

Session Organizer: K.E. Gsteiger, *Sperry Rand Corporation*

The principal objective of this panel discussion is to present some of the major problems encountered in dealing with noise in devices and how the device noise affects system performance. Noise in Gunn diode oscillators, avalanche diode oscillators, and multiplier chain sources will be discussed from the component aspect, followed by a discussion of the effects of these noise sources in radar and communication systems. Each panel member will present a formal review of noise in devices or systems as applied to his own area of interest. After the formal presentations, the panel will be open for general discussion with audience participation.

Chairman: J.R. Ashley, *University of Colorado, Colorado Spring.*

Panel: J.G. Josenhans, *Bell Telephone Laboratories*
D. Leeson, *California Microwave Company*
D.E. Wunsch, *Collins Radio Company*
K.E. Gsteiger, *Sperry Rand Corporation*
T.R. Turlington, *Westinghouse Corporation*
J.F. White, *Microwave Associates, Inc.*
R.A. Campbell, *Raytheon Company*

MICRO STATE ELECTRONICS, OPERATION OF RAYTHEON CO.

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S.S. Tunnel diode & Mixer-preamps-Converters-Attenuators
Duplexers-Modulators-Limiters-Switches-Sources
Multipliers-Levelers-Phase shifters-Diodes-Materials