



Overview – CATTRON-THEIMEG™ Remote Control Systems.

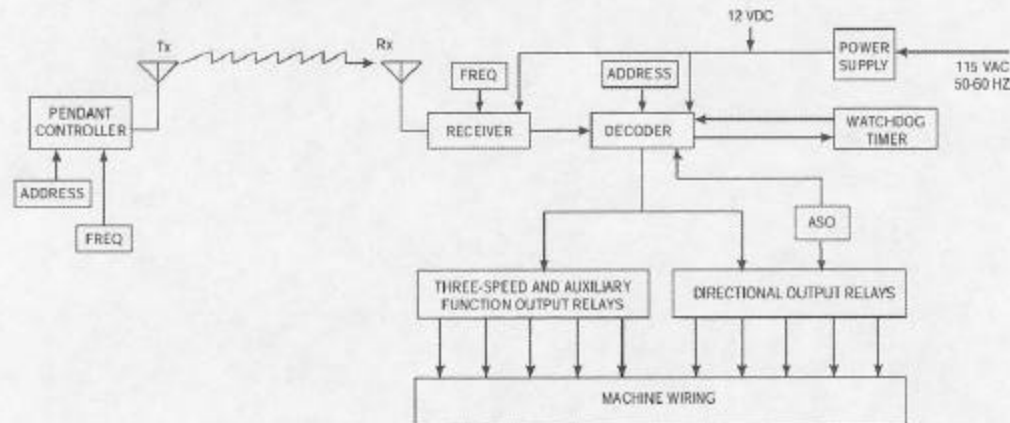
Figure 1-1 below shows a simplified block diagram of a typical CATTRON-THEIMEG™ remote control system. Refer to this figure and the following paragraphs for a functional description of the remote control system.

The target receiver/decoder is controlled by the **Pendant Station Controller**. Provided the correct **coded 'i-Key'** is inserted into the controller, the controller sends signals to the receiver/decoder using an UHF radio link. The signal is picked up by the antenna and passed on to the receiver. If the signal is the correct frequency and passes all required data tests, the signal is passed on to the decoder. The decoder compares the address code of the signal to its own address code. If the signal's address code does not match its address code, it is ignored and a message is displayed on a system status display located in the receiver/decoder unit. If the address code is correct, the decoder processes the message and energizes and de-energizes the appropriate control, directional output, three-speed and auxiliary function relays located within the control system.

An Automatic Safety Override (ASO) function continually monitors the state of all directional relay outputs (i.e. Forward/Reverse). If a directional relay electrically fails closed without a command from the controller, the ASO circuit logic de-energizes the master output relay (OPR).

During operation, the microprocessor on the decoder board resets multiple watchdog timer circuits whenever valid messages are received and decoded. If the microprocessor fails to reset the watchdog timers, the timer circuits shut down and de-activate all relay outputs. The decoder microprocessor requires continuously valid transmitted signals to be received and decoded or all relay output functions will be de-activated unless programmed otherwise. It should be noted that the mainline control relay (OPR) would be maintained for up to 10 minutes, depending on system configuration.

Figure 1-1. Typical Radio Remote Control System, simplified block diagram



END OF SECTION