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# Muon Atom Pro User Manual

Thank you for choosing to purchase the Muon Atom Pro synthesiser. We hope you'll find that its warm sound and great interface make it a welcome addition to your music software collection.

In an analogue synthesiser, the type the Atom Pro simulates, sounds are made by taking a raw waveform with a very full sound, and progressively removing the harmonics that you don't want. The essential components of this kind of synthesiser are listed here:

**Oscillators -** These produce the initial sound wave. In the Atom Pro, there are two oscillators for each of its twelve voices. Oscillator 1 always produces a Sawtooth wave, which has a brassy sound, and Oscillator 2 always produces a Square wave, the tone of which can be varied using the Pulse Width (PW) parameter control. There is also a low-frequency oscillator which sweeps the Pulse Width up and down automatically. The speed and depth of this modulation is controlled by the PWM switches. Finally, the output level of each oscillator is set using the Mix control.

**Filter -** The Atom Pro's filter is a Lowpass design, with sweepable cutoff and resonance (Q). when the cutoff knob is set fully left, the filter will pass very little sound through. Increasing the cutoff allows more sound through the filter. When the filter knob is set fully right the filter is open, and you will hear the raw sound of the oscillator section.

The Q control amplifies the frequencies at the cutoff point. When the knob is fully left, the filter opens and closes normally. When the Q control is increased you will hear a more defined and "squelchy" analogue sound. Very high settings of Q will cause the filter to begin to act like another oscillator, which, with careful setting of the cutoff frequency can be a useful effect.

**Filter Envelope** -Also in the filter section are the controls for the filter envelope, labelled A, D S and R. These stand for Attack (the time taken to rise to peak level), Decay (the time taken to fall to the sustain level), Sustain Level and Release (the time taken to fall to zero). These controls are used in conjunction with the EnvMod knob to create filter movements that open and close the filter dynamically. When the EnvMod knob is fully left, the cutoff will be moved in a negative direction (closed) by the envelope. When EnvMod is fully right the cutoff will be moved in a positive direction (opened). These five controls are the main sound-shaping tools in the Atom Pro. If you vary the EnvMod and Decay controls on a percussive synth bass tone (such as the preset "Spikey Bass"), for example, you'll get a great effect.

**Amplifier** - The final part of the signal path is the amplifier and its associated envelope. The controls for this are the same as for the Filter envelope - A, D, S and R. Use these controls to sculpt your overall sound.

The controls at the very top of the Atom Pro are provided by the host program you are running it in - you should refer to your user manual for more details of those. They will generally provide means for patch/bank storage, recall and changes.

In Cubase, the Atom Pro parameters can also be changed using MIDI continuous controller messages. The parameters and their CC message numbers follow:

Parameter	CC	Range
VCO Balance	75	0-127, 64=centre (50/50 balance)
VCO2 Pulsewidth	76	0-127, 64=centre (square wave)
PWM preset	77	1-127 in four steps (0=off)
VCA Attack	78	0-127
VCA Decay	79	0-127
VCA Sustain	80	0-127
VCA Release	81	0-127
VCF Attack	82 or 72	0-127
VCF Decay	83	0-127
VCF Sustain	84	0-127
VCF Release	85 or 73	0-127
VCF Cutoff	86 or 74	0-127
VCF Q	87 or 71	0-127
VCF EnvMod	88	0-127, 64=centre (no modulation)

In Logic Audio, the CC mappings are determined automatically by the host program. You should refer to your user manual for more details.

Don't forget to check the FAQ and support page for your product on the Muon website. If you encounter problems then mail us at [service@muon-software.com](mailto:service@muon-software.com) straight away.

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