

# **Alpha 3000 Model**

## **Operational Description**

The Alpha 3000 industrial radio remote control system consists of a pushbutton type transmitter unit that operates on four (4) “AA” size alkaline batteries (6 volts) and a receiver unit that is hooked up to AC 110V~120V voltage input. The receiver also provides a terminal output for connection to Ground. The receiver unit is also equipped with an Aerial Antenna that operates on 301MHZ range. The receiver unit is hooked up on to an industrial crane system with numerous travel directions and speeds via electrical motors. The output relays in the receiver is rated at DC 250V @ 10A. By pressing the pushbuttons on the transmitter unit will able the contact relays inside the receiver box to energize, thus activate the magnetic contactors inside the crane control panel.

When the transmitter pushbutton is pressed, the encoder board will encode the information and then sends it out to the receiver unit via the transmitting circuitry. The receiving module inside the receiver unit then receives this transmitted information. Afterward it sends the received information to the decoding microprocessor for decoding process by numerous software programming (CRC and Hamming code bit checking). After decoding process is completed, the central microprocessor will then enable the intended contact relay or relays to energize.

The receiver unit also equipped with Safety MAIN contact relay. When the transmitter unit is not in use, this Safety MAIN contact relays will be disengaged thus provide no power to the receiver unit.