

Kaltman's Creations' RF Spectrum Analyzer

An Affordable Solution to Frequency Management

By Ken Freeman, Technical Sales Manager with Meeting Services Inc.

In our increasingly crowded radio frequency environment, we are hard pressed to deliver functional wireless systems and often are pressed into sub-rentals and additional purchases to solve problems with spectrum and frequency availability. Last year, at the 2007 Infocomm show, I discovered a new product that makes it affordable to access the RF spectrum information by running real time frequency analysis.

We have often relied upon a very unscientific process by which we hunt and guess for wireless frequencies. Last year, looking ahead to our large industrial shows, I realized that we were in for difficult times trying get all of our wireless solutions to work as planned, especially for an upcoming show in Boston.

We decided to push forward with a scanning system, as we packed in progressively more and more wireless channels into our limited spectrum. The weekly rentals for scanners, as typically used in New York on Broadway, are upwards of \$1,000 plus a tech to operate. We needed a more affordable solution to manage monumental amounts of wireless.

Bottom line? The Kaltman Spectran HF4060 made it possible for us to take 140 wireless Mic, Com, and IFB channels to the AARP National Convention in Boston, Massachusetts, and they worked flawlessly.

Features:

The Spectran HF4060 covers the frequency range of 10MHz to 6GHz, making it possible to view all RF activity from down around 70MHz - 80MHz for assisted listening devices, through VHF & UHF, all the way up to 6GHz. On the

higher frequencies, you can view RF activity for remote AMX and Crestron wireless control, Wi-Fi, intercom, etc.

Just like its counterparts – models HF4040, HF6060 and HF6080 – the Spectran HF4060 features 10 user-assignable Hot Keys for instant access to frequently used RF bands, plus you can manually input any frequency start and stop point.

There is a jog dial on the side of the unit which positions a cursor on the LCD screen and the cursor position is read out in both frequency and level in dbm. Clicking this jog dial allows you to zoom in to a high resolution, close-up view of the RF activity, find offending interference, available RF space, etc.

There is a whole suite of menu items such as resolution, sweep time, antenna types, etc., but the defaults, which were set by Kaltman Creations (the US distributor), seem to cover all of our Pro Audio, AV related needs. All of these functions, and more, are also available via the included PC software.

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What I Like About It:

Looking ahead to the Feb 2009 analog TV cutoff time and the pending RF auction to the larger wireless providers, it's apparent that the RF congestion problem will only be more complex as we move forward. Tools like the HF4060 RF spectrum analyzer will be critical to our ability to use our current arsenal

of wireless equipment and to make informed decisions about what to buy in the future.

I have suggested that the growing installation department of my company should also host this device, as their needs may well exceed the rental and staging department's need.

Aside from handheld operation, the Spectran HF4060's USB computer interface and included software means that you can scan a frequency range in advance of firing up your first wireless device. I set the unit up on the day of our technical installations and found nice spectrum holes for our equipment to work in, which confirmed a lot of the pre-production work we had done. But, I also found that a local station in the Boston area had switched on their DTV transmitter, and that none of the usual frequency allocation places had this information documented.

What I Would Change:

I would like the system to have a BNC antenna connector, or at least an included SMA to BNC adapter, so that I could plug the unit into an output of a typical wireless microphone receiver antenna distribution system. This would permit me to use the analyzer to set up the antenna systems to maximize what I need and minimize background signals.

I would like to be able to create some markers in the software interface so I could track a challenging area over time.

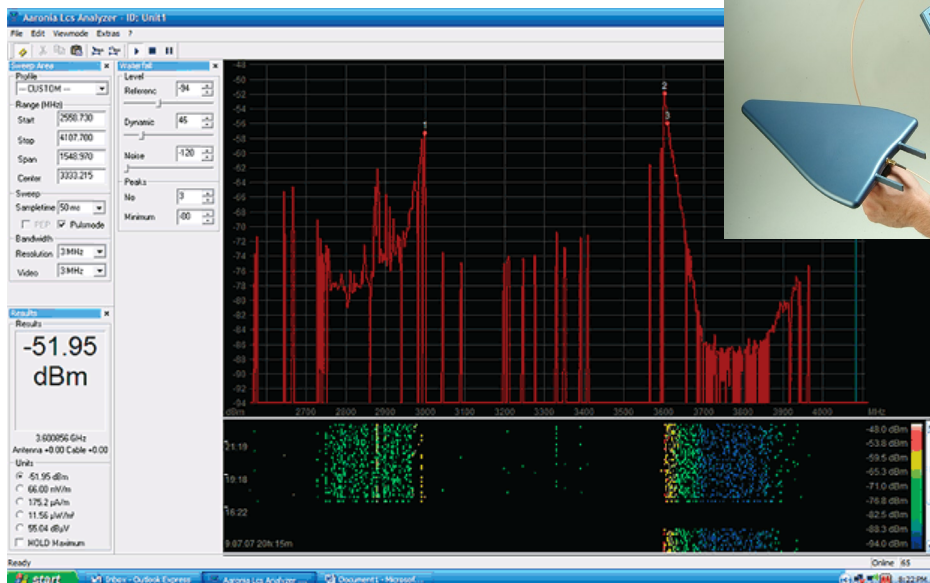
I would also like to be able to home into an area for a detailed look while still sweeping the wider band.

Summary:

The Kaltman Creations Spectran HF4060 RF spectrum analyzer has earned a place in my toolbox. One of the key challenges for these events was working around the RF interference while still providing a flexible presentation solution to our high profile presenters. I strongly suggest the HF4060 system for any dynamic and uncontrolled RF environment where you really need your systems to work.

Product Reviewer:

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Priced at around \$1770, the HF4060 is a very cost-effective frequency manager and consultant!