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Over the years, I have run a succession of noise-cancelling products from British firm bhi landing in my shack; most of them we have reviewed in these pages.

This new bhi In-Line Module with a 5W audio amplifier (Fig. 1) is no exception. The engineers at bhi have developed this new Amplified DSP Noise Cancelling Module (135 x 65 x 46 mm), together with a Dual-In-Line unit, as a replacement for the earlier bhi NEIM (Noise-Eliminating In-Line Module) 1031 and ANEM (Amplified [DSP] Noise Elimination [In-Line] Module) MKII models.

The information available on the bhi website, as well as the relevant manual (*In-Line Module Issue A 08/21*) holds the full technical description of the unit.

In its promotions, the manufacturers accentuate the 5W audio amplifier, the input-overload LED and the (factory-preset) audio output level adjust control as noteworthy features.

Upon unboxing, I noticed that, with this unit, the design and form-factor of past incarnations of noise suppression units have been 'flipped', so that the main controls are now on the *sides* of the sturdy rectangular plastic box that holds the circuitry, not on top. This is much more practical if, like me, you slot your unit in with many other competing devices in your already over-stacked shack.

On the left-hand side of the unit, users will find the 'On-Off-DSP' multi-switch, status and 'overload' LEDs and the DSP filter level control (light grey knob; Fig. 2). At the opposite end, you'll find the sockets for 'Audio-Input', 'Speaker', 'Headphones' and 10-16V DC In (Fig. 3).

The grey DSP-level adjustment knob now appears slightly recessed into the inside of the box; this makes it more difficult to damage it. No rocket science here, and the unit was up and running in seconds.

Many radio amateurs will find this latest version invaluable when it comes to removing background noise, hiss and static from transmissions received. It is very useful to do this, especially if you struggle to make out a strand of speech from a background soundscape.

My principal use for this bhi noise-cancelling unit – as indeed for earlier



The New bhi In-Line Module

The editor takes a look at the new 5W amplified DSP (Digital Signal Processing) Noise Cancelling In-Line Module from British noise suppression experts bhi.

models – was to clear up the audio on broadcast radio stations from long- to short wave.

It is very useful to be able to do this in eight finely graded steps. In this way, broadcasts – both daytime and after dark – from such stations as RTÉ or Radio Luxembourg become so much more enjoyable, especially when, in the case of the latter, you are listening to a foreign language station broadcasting. Here, the unit can make the crucial difference between understanding and unreadability.

For many, the unit will come into its own when in the monitoring of HF *utility speech signals*, such as the RAF VOLMET weather transmissions on (for example on 5,450 and 11,253kHz) or aeronautical and maritime HF speech signals in the relevant frequency bands. In this case scenario, the

In-Line module cleans up speech clarity and resolvability very considerably, lifting it from the hiss, crackle and pop of a bad day to full resolution, in no time at all.

Although not especially suitable for music, those who enjoy tunes on these bands may also have a more stress-free listening experience, *with a low filter setting*. High-level filter settings tend to affect the quality of the music.

The other way in which I am utilising this unit, and its predecessors, is for the audio-monitoring of signals in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) bands: Dawn chorus, whistlers, tweeks, and a host of other sounds, which result from the impact of the solar wind on the Earth's ionosphere and atmosphere. With a bit of a practised ear and the right (electro-smog-free) setup, you can use

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Fig. 1: The In-Line Module out of the box.

Fig. 2: Frontal view of the module.

Fig. 3: Sockets and connections.

this little box to filter out the unwanted atmospheric hiss from the 'nature-radio' phenomena you are after. The eight DSP settings are certainly enough to make an audible difference. But this is, perhaps, a niche interest, albeit possibly one worth noting for our growing band of VLF hunters.

Altogether, this is a welcome further constructive development of a very popular product that will find many new users amongst radio amateurs, DXers, programme listeners, and radio enthusiasts.

Moreover, if you do experience any age-related hearing loss or similar issues, you will notice the difference, both in an amateur radio context or for your general radio listening enjoyment.

The unit retails at £159.95 and is available from bhi Ltd. or any of their authorised dealers.

I used the In-Line module with the bhi cabinet-style 8Ω passive extension speaker (EXTSPK25). More information can be found at the website, below.

My warm thanks go to **Graham Somerville at bhi Ltd.** for the additional information provided and for the kind loan/donation of the review unit (see right).

www.bhi-ltd.com

WORTH
£159

Win an amazing bhi In-Line Module



Thanks to the generosity of our friends at bhi, we have one of these great units to give away.

The new bhi DSP noise cancelling In-Line Module cleans up noisy radio signals and will work on most radios and receivers. It has the latest bhi DSP noise cancelling technology inside, which brings improved audio quality to the listener when operating in noisy conditions across all radio bands.

To be in with a chance of winning this fabulous prize worth £159, all you need to do is visit our website at bit.ly/ru-dec21-comp and answer the following multiple-choice question...

How many noise suppression levels does the new bhi In-Line Module offer?

a. 5 b. 6 b. 8 c. 9

Entry is only via our website. Entries close at midnight on 31st December 2021. To enter you must answer the question correctly and answers received after the end date will not be accepted. The winner will be notified by email by 28th January 2022. Warners Group Publications Plc standard competition terms apply, to view visit warners.gr/compterm. For information on how your personal data is processed, secured and your rights, our Privacy Policy can be viewed here – warners.gr/privacy or available in hard copy upon request. The winner will also be announced in the March 2022 issue of RadioUser.

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