

Specifications

- Operates anywhere on planet Earth where 110-250V AC power is available.
- Supplied with IEC mains power cable and 4 × very heavy duty 5.5mm × 2.1mm pedal leads.
- 4 × isolated 12VDC @ 1250mA outputs (linear regulated and heavily filtered—super quiet).
- One of the outputs can be configured to power 9VDC center negative pedals (600mA max.).
- Short circuit/overload protection protects tube pedals from damage.
- Power requirements: 110 — 240V AC @ 60 Watts.
- Dimensions: width 7.5"; depth 4.8"; height 1.5"
- Weight: 1lb14oz (on Earth); 4lb 12oz (on Jupiter)
- Construction: Solid die-cast aluminum box.
- Finish: dark graphite powder coat.



WARNING!

If removing the rear panel of this unit, first completely isolate it from the mains by disconnecting the mains power cable as there are hazardous voltages within that could cause injury or death. If you are uncertain about what you are doing please seek advice from a qualified electrical engineer.

MODEL: **AT-2A** SERIAL:

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Owner's Manual



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Staffs, England. ST12 9DB
www.effectrode.com

Introduction

The *Atomic*TM power supply is specially designed to generate high currents to power the heaters and high voltages required by the vacuum tubes within *Effectrode* pedals. Further, the *Atomic* features a unique 'soft-start' voltage capability, which eliminates tube heater filament flash and thus extends the life of the tubes.

The *Atomic* can power up to four large *Effectrode* tube pedals, such as the *Blackbird*TM preamp or *Tube-Vibe*TM, or eight of our smaller pedals, like the *Fire Bottle*TM boost or *Mercury*TM fuzz. Each power outlet is fully isolated to eliminate earth loops, fully linear regulated and heavily filtered to keep noise to an absolute minimum without compromising tone quality.

Additionally, one of the power outlets can be configured for 9VDC center negative operation (600mA maximum). This outlet has additional regulation and filtering to ensure even particularly noise sensitive effects pedals will always operate quietly and cleanly. In fact the *Atomic* is as quiet as a pure direct current source, a.k.a. battery power.

Thank you for trusting *Effectrode* to be your effects pedal company. We wish you many years of musical enjoyment from this very special, hand-built unit.

Phil Taylor — Designer

Heater Filament Flash

The function of heater filament—the part of the tube that glows orange inside—is to heat the cathode so that it is able to emit electrons (current) and therefore amplify the small signal from your electric guitars' pickup. The filament is made of length of extremely thin tungsten wire, housed within a miniscule nickel tube, and is connected to the tube pins on the base of the glass envelope by spot welds.

The filaments of some—mainly European tube types, such as *Amperex*, *Mullard*, *Philips Miniwatt* and *Brimar*—frequently possess high resistance regions. These high resistance regions are due to weaknesses in the spot welds and/or stresses resulting from adverse bends when forming the tungsten wire to pack it inside the cathode. The high resistance causes intense localised heating on the tungsten wire and it's not uncommon to see a brief, bright burst of white light from the heater filament when powering up European tubes from cold. This is a serious defect, which can result in premature tube failure.

To prevent heater flash and extend tube life the *Atomic* 'soft-starts' at low voltage to pre-heat the tube heaters. On power-up, the LEDs on the front panel will blink red for 15 seconds indicating the *Atomic* is in low voltage pre-heat mode and then the LEDs will turn green to indicate full voltage (12VDC) operation.

Installation

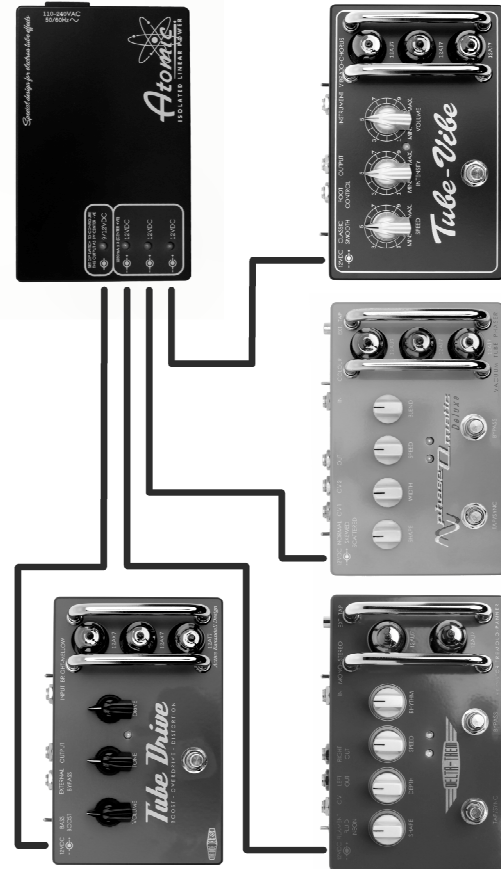
When installing the *Atomic* power supply underneath or inside a pedal-board, ensure that there's adequate ventilation around its enclosure and **do not** obscure the ventilation holes—the *Atomic* ships with mounting hardware specially designed for this purpose. Note: it's perfectly normal for the metal enclosure of the *Atomic* to get exceedingly warm to the touch during operation when powering several pedals.

Also included are four special design, high quality DC interconnects. These cables are capable of handling the high currents required by *Effectrode* effects—pedals such as the *Blackbird™* or *Tube-Vibe™* nominally draw about 1 Amp (1000mA) once the heater filaments within the tubes have fully warmed up, more on power-up when the heater filaments are cold. As the heater filament warms up, its resistance increases, the tube heater begins to glow a deep orange colour and it draws less current—it typically takes several seconds for this to happen.

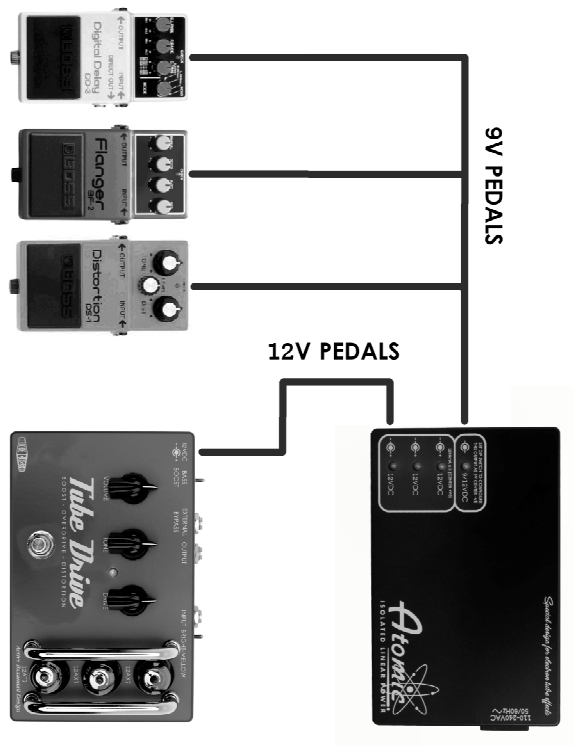
To extend tube life we recommend you allow your *Effectrode* pedals to warm up for at least one minute after being powered up. This allows the heater filament within the tubes to heat the cathode, which is coated with a layer of electron emissive material (barium and strontium oxides). If operated within their ratings, good quality tubes can last for 10,000s of hours, meaning that if you use your *Effectrode* pedal a few hours a day the tubes will not require replacement for many, many years.

Setups

The *Atomic* powering four *Effectrode* tube pedals.

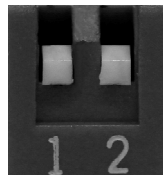


The first power outlet can be used to power 9VDC center negative pedals in a daisy-chain as shown below.

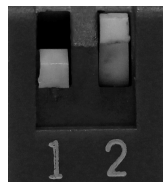


Configuration

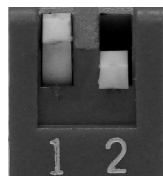
The *Atomic* power supply ships in standard configuration of **12VDC center positive** for powering *Effectrode* pedals. However, one of its power outlets can be configured to power 9V center negative pedals via the recessed DIP switches on the side of the unit.



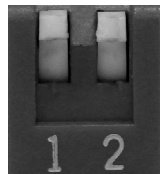
Set both switches in the 'down' position for 12V center positive for powering *Effectrode* pedals. The LED illuminates green.



Set switch 1 'down' and switch 2 'up' for 12V center negative pedals. The LED illuminates amber.



Set switch 1 'up' and switch 2 'down' for 9V center positive pedals. The LED illuminates green.



Set both switches in the 'up' position for 9V center negative pedals, for example Japanese manufacturers such as *BOSS* or *Arion*. The LED illuminates amber.