

Rigid Line

Vital to Overall Performance

The importance of transmission line quality is easily overlooked when planning a broadcasting site. Yet the installation's rigid transmission line can significantly affect the system's overall performance and expansion capabilities.

The benefits of using high quality rigid line instead of cable or other systems are quite measurable, both in terms of performance and cost of installation and maintenance. At Exir Broadcasting we pride ourselves on being able to deliver a complete range of transmission line products offering extremely low loss for total system quality.

DOES TRANSMISSION LINE QUALITY REALLY MATTER?

Transmission line quality is as vital to a system's overall performance as is the quality of more critical components like transmitters and combiners. Every component in a system affects the electrical performance and output power of the transmission.

WHY RIGID LINE WHEN THERE IS CABLE?

Cables with dimensions greater than 7/8" are very bulky and heavy, and are also more expensive and more difficult to install than rigid line. In addition, the cable must be over-dimensioned in order to compensate for its comparatively high attenuation.

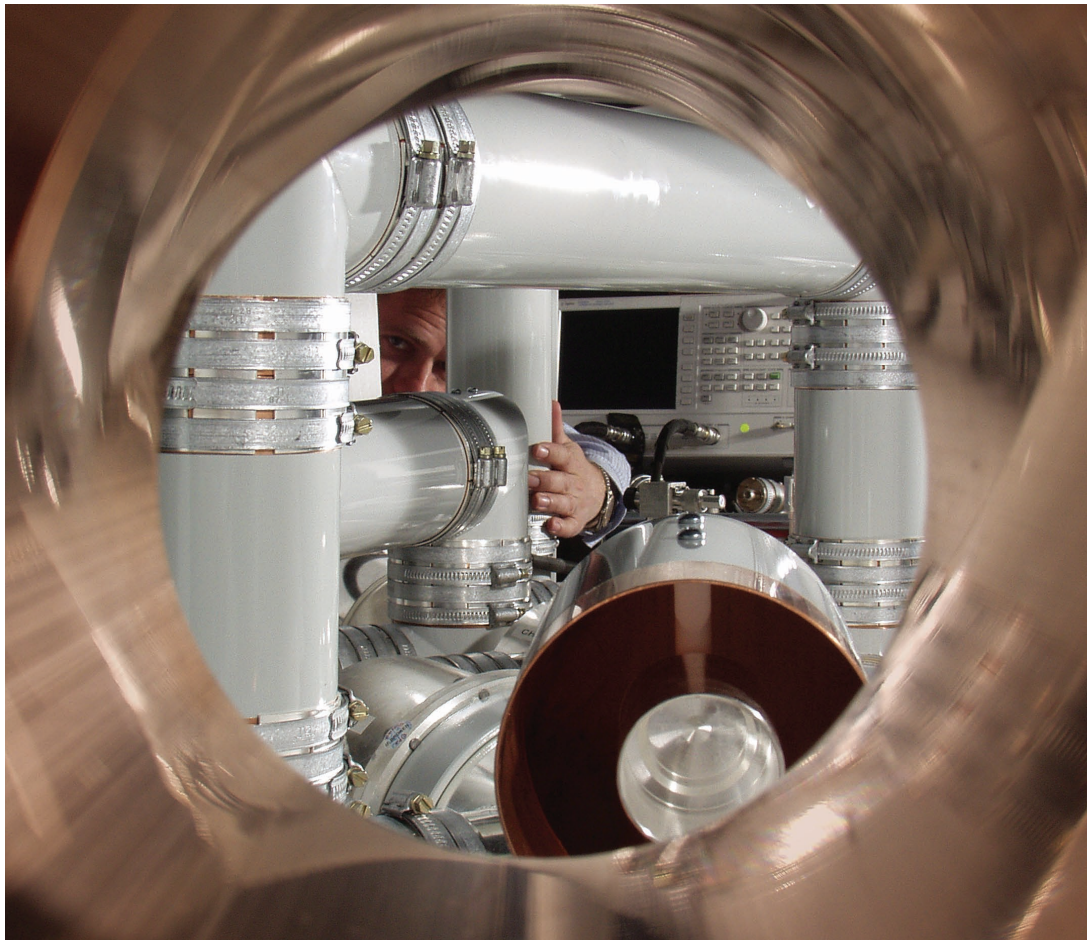
WHAT'S SO UNIQUE ABOUT RIGID LINE FROM EXIR BROADCASTING?

First, we offer a complete program of interconnecting rigid line components to ensure easy assembly and consistently high quality from start to finish. Secondly, our adapters perform so well that they can be used as test adapters. Most importantly, our rigid line is manufactured using the purest copper available in order to achieve the lowest loss.

99.9% PURE COPPER

During transmission all power is concentrated to the coax line's inner conductor. For this reason, we use only the purest material available for our inner conductors consisting of 99.9% pure copper. This is how we are able to minimize loss. All other key rigid line components are similarly designed





to contribute to a low-loss system. For example, the inner conductor used in our elbows is milled from a single piece to achieve a return loss that is not only very good, but very consistent as well. Likewise, the exceptional isolation properties of our high quality adapters are kept consistent by using only virgin, high grade Teflon manufactured under strict controls.

KEEPING IT SIMPLE

One of the main features of Exir Broadcasting rigid line is its unique simplicity. The entire system is of a modular design according to the Lego-principle, meaning that all components can be assembled quickly, easily and reliably. Rigid line sections are easily adapted to the unique layout and characteristics of a station, and a wide variety of adapters even allows for varying rigid line dimensions within the same system.

Installing cable is much more cumbersome and time-consuming, and every splice means another possible source of trouble. Rigid line components, on the other hand, are connected safely and quickly using innovative coupling kits. These kits are available for both flange rigid line for outdoor use, and unflange rigid line for indoor use. They require neither welding nor threading, and completely eliminate the need for pins.

GOOD CONTACT THROUGH-OUT ENTIRE LIFETIME

Designing rigid line products that are easy to assemble and provide good contact throughout their entire lifetime is no easy task. Any small gap in the contact between components reduces conductivity, which may lead to increased temperature and a greater risk of interruption. At Exir Broadcasting we never use contact springs in transmission line components. Instead, our coupling kit solution with an inner bullet designed like a plug offers a durable alternative that will not wear out and at the same time eliminates the risk of installation flaws.

ACHIEVING DESIRED SYSTEM PERFORMANCE

The return loss value for each component in a coax system is of importance to the cost of installation and tuning. Every rigid line component from Exir Broadcasting has a guaranteed value of -32 dB or better.

Elbows are even more impressive with a typical return loss of -45 dB up to 860 MHz. And their consistent performance means sections of the line can be rebuilt without having to re-tune the entire system.

For multi-channel systems, only highest quality components are good enough. The total return loss during broadband measurement of the system will always be greater than the value for each individual component.

The important thing to remember is that building complete systems to meet specifications is really not that difficult when using components that have excellent values to begin with.

TAKING RIGID LINE TO A HIGHER LEVEL

In the final analysis, careful planning and the use of high

quality components are the only means for achieving long-term security and quality for transmission line installations. These are the decisive factors that determine overall electrical performance of the complete system.

Rigid line from Exir Broadcasting takes your rigid line installation to a higher level. With the reliability and innovation our customers have come to expect, the simplicity of our system makes transmission line installation easier, faster and safer than both cable and other systems, not only initially but also upon future modifications of the system.

