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USER REPORT

WNEO Saves with the L-3 CEA

by Jim Baltes
Chief Engineer
WNEO/WEAO-TV

KENT, OHIO

I began working at WNEO and WEAO in 1981 as the transmitter supervisor, and then in 1996 I moved into the role of chief engineer. In all that time, perhaps the most challenging project for us has been the transition to digital, which we started planning for in 1997, finally going to air with our digital signal in September 2003 on WNEO.

With an engineering staff of just two—Engineer Rick Patterson and me—we knew that it would be a challenge to build the digital operation, and more work to run it. So we had to be certain that the equipment we chose was straightforward to operate, easy to maintain and rock-solid reliable. Our other concern was expense—the cost of the equipment and the cost of running it; because adding the fee for power for an additional transmitter is a significant operational expense.

We chose the Thales DCX Paragon transmitter for digital transmission, in part because of the reputation of its products and for its support. Also critical in the decision was the use of the multistaged depressed collector IOT and the constant efficiency amplifier tube from L-3 in the transmitter. The initial reports on potential power savings were in the area of 50 percent, which is quite dramatic.

The transmitter we installed consisted of an exciter cabinet, a control cabinet and two high-power amplifier cabinets each with an L-3 CEA tube. By running the two HPA cabinets in parallel, we're able to do maintenance on one cabinet without having to go off the air.

The L-3 CEA tube—an MSDC IOT—is shown here in the Thales DCX Paragon transmitter at WNEO-TV.

The transmitter and L-3 CEA tube went live Sept. 6, 2003, and I can't say that everything has been perfect, but it's been just about as near to perfect as it could be.

We had one potential problem early on, but the Thales and L-3 service people detected it and dealt with it before anything could go wrong. The Thales support person realized that the performance of one of the tubes didn't appear to be quite as good as it should have been, so he contacted L-3. That company had people on the scene the very next day. They swapped out the tubes and re-tuned the new ones at no charge. That was in December 2003, and the transmitter and tubes have been running constantly and without any issues since then.

The other thing I like about the transmitter is that it is a very straightforward design that is simple to use. Too much equipment is overdesigned and complicated to operate when it doesn't really need to be. When you want to make a simple adjustment, you don't want to have to wade through a multilayered, complex menu system.

So, to sum up, the combination of the Thales DCX Paragon transmitter with the L-3 CEA tube has helped us meet the operational objectives for our digital transmission operation. The system presents an overall good design for easy operation and solid reliability. Both companies have exceeded my expectations for responsiveness and support, and the power efficiency that we get with the CEA tube has really contributed to our operation's bottom line. ■

Jim Baltes is chief engineer for PBS affiliate stations WNEO and WEAO. The opinions expressed above are the author's alone.

For more information, contact Buzz Miklos Director of Sales and Marketing L-3 Electron Devices 1035 Westminster Drive Williamsport, PA 17701 570-326-3561 ext 201 Fax 570-326-2903 Email:joseph.miklos@l-3com.com or visit www.edd.l-3com.com.