

VU METERS
These indicate gain reduction

INPUT GAIN AND THRESHOLD
These two dictate the amount of compression



LAT/VER
Here, the unit is set to sum and difference mode

TIME CONSTANT
Positions and selects the fastest attack and release times. Position six is the slowest

LOW FREQUENCY
Combines with the Boost and Attenuation controls to form a low-shelving EQ band



ATTEN SEL
This high-shelf offers cut at three frequencies

HIGH FREQUENCY
Forms a boost-only bell-shaped EQ in conjunction with the Bandwidth and Boost knobs

Waves **PC** **MAC**



The JJP Collection \$800

Rather than model any old classic units, Waves have recreated those found in mix supremo Jack Joseph Puig's studio

System requirements

PC Intel P4 2.8GHz/AMD Athlon 64 or equivalent, 1GB RAM (XP) or 2GB RAM (Vista), Windows XP SP2 or Vista 32, VST/TDM/RTAS/Audiosuite host, iLok

Mac G5 Dual 2GHz or Core Duo 1.83GHz, 1GB RAM, OS X 10.4.11, AU/VST/RTAS/TDM/Audiosuite host, iLok

Test system

Mac Apple Mac Pro Dual 3GHz, 3GB RAM, OS X 10.4.11, Logic 8, Pro Tools 7.4

> In recent times, Waves have turned their attention to visually as well as sonically emulating analogue gear. Some of these (The API Collection and SSL 4000 Collection) are endorsed by the original manufacturers, while others (the Neve-aping V Series) haven't. The latest package falls into the latter category and is entitled the JJP Collection. Here, they've teamed up with the famous mix engineer Jack Joseph Puig and modelled his own processors. JJP has also chucked in a bunch of his own presets, giving you easy 'turn to' settings and an indication of what he thinks they work best on.

Cream of the crop

The plug-ins are based on four hardware processors: the Fairchild 660 and 670 compressors, and the Pultec EQP-1A and MEQ-5 equalizers. There's a certain inevitability about these choices, not least because they are some

of the most coveted analogue processors around. As we mentioned, Jack lent Waves the very best example of each unit from his private collection of classic analogue gear. This makes sense, because in the same way that two seemingly identical Minimogs may sound different, so too might two examples of the same compressor. However, with a few plug-in versions of these units already available (by UAD and Digidesign, for example), it'll be interesting to see if this collection's pedigree will give it the edge.

Sticking with the Puig tag, they've christened the plug-ins PuigChild and PuigTec, and the PuigChild effects follow the mono (660) and stereo (670) nature of the originals. The PuigTec EQs, like many plug-ins (and irrespective of the original units), are available as both mono and stereo processors. There are also a few modern conveniences that the original units didn't enjoy: on the PuigTecs, you'll find output levels and VU

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metering, and all plug-ins have optional mains hum emulation in 50Hz and 60Hz flavours.

We’ll kick things off with a look at the EQP-1A, which is an idiosyncratic three-band EQ. The first band is a low shelf with four fixed frequencies (20Hz to 100Hz) and simultaneous 18dB boost and attenuation. Next is a bell-shaped section with variable bandwidth, offering 18dB boost at seven fixed frequencies (3kHz to 16kHz). Finally, the third band offers a high-cut with three frequencies and variable attenuation.

The MEQ-5 fills in the mid-range gaps left by the EQP, with three fixed Q bell-shaped bands. Band one is boost-only at five fixed frequencies in the low- to mid-range (200Hz to 1kHz). The second band offers cut or ‘dip’ at 11 fixed frequencies (200Hz to 7kHz), and the remaining band is boost-only at five fixed mid-to-high frequencies (1.5kHz to 5kHz).

JJP’s favourites

Waves rightly point out that due to their transformer stages, the EQs have a gentle roll-off at high frequencies, and the plug-ins emulate this, though it’s not immediately obvious when you load them up; however, other aspects of the Pultec sound are. Spinning through the ten EQP-1A and three MEQ-5 presets gives not only an idea of how they sound but also how far a pro mixer chooses to push their settings to get the desired result. The great thing about these EQs is you can do this without it sounding harsh. We were curious about the Mains Hum setting and came to the conclusion that it also added a tiny bit of hiss. Overall, both EQs sounded very similar to other Pultec emulations we compared them to.

On to the compressors, then, and the 660 and 670 are both simple designs, with input and output levels, threshold, and six time-constant settings that control attack and release. In addition, the 670 adds dual stereo and linked operation and also the vertical-lateral option, like the original hardware. This splits the stereo input signal into sum and difference elements, with the left channel controlling mono and the right governing the stereo aspect of the signal.

You’ll notice there’s no ratio setting, as compression behaviour here is a combination of the time constants and signal level - see the boxout above for more information on how valve compressors work. Although having few controls makes the unit look simple, they can still take a bit of getting used to. Again, the presets prove a

useful starting point, but these compressors are pretty forgiving in their sound.

Waves have done a good job with the JJP Collection, but it has to be said that there are already other plug-ins that emulate this type of gear, and we’re sure there must be even more esoteric items to covet at JJP’s studio. Whether the fact that Puig’s own units have been modelled here makes any additional difference is impossible to say. What’s more, the presets, although they’re a useful starting point, aren’t quite as many or as varied as they could be. Still, the classic flavours of Fairchild and Pultec processing are very well represented here, making this a desirable bundle. **cm**

Contact Via website
Web www.waves.com
Info TDM Version, \$1200



Filling in the mid-range gaps that the EQ-1P can’t quite cover is this complementary processor, the MEQ-5



The PuigChild 670 models the ‘variable mu’ effects of a real, valve-based Fairchild compressor

The variable mu sound

The use of a valve as a gain reduction device is now fairly rare in compressor design, with most units incorporating VCA, FET or opto designs. So what’s the big deal? In engineering terms, cost, size, tube-matching and robustness come into it - the original Fairchild has 20 tubes and 14 transformers - although you could argue that it also incorporates other less significant aspects of 50s electronics design.

In terms of technology, the variable mu sound (mu being the term used to refer to gain in valve systems) comes down to the behaviour of the remote shut-off dual-triode valve in the audio path. The constant re-biasing of this

valve by a tube-rectified sidechain control voltage produces the gain reduction in the valve itself.

Sonically, this is not only very pleasant but also capable of anything from gentle 2:1 compression to heavy limiting. But what’s interesting is the way in which this happens.

Essentially, as gain reduction increases, so does the ratio, resulting in progressively non-linear behaviour. In addition, you’ll also find that the threshold level influences the onset or ‘knee’ of the compression, and the knee shape tends to soften as this increases. Overall, the sound is natural, flexible and useful for acoustic instruments.

Alternatively

Universal Audio UAD2SOLO
N/A >> N/A >> £399

The UAD DSP platform offers official Fairchild and Pultec emulations

Digidesign Bomb Factory Fairchild Bundle

N/A >> N/A >> £382

There’s a Pultec Bundle, too

Verdict

For Great sound, and interesting presets
Familiar, simple interface
Interesting presets
Cheaper than some Waves bundles

Against Not a cure-all package
Presets not extensive enough

Only scratches the surface of JJP’s actual processing arsenal

Waves deliver the Pultec and Fairchild sounds in a typically slick package, but there is plenty of competition out there

8/10