

## THEORY OF OPERATION

### GENERAL:

The LEDWELL Wireless controller system consist of a Modulator/Transmitter and a Decoder/Receiver unit. The system operates on the RF frequency in accordance with FCC part 15.231. An operators license is not required for use of this system.

### TRANSMITTER:

The transmitter is a high performance synthesized ASK/ OOK transmitter. The modulation is a 112 bit data stream with start and stop bits, information concerning the selected button pressed, and a algorithm developed to ensure the validity of this transmission and the address information to enable it to communicate to its matched receiver. This address information is set at our factory so that no two devices will be identical.

### RECEIVER:

The receiver utilizes an advanced single-conversion superheterodyne architecture. Transmitted signals are demodulated, then the data stream is decoded and checked to ensure that it is valid before passing this on to the outputs. An algorithm is performed to accept or deny this data, if this rejects the incoming data no output will be activated, if accepted, the selected output will be enabled.