

## RICHMAN

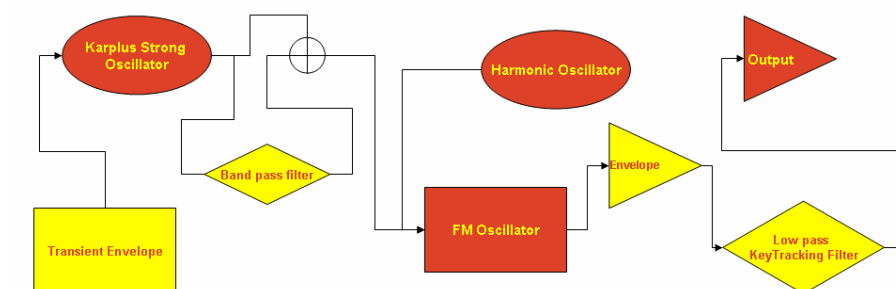
Hybrid Physical modelling / FM synth developed for Computer Music magazine by Krakli Software <http://www.krakli.co.uk>

Patch design by Electric- Himalaya <http://www.electric-himalaya.com>

Richman(CM) was developed using Synthedit. <http://www.synthedit.com> and used custom modules from KDL, Chris Kerry and David Haupt

Richman uses a hybrid of Physical modelling and Frequency Modulation to achieve its sounds. It consists of 2 near-identical structures which are referred to as Lines, these feed into a stereo Reverb and Chorus unit.

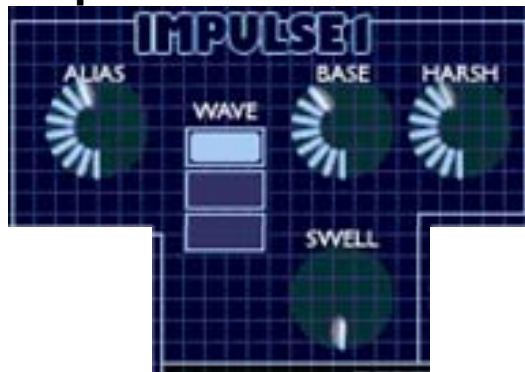
The basic structure of each line is shown here:



Richman(CM) performs best when it is played using a keyboard that transmits velocity information as it is possible to exercise a broad range of control of the sounds that Richman produces with the dynamics of your playing style.

The following area describes the function of each area of RichmanCM's Lines:

## Impulse:



Used for the basic tone creation

**Alias:** is higher harmonics which are introduced into the impulse signal, these give the effect of more 'squeakiness' to the sound

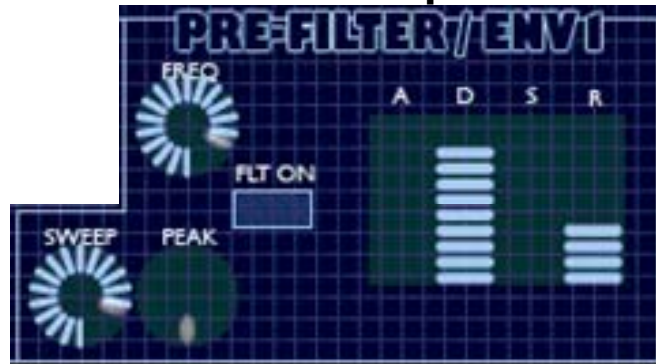
**Wave:** A choice of 3 basic waveforms

**Base:** This is a form of Octave switcher but as it only affects the FM 'carrier' it also acts as a form of tone control adding a different character to the sound.

**Harsh:** this adds more buzzyss to the sound (in actual fact it is allowing more of the phys-mod sound through to the next stage in the signal flow). At its top settings it can be used to create sitar or saxophone like sounds.

**Swell:** this adjusts the attack phase of the Phys-mod element, it can be used to achieve bowing or raspiness to the beginning of the sound.

## Pre-Filter/Envelope:



Note that the pre-filter is used on the Phys-mod element (remember that the phys-mod is used as the FM modulator). You will hear the effect of the pre-filter but it will not be as pronounced as the filter on a subtractive synth.

**Freq:** Controls the cutoff of the band pass Pre-filter

**Peak:** controls the resonance or Q of the pre-filter

**Sweep:** controls the amount that the Pre-filter is modulated by the ADSR envelope.

Flt On: puts the pre-filter in or out of the signal path, if it is set to off then none of the previous controls have any effect.

**ADSR:** a conventional envelope used to control the pre-filter and the Lines level

\*\*Line 2's envelope differs in having a delay control that offsets the start of the envelope cycle. When two lines are combined this can give a better effect to guitar type patches, simulating the thumb strike on the string.

\*\*Please note that the response curves of RichmanCM's envelopes are preset to exponential

## Velocity:



Offers you the chance to control the amount that Note Velocity affects, the Tone or the Level of the sound.

## Harmonics:



This module offers the chance to modulate the carrier with a further audio signal. It has a relatively limited scope but can be very useful for electric piano or bell like sounds. The controls are as follows:

**Pitch:** controls the basic pitch of the modulator

**Length:** determines how long the modulator will sound at each key press, use very short length settings to add emphasis to the start of a patch.

**Amt:** determines how much modulation of the carrier will take place

**Key:** is used along with the two **track** controls to create a profile of the effect across the octaves of the keyboard. The profiles can be Normal or Inverse, Linear Exponential or inverse Exponential.

## Vibrato:



Vibrato is independent for each Line the controls are:

**Delay:** creates an offset before the vibrato effect commences at each note-on

**Rate:** The speed of the vibrato effect

**Amount:** The amount of pitch modulation, from zero upwards

## Transient:



A subtle effect but one that adds greatly to the realism of the instrument

**Attack:** determines the attack phase of the transient effect

**Decay:** determines the decay phase of the transient effect

**Amount :** sets the amount that the transient effect alters the phys-mod modulator.

## Post Filter:



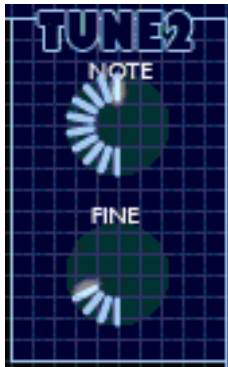
A simple filter effect that is applied to the output of the line. The post filter is a low pass filter which is hard wired to track the keyboard and has the following controls:

**Cutoff:** The filters cutoff frequency

**Res:** the resonance or Q of the filter

**Track:** the shape of the keytracking, offering Linear Exponential and Inverse exponential settings.

## Tune:



\*\*Line 2 only

Note and fine tuning of Line 2 in relation Line 1. Note offers a -1 to +1 octave range.

## Bend/Portamento:



Both Lines offer independent Bend wheel ranges and portamento (glide between played notes) speeds. If these are set at different levels for each line some very interesting effects can be generated.

## Levels and effects:



This panel offers level controls for each line as well as global Reverb and Chorus effects. The last control is an overall volume control.

## Midi CCs

If you hover over each control a hint box will appear that reveals the Midi Continuous Controller value for that control.