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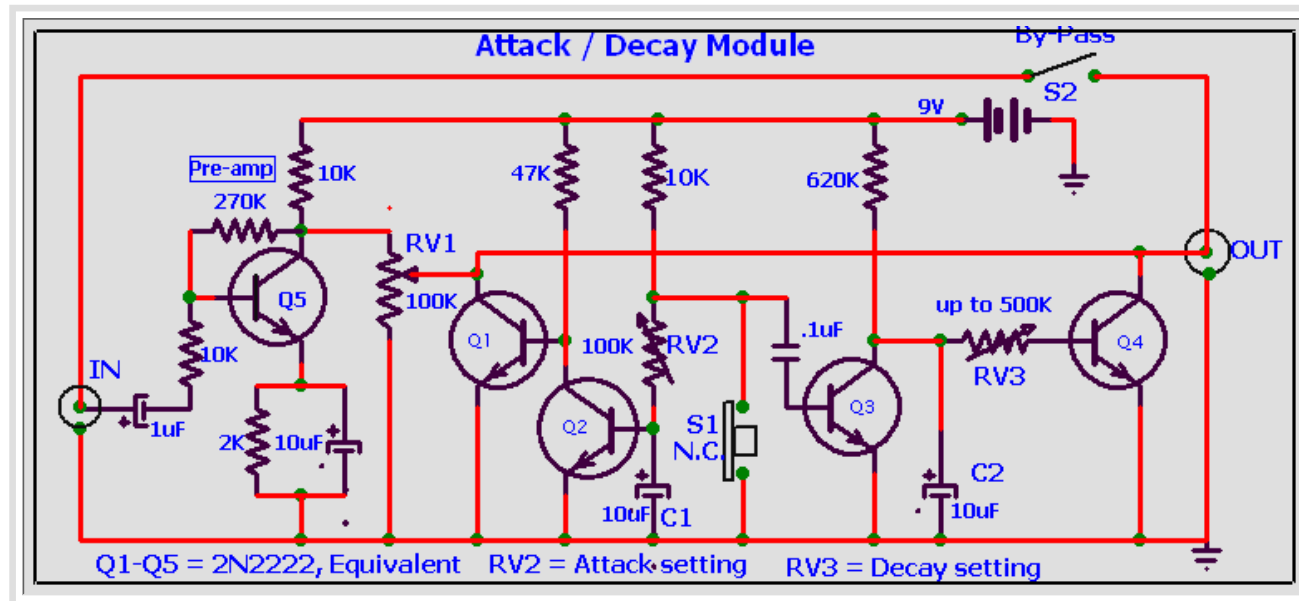
Introduction

Attack and Decay Module

As I came across this circuit among my old files I could not determine the origin of this wonderful little circuit and I hope that after all these years, the author would not if ever decide to declare war on me for copyright infringement but I simply had to share it with the music hobbyists.

What does it do

The circuit can modify the normal sound of tones by changing the attack and decay time. It is a fun circuit that will produce a wide variety of tone modifications when used with most musical instruments or tone generators



How does it work

From the Pre-amp the signal is introduced to the circuit through RV1 which acts as pre-set volume control. The output of RV1 is connected to the collector of Q1 and Q4 then to the output jack. Switch S1 (optional) is normally closed type which when ON short out Q1 and Q4 to ground.

When S1 is opened Q2 turns on and charges C1 the 10uF capacitor via RV2 which controls the attack time and turns off Q1. At the same time Q3 turns on and discharges C2 the 10uF capacitor connected to its collector which in turn turns off Q4. Then C2 now charges through RV3 which controls the decay rate. RV3 value can be changed to suit from 10K to 500K.

The pre-amp has been added to help those guitars which have a low output voltage signal, if it is found that the circuit works good by-passing the pre-amp and connecting direct to RV1 then the pre-amp circuit can be omitted.

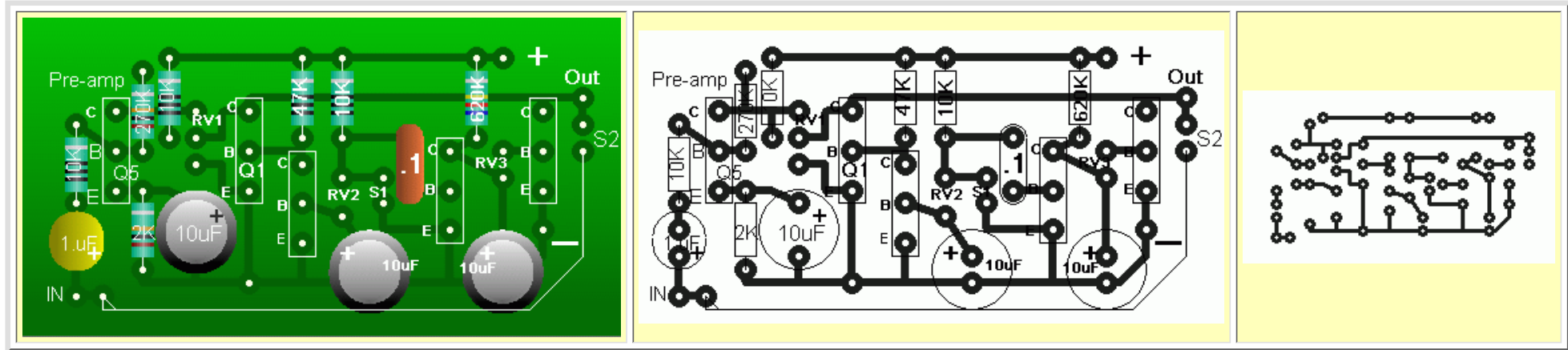
Construction

Below is the suggested PC board layout of the circuit which can be easily hand wired on a perforated board . Use a strong minibox for your project large enough to accomodate the circuit , a 9 volts battery and two female input and output jacks which should mounted on each and opposite side of the box . Mount RV2 and RV3 on the face of the box as well as S1 .

The battery should last a long time as the total current used is only 1.5 mA when S1 is activated .

S1 by choice can be a normally closed contact foot switch . A sturdy microswitch can also me used with its metal lever set slightly above the box surface and the switch itself set in epoxy to the underside surface of the box .

An alternative is to use a simple toggle ON/OFF switch to be activated by hand .



Input and output jacks to accomodate your cable connector plugs are required . Female input/ouput jacks with an open circuit can be used to connect the negative side of the battery to the circuit instead of the power switch. See [Input Jack connections](#)

Let me have your comments on the performance results of this little circuit .

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