searches for all of the audio files on your Mac. You can further refine a scan by searching for full or partial words contained in the file names, and scans can be saved and

recalled later.

The Browser and Scanner present you with a pool of audio files. Simple operations let you organise them, audition them, drag them into your sequencer, or process them with Audio Units plug-ins and in-built functions.

Audio Finder adheres to traditional shareware ethics: it's useful even if you never register. Some key features will, however, expire after a number of launches, but the software is constantly being improved and 60 bucks really is a pittance for what has to be one of the



most essential musical assistants available to Mac users.

www.icedaudio.com

PRO TIP

DOUBLING UP
Before you start a new project, collect some inspiring library loops and samples by copying them into a new project folder. This will help you remain more focused, and you can modify the samples with abandon without fear of changing the library copies.

PRO TIP

ADMIRE THE VIEW
Use SampleCatalog libraries to create different views of the same loops. For example one organised by BPM, another by instrument, a third as 'construction kits'. Audio Finder can do the same thing by creating aliases in a Finder folder structure that parallels each alternate view.

Loop Horse (John Zealey)

PC Mac

FREWARE

Loop Horse addresses the collection, copying, archiving and deletion of sound files. It makes light work of gathering samples at the start of a project, reorganising a sample library's folder layout, and choosing files to copy from sample CDs or DVDs.

The browser view shows your hard drives, folders and audio files, and you can limit Loop Horse to display only

certain audio file types.

You 'collect' files by dragging them to the copy list or to 'folder shortcuts' that you've defined. The copy list lets you build a list of candidates and then audition between them to make your final selections. You can also perform basic sample operations like renaming, BPM calculation and trimming.

www.loophorse.com

SampleCatalog

PC Mac

FREWARE

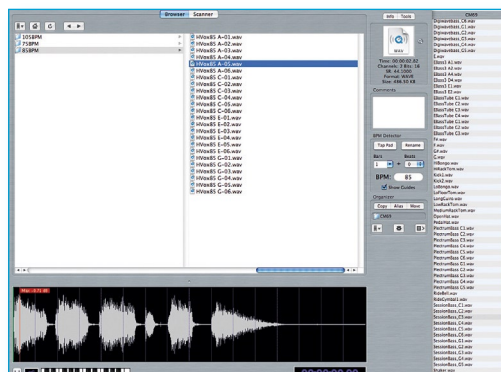
SampleCatalog helps you organise your sounds. It uses a catalogue system to store information about each file, including assigning descriptive categories.

Each catalogue contains 'libraries', which can contain sound files or other libraries. You can place the same sound file in multiple libraries without actually duplicating the file.

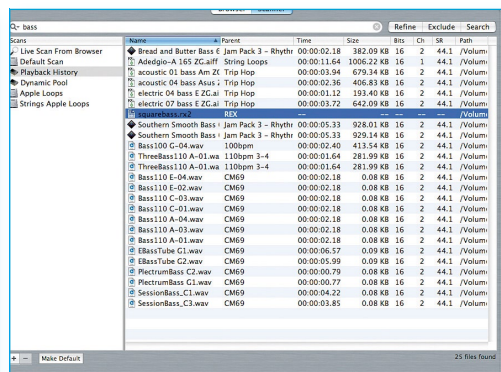
The search feature offers a combination of file name and category searches. The result is a list of files that you can audition, copy, or make into a new library. One use for SampleCatalog is to create a collection of files and then archive them to CD-R or DVD-R, along with their catalogue, making locating archived files a snap.

www.geocities.com/samplecatalog

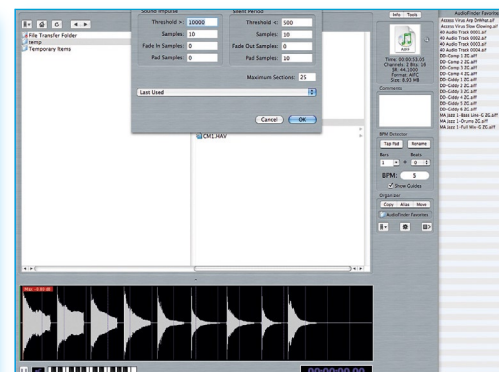
STEP BY STEP Sample management with Audio Finder



1 The Browser view shows your audio files. A selected file plays, its waveform is displayed, and useful file information is shown. The on-screen keyboard can be used to transpose the playback, and the drawer to the right displays the current bookmarked folder's content. >>



2 The Scanner finds file collections automatically and lets you save the results. The built-in scanner result Playback History shows recently auditioned files. Here, search features are being used to find all recently auditioned bass sounds. You can copy, move, or make an OS X alias in the current bookmark folder. >>



3 One of Audio Finder's tricks is splitting a long file into separate, perfectly trimmed sample files. The screenshot shows this being applied to a sample CD track. This is also useful for segmenting a live recording or sampling instruments.

Audio Tools

Audio routing utilities and a generic soundcard driver that can only be described as miraculous...

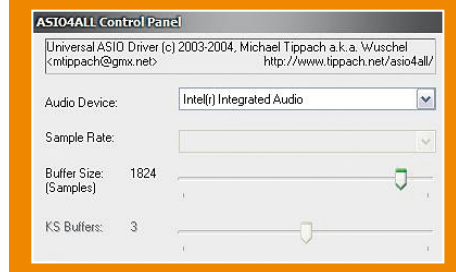
ASIO4ALL (Michael Tippach)

PC Mac **FREWARE**

The performance of any soundcard is dependent on the quality of its controlling software, and for most Windows studio software that'll be an ASIO driver. A surprising number of soundcards, though, don't have one.

ASIO4ALL is a low-latency, hardware-independent ASIO driver. It sits between your soundcard's native Windows driver (WDM) and your audio applications, working its magic on top of Windows rather than at the more risky driver level. The result is stable operation and easy removal when it's no longer required.

ASIO4ALL is a remarkable achievement on the part of its author, Michael Tippach, who has even



gone the extra mile and provided an active online support forum for his baby.

www.asio4all.com

JackTools

PC Mac **FREWARE**

One of the best things about OS X's robust multitasking is the ability to have different audio applications working in concert. What your Mac can't do on its own, however, is pipe audio from one program to another...

That's where JackTools comes in. It has two components: an OS X CoreAudio driver and Jack Server – a background program that manages connections between applications and to and from the soundcard.

You can use JackTools to record from software that doesn't offer any way to record its own audio output by creating a virtual connection between the program's audio output and any application that can record audio. You can also monitor with reduced latency by patching the program's output directly to a soundcard output.

JackTools is open source software, so not only is it free, it's also got a bright future.

www.jackosx.com

Soundflower (Cycling 74)

PC Mac **FREWARE**

Soundflower provides a means to pass audio between applications using virtual audio buses. It comprises two CoreAudio drivers – a two-bus version and a 16-bus version. Simply select the required version as the audio driver.

For example, to process the output of one program with another, assign the dual-bus Soundflower as the source program output driver,

and select the dual-bus Soundflower input driver for the processing application input. A second 'listener' assigned to the input driver would receive the same audio. Likewise a second 'talker' connected to the output driver has its audio output mixed with the first source. It essentially works in the same way as a mixing desk bus.

www.cycling74.com/products/soundflower.html

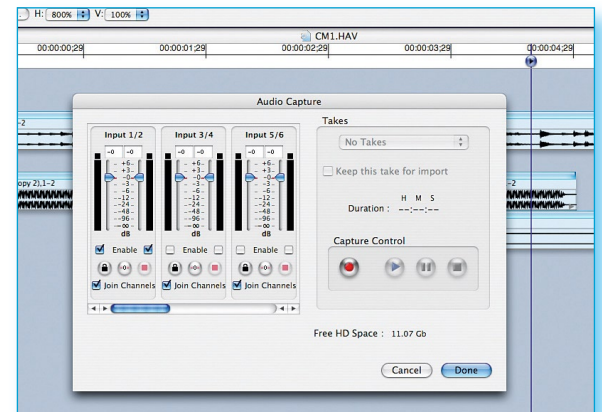
ALSO TRY: PlugAdmin
 ▶ Mac ▶ Demoware: \$20
 CodeOperator:
www.codeoperator.com
 PlugAdmin does exactly what it says on the tin: it helps you to effectively manage your Audio Units, RTAS, VST, and MAS plug-in folders.

AudioUnit Manager
 ▶ Mac ▶ Freeware, but a donation is requested
 Granted Software:
www.grantedsw.com
 Lets you maintain multiple groups of Audio Units and select the active group before you launch an application.

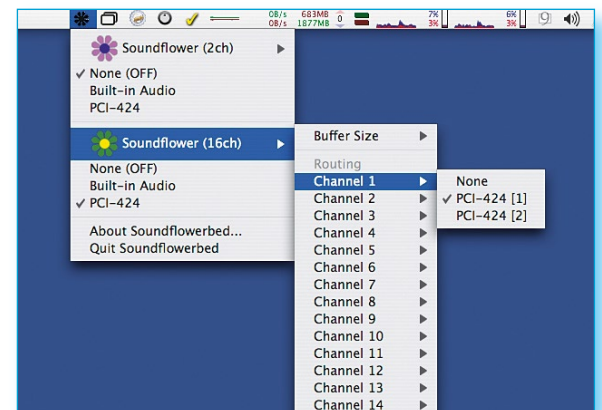
STEP BY STEP Soundflower in action



1 Set the source application audio output to Soundflower. Here we're routing Numerology's audio output to Soundflower 16ch, and assigning the mixer output to use buses 1 and 2. >>



2 We want to record Numerology directly into HyperEngine-AV. First select Soundflower 16ch for the input driver. Open the Audio Capture dialog and enable the same pair of inputs – 1 and 2 in this case. HyperEngine-AV will record Numerology as if it was an external audio source. >>



3 To monitor with minimal latency use the Soundflowerbed applet that resides in the menu bar to patch the first two Soundflower buses to your soundcard's monitoring outputs.