

## 1.0 GENERAL DESCRIPTION AND OPERATION

The Telguard® model TG-4 is a digital cellular radio alarm transmission device used to provide a back-up transmission path (cellular) for control communicators (C/Cs). When transmitting alarms it will attempt to use the secondary transmission path (Cellular) when the Primary path is not available. When transmitting an alarm signal, Telguard obtains its data from the C/C by way of a telco interface. The Telguard will obtain all alarm signal information including monitoring station phone number, account number and all zones for every alarm transmission. The Telguard transmits a Link Request to the Telular Communication Center and when a link acknowledgement is received, the Telguard handshakes with the C/C and causes the C/C to transmit the alarm data. Telguard encodes the alarm data into SMS (Short Messaging System) protocol and transmits to the local digital cellular network provider. The signal is routed from the network provider to the decoding Telular Communication Center. The Telular Communication Center performs a function similar to a central station receiver and issues the transmission acknowledgement when the last message in the transmission is received. After decoding and reformatting, the alarm signal is routed over the telco line (Public Switched Telephone Network - PSTN) to the appropriate alarm company central station for action.

In a typical alarm installation, Telguard is installed in the same area as the host alarm system. The incoming telco line is connected from the premises RJ-31x jack to Telguard and then from Telguard's RJ-45 jack to the host C/C digital dialer in the normal fashion. Two programmable supervisory trip (STC) outputs are available for connection to the host control/communicator's trip zone input terminals in order to provide a Telguard trouble signal to the C/C. Additionally, automatic self-test and status-on-demand report signals are transmitted exclusively over the cellular network to the Communication Center. Telguard has its own internal power supply/battery charger. All telco line and cellular monitoring, switching and supervisory functions are built in. No extra modules are required.

The Listed equipment at the Telular Communication Center (TCC) plays a key role in the operation of every Telguard. All Telguard units are required to use the Communication Center because of the C/C alarm signal format encoding and decoding requirements used in packet-data transmissions over the digital cellular network. The Communication Center also manages the real-time databases for cellular activation and a complete history of every Telguard's operating conditions. These conditions include programming setup information, cellular alarm transmission information, supervisory trouble information, status-on-demand information, and automatic self-test information.