

**DACS**

# FREQue II

**TWO CHANNEL RING MODULATOR**

# APPLICATION NOTES

## Application Ideas

This section is not intended to be a comprehensive list of all that can be done with the **FwS effectors**. Rather it is a list of starting points for you to begin experiments from. Using the **FwS series** producers and engineers can almost infinitely extend the voices of their existing battery of synthesisers and sound generators and create vast ranges of completely new sounds, add depth and warmth to early digital synthesisers, give drums new power, radically transform voices...

## Introduction

We have found that the most satisfactory set up for experimentation is to have the inputs to the units fed from pre-fader auxiliary outputs on a mixer. This means that you have good control of what is going into the units AND you can mix the processed and unprocessed signals together. Some treatments will require mixing with the original signal and some will need to be kept separate. For example adding distortion to a continuous sound will need mixing while gating effects will not.

## STONE AND MUSIC

### Set Up

Feed a stable tone, or a slightly varying one, into the MOD input and the music or tune into the MUSIC input. The MOD input could be from the internal oscillator. If the MOD input is harmonically related to the key of the music the OUTPUT will tend to be harmonic eg the MOD input is a D and the music is in the key of D, then the output will tend to be harmonically rich. If the MOD input is not related, then the output will be rough, bell like and/or noisy depending on the frequency of the input.

Try this...

- \* Use held chords that have a certain amount of vibrato - as the pitch of the chords varies so the harmonic content of the sound will vary
- \* Vary the MOD frequency to generate sliding upper and lower harmonics
- \* Use randomly generated frequencies from synthesisers on MOD input
- \* Try varying the edge controls contrariwise ie turn one up as you turn the other down, to produce stereo effects
- \* Have a go at the 1st range to produce gating effects, the 2nd range to produce tremolo effects, the 3rd range to produce heavy modulation effects while the 4th and 5th ranges will produce higher and higher harmonic effects

## DRUMS

### Set Up

Feed percussive sounds into the MUSIC input and tones or other sounds into the MOD input. The MUSIC input will then act as a trigger and give a gating effect, only producing OUTPUT when the MUSIC input signal is present.

Try this...

- \* Vary the MOD input frequency to produce output harmonically related to the music
- \* Feed the melody into the MOD input and the percussion will 'play the tune', or at least tend to go up and down with it
- \* Feed any old music to the MOD to produce an effect similar to scratching
- \* Feed to the MOD with carefully selected samples synchronised with the percussive sounds
- \* Using the **FREQue IIs** oscillator set on the 2nd or 3rd range generate deep deep bass subharmonics on bass drums
- \* Using the oscillator set on the 4th or 5th range generate grain, grit and glitter on snares, hi hats, cymbals, maracas

## VOCAL INPUTS

### Set Up

Feed your voice into the MUSIC input and feed a variety of signals into the MOD input - music, tone, noise...

Try this...

- \* Use the voice to gate the MOD inputs
- \* Use the voice as a percussion imitator to produce hot rhythm sections from modulated MOD inputs
- \* Try the 1st range to produce gating and heavy breathing effects, the 2nd range to produce tremolo and panting effects, the 3rd range to produce heavy modulation effects (Dalek among others) while the 4th and 5th ranges will produce higher and higher harmonic effects

## SAME SIGNAL OR L & R OF STEREO INTO BOTH INPUTS

### Set Up

Feed the same signal or the left and right of a stereo signal into the MUSIC and MOD inputs.

Try this...

- \* Mix the output into the original signal to harmonically enhance the signal
- \* Left and right inputs into MOD and MUSIC inputs respectively on both modules in dual models can produce phasing and other spectral phenomena, particularly if the spectral controls are varied
- \* With dual **FwS units** try varying the edge and/or weight controls contrariwise ie turn one up as you turn the other down, to produce stereo effects

## DELAY FEEDBACK

### Set Up

Use a delay line to process signals going in to or out from the units

Try this...

- \* Feed audio out back to MUSIC input via delay at tempo or multiple of tempo
- \* Do the above with long decays on the end of sounds
- \* Split the signal to both inputs and use delay line on one input to produce weird flanging effects on output
- \* With dual modules, feed as above, but delay only one side then pan both outputs centrally

## MULTIPLE MODULATION

### **Set Up**

Feed music into the MUSIC input of one modulator and use the internal oscillator to modulate it. Take this OUT to the MUSIC input of the second modulator and modulate it with the same internal oscillator. The result is that the original signal is reconstituted and additional higher partials are also added.