

db Letters

THE EDITOR:

Some comments on Patrick Finnegan's article on f.m. broadcast monitors (*Broadcast Sound*, June, 1977). The most effective, and I believe most simple, way of matching the monitor load to the coaxial cable feeding it is to place a fixed attenuator at the input to the monitor (rf input). A fixed 10 dB attenuator (50 ohm impedance) with power handling capability adequate to handle the power level at the monitor input will effectively dampen any reflections that might otherwise arise due to the mismatch of the coaxial feeder cable and the monitor. The available rf level will of course have to be 10 dB higher than otherwise required, due to the 10 dB insertion loss of the pad. High quality pads are available from numerous sources at reasonable cost. The use of a 10 dB pad improves the "match" by 20 dB, i.e. any reflection is reduced by 20 dB. If you're really fussy about this match you could use a 20 dB pad and reduce the reflection by 40 dB! We do this all the time in matching cable t.v. head-end equipment to long feeders. Most of the tests that Mr. Finnegan describes using a communications receiver can be done much more easily and accurately with a good laboratory-type spectrum analyzer, e.g. Tektronix 7L13 system. If you don't have one, go out and rent one. It will save you time and money!

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Mr. Finnegan replies:

Mr. Switzer is correct on both counts. The use of a good rf pad will properly terminate the line, and there is no question about the spectrum analyzer checking the accuracy of the carrier deviation. The use of the directional wattmeter, however, will also permit measurement of the input to the monitor at the same time you are adjusting for a good match to the coaxial cable; it is important that the monitor input not be overloaded as well as matching the line. Many of the smaller f.m. stations cannot afford expensive test equipment, so other methods must often be used. The communications receiver is often more available than a spectrum analyzer.

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