

The Silence of the Hams

Just to show you that the winners of our free competitions on the Southgate ARC website are, in fact real people, here is a photo of our latest winner, **John VK4TJ** of Queensland, Australia, putting his prize, an [NEIM 1031](#) noise elimination in-line module - donated by [bhi Ltd](#) - through its paces. (Photo inverted for the viewing comfort of northern Hemisphere viewers)



John explains – “Our beleaguered Aussie dollar does not allow many new toys to slip past the familial Minister of Finance these days into the disaster zone I call a ham shack, so it was with considerable anticipation that I awaited the postal notice indicating that I had a parcel to pick up.”

“Christmas in June!” I exclaimed, as I unravelled the carefully wrapped bubble wrapped package, revealing the NEIM 1031, Perspex stand and cable. Never one to read manuals (for mere mortals), I quickly wired it up to the trusty IC-706 (better make that “rusty” after the last wet season we had) and spun around a late night 20-metre band in search of prey, and heard.....absolutely nothing! Yes, between signals, the NEIM is so effective at dropping white noise out of the picture that it is like having the squelch from your 2-metre FM, only on HF.

All right, on to VHF FM, where a couple of semi-locals are conducting antenna tests. One is booming in, but the other is discernable only as movement of the noise floor up and down in response to modulation. Punch in the NEIM, and, behold, it can actually dredge out voice information that I cannot even begin to hear! At that level (or rather, lack of level!), the eliminator hasn't got much to work with, so the recovered audio is patchy, but I dare say, if it meant a new grid on UHF, I could pull it through. BHI warn that the audio at full throttle DSP sounds “robotic”, however, I find this to be a little unkind – it sounds for all the world like a rock pool in a cave, with a melodic “plink” as droplets of noise hit the cosmic pool. Much less irritating to listen to than artefacts of a poorly designed DSP VFO....

But how would it do on CW, with that mode's sharp rise times and erratic audio signature? Not too bad, as it turns out. There is a slight softening of the leading edge of characters initially, but the DSP appears to “learn” quickly, and flatten out whilst still providing meaningful noise attenuation. I found myself flicking the unit in and out of the circuit repeatedly to confirm that it was working until I found that the band was rapidly going

flat, and that I had followed a CW signal just about down to the noise floor. A certain JA is probably still ripping apart his receiver, wondering why I was able to give him 599 reports, when the best he could reciprocate with was a 229!

Music – BHI says, “don’t go there”. Fools go where angels dare no tread, so what the heck.... I fill the odd idle moment with FM broadcast band dx’ing, primarily as an aid to evaluating paths for 2 metres and up. One Brisbane FM station is pretty scratchy here in the bush. For laughs, I punched in the NEIM. Lo and behold, head-banging music sounds pretty much the same with or without DSP, but the white noise is definitely absent. It isn’t the last word in fidelity, but my recommendation would be to give it a go if you listen to music under difficult circumstances.

I can see where the BHI NEIM 1031 would be a valuable addition to most any shack, particularly in urban environments with gaussian-type noise problems. One thing for sure – it isn’t getting any quieter out there. We need innovators like BHI in our corner to ensure that we aren’t forced from the airwaves strictly through neglectful engineering of shoddy consumer goods.

John VK4TJ