Basic module: 36HP

- Midi in/out
- 6 voices
- 6x 16 bit CV outs – 1.0V/octave
- 6 trigger outs – configurable trig/gate/Strig
- 4 controller CV outs: definable for velocity, aftertouch, mod, expression or any midi controller
- 100x 32 dot matrix graphic LCD – can display 64 harmonics
- Edit/Cancel controls like RS290 and RS300
- 2x CV in (pitch + overall level?)
- Midi active LED

CV input module: 48HP

- 16x CV inputs with pots to manually control 16 harmonics
- Option to have monophonic real-time synthesis of the 16 harmonics – hook up 16 ADSRs and get some very realistic attacks (!)
- We have 8 spare sockets – use undecided yet

Tech stuff:

- 44.1kHz sample rate
- 6 note polyphonic
- Simple arpeggiator (?)
- up to 4 oscillators per note – total 24 generators

- Each oscillator can be detuned.
- 'warmth' feature to add a small amount of random detuning
- Max 32 harmonics (is this enough? The only down side of having more harmonics is that it increases generation time)
- You will get a delay of approx 0.5 seconds between changing a harmonic value and hearing it – this is the time to generate the new waveform.
- In real-time mono mode the changes will be nearly instantaneous (approx. 2-3 ms delay)
- TMS320VC5412 DSP – gives 3 stereo channels
- A number of stored waveforms in ROM
- One CV input can be assigned to select one of these waveforms depending on the input voltage. However there would be a short delay between the input changing and the output changing (about ½second)
- 32(?) memories for user waveforms.
- 5 waveform blocks. One for each oscillator, one temporary block used while generating a new waveform. This should prevent any glitches/clicks etc.
- Ram blocks are 8K samples long - waveforms below 2.7Hz will have very slight quantisation noise – it should be virtually undetectable unless you are using very low frequencies at very high levels (watch out for smoke rings from your bass speakers!)
- Windows based configuration program so harmonics can be adjusted in a more user-friendly environment. It will be fairly basic but still a lot easier to use than a small LCD.