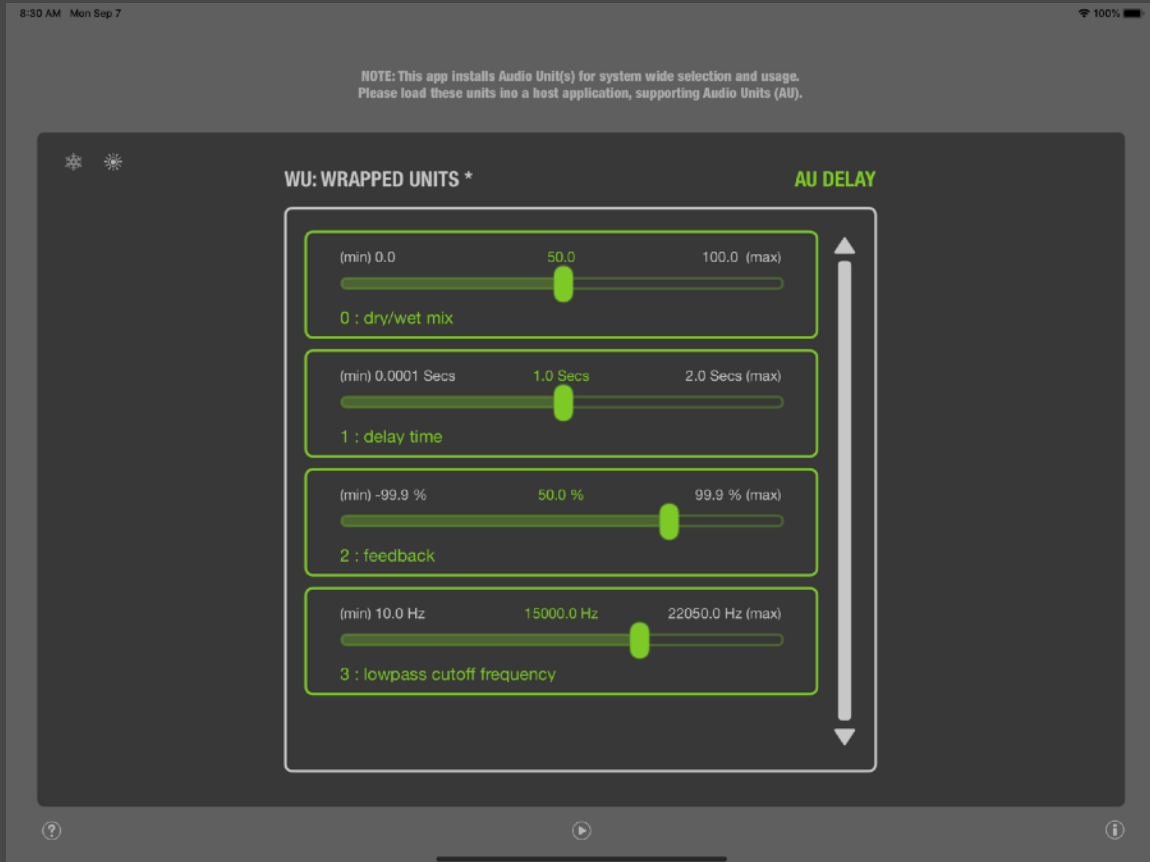# JAX : ((WU : WRAPPED UNITS)) SERIES

Manual Version 1.2

UNLEASH THE POWER OF THE HIDDEN UNITS.

JAX : WU (WRAPPED UNITS) SERIES

This is a collection of Audio Units, which expose the (missing) user interfaces to iOS system included Audio Units.

iOS includes allot of quite useful public Audio Units, but many host applications do not expose these to the user, never mind of not using their functionality in any way.

The result is often missing these essential cross-platform-available Audio Units, the useful essentials for audio processing, i.e. an expander, compressor, limiter, ring modulator, decimator, delay, reverb, several filters and EQs and so on, which are all well known and instantly available on the MacOS to anyone (GarageBand, MainStage and Logic Pro X and others).

GarageBand for iOS (and some few third party host applications for the mobile platforms) at least, do embed these audio units with a more or less useful generic interface too.

So we created some kind of generic user interface, published as single audio units, now with their own user interfaces, that wrap the included system Audio Units to expose all of their parameters to the host applications not providing such, because of the simple lack that these units are UI-less. (These system units are by default - and probably certain intention - parametric Audio Units without any specific user interface on iOS).

Some hosts do provide MIDI to audio unit parameter routing (i.e. AUM) on demand. With such mechanism virtually any exposed audio unit with parameters can be configured to be remote controllable via MIDI controllers in complex ways. With version 1.2 we removed internal MIDI connectivity, as it often caused confusion and problems with several host applications, not handling MIDI enabled effects correctly. Other host even would not list such units for user selection. The WU series plugins are now standard audio effects, increasing the count of (legacy) hosts, supporting it for loading.

This collection concept may sound quite simple but required allot of research, time and work on our side, due to missing system and development documentations for these units and so each single Audio Unit extension will be available for a low price in the App Store, which probably never will compensate for the initial investigation and development costs ever.

We also decided to release these units as separate units, rather than merely complete packages, because users may not need all of the offered Audio Units at ones or even owning each single unit of them (cluttering the AU listings this way) but selectively are able to chose the unit(s) of desire. Another reason is, that the count of units for a package is limited by the AppStore.

Please note, that we did not touch the internal DSP of these units in any way and also tried to keep the native preset format untouched for possible exchanging of patches across different host applications and platforms.

These Audio Units are developed by Apple and essential part of the basic Audio Unit system on all Apple platforms. However, developers can expose these for usage with audio processing. So the availability of the WU series very much depends on the continued support of Apples OS implementations.

The complete collection includes the following single components, which will be released in successive order:

Delays & Reverbs:

- WU: AUDelay (a classic stereo delay effect)
- WU: AUSampleDelay (a sample offset, useful for latency compensation)
- WU: Reverb2 (algorithmic reverb)

Distortion & Dynamics:

- WU: AUDistortion (multi distortion effects)
- WU: DynamicsProcessor (multi dynamics effects)
- WU: AUPeakLimiter (peak/brickwall limiter)

EQ & Pitch:

- WU: AUNewPitch (pitch shifter)
- WU: AUParametricEQ (single band EQ)
- WU: AUNBandEQ (10 band EQ and Filter Bank)

Filters:

- WU: AUBandpassFilter (basic bandpass filter)
- WU: AULowPassFilter (basic lowpass filter)
- WU: AUHighPassFilter (basic highness filter)
- WU: AULowShelfFilter (basic low shelf filter)
- WU: AUHighShelfFilter (basic high shelf filter)

Synthesizers, Sampler & File Player (*)

- WU: AUSampler (single channel, 64 voice polyphonic MIDi sampler)
- WU: AUMIDISynthesizer (multitimbre/multichannel GM compatible synthesizer, that uses soundfonts) (**)
- WU: AUFilePlayer (simple file player that supports playback of segments)

(**) GM (General MIDI) compatibility and sound quality always depends on the used sound fonts.

(*) The last category will be released only, if there is enough interest in the products and pretty support by users, as these require additional development effort and extensions to be any useful.