Telegraphy:

Defined: ***the transmission of information that is to be read and heard via signals creating sounds produced by an electric current.***

Used by a variety of commercial industries to transmit messages over large distances, the telegraph was invented in North America during the 1840's. It was first used by Samuel Morse on May 24, 1844 to transmit a message from Washington to Baltimore. On December 4, 1846 telegraphy became to Canada when a message was delivered between Toronto and Hamilton. By the 1850's, the telegraph had become synonymous with the railroad industry and was used to transmit information between stations regarding track conditions and departure times. And finally, on December 20, 1886, the Trans-Canadian Telegraph System was linked between New Westminster and the Atlantic Coast providing the new Dominion with an important form of communication.

When sending a message the operator uses a telegraph key. Such a key is a circuit breaker. Thus, when no message is sent all switches close resulting in a continuous flow of electricity. But, when a switch is opened the continuous flow is interrupted. The circuit becomes complete only when the telegrapher presses the key. The resulting current flows through the main line exciting the magnets of each telegraph *relay* and thus pulling an armature which closes the local circuit. The current in the local circuit then excites the magnets of the *sounder*. Such magnets are responsible for pulling up an armature against a stop thus making an audible click which repeats each time the telegrapher releases the key button. Such clicks, short and long, form the basis of all telegraph codes.

Also, when the key is held down for a short period, the interval between the two clicks is shorter and creates what is better known as a *dot* . And when the key is held down longer we get a *dash*.

In closing, our system also represents a *Duplex System* which allows messages to be received and sent at the same time.