

Radio World

The Newspaper for Radio Managers and Engineers

REPRINTED FROM NOVEMBER 23, 2005

WWW.RWONLINE.COM

USER REPORT

Goldeneagle HD Relays Signal Info

Greater Media Uses 'Smart Mod Monitor' For Taking, Recording Off-Air Measurements

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BOSTON The box from Audemat-Aztec in Florida arrived just a couple of days ago, but I had downloaded the user manual weeks ago, in hopes of shortening the learning curve on this rather sophisticated piece of monitoring gear.

As it turns out, it was painless to get going, and Tony (the guy who literally wrote the book on it) was happy to take my call and answer a few questions. In less than an hour I was able to look at some parameters on my five FM stations in Boston I had never been able to see.

The Goldeneagle HD comes in a few flavors: AM, FM, AM HD, FM HD or all of the above. It is one of the first devices to hit the market that can actually make precise off-air measurements of many parameters of the station's performance and record them, allowing detailed analysis of both analog and digital RF and audio signals. Think of it as a "smart modulation monitor" that has capabilities far beyond most rack-mounted mod monitors you may be used to.

Physically it is a 2 RU device, and requires an RF sample or connection to an antenna for direct off-air monitoring. I am a big fan of measuring signals right from transmission line samples at the transmitter, but I am told that off-air monitoring can also be meaningful if you have a clean multi-path free signal

at the receive antenna.

Having said that, the physical location of the device is somewhat irrelevant, due to the many ways available to access the information remotely, the most useful being the network interface. By running a small utility on your PC, you can access the Goldeneagle's

through the network and initiate an FM scan. The entire FM radio market comes back depicted as a spectrum with each station showing up with signal strength, call letters and color-coded graphics indicating whether the station is analog, digital or both, along with RDS information.

This scan alone can tell you a lot about the market, but the real value of this product is that it can make precise



Goldeneagle HD monitors and graphs FM analog signal strength, pilot and RDS injection and HD Radio signal-to-noise ratio.

real-time, high-resolution graphics via the Internet, and connect to your unit from almost anywhere.

My unit came equipped with an FM analog tuner and an FM HD tuner, the optional LCD touchscreen on the front panel and a relay card to provide dry contact closures for alarms. (This will be supported in the future with the next software revision.) I found the LCD touchscreen a little difficult to operate, but in reality, it is not used much after the initial setup.

Continuous measurements

Now for the good stuff. Log in

measurements on many stations automatically and continuously, and also alert you via e-mail, telephone or text messaging if the parameters you select fall out of tolerance.

The ability to set the thresholds for any of these alarms is impressive. The alarms also have built-in timers and definable upper and lower thresholds and hysteresis settings, so alarms will not continue to generate if the parameter you are looking at is on the "hairy edge" and would otherwise trigger multiple annoying alarms.

A few of the useful parameters the device will monitor and graph include

FM analog signal strength, pilot injection, RDS injection, HD Radio signal-to-noise ratio, total analog modulation and analog audio. In addition to the audio output connections on the rear, the Goldeneagle will generate a real-time audio stream of any station you select (analog in one channel and digital in the other), so you can hear the station on your PC wherever you are.


During audio streaming the device stops scanning and recording data from your list of stations; but the program gives you fair warning.

If you are running HD Radio, a useful feature is the monitor's ability to analyze the analog and HD Radio audio as received off-air, and display analog vs. digital time alignment information. It takes a few seconds, but you are able to set your time diversity accurately, right to the exact frame. It also provides information as to the relative amplitude of the analog audio with respect to the HD Radio audio.

Soon a real-time spectrum analysis plug-in will be available, adding to the utility of this powerful tool.

I miss not having the ability to print out hard copies of the data, and it would be nice to be able to pull up archived information older than a day. I am told these items may be addressed in a software revision.

Careful thought has gone into this product, and if nothing else it provides critical real-time information about our HD signals that up until now has not been available to us.

For more information, contact Audemat-Aztec in Miami at (305) 249-3110 or visit www.audemat-aztec.com. 



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