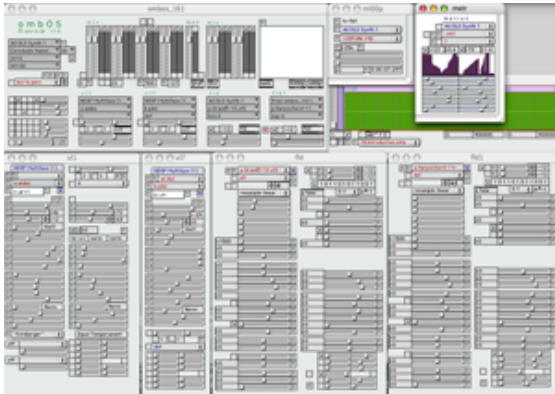


o m b OS

max/msp, PPC, j.simon2002-2008, current v.1.7

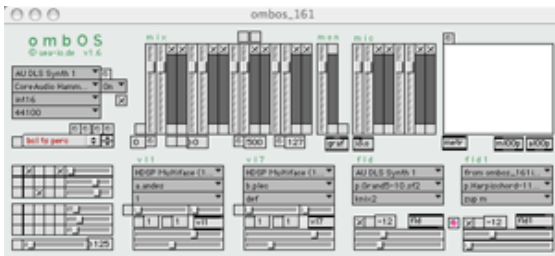


OMBOS FEATURE DESCRIPTION v.1.5.6. (070108)

History: "ombOS" is a program written in max/msp that controls several hard- and software-synths and has many features necessary and useful in performances. I have started the development in 2002 under the worktitle "vl-ctrl". The current title "ombOS" stands for "one man band Operation System", because it allows multivoice-stacking of voices in life-performances.

The interface consists of a main panel and several specific instrument-panels: two hardware and two software-synths, a mixer and recorder, an elaborated metronome, an audio-looper, a midi-looper, a grafical sound analyzer, midimonitor and a channel-router. Every panel can be opened separately, particularly the main window allows to control the most general features. The interface looks packed with controls and may seem too complex to use intuitively, but this is not my experience in many years of using it. I find the interface well structured and I can arrange a set of panels, that fits the needs of most working/performing situations. I saved the place for descriptors, but hinting the mouse over a control will show up its name.

overview:



MAIN ombOS Panel

- Sections:
- Device-Selector
- Voice/Feature-Selector
- Global-Preset_Selector
- 12chan Mixer/Recorder
- Display
- vl1 Header
- vl70 Header
- Fld Header
- Fld1 Header
- Buttons that open Metro, GrafAnalyst, IOmapper, audio/midi-Looper



Device-Selector

- MIDI-input device for the wax
- audio-device (audio in/output) and an on/off switch
- bit-depth and frequency of recording
- button to initialise the devices (in the case the hardware-setup changed)
- checkbox that opens the four synth-panels at once



Voice/Feature-Selector

allows to select voices and particular features (vol, pan,...) of the voices.

The controls in the lower area are a pause-detection controller. It finds phrases - i.e. it detects pauses of a certain length in the signal stream of the midi-input. These are used to automatically change certain parameters (e.g. voice-shift). The left-most checkbox turns pause-detection on/off. The slider controls the minimal length (in ms) of pauses to be searched for and then used as a trigger to change parameters according to

and then used as a trigger to change parameters according to the feature-selection in the check-box-area above.

SOLO-MUTE (voice-selection)

The top row of check-boxes deals with voice-selection. from left to right:

x auto, 0 manual (automatic random selection of voices)

vl1 selected/muted

vl70 selected/muted

fld selected/muted

fld1 selected/muted (this channel also is for the metron)

In manual mode (first box unchecked) the four voices and their combination can be selected by checking the according boxes.

The slider controls the fade-in-rate of the voices: In manual

mode (first box unchecked) the four voices and their combination can be selected by checking the according boxes.

The slider controls the fade-in-rate of the voices: left is

immediate, right a few seconds.

In manual mode with phrase-detection checked, sequences of voice-combos are repeated ...

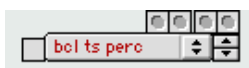
In auto mode with phrase-detection checked the voices are selected randomly at the beginning of a new phrase. The slider allows to control the differentiation of combos: low values favor the combinations of more voices (4- and 3-combos) and the vl-voices. High values mix all different kind of combinations.

PAN

2nd row: autopan

PITCH-SHIFT

3rd row: x determines which voices will be pitch-shifted randomly (at detected pauses). slider determines the shift-range



Global Preset Selector

load/save set of global presets

store single presets

select item-position in global preset menu

open data-window, client-window



Mixer

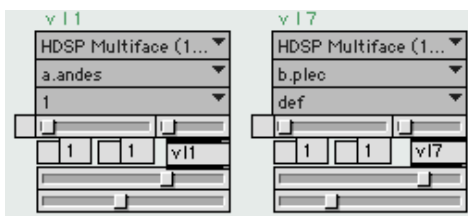
organizes 12 audiochannels for separate listening and recording and a monitor stereo-pair. In order to provide maximal

simplicity for performance-situations the mixer is not a general purpose-mixer but has several settings (such as channel-

assignments) hardwired.

record selected tracks

set slider range



VL1 and VL70 Header

midi in select menu

voice select menu

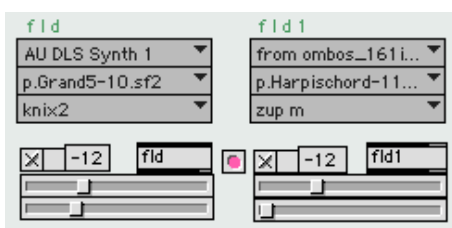
preset select menu

morph settings between voices

open editor window

main volume slider

panning slider



Fluid and Fluid1 Header

midi in select menu

voice select menu

preset menu

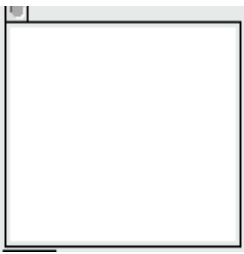
polifonic, shift, controls

open editor window

main volume slider

panning slider





display

to write/show/store comments on presets, voices, etc.

also:

Error-Output field:

puts out errors, mainly regarding file-not-found, etc.

These error-messages are important as older presets could find certain voices missing in the folder. This gives the chance to find the voices or replace them with others.

modul buttons

grafic sound analyzer

input/output mapper

metronom application

midi-looper

audio-looper

features

VL1-M

midi-port popup

voice-list popup (search-names-button - save-voices-button)

patch-folder popup

save current-voice button

MIDI CONNECT several synths (like a vl1m and a vl70m) and a midiinterface with 1 port (rme multiface, midiman 1x1):

>> midi-interface-out - - - vl70m-in

>> vl70m-out - - - vl1m-in (for voicechange on vl1)

>> vl1m-out - - - midi-interface-in (for voicedump - no midi-in wax)

or: vl1m-thru - - - midi-interface-in (midi-in - no dump)

(this setting is specific for my modified synths: vl1 has powered-wx-in and merging of wx and midi-in. In the vl70m the thru is modified to be also an out).

voice-list popup (vL):

Via the second popupmenu the internal voices from the synths can be accessed thru the application. At startup the popupmenu

contains a list of numbers that load the corresponding voice-nr into the synth and into the application (note1).

The button directly left from the popup starts scanning all the voices for their voice-names. This process takes some time (~2sec/voice). The process can be stopped by hitting the [spacebar]. The voices are filled in the popup. Choosing an item loads the voice in the synth as well as in the application.

store-all-patches-on-synth button: not yet

allows to save all the patches from the synth into a folder.

patch-folder popup (pFold):

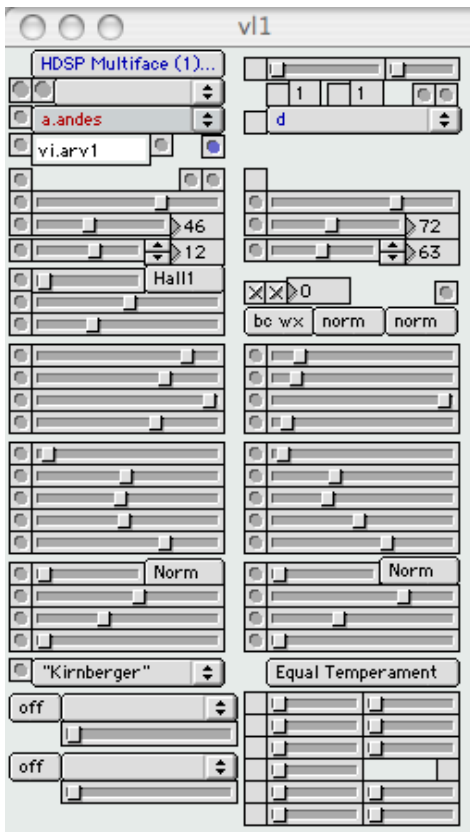
contains the patchfiles of a selected folder. The folder can be selected with the button in front of the popup. The popup allows to load a patch into the synth and presents some values for control in the vl-ctrl interface. Selecting a voice from the pupup when no folder has been selected also opens a load-folder-dialog to choose a folder. The file-not-found error is displayed in the error-putup field and the blue dot to the right of the popup becomes jellow until a folder is chosen and a voice is selected from the popup menu.

voice-name input:

The input field shows the name of the current voice. It also allows to change the name in typing a new one into the field and hitting return. Then the new name appears on the synth. Saving the voice stores the new name in the current voice. (it is recommended tp use this name also for the filename).

save current voice button (save) :

allows to save the current patch from the synth, either one that



is stored in synth-mem (then it has to be selected on the synth) or one that has just been changed. Clicking the temp-reset button before the save button allows to save the temporary patch.

With the patch-folder button the folder with the saved patch can immediately be refreshed and the saved patch can be reloaded.

load current voice

from the synth into the app, esp when the patch has been chosen on the synth directly

temporary-voice button (temp):

the temp-button can be used to temporary store a (changed) patch from the synth, even during playing another voice.

reset-to-temporary-voice button(temp reset):

This button allows to reset to a (previously chosen) temporary state.

value-sliders:

All sliders reflect the current values and can be used to change the values for corresponding parameters.

(general)

volume

panning / panning region

noteshift

(reverb)

initial delay / reverb type

reverb return

reverb time

(mixing)

driver

pipe

tap

tap location

(instrument)

1st harmonic

pressure

graham function

beat

lip collision

(mod)

carrier

overdrive

decay time

Most sliders are as used in the synth, except the pan/region-slider: more useful in providing typical panning and to the right the panning-region which is a bit like spatial distribution of the voice.

Tuning popup:

allows to choose a tuning for the two elements.

value-reset buttons:

The button to the left of the sliders allows to reset to the value stored in the patch-file.

value-reset (all):

The top button resets all the slider-values to the stored values. A better way though, to reset to the patch-file is to doubleclick the name of the patch in the popup (because some parameters influence other parameters so that resetting the slidervalues sometimes does not perfectly recall the patch-file).

assigned-variables popups (slid1 and slid2 - only VL1):

The popups in the bottom allow to assign 2 values to the sliders below the popup. In the left popup com (common parameters) and e1/2 (element parameters) can be chosen. The right popup contains the corresponding list of more than hundred params. Choosing one parameters assigns it to the corresponding slider (actually via controlnr 16 and 17) .

assignable sliders (slid1 and slid2 - only VL1):

With these sliders the parameters selected in the corresponding nonumenu can be changed directly.

IMPORTANT: The patch-file format the program uses for the VL1 are byte-files of 3102 bytes. The program reads in binary-files with .syx extension and without extensions. It saves binary files. As any sysex-message the file has to start with a "F0"-byte and ends with a "F7"-byte.

VL70-M - specific FEATURES:

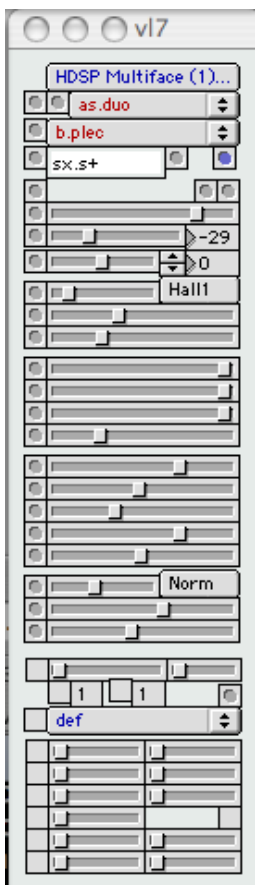
equivalent to vl1-m, except that this synth has only one element and does not support assignable parameters and microtuning.

IMPORTANT: The patch-file formats the program uses for the VL70-m are 15part byte-files with 1808 bytes. The program reads in binary-files with .syx extension and without extensions. As any sysex-message the file has to start with a "F0"-byte and ends with a "F7"-byte.

IMPORTANT: "load curr voice" only works with the interface connected to the VL70out (not VL70thru) or VL70out connected to VL1in and VL1thru (not VL1out as used normally) connected

to the midi-interface !

there should be no problem when the two synths are connected to separate channels of a midi-interface.



W A X (midi routing and transposition)

this panel allows to select the in/out-ports for a connected (e.g. wind-) controller.

in-port:

selecting the in-port is necessary for all internal soundgeneration (e.g. fluid,...).

(not yet; button next to it gives visual feedback ? can be toggle on/off since it may be a little costly).

out-port - unison:

selecting an outport allows to use the wax-mididata as they are (unison) by another device (e.g. it can be sent to the vl70m).

the popup to the left allows to set the channel:

0 disables output (?)

1sets output to midichannel 1 (vl70)

2sets output to midichannel 2 (vl1)

3sets output to midichannel 3 (fluid)

sets output to multichannel 3 (fluid)

out-port - interval
the slider and the in/decrease button (below the out-port-popup) transposes the midi-input to a certain interval before it is sent to the below the chosen out-port. The button to the left sets the value to 0 (unison), With the popup a out-channel is selected (see above).

out-port pci (pitch class inversion: within a definable interval all notes are mirrored)
the slider and in/decrease button allows to set a certain pci-interval. The button allows to reset the interval to 0 (unison), the popup to set a channel (see above)

pitchbend and breath checkboxes
checking adds pitchbend and breath to the out-port 3 (fluid). channels 1 and 2 (used for breathsinths) have pitchbend and breath set all the time

FLUID (sf2 synth)

load sf2 file:
the top button opens a filedialog to load a single sf2-file

load sf2 folder:
this button opens a filedialog to load a folder with sf2-files

sf2 popupmenu:
to choose a sf2-file from a folder selected previously. If no folder has been selected a dialog is opened automatically. The blue dot to the right indicates the loading-status: if it is yellow there is a file-not-found message in the error-output field. After a folder and a file has been chosen it becomes blue again.

Presets
store preset:
Presets of the current parameters can be stored by first checking the checkbox to the right of the menu and then selecting a slot in the preset-popupmenu. This opens an input-panel to enter a name for the preset. The presets are saved automatically as xml-files in th the presets-folder (in the sf2-folder).

load preset:
Choosing a preset-name from the menu loads the stored parameterset (the first item in the menu is the default preset that is loaded when a sf2-patch is loaded.

inspect parameterset:
To the right of the menu are two buttons, one to inspect the current parameter settings and the other to inspect all the presets stored in the menu (the xml-file).

Voice-table
These controls allow to play the loaded patch in several modes (unison, pitch-shifted, pitchclasses, chords) and the corresponding un/mute checkboxes allows to switch them on separately or together for polyphonic setups

Unison checkbox: the patch is played in unison mode or switched off.

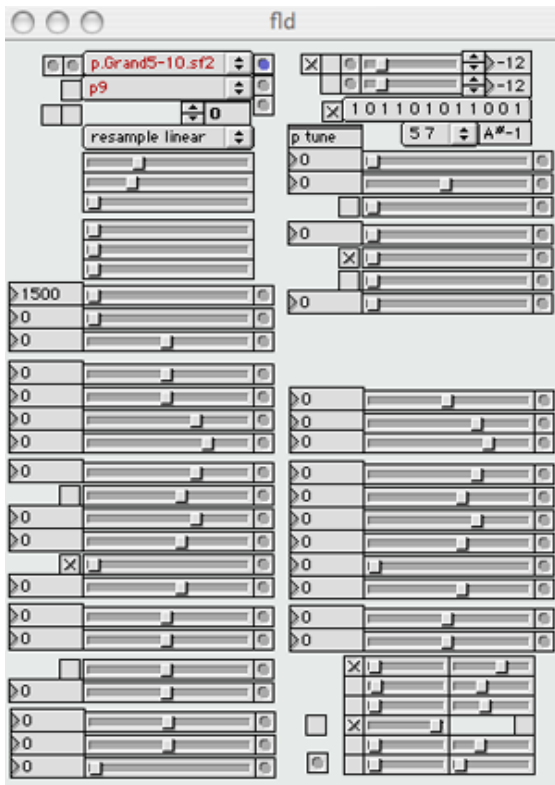
Pitch-shift checkbox & slider: with the slider the shift is determined and the checkbox turns it on/off (note: too high/low a shift may result in pitch-values outside the MIDI-range of 0-127)

Pitch-class checkbox & slider:

chord-controls consisting of a un/mute checkbox and three menus: a mode-, a pattern- and a key-menu.

Note: it depeds on the performance of the computer and the size of the sf2-patch how many of these possible voices can be played concurrently.

Volume-Slider

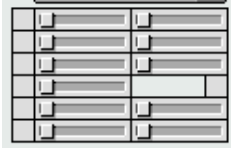


Panning-Slider

Reverb-Slider (level, room size, damping, width, but currently only room-size implemented)

RAMP

The two numberboxes allow to define ramp-time and time-grane for the transition between the current and a new value. timegrane has to be above 100 for VL value changes (otherwise the synth-output will be disrupted by the frequent changes)



COMPRESSOR

In the VL1-, VL7- and the two FLD Windows there is a compressor.

In the case of the VL1/7 when the top-left checkbox (compressor on/off) is checked, then the two channels are routed through the audio-interface

checkbox: - slider: - slider:
compress on/off - attack - range
dualband - release - ratio
sidechainfilter - delay - progress release
AGC - threshold - expand enabled
Limiter - smooth gain - expand threshold
Limiter Response - level gating - level freeze

MIXER

open-button:
opens the DSP-window to adjust device- and channel settings.

start-button:
starts the mixer (the analog to digital conversion from the audio device). The mixer is started automatically from metron and fluid.

There are 4 stereo-pairs, each consisting of:

2 gain-sliders:

2 level-meters:

link fader-checkbox: the left of the two top checkboxes to link the two sliders.

show/hide level: (hide to save cpu resources)

2 channel-select check-boxes: select the channels to be recorded

To the left of the 8 input-channels there is a monitoring strip that sums all inputs into a left and a right channel (although there is only one slider and meter). It can be used as a software mixdown to two channels and to see the overall activity and it can be used to to a control-recording. It consists of:

gain slider

level meter

monitoring on/off checkbox:

2 channel-select checkboxes (to be recorded)

above the 4th stereo-pair there are controls for all channels:

set_level_127-button: this is 0db

level- numberbox: to assign a certain level to all sliders

set_slew_time_100-button: this is fast

slew-time numberbox: to assign a certain slew-time to all sliders

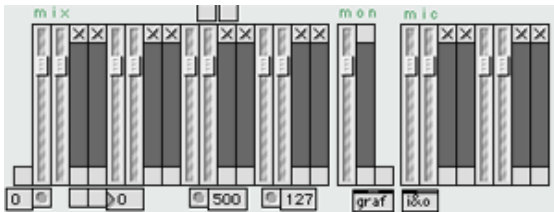
de/select_all_channels-checkbox (bottom left of the eight channels)

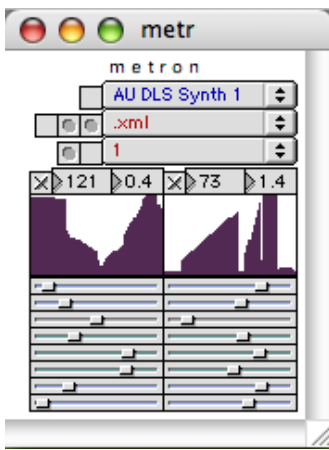
nr._of selected_channels-numberbox (counts nr of chan selected for rec)

open-button (bottom row. Opens a dialog to create a file for the recording)

start/stop_recording-checkbox:

recorded_minutes-numberbox:





METRON

The metron has two metron-elements. Each element consists of a graphic field to define a wave-form and several controls that set the repeat-rate and other parameters of the beat.

There are two preset-menus, one in the 3rd row saves up to 16 presets; the one in the 2nd row allows to save such 16-preset-packs as a "voice"-file.

Additionally to the regular repeat of a beat, there is midi-control that allows to map midi-input to one of the 16 presets of a voice (128 MIDI-notes modulo 12).

midi (top row):
MIDI-Control on/off
select MIDI input-channel

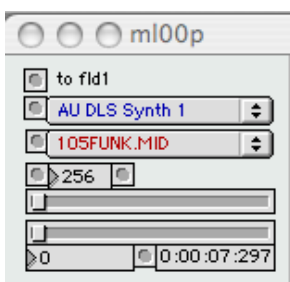
voice load/save (2nd row):
button to select the folder of voice-files
button to save a voice
dpopupmenu to select voices from a chosen folder

preset load/store (3rd row):
button to open storage window that shows the values of the individual presets of the current voice
toggle to store a preset: check toggle-box and select the preset-slot in the popup-menu
popup menu to select a preset or store a preset when the toggle-box is checked

2 beat-parameter-tables; each of the two elements consist of:
un/mute checkbox to start/stop the sound
bpm-number-box: beats per minute
ratio-number boxes: time-ratio between primary and secondary beat

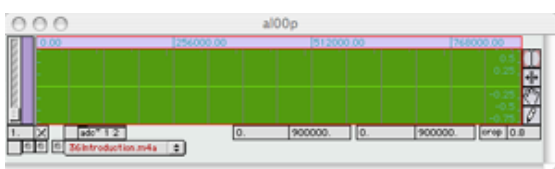
beat-profile graph: re/draw a profile

frequ shift-slider:
volumne slider:
panning slider:
reverb time slider:
early reflection balance slider:
hi frequ rolloff slider:
dry wet slider:
ramp time (sec): If a ramp-time other than 0 has been set all setting-changes except for the profile-graph are ramped. Ramp-time can also be used to morph between presets.



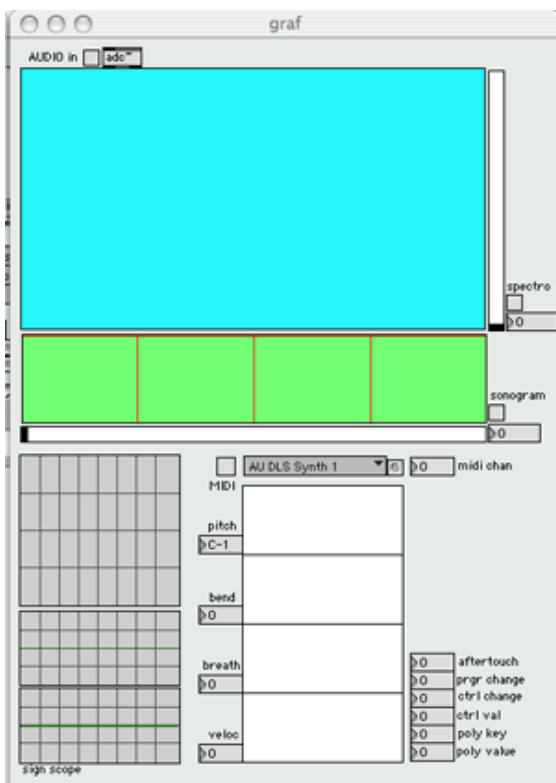
ml00p

midifile loop, particularly for practicing purposes



al00p (see description of the standalone-version)

audiofile loop, particularly for practicing purposes

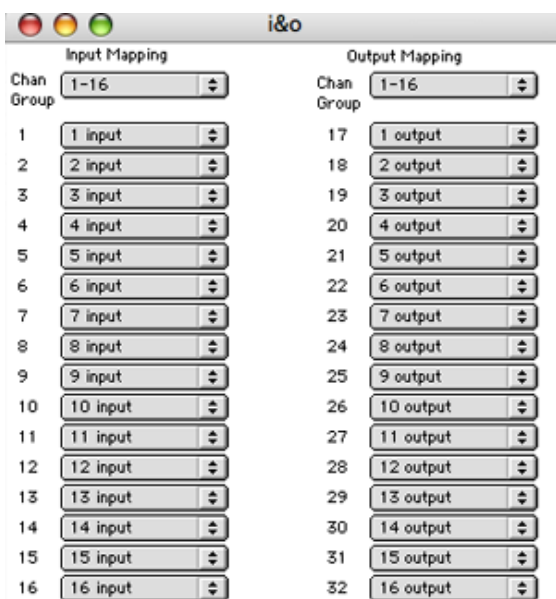


grafic analyzer

spectrometer, sonogramm of the monitor-channels

midi monitor

input-output mapper



THIS MANUAL IS INCOMPLETE AND WILL BE UPDATED FROM TIME TO TIME

uea-io.de/wax

