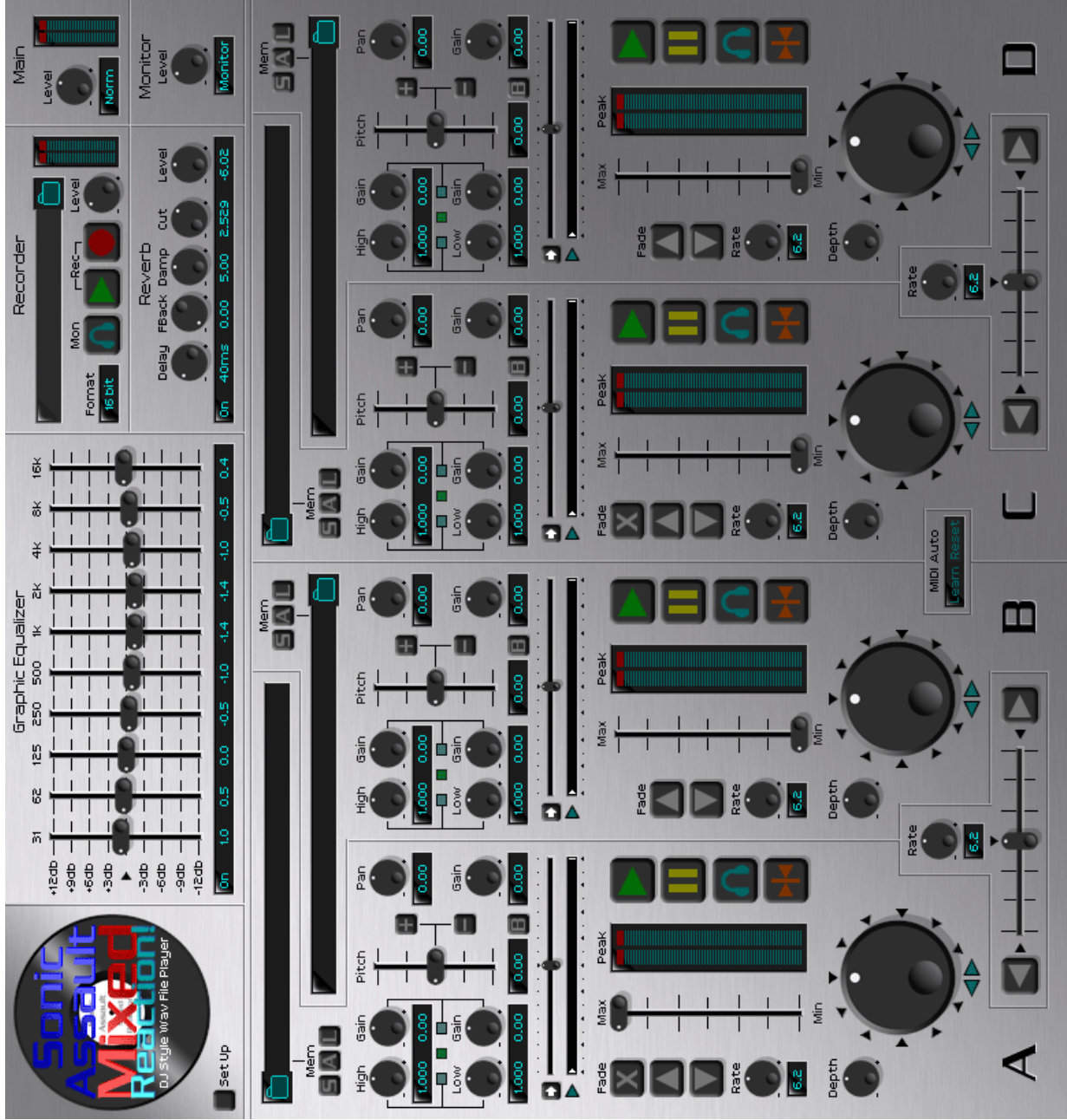


Mixed Reaction! 1.0

DJ Style 16/24-bit Wav Player/Recorder



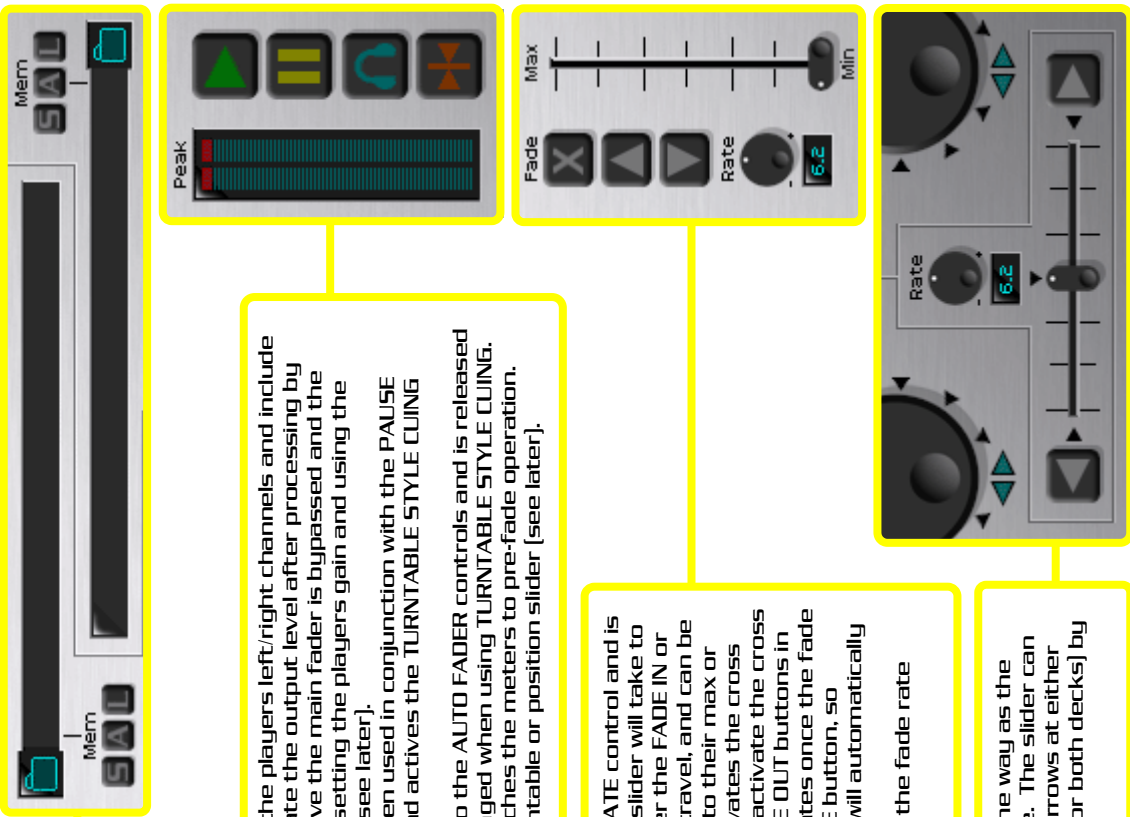
Controls

FILE LOAD AND DISPLAY - Click on the green FILE icon to open the file selector - Click anywhere inside the FILE DISPLAY to remove a file.
S - MEMORY SAVE button.
A - MEMORY AUTO LOAD button - locks the MANUAL MEMORY LOAD button on when active.
L - MANUAL MEMORY LOAD button.
A full description of the file memory function is given later.

PEAK METERS - The stereo peak meters indicate the peak level of the players left/right channels and include a one second peak hold. In normal 'live' operation the meters indicate the output level after processing by the deck's filters and main fader. When the MONITOR button is active the main fader is bypassed and the meters display the level directly from the filters - this is useful for setting the players gain and using the meter as a visual reference when using TURNABLE STYLE CUEING (see later).
PLAY (Green) - Can simply be used to start and stop the player. When used in conjunction with the PAUSE and/or CUE buttons it acts as a player reset when double clicked and activates the TURNABLE STYLE CUEING function when on, or POSITION SLIDER CUEING when off (see later).
PAUSE (Yellow) - Holds or suspends playback. The button is linked to the AUTO FADER controls and is released when the FADE IN control is clicked on. It is also automatically engaged when using TURNABLE STYLE CUEING.
MONITOR (Blue) - Routes the player to the monitor output, and switches the meters to pre-fade operation.
CUE (Orange) - The CUE button activates the two cueing modes - turntable or position slider (see later).

AUTO FADE CONTROLS - The fade time is determined by the FADE RATE control and is indicated in seconds. Note: the indicated time shows how long the slider will take to reach its max or min from its actual start position. Clicking on either the FADE IN or FADE OUT buttons determines which direction the DECK FADER will travel, and can be cancelled by clicking on the same button. The faders can be reset to their max or min position by clicking on the appropriate label. The X button activates the cross fade function - which works between decks A and B or C and D. To activate the cross fade, select the X button first, and then click on the FADE IN or FADE OUT buttons in either deck to fade between the two decks - the X button deactivates once the fade is complete. The fade controls are also linked to the players PAUSE button, so selecting PLAY and PAUSE and then clicking on the FADE IN button will automatically start a player - this also works in cross fade mode.
Note: in cross fade mode the rate of fade is always determined by the fade rate indicated by deck A or C.

AUTO CROSS FADER - The auto cross fader works in exactly the same way as the individual DECK FADERS, but does not include the auto start feature. The slider can be quick reset to its fully left/right position by clicking on the black arrows at either end of the slider, or its centre default position (maximum volume for both decks) by clicking on the arrow below the FADE RATE INDICATOR.



Controls [Cont.]

HIGH/LOW SHELF FILTERS - The filters are automatically activated by adjusting the gain controls from their default 0db settings, and have a usable range of +/- 12db. The green LED indicates that the filters are active. The **FREQUENCY** and **FILTER GAIN** controls can be linked together by clicking on the blue LED above/below the relative control. All readouts are calibrated in decibels and kHz.

PITCH - The pitch control has an adjustable range of approximately +/- 8.5%.

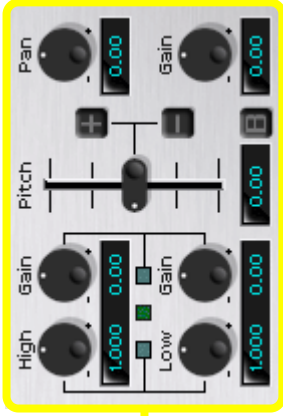
+/- PITCH BEND BUTTONS - These are used as an aid to beat matching and temporarily speed up or slow down the playback.

BPM CALIBRATION PANEL SWITCH (B) - Toggles between the **PITCH CONTROL PANEL** and the **BPM CALIBRATION PANEL** (see **BPM CALIBRATION** instructions later).

PAN - Pans!

GAIN - The **DECK GAIN** control has a range of -150db to +6.02db

All controls can be reset to their default positions by clicking on their labels. If the deck filter's **GAIN** or **FREQUENCY** controls are linked, clicking on either of the linked controls labels will reset both.



CUE/SCRATCH CONTROLS - The **CUE/SCRATCH WHEEL** takes the form of a spring loaded pitch control with reverse playback. At its central rest position playback will be at normal forward [x1] speed. As the wheel is slowly rotated in either direction from its default position, the speed will immediately drop to its slowest playback speed - the range of speed reduction is altered using the **DEPTH** control. The further the wheel is turned the faster the playback speed until on reaching it's end stop playback is at normal forward (clockwise rotation) or reverse speed (anti-clockwise rotation). The playback direction is also indicated by the blue arrow shaped LED's below the wheel. Clicking on any of the markers around the wheel will snap the wheel to that position and hold it there until the mouse button is released.

MAIN OUTPUT - The main output includes a basic limiter, which is activated by clicking on the selector below the **MAIN OUTPUT LEVEL** control. Although the limiter is useful for blocking occasional transient peaks, do not overdrive the output as the limiter will drastically affect the sound quality. As with the deck meters, the output meter include a one second peak hold.

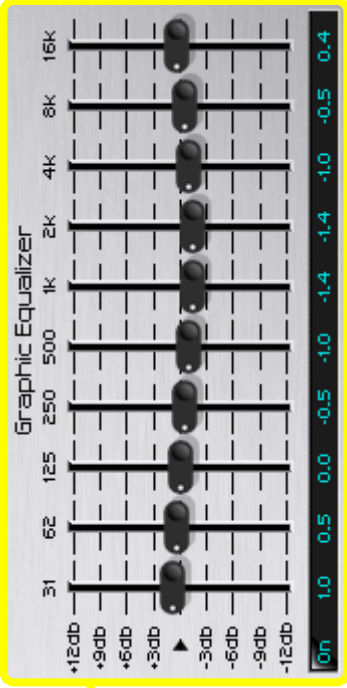
MONITOR OUTPUT - The use of the monitor output is dependant on the VST host and soundcard. If the VST host allows the routing of individual VST stereo inputs to separate stereo outputs of the soundcard - it is possible to setup a monitor output independent of the main output (check your VST host and soundcards instructions on how to do this). If your system will not allow this type of configuration, you can still use the monitor in a limited capacity through the main output. Click on the **MONITOR OUTPUT SELECTOR** below the **MONITOR LEVEL** control to change the monitor routing.



Controls [Cont.]

+/-12db 10-BAND STEREO GRAPHIC EQUALIZER

Click on the ON/OFF INDICATOR to the left of the equalizer display to activate the equalizer. A single slider can be reset to its default position (0db) by clicking on its frequency label above the slider. All the sliders can be reset simultaneously by clicking on the black arrow to the left of the sliders. Readouts are in decibels.



STEREO REVERB

DELAY - Sets the time of the reverberation. Variable range - 10-100ms
FEEDBACK - Controls the decay of the reverberation.
DAMPING - Adds equalization to the reverberation decay.
FREQUENCY CUT - Removes the high frequency content of the processed signal above the indicated frequency (kHz)
LEVEL - Balances the reverb against the main output.



16/24-BIT STEREO WAV FILE RECORDER

FILE LOAD AND DISPLAY - Click on the green FILE icon to open the file selector and to name a file to be recorded. Click anywhere on the FILE DISPLAY to remove a file from the recorder.
FORMAT - The wav file recorder is capable of recording in 16 or 24-bit format. Select the desired bit format by clicking directly on the FORMAT SELECTOR.
MON (blue headphone icon) - This allows the recorder to be routed to the monitor output.
REC (red circle and green arrowhead) - Clicking on the red [REC] button places the recorder in pause mode - this is indicated by the button flashing. Clicking on the green [PLAY] button starts the recording (the REC button will remain lit). To pause the recording, press the PLAY button again or to cancel the recording, press the REC button.
LEVEL - Adjusts the record level.
RECORD LEVEL METER - Although, the recorder has an internal limiter, it is recommended that the record levels are not allowed to light the red segment of the peak meter as this will degrade the sound quality of the recording.



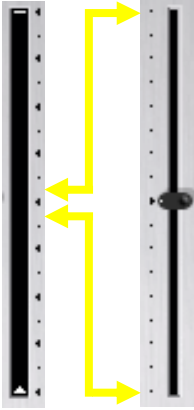
Start/Fade Position and Fine Adjustment Controls

START/ FADE POSITION SLIDERS, FINE ADJUSTMENT SLIDERS AND PLAY POSITION INDICATOR

The START/FADE POSITION CONTROLS are accessed on two selectable panels. The START POSITION PANEL is identified by the arrow icon on the PANEL SELECTOR BUTTON and the black background in the POSITION INDICATOR. The FADE POSITION PANEL has a sloped triangle icon on the PANEL SELECTOR BUTTON and the background of the POSITION INDICATOR is blue. Coarse adjustments are carried out by either clicking on any of the 16 POSITION MARKERS below the POSITION INDICATOR or clicking and horizontally sliding the mouse anywhere within the POSITION INDICATOR.



Fine adjustments are made by clicking on the POSITION MARKERS above the FINE ADJUSTMENT SLIDER or just dragging the slider. The FINE ADJUSTMENT SLIDERS have a range of up to half, above or below, that of the 16 position markers. The FINE ADJUSTMENT MARKERS have the effect of raising the resolution from the 16 possible cue positions allowed by the coarse position sliders to 128 and gives greater accuracy in manual positioning.



The blue arrow LED below the PANEL SELECTOR BUTTON is a play reset button - If the player is in stop mode, clicking on this will reset the loaded file to the currently set start position.

Note 1: The fade function will not work if the fade position indicator [white sloped triangle marker] is in front [to the left of] the start position indicator.

Note 2: As the FINE POSITION SLIDERS are designed to operate in a range above or below the COARSE POSITION SLIDERS - when the coarse adjustment sliders are in their default OFF positions [START SLIDER fully left and FADE SLIDER fully right], the START FINE POSITION SLIDER will have no effect below [to the left of] its default central position and the FADE FINE POSITION SLIDER will have no effect above [to the right of] its default central position.

Note 3: The fade function is automatically switched ON if either of the FADE POSITION SLIDERS is moved away from its default position.

Cue Modes

TURNTABLE STYLE CUEING

1. Switch on the CUE, PAUSE and PLAY controls.
2. Move the CUE WHEEL slowly in the required direction (FWD PLAY=Clockwise, REV PLAY=Counter Clockwise) - as the wheel is moved the PAUSE button will disengage and the track will start to play at a speed determined by how far the CUE WHEEL is moved - the further it's moved from it's centre position the faster the playback.
3. On reaching the required position, release the CUE WHEEL - the PAUSE button will re-engage.
4. Repeat the adjustment of the CUE WHEEL (forwards/backwards) until you're happy with the position.
5. Switch off the CUE button, and release the PAUSE button to start the playback.

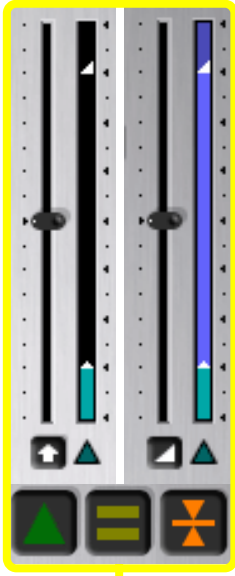
If, when adjusting the CUE WHEEL, the playback is too fast at its slowest setting, adjust the speed using the DEPTH control.



POSITION SLIDER CUEING

1. Switch on the CUE control, and make sure the PAUSE and PLAY controls are OFF.
2. Switch to either the START or FADE POSITION PANEL.
3. Using the COURSE or FINE POSITION sliders move the slider to the required start position - As the sliders are clicked on playback will start from the current position. On reaching the required position, release the slider - playback will stop
4. Click on either slider to start the playback and confirm the start/fade position
5. Repeat the adjustment (forwards/backwards) until you're happy with the position.
6. Switch off the CUE button, and either switch on the PAUSE and PLAY buttons to place the deck in pause mode, or just the PLAY button to start the playback

Unlike TURNTABLE cueing, which is for quick one off start position cueing - POSITION SLIDER CUEING allows you to store the start and fade out positions in the file memory. Once the positions have been set, click the SAVE MEMORY button just below the decks file display to store the positions.



BPM Calibration and Set Up Controls

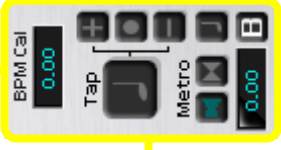
MANUAL BPM ENTRY

1. Ensure the PITCH slider is set to its default [centre] position.
2. Using the small B button to the right of the BPM DISPLAY, switch to the BPM CALIBRATION PANEL.
3. Make sure the TAP TEMPO function is off - the small button with the note icon will be greyed out.
4. Enter the BPM value in the entry box at the top of the BPM CALIBRATION PANEL. The value will be echoed in the BPM DISPLAY once entered.

The accuracy of the BPM value can be checked using the METRONOME if required. [See procedure below]

'TAP TEMPO' BPM CALIBRATION

1. Ensure the PITCH slider is set to its default [centre] position.
 2. Using the small B button to the right of the BPM DISPLAY, switch to the BPM CALIBRATION PANEL.
 3. Switch on the TAP TEMPO function by clicking on the small button with the note icon just above the BPM CALIBRATION PANEL SELECTOR [B].
 4. Start the track playback.
 5. Using the mouse, click on the large TAP button in time with the music - as the mouse is clicked the BPM DISPLAY will display the average BPM of the last four mouse clicks.
 6. When you are satisfied that you are close to the tracks timing, stop clicking.
 7. Switch on the METRONOME using the button with the blue loudspeaker icon.
 8. If you need to synchronise the metronome with the track's playback, hold down the button with the white twin arrowheads, and then release it at an appropriate moment to synchronise the metronome.
 9. If the metronome's timing is too slow, increase the BPM using the PLUS button - Use the MINUS button to decrease the timing.
 10. Repeat any part of the operation until you are happy with the BPM.
 11. You can save the indicated BPM setting to the tracks memory file by clicking on the deck's MEMORY SAVE button.
- The FINE TIMING ADJUSTMENT is carried out in +/- 0.05 increments.
To clear any fine timing adjustments and return to the original tapped value, click on the RESET button in-between the PLUS and MINUS buttons.
Clicking on the TAP button will also reset any fine timing adjustments.
Switching back to the PITCH PANEL switches off the metronome if it is running.



SET UP CONTROLS AND FILE MEMORY FUNCTION

METRONOME - The metronome can be routed through either the main or monitor outputs [taking account of the previously mentioned conditions related to the monitor output's configuration]. Click on the OUTPUT SELECTOR to change the routing. Use the TONE and LEVEL controls to adjust the basic metronome settings.

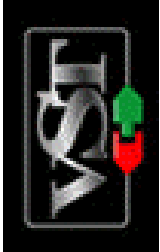
CREATE MEM FILE - Each track can have a memory file, which can be loaded automatically or manually when ever a track file is loaded. The file stores the following deck parameters: DECK FILTER HIGH FREQUENCY - DECK FILTER HIGH FREQUENCY GAIN - DECK FILTER LOW FREQUENCY - DECK FILTER LOW FREQUENCY GAIN - PITCH - PAN - GAIN - COARSE START SLIDER POSITION - COARSE FADE SLIDER POSITION - FINE START SLIDER POSITION - FINE FADE SLIDER POSITION - FADE RATE - BPM. In order to use the file memory, a default .txt file for each track will need to be created. Click on the CREATE MEM FILE button, to access the file selector, and open the folder where you keep the wav files you wish to use. Load each wav file in turn [the file selector is automatically reopened after each file]. As each file is loaded a txt file with the name of the wav file is created containing the default settings. Click CANCEL in the file selector to exit. Once the deck parameters for an individual track have been set up, click on the MEMORY SAVE button in the deck's MEM section. To have a memory file load with the track, activate the AUTO LOAD button in the MEM section.

Note: The memory saves all the currently displayed parameter settings regardless of what is already stored in the memory file - If you wish to alter an already saved memory file, make sure the file is loaded along with the track, otherwise the original file setting will be overwritten by the current displayed ones.



MIDI Implementation	
Controller Number	Control
82	Deck A PLAY
83	Deck A PAUSE
17	Deck A FADER
84	Deck B PLAY
85	Deck B PAUSE
18	Deck B FADER
86	Deck C PLAY
87	Deck C PAUSE
19	Deck C FADER
88	Deck D PLAY
89	Deck D PAUSE
20	Deck D FADER

Mixed Reactions! basic play controls can be controlled via an external MIDI controller using the MIDI assignments above . It is also possible to reprogram Mixed Reaction's controls using the MIDI AUTO panel, between decks B and C, and an external controller. To do so, click on LEARN, move or switch the control you wish to automate and then adjust the external controller you wish Mixed Reaction's control assigned to. Use RESET to return the controls to their default values.



VST Plug-In Technology by Steinberg.
www.steinberg.net



Created using **SynthEdit** by Jeff McClintock
<http://www.synthedit.com/>
Including modules by
David Haupt - <http://www.dehaupt.com/SynthEdit>
Chris Kerry - www.chriskerry.f9.co.uk
Kelly Lynch - <http://www.rubidiumhexafluorosilicate.com/synthedit/>
Oli Larkin - <http://www.oli.adobe.org/>
Simonluca Laitempergher - <http://www.puntoexe.info/SI5EModules/>
Etric Van Mayer - <http://www.evmsynths.com>
Lance Putnum - <http://www.uweb.ucsb.edu/%7EEljputnam/synthedit.html>
and Dan Worrall

Points of Note:

The deck filters are automatically bypassed when the filter gain controls are at 0db. If the filters are not required, make sure the green LED is not lit as this will reduce CPU load. The same can be said of the reverb and graphic equalizer, make sure they are off if not required.

MP3/Ogg and other compression encoded audio files

There is, at the moment, no way to playback compression encoded audio files on a SynthEdit constructed VST (which is a shame), but if or when this situation changes I will do my best to implement this feature into Mixed.

Known limitations:

On start up Mixed creates its own default memory file which automatically returns the saved controls to their default settings whenever a .wav file is removed from a deck. It is unfortunately quite easy to accidentally overwrite this file and lose the default settings - by clicking on the save memory button when there is no .wav file loaded. If the file is accidentally overwritten it can be restored simply by switching to a different patch and back again, or restarting the VST host. I realise this is not an ideal solution, but I hope to resolve this problem in a future release.

A problem encountered during testing concerns CPU spikes when loading files on the fly, this manifests itself as an audible glitch on the main or monitor outputs (although not on any recordings made on the internal recorder). Unfortunately I have no way of checking whether this audible glitch is dependant on any individual system, VST host or soundcard, but if you do encounter the problem there are a couple of tips to reduce the problem. Firstly, Shut down any firewalls, virus checkers and internet/network connections running on your system. Screensavers are an unmistakable cause of problems, so yet again make sure they are disabled. Kill any background operations you don't actually need. And finally, if you have access to the setting, check that your VST Host is running in High Priority mode and if not change it if you can. This is only a basic, somewhat obvious, list of ways to improve the performance of audio applications, but there are a great many tweak sites which give good advice on how to get the best of running individual OS setups and many of the music magazines publish articles on improvements to audio based system performance.

Normal old gobble-de-gook coming up.

Any comments, problems, suggestions, large quantities of unwanted cash or phone numbers of unattached female millionaires to: sonicassault@ntlworld.com

And the bit to keep the lawyers off me back.

This program is FREE; it cost zilch, nothing, not a penny, a dime, a euro. Therefore, you use it at your own risk. Because if you think your gonna shove your self-serving capitalist laws down my throat if something goes wrong, think again. It ain't gonna happen. A friendly word of advice though. As this player is capable of producing some speaker damaging frequencies and levels: as are a lot of effect and synth plug-ins. Keep the volume DOWN whilst experimenting with this, or any other plug-in. Alternatively, use someone else's speakers! (Snigger, Snigger... Only kidding!).

Thanks to: Jeff McClintock (Who we are not worthy!), Chris Kerry, David Haupt, Kelly Lynch, Oli Larkin, Simonluca Laitempergher, Etric Van Mayer, Lance Putnum and Dan Worrall (For their indispensable modules) and all the developers involved in SynthEdit.

Special Thanks to:

Tom at EFM (ele4music.com) - for hosting the beta versions, and who I'd highly recommend you visit - especially if you're into modular synth hardware.
bmovie - for intensive beta testing, and some extremely useful advice on beat-matching issues ☺.

Jez