

MINIWAVE NOTES

I thoroughly enjoyed "A Personal Microwave Communications System: The Mini-Wave" (October and November 1978 and January 1979). A few interesting things came to mind as I read it. An i-f of 100 MHz can be used if the experimenter is interested in just an audio link. Therefore, an ordinary FM receiver can be teamed up with the Gunnplexer. It may be necessary to insert a gain stage ahead of the FM receiver, however. It is also possible to use a 55.25- or 61.25-MHz i-f, which corresponds to TV channels 2 and 3, respectively. Once again, preamplification may have to precede the receiver. It might also be necessary to introduce afc.

For flawless video, you should strive for a 48-dB S/N. When dealing with an audio link, a lower S/N can be tolerated. We can, of course, reduce the bandwidth of the receiver and transmitter to improve S/N. In some cases, line-of-sight communication may not be possible. This problem can be circumvented by using buildings, water towers, and other structures as reflectors. Like all electromagnetic waves, microwaves can be made to bend when propagated through different media. 10.0-GHz tropo anyone? It is also interesting to notice the scattering effects microwaves exhibit under varying conditions. Thanks for the great article. See you on 10.2-GHz simplex!
—Carlton Davis, Newark, DE.