

Field Guide

Omni-3fm Turbo: Solid Audio – Modest Price

by Peter Stewart

[AKRON, Ohio - September 2004] Many stations looking to upgrade their audio processors are daunted by the costs of the “top of the line” digital processors available. And in some cases, they really may not need that level of processor, nor the price tag that goes with it.

Such stations are not in the “modulation wars” typical of some markets. They are under no pressure to be loud for the sake of being loud. Instead, they are looking for the best “bang for the buck” in getting control of their air sound, with a processor that is clean and easily adapted to their format.

UPGRADED MODEL

We recently received a Beta version of the Turbo upgrade for the Omni-3fm series audio processor. The Omni-3fm Turbo features something new the previous versions did not have – a three-band AGC/Leveler section. This makes the Omni-3fnt ideal for cash strapped stations needing to upgrade from an older, basic audio processor, such as an Optimod 8100, CRL Amigo, etc.

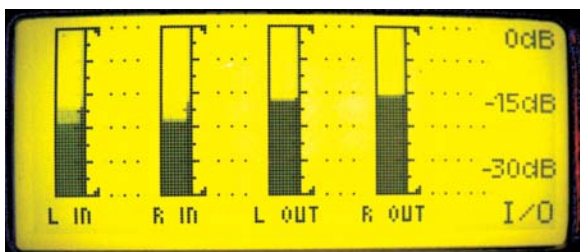


Although being a basic audio processor itself, the Omni-3fm gives you more processing power than its predecessors. And now these new enhancements from the folks at Omnia have “turbo-ized” the unit, making it a great value among the mid-range processors.

For those of you who have not been exposed to the Omni-3fm, its original design was a wide-band AGC followed by an EQ enhancement stage, then three bands of limiting, distortion cancelled clipping, and finally the stereo generator stage with built-in composite clipping. The composite clipping features Omnia’s composite filtering to remove out of band components created when heavy amounts of composite clipping is used.

MAKING THE SOUND CONSISTENT

One of the difficulties with the classic Omnia 3 was trying to maintain cut-to-cut consistency without having to use the limiters way outside their “sweet spot” operating range. What was needed was some sort of multi-band AGC stage. Omnia provided that with the Omnia3 Turbo upgrade. This upgrade comes free for all existing users of the Omni-3fm audio processor. If you are one of these users, you *will* want this upgrade!



I have found adding three bands of AGC allows this processor to have enough power to give a nice presence on the dial. Even running the AGC section lightly and/or with slow attack/release times will provide significant improvement, as the gentle EQ action of the multi-band AGC delivers a much improved source-to-source consistency.

HOW DOES IT SOUND?

Call me a nostalgia freak, but a nice plus for me is how the Omni-3fnt comes extremely close to recapturing the aural charm of the original Omnia-fm (now called Omnia-Classic) – and I like that! When comparing this to the Omnia-Classic, I find the Omni-3fnt has a much better range of operation than the old classic had.

The Classic just had insufficient range to correct large level errors and an outboard processor, such as a Compellor, was needed. Not so with the Omni-3fnt. It has plenty of level correcting power.

The Omnia 3 Turbo comes with a full bag of tools to get the sound you want. This includes two different editing modes (“Normal” and “Expert”), which is a nice touch. The Normal mode is meant for the average processing user, and Expert mode for folks who are not afraid to dig into things and get their feet wet!

A quick warning: The Expert mode gives you the ability to adjust quite a few different parameters. If you are unfamiliar with the finer points of audio processing, I would advise you to stick to the Normal mode at first, trying out the “advanced” options cautiously, one at a time!



Normal mode consists of the following controls:

- **Thunder** - which adjusts the “bass boom.”
- **Sizzle** - which adjusts high frequency components (treble).
- **Thrust** - This is your loudness vs. distortion control.

I think these controls will get most users close to the sound they want.

CRANKING IT UP

When you have access to an audio processing guru, and need to really create a custom sound, the Omni-3 Turbo Expert editing mode has the tools you need. In Expert mode, menu navigation for adjusting the various parameters is done through a useful block diagram flow chart of the Omni-3fnt’s processing stages.



Amongst the many useful adjustments, the Expert mode features a two-stage bass EQ to separately fine-tune deep bass with “normal” not-so-deep bass, as well as a bass warmth adjustment.

The Expert mode also opens the flood gates on a wide range of adjustments on each of the AGC and Limiter systems, ranging from attack and release to “makeup gain.” The “makeup gain” feature allows the Omnia Turbo to make quick adjustments to catch quieter passages, while “remembering” where it was before, and jump back to its normal operational state when the quiet passage is over.

QUICK SETUP

How was it to work with? We had no problems getting the most out of this processor on our format within one evening. Since this unit is quite a bit less complex than its bigger brothers, it was simpler to quickly get close to a sound we liked, a big plus when you have a ton of other tasks to get to around the station.

Another plus: the Omnia-3fnt also offers dual composite outputs to feed two composite transmission paths, each separately adjustable, which definitely comes in handy. In our case, our main and auxiliary STL’s require different drive levels, and we were able to adjust both for correct modulation.

RATED: A “BUY”

Overall I have to say the Omni-3fnt is a great audio processor for the money. It definitely gives you enough power to compete loudness-wise with the bigger more expensive boxes. Jazz, Classical, and other “purist” formatted stations may find this processor a perfect fit. And when funds are limited, it fits the bill nicely for most other formats too.

Downsides? As a three-band unit, the Omni-3fnt does lack the sophisticated EQ correction available on the more expensive processors, to standardize a station’s sound across a wide range of musical types. And this processor will only work for analog FM service. If digital transmission is on your near horizon and you will need to process for IBOC-FM, Omnia recommends picking up an Omnia-3net HD radio. At this stage of the game, I would rate it a minor issue.

In conclusion, I find the Omni-3fnt a much-needed improvement on the Omnia 3 design. If you have an existing Omni-3fm, run – do not walk – to your dealer for this free upgrade! My only question: Frank – what took so long?!

This is a worthy processor to consider in your next purchase evaluation. You will not be sorry you do.

Peter Stewart is a contract engineer in Akron, OH. Peter can be contacted via: editor@radio-guide.com


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