

NABCO Entrances, Inc.
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Muskego, Wisconsin

**Installation Instructions
Radio Controls For Automated Door Systems**

NABCO Part #143679 Transmitter 300 MHZ
NABCO Part #143681 Receiver 300 MHZ
NABCO Part #243681-05 (4 wire) Receiver 300 MHZ

This combination of radio controls is designed to remotely control either a NABCO Entrances or a competitors' automatic door. We have provided an assortment of hardware and wiring diagrams that will allow installation of the Receiver into many of NABCO's swing and sliding automatic door systems. If you need additional information for competitors products, please contact the NABCO Engineering Department.

The transmitter/receiver combination is functional with as many as 1024 code variations to accommodate the owner's preferences. All radio controls are set with the even numbered switches in the "ON" position when they leave the factory, therefore, it is recommended that an alternate code be selected and set at the time of installation. Please refer to the "Setting the Codes" section for instructions.

The radio frequency (RF) portion of the controls are tuned to standard frequencies and are thoroughly tested at the factory. No RF adjustments are needed nor should any be attempted.

PARTS LIST

Transmitter	2 Female Pins	3 Wire Nuts
Receiver	6 feet of Wire	3 Crimp-on/Slip-On Connectors
	Harness for Magnum Boards	

TRANSMITTER BATTERY PLACEMENT

Batteries are not included in the transmitter. A standard 9 volt battery is required. We recommend a high performance battery for longer life.

Install the battery in the rear of the transmitter. Use a small screwdriver to pry the code switch access cover from the unit. In severe cold, warm the transmitter to room temperature before prying on the cover to avoid cracking the plastic tabs.

SETTING THE ACCESS CODES

RECEIVER: Use a small screwdriver to pry the code switch access cover from the receiver. Use a ball point pen or a pencil to set the code switches on the receiver.

TRANSMITTER: Grasp the front, lower half of the transmitter case on both sides and pull upward, away from the transmitter to

disengage the lower end. Pull downward to remove the lower cover and expose both the code switch and battery compartments. Use a ball point pen or a pencil to set the code switches on the transmitter so that they match the exact codes on the receiver. Avoid using sequential or odd/even code sequences.

IMPORTANT! The codes must match exactly or the system will not function. (See Figure #1)



Figure 1

After the codes have been set, reinsert the access covers on both units.

RECEIVER INSTALLATION

The receiver may be mounted directly inside the door header or may be mounted outside and wired into the door header. The antenna (an 11 inch black wire) should be extended as far as possible in a vertical position.

ELECTRICAL CONNECTIONS

POWER REQUIREMENTS

Model 300, 400, 500 and older 710 swing doors do not need the separate power source. The swing door control board will provide adequate amperage to power the receiver.

For the **GT710 with a Magnum Board** (a control board with 8 adjustable potentiometers), this kit includes a harness (P/N 149946) to connect the Receiver to the Magnum main harness which will provide power to the transmitter.

Model 1175 Sliding Door Systems require a 24 VAC transformer as a power source. This transformer is NOT provided in this package and needs to be ordered separately (P/N 142101).

ACTIVATION & POWER WIRING

For **Model 300, 400, and 500** Swing Doors:

1. Cut the 6 feet of wire into 3 equal pieces. Strip both ends of the wires about 1/2".
2. Squeeze a Crimp-On/Slip-On Connector to one end of each wire. Make sure the end that does NOT slip onto the tings of the Receiver is crimped onto the wire. (See Figure #2)



Figure 2



Figure 3

3. Slip the Crimp-On/Slip-On Connector of each wire onto a tang of the Receiver.
4. Crimp a Female Pin onto the wire connected to the *Radio Power* tang. Be sure to slide the wire into the back of the pin, not the front end. (See Figure #3)
5. Cut the Red and Black wires from the main harness and attach the wires from the 24 V and Relay tangs as shown in the attached wire diagrams.
6. Locate the model number of the control board printed on the face of the board:
For Model No. 2600 or 3400, push the Female Pin into Position 4 of the main connector. (See Figure #4)
For Model No. 22-0800E, push the Female Pin into Position 1 of the main connector. (See Figure #5)

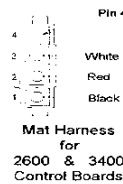


Figure 4

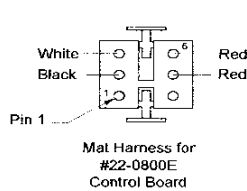


Figure 5

Detailed wire connections are shown in the included wiring diagrams.

For **Model GT710 without the Magnum Board** (Control Board with screw terminals):

1. Cut the 6 feet of wire into 3 equal pieces. Strip both ends of the wires about 1/4".
2. Squeeze a Crimp-On/Slip-On Connector to one end of each wire. Make sure the end that does NOT slip onto the tangs of the Receiver is crimped onto the wire. (See Figure #2)
3. Install one of the above wire assemblies from step 2 onto each of the tangs of the Receiver.
4. Connect the wire from the 24 V tang to screw 3 of the J1 Terminal Bank. J1 is printed on the board and the screw numbers are printed on the side of the Terminal Bank.
5. Connect the wire from the Relay tang to screw 4 of the J2 Terminal Bank.
6. Connect the wire from the Radio Power tang to screw 2 of the J1 Terminal Bank.

Detailed wire connections are shown in the included wiring diagrams.

For **GT710 With Magnum Control Boards**:

1. Remove the 4 wire pigtail harness plugged into J9 of the main harness.
2. Install the 3 wire harness supplied in this kit into J9.
3. Slide the Red wire onto the 24 V tang.
4. Slide the Black wire onto the Relay tang.
5. Slide the Orange wire onto the Radio Power tang.

Detailed wire connections are shown in the included wiring diagrams.
For **Model 1175 Sliding Doors**:

1. Cut the 6 feet of wire into 3 equal pieces. Strip both ends of the wires about 1/4".
2. Squeeze a Crimp-On/Slip-On Connector to one end of each wire. Make sure the end that does NOT slip onto the tangs of the Receiver is crimped onto the wire. (See Figure #2)
3. Using two of the wire assemblies, connect the Radio Power tang and the 24 V tang to the 24 VAC transformer.
4. Install the last wire assembly onto the Relay tang. Connecting this wire and the 4th wire determine the operation of the door. See the 1175 Wiring Diagrams to obtain the desired operation.

OPERATIONAL CHECK

To verify operation, position yourself at a distance of 25 feet from the receiver and press the transmitter button. Operation should be reliable at this distance but environment and location of both the transmitter and receiver may affect the range. Try different locations and positions. If operation is still unsatisfactory, consider the following for troubleshooting:

1. If the door does not open when the wall switch is pressed, the problem could be the operator (see operator manual for operator trouble shooting). If the door will open by pressing the directly wired wall switch but not when the radio control button is pressed, the problem is likely to be with the radio control.
2. If the radio control is suspect, try moving the transmitter closer to the receiver. Verify the following:
 - a. The transmitter and receiver are set to the same code.
 - b. The LED on the transmitter should illuminate when the button is pushed. If it does not, it could mean:
 1. A dead battery
 2. A defective transmitter
 - c. If the LED barely illuminates or only flashes, it could mean:
 1. The pulse extender board is defective
 2. The battery is weak.
3. If, after performing the above operational checks, the controls still do not function, they should be returned to NABCO Entrances for repair or replacement.

TO REPLACE OR ADD A NEW TRANSMITTER

A replacement or new transmitter or receiver may be matched to the companion receiver or transmitter. To order, specify the Part Number and the RF frequency noted on the identification label of each unit. Customer Service Representatives can provide the proper replacement unit. The digital code should be reset to match the existing sequence.

FCC NOTICE

Users of the transmitter with the pulse extender board are authorized under part 15 of the FCC rules to use this device without a license. However, making any modifications not expressly approved by the manufacturer may void the user's authority to operate this device.