



# Thermionic Culture Snow Petrel

Keary cranks it up for the lower output microphones.  
Birdie num num, says **GEORGE SHILLING**

Thermionic Culture has long developed products which include a valve-based microphone preamplifier section, like the Rooster, and dedicated mic preamps like the Earlybird. However wonderful these sounded (yes, they do sound very good indeed), there have been requests for more gain, mainly for optimum use with low output ribbon microphones, such as the BBC/Coles 4038. This new design aims to satisfy those needs.

The Snow Petrel is a 2RU dual microphone preamp. Each channel includes a high-pass filter and an Air control treble boost, and a selection of gain boosting and attenuating controls for 'clean' operation or different ways of driving the valve circuitry. It follows the usual Thermionic Culture house style, with a clearly legended front panel, robust toggle switches, and on this model, chicken-head type knobs for all rotary controls.

The Snow Petrel doesn't just cater for vintage types of ribbon mics though, it also includes phantom power and a -20dB pad for FET and self-powered microphones.

The casing is similar to other Thermionic products. Three valves are involved in the signal chain: an RTC 5654 for Input stage, a Svetlana EF86 for Stage 2, and a Tung-Sol or similar 6189 for output. This is where designer Keary's expertise lies (see Meet Your Maker feature this issue), knowing what valves to use and how to design the circuitry for maximum benefit.

## Gain with no pain

On the front, the two completely independent channels' controls are arranged one above the other. First is the -20dB pad toggle which is placed before the input transformer. Next is an Input Z toggle — Lo or Hi impedance which equate to 800 or 2,400 ohms. Gain is set using a rotary switch with dB settings for 40, 47, 54,

61, 68 and MAX! The High Pass Filter is next, with 6dB per octave roll-off at 60, 120 or 240Hz — mainly in order to reduce proximity effect, but also useful for reducing the sound of a vocalist kicking the mic-stand or taking some of the boom from the drums out of cymbal mics.

Next is the Air control which lifts treble. This is a variable pot which at maximum adds 5dB at 10kHz, peaking at 30kHz. An Output Trim knob is next, a non-linear pot which tames the input stage by up to 10dB. Finally there is an Attenuation switch for reducing the signal by 7 or 15dB, allowing distortion in the output stage and transformer. There are useful Polarity Invert toggles on each channel, then farthest to the right — sensibly away from the other controls to avoid accidents — are the 48V phantom toggles. These are extra safe as they have to be lifted to unlock, so no accidental switching, and sensibly there are tiny red LED indicators to show the presence of phantom power.

## Velvety smoothness

A Coles 4038 instantly sounds more than agreeable when hooked up to the Snow Petrel — all the velvety smoothness one expects is immediately obvious, along with a surprisingly detailed mid-range and top end. Adding some extra treble with the Air knob can do no harm though, and even at full boost there is no harshness. You could argue that this Air circuit could have been bestowed with even more gain, but usually this is enough to bring out the best in a ribbon without going overboard or possibly wrecking the beauty of the natural sound.

Another mic sometimes needing a lot of gain is the Shure SM7B. With many typical mic amps, full or nearly full gain boost is necessary, especially for quiet vocalists, and this can introduce noise. But the SM7B presents no

problem for the Snow Petrel. With most singers you only need the gain up to 54 or 61dB, and you'll only need the MAX setting for someone actually whispering. On the rare occasion you do, amazingly, the noise level is imperceptible.

Plugging a Neumann U87Ai for male vocals is a joy — the Snow Petrel copes with ease, the tone is super-vibrant, detailed, musical and extremely 'hi-fi' — it jumps out of the speakers in the most charming and captivating manner. And a Sontronics Aria sounded terrific for violin, cello and double-bass. With all the various gain and attenuation controls, all performance loudness-levels and mics are covered.

Glyn Johns would overdrive the Helios desk channels when recording drums. You can do similar with the Snow Petrel, even with 4038s. Cranking up the Gain, and bringing down the Trim knob to zero and the final Output Attenuator to -7 or -15 makes for some fabulous vintage-style crunching — if you are brave enough to commit when recording. Having said that, there's nothing to stop you inserting the Snow Petrel across a line insert when mixing to add some character and crunch. This also gave cello recordings some wings.

The Snow Petrel is one of my favourite Thermionic Culture devices, it sounds solidly reassuring, detailed and open — not just with 4038s, but with every mic in the cupboard. **T**

## resolution/VERDICT

**PROS** Huge amount of gain, clear sounding, clean and musical, or crunchy and characterful, sweet sounding Air treble boost.

**CONS** No onboard instrument input (see Extras!).

**EXTRAS** Keary left out a DI input for fear of impairing the mic signal, but instead offers a solidly-built separate D/I box (with bypassable transformer) called The Robin as a companion product.



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