

3.4 MICROPHONES

Two microphones, one for each stereo channel, or one microphone for single channel must be externally connected to the transmitter cables. The transmitter is designed to work with electret microphones and has been tested using the Knowles electret microphones, FG Series.

4.0 THEORY OF OPERATION

Converting analog audio waveforms to digital data, that is, a sequence of rapid on-off decisions has become almost commonplace in modern telephony, high fidelity, and audio recording equipment. Recent advances in analog-to-digital (A/D) and digital-to-analog (D/A) converters have made available inexpensive integrated circuits, which allow miniaturization of all the essential functions. The primary benefit of a digital format is that extremely accurate transmission, recording, and reproduction becomes a reality. A secondary benefit is that the digital format lends itself to coding and encryption in systems designed for private communications.

This section describes some details of the Tektron Digital Transmitter and the nature of its wideband, "low probability of intercept" signal.