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USER REPORT BUYER'S GUIDE

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KGDN Gets the Juice From Bext

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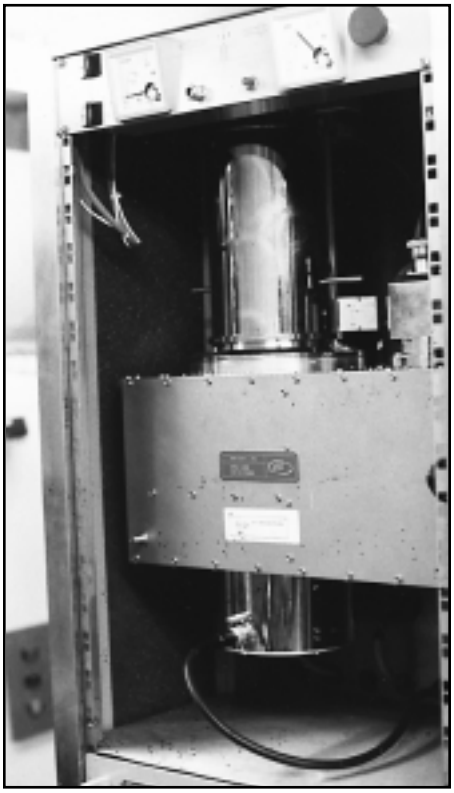
MARION, Wash. In 1993, KGDN(FM) was in the process of preparing for a power increase to a C-3 allocation.

Our owner had been to the NAB show and had been impressed with the appearance and specs of the **Bext** L series transmitters. Our requirements dictated 4 kW of transmitter power or a bigger antenna. We chose the Bext L4 to do the job.

A couple of years ago I helped install and maintain a Bext L10. I later had the opportunity to consult on the installation of an L7.



Bext L4 Transmitter. The front access cover is removed, showing PA assembly.

These transmitters are physically identical to the L4. They have the same cabinet and tube (3CX-5000), but with a bigger power supply, bigger blower and a bigger driver amp.

The modular construction of the L series makes it easy to change the configuration for various needs, and these transmitters are available up to 30 kW in the same rack-width cabinet.

Our new L4 is rated at 4 kW output, but we were in for a surprise when we turned up the heat.

> "I had set this unit up at its rated 4 kW, when my curiosity made me wonder what the top limit was. I turned the exciter up...the L4 wasputting out 6.2 kW!"

Unique and accessible

The L4 is not built in the same fashion as the transmitters many of us are used to.

The Bext people have long been known for finding the best equipment designs available in Europe and bringing them here to the U.S. The L4 is one of those designs.

As it is of European design, it is built into an open-framed, standard rack-width cabinet. With both side panels and the rear panel removed, there is ready access to the entire insides. Its modular construction further enhances maintenance access.

The complete power supply assembly is on wheels and can be rolled in and out of the back of the cabinet. It is connected to the transmitter via three plugs and a ground lead. The blower assembly is mounted on slide rails and is also removable from the rear of the cabinet.

The PA amplifier cabinet is attached in the front of the cabinet and can be removed completely in a few minutes by disconnecting the high-voltage and filament leads, removing the RF output connections and cooling chimney, then undoing two bolts.

Shelves are provided in front for mounting exciter and driver assemblies. Metering of forward and reflected power is provided at the upper front of the cabinet, and meters for plate voltage, plate and grid current are mounted on the control panel at mid-front level in the cabinet.

A maintenance dream

This transmitter is a maintenance dream, due to the accessibility throughout.

Because of its European origin, the electronic safety system is different from the domestic style.

Instead of protective interlock switches throughout the cabinet, there is a key lock system. A key lock switch allows the main AC switch to be turned on (which also starts the filaments). When the AC is on, the key cannot be removed.

When the main switch is off and the high-voltage shorting lever is in the grounded position — all on the lower front panel — the key can be turned off and removed. The key can then be used to unlock and open the back door. Again, when the back door is open, the key is retained in the door, not allowing the transmitter to be turned on.

The key has a third use. The cooling chimney for the PA tube is locked in place. To remove the tube or get access, the key unlocks the chimney and is retained in the chimney until it is back in its normal position.

The RF connections are completed with nickel-plated 1-5/8-inch coax sections. The matching stub and bandpass filter are contained completely with in the cabinet.

PA tuning and loading controls are readily accessible on the PA cabinet. A screwdriver grid match adjustment is also on the front of the PA cabinet.

Discovering headroom

I completed the installation of the L4 at the KGDN site and was in the final stages of tuneup when I made a pleasant discovery.

I had set this unit up at its rated 4 kW, when my curiosity made me wonder what the top limit was. I turned the exciter up.

With the 20 W exciter at full output, the 200 W driver was outputting about 190 W. The L4 was putting out 6.2 kW.

I conferred with ownership and with Bext. Bext conferred with the factory and we concluded that the unit could probably run at the higher power levels continuously, if needed. So we reengineered the installation and licensed the site to run with the L4 putting out 5.5 kW.

I was cautioned by the factory to watch closely for signs of power supply overload or overheating. Although the power supply was robust enough to handle that power level, it just never had been done before.

It ran cool and gave no appearance of being under any excessive load.

> “Mark me down as a fan of the Bext L series transmitters. They are easy to install, easy to maintain, their tube life is excellent and they are very reliable.”

Upgrades and satisfaction

In July, the KGDN Bext L4 passed the 50,000-hour mark operating at 5.5 kW. We replaced the tube at 40,000 hours, and it was still producing 5.0 kW.

Recently, we completed the final power upgrade for KGDN by taking it down into its modular components, loading it onto a truck and moving it to a mountaintop location. It now resides in a new building and continues to operate without failure at 2.1 kW.

The people at Bext are top-drawer in their assistance and support. They remain as interested in the status of their products today as they were when the units were new.

Mark me down as a fan of the Bext L series transmitters. They are easy to install, easy to maintain, their tube life is excellent and they are very reliable.

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