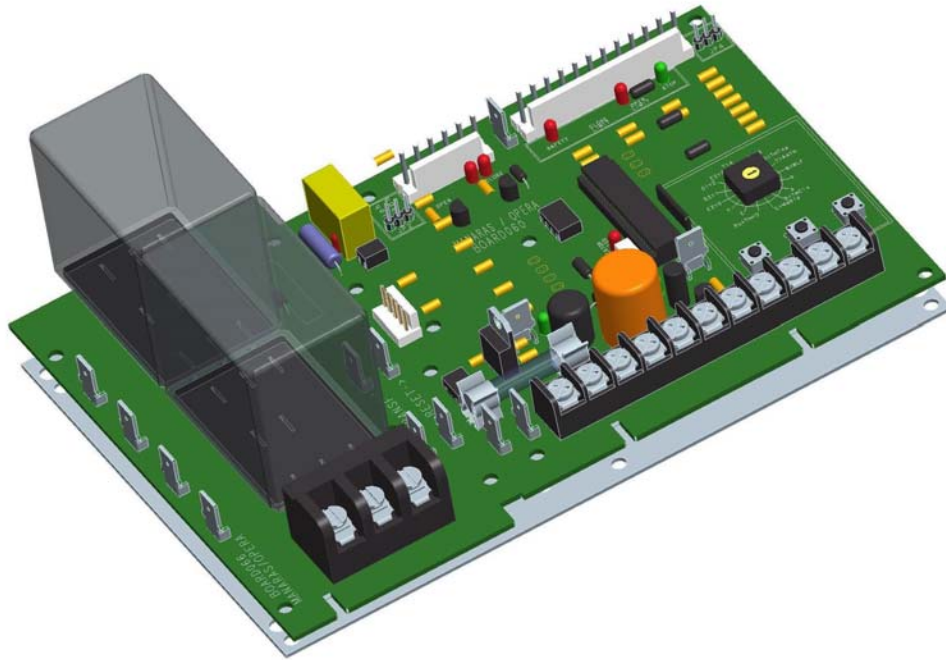


Programming Instructions



- BOARD060
- Warning Lights module
- Single Radio Control

Note: Read this manual carefully before replacing the existing board and place this installation manual in an accessible place near the operator. For future reference record:

Model # _____

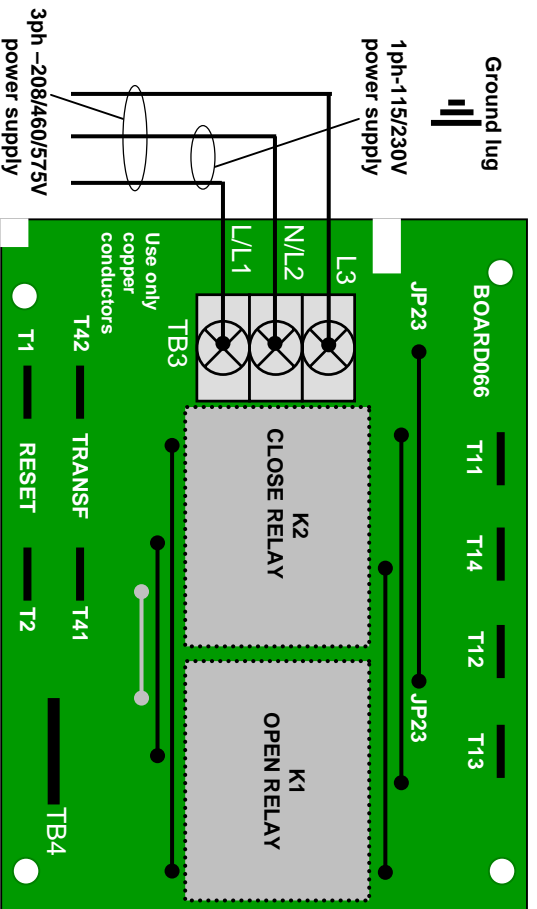
Date _____

Wiring Diagram # _____

Door No. # _____



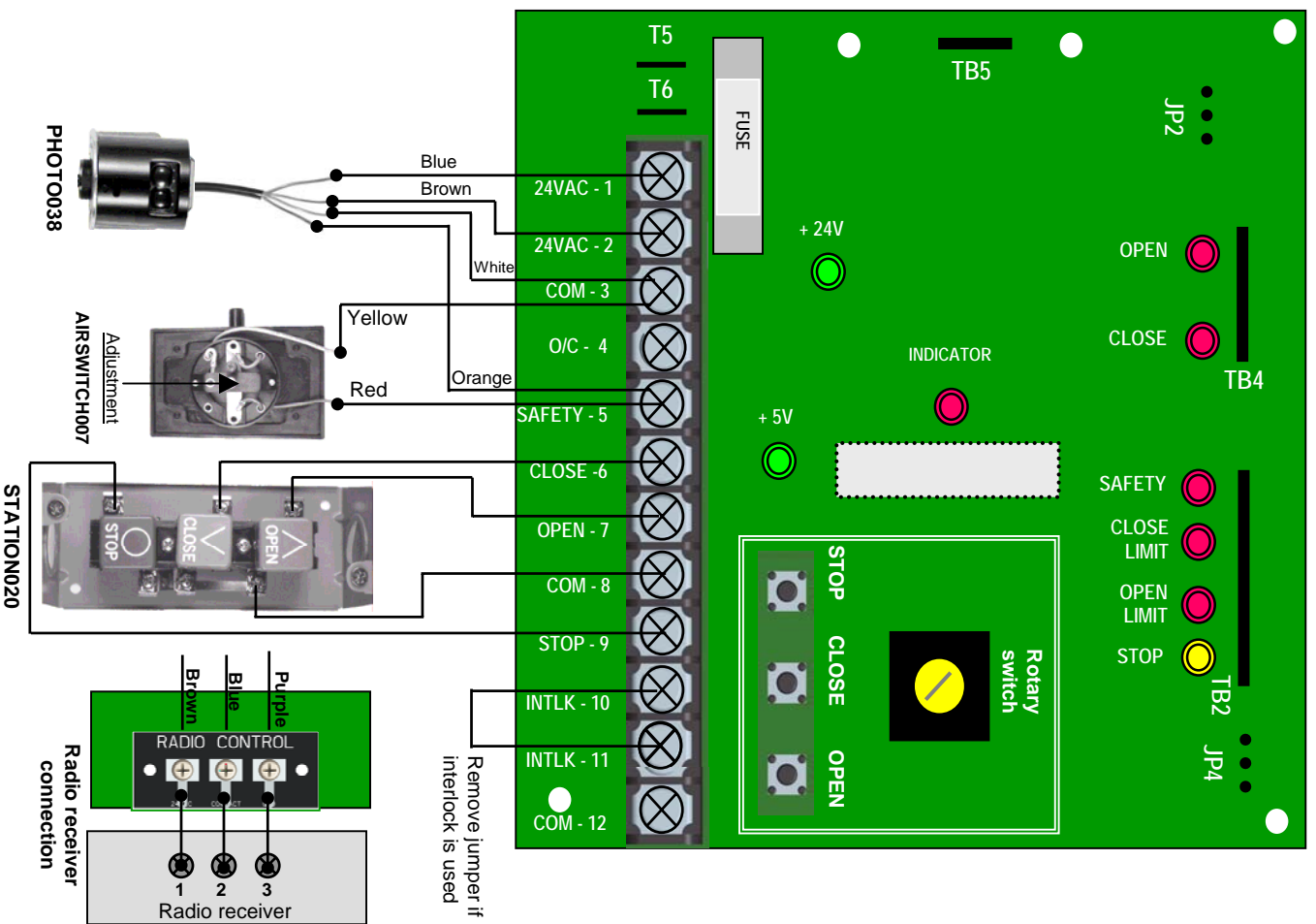
POWER AND CONTROL WIRING DIAGRAM



! VERY IMPORTANT NOTES

Before installing power and control wiring, be sure to follow all specifications described below. Failure to do so may damage the operator.

- The operator must be properly grounded and connected in accordance to local electrical codes.
- Use different knockouts available on EACH side of the control box to pass the power and control wiring through.
- **Ensure maximum separation between power wirings and low voltage control wirings in the control box.**
- **If a push button is not used, a jumper must be placed between #8 & #9**
***Under this condition a stop command is not available to stop the door during its travel.
- **2 Amp fuse** is used to protect 24VDC on electronic board and also the 24VAC supply for auxiliary control devices



LED MONITORING STATUS

LED's on the ECB help with wiring and making troubleshooting diagnoses. Every LED states the actual position of the door. The board has a non-volatile memory and all the LED's will return to their initial state after a power interruption.

L.E.D	Color	Status
+24 V	Green	When ON indicates the presence of 24VDC on the Logic Board
+5 V	Green	When ON indicates the presence of 5VDC power in the Control Circuit
Open Limit	Red	When ON indicates door position, completely open.
Open	Red	Only when the open relay is activated (open relay is energized)
Close Limit	Red	When ON indicates door position, completely close.
Close	Red	Only when the close relay is activated (close relay is energized)
Safe	Red	Light ON only when safety devices are activated.
INDICATOR	Red	Flashes only when motor runs in opposite direction and activates the wrong limit switch.
		Stay ON only when the "centrifugal switch" is opened (<i>please contact technical support</i>)
STOP	Yellow	In normal conditions light; stay ON, goes OFF every time when press STOP button or hoist is engaged

Stop LED OFF:

- Check if the Stop button is properly connected on #8 and #9 or if a Normally Closed contact is used.
- Verify if the Hoist is properly engaged and if the Hoist switch is closed (or if any external interlock device remains open)

EXTERNAL CONTROLS

Refer to the wiring diagram on page 2 before connecting power or any external device to the ECB. Neglecting to use the proper terminals will result in complete damage to the ECB. If you are not certain about procedures, please consult Manaras for assistance.



WARNING

IF THE MOTOR ROTATION IS NOT CORRECT, DO NOT ATTEMPT CORRECTION BY REVERSING WIRES ON CONTROL STATION.

Program and Program settings

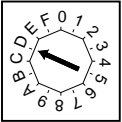
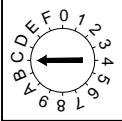
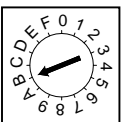
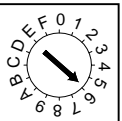
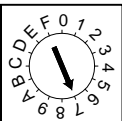
Programming ability and door control at electrical box are provided by Open/Close/Stop buttons and Rotary Switch located on the ECB.

• Programs

PROGRAMS	FUNCTIONS AND DESCRIPTIONS
RUN TIMER	The Run Timer automatically stops the operator after an adjustable time delay either travelling upwards or downwards. The Run Timer is designed to protect the door and the operator by preventing the motor over running much longer than the normal time.
MID-STOP	Mid-Stop function will, when active, move the door from the down position to a predetermined Mid-stop position when the open button or Open/Close device is activated. Once at Mid-Stop, subsequent Open/close commands will close the door. To move the door to full open position, the open button must be pressed again.
TIMER TO CLOSE	Timer to Close is a function that, when active, will close the door after an adjustable time delay once the door has reached its fully open and mid-stop position. The timer to close function works only in T and TS modes.
TIMER TO CLOSE (from fully open position only)	Option used in conjunction with MID STOP function. When activated, Timer to Close is active from the fully open position only and not from the mid-stop position.
ADVANCE CLOSED TIME	This feature, when programmed, allows adjustment of the safety device disabling point and to determine the final stop point of the door once the "close limit switch" is activated. No "advance close limit switch" is needed with this feature.

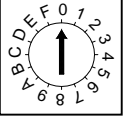
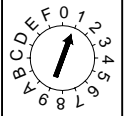
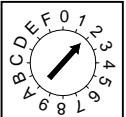
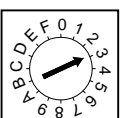
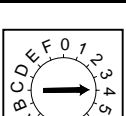
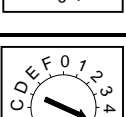
• Program setting

Door should be in fully **closed position** while setting any of the following programs.

PROGRAM SETTING			
PROGRAMS	ACTIVATE	DEACTIVATE	SELECT SWITCH
RUN TIMER	<ul style="list-style-type: none"> Check if close limit switch is activated. Set select switch on D. Open the door fully, 10 sec is added to total travelling time. Set the select switch on (0,1 or 2) 	<ul style="list-style-type: none"> Set select switch on D. Press "Stop" button. Run timer comes to it's default value 90 sec. 	
MID-STOP	<ul style="list-style-type: none"> Check the close limit is activated. Set select switch on "C" Press "Open" button then press "Stop" button on desired Mid-Stop position. 	<ul style="list-style-type: none"> Set select switch on "C" Press "Close" button. 	
TIMER TO CLOSE	<ul style="list-style-type: none"> Set select switch on "B" Press "Open" button to add 15 sec or "Close" button to add 1 sec each time (max. 4 minutes & 30 seconds) Set the select switch on T or TS mode 	<ul style="list-style-type: none"> Set select switch on "B" Press "Stop" button the timer to close is reset to 0 sec but still activated. To deactivate the timer to close completely set the switch on desired position (0, 1, 2 or 3) 	
DEACTIVATE TIMER TO CLOSE (from floor level)	<ul style="list-style-type: none"> Then, press "Close" 3 times and then "Stop" 3 times consecutively on the push button station (Timer to close active). 	<ul style="list-style-type: none"> Press "Stop" 3 times and then "Close" 3 times consecutively on the push button station (No timer to close) 	Not required
TIMER TO CLOSE (from fully open position only)	<ul style="list-style-type: none"> Set select switch on "6" First press the "Close" button and then the "Stop" 	<ul style="list-style-type: none"> Set select switch on "6" Press "Close" button. <p>*Now the Timer to Close works from fully open and Mid-Stop position.</p>	
ADVANCE CLOSED TIME	<ul style="list-style-type: none"> Set the select switch on "7" Press "Open" to add 50 milliseconds up to 500 milliseconds max. Press "Close" to deduct 50 milliseconds each time till it reaches 0/sec. 	<ul style="list-style-type: none"> By pressing "Stop" the default time will be set to 200 milliseconds. <p>* LED "INDICAT" comes ON only when time is increased or reduced. LED OFF when open or close button is pressed indicates "Advance Close Time" is reached Maxi or Mini. (pressing "Stop" LED ON = 200 milliseconds)</p>	
The "close limit switch" should be readjusted when the "advance closed time" is programmed or deactivated			

Mode setting

For any mode setting the door should be in either on fully open or fully closed position.

Wiring Type	Wiring Type & Functions	Select Switch
C2 (factory preset)	Set select switch on 0 Momentary contact to open and stop, constant pressure to close with 3 buttons station. Activation of safety devices will reverse the door during closing. Auxiliary devices function as an Open control and to reverse door during closing.	
B2	Set the select switch on 1. Momentary contact to Open/Close and Stop with 3 buttons station. Activation of safety devices will reverse the door during closing. Auxiliary devices function as Open/Close control and reverse the door during closing.	
D1	Set the select switch on 2. Constant pressure to Open and constant pressure to Close. Activation of safety devices will stop the door during closing.	
E2	Set the select switch on 3 Momentary contact to open and constant pressure to Close. Release of Close button activates the door upwards. Activation of safety devices will reverse door motion to fully open position.	
T	Set the select switch on 4. Momentary contact to Open / Close and Stop. When Timer to Close is programmed, safety devices will reverse the door but will disable the Timer to Close. Timer to close will also be disabled if there is a power outage, a chain hoist is engaged or the stop is pressed before elapsed time. The timer resumes its normal operation, once the close cycle is completed.	
TS	Set the select switch on 5. Momentary contact to Open / Close and Stop. Timer to Close if programmed, safety devices reverse upon activation and will refresh Timer to Close. Timer to close also gets refreshed, if there is a power outage, a chain hoist is engaged or a stop button is pressed before elapsed time.	

IMPORTANT NOTES:

• STOP JUMPER

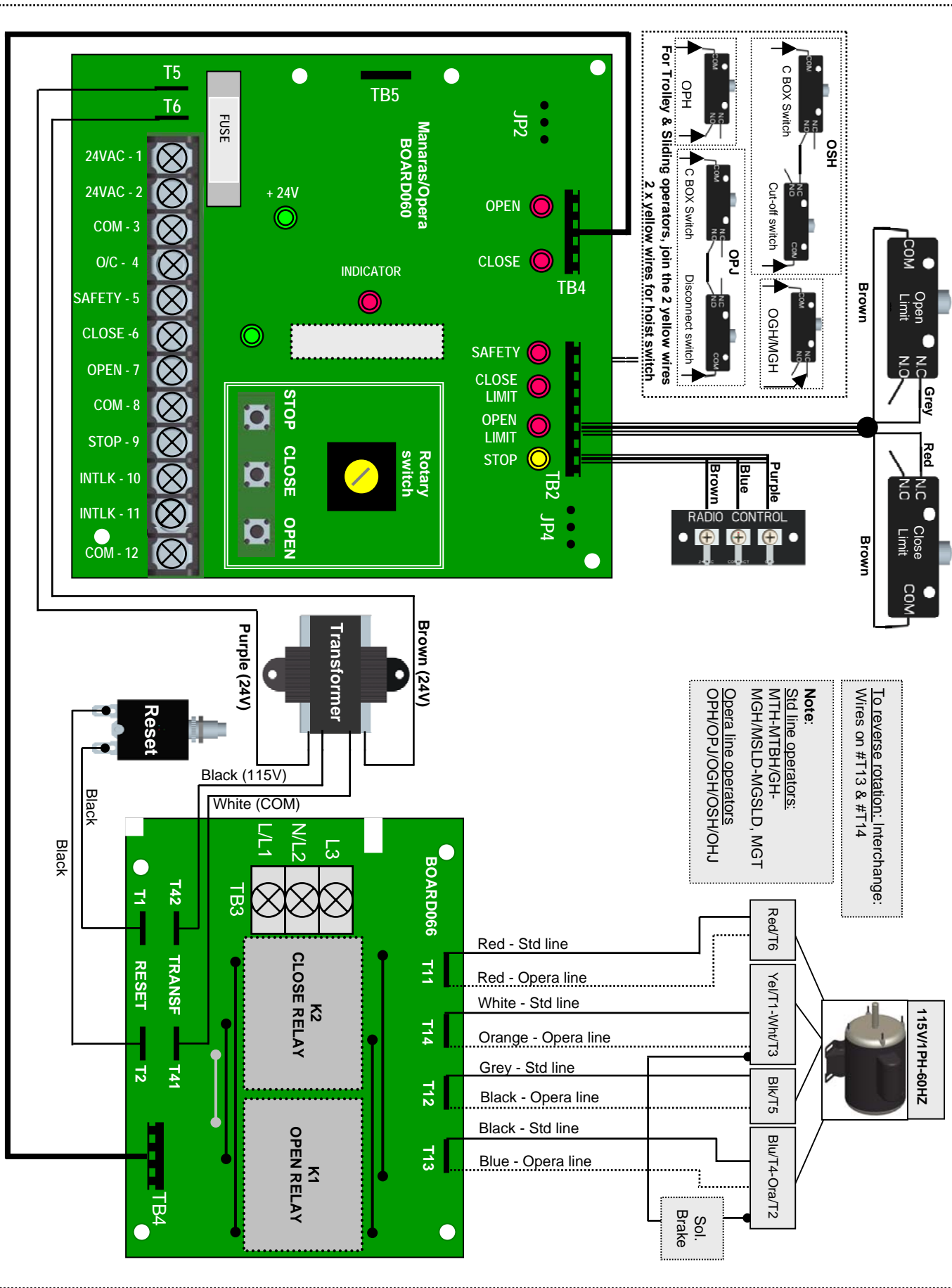
- While testing the operator or adjusting the cams using the O/C/S buttons available on the Electronic Control Board, a jumper should be placed between #8 & #9. Once the tests or adjustments are completed the jumper should be removed before connecting the wall 3-push buttons station. Failure to remove the stop jumper, **the STOP BUTTON WILL NOT RESPOND.**
- A stop jumper should be installed between #8 & #9 when using a Key switch, a single button Radio control or a 2-buttons station (Open/Close). **IN THESE CONDITIONS NO STOP COMMAND IS AVAILABLE TO STOP THE DOOR DURING THE TRAVELING.**



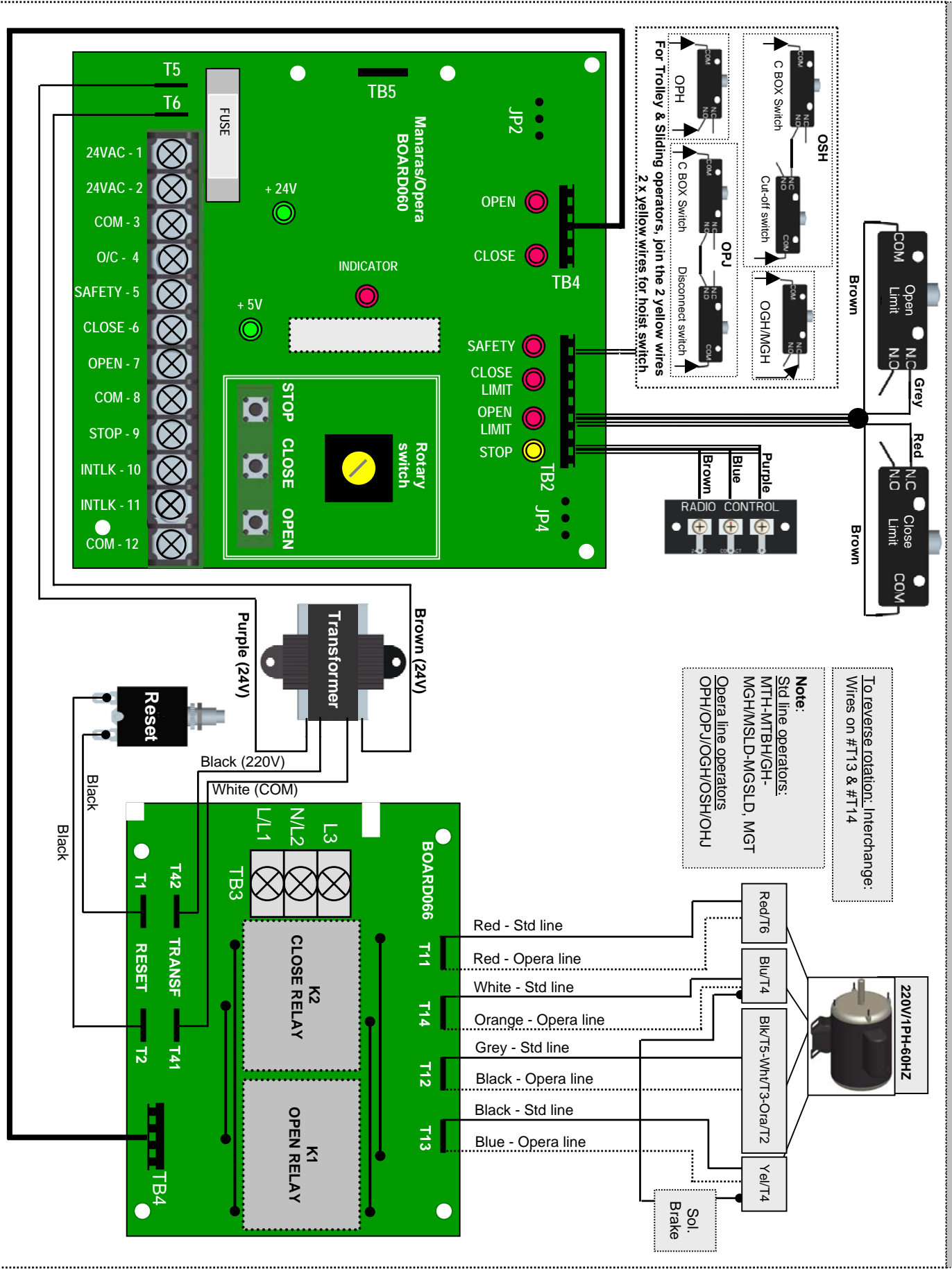
WARNING

MOTORIZED DOORS CAN CAUSE SEVERE INJURY OR DEATH. MANARAS STRONGLY RECOMMENDS THE USE OF ENTRAPMENT PROTECTION SYSTEMS, ESPECIALLY IN THE CASES OF MOMENTARY CONTACT TO CLOSE (B2 WIRING) AND TIMER TO CLOSE (T & TS).

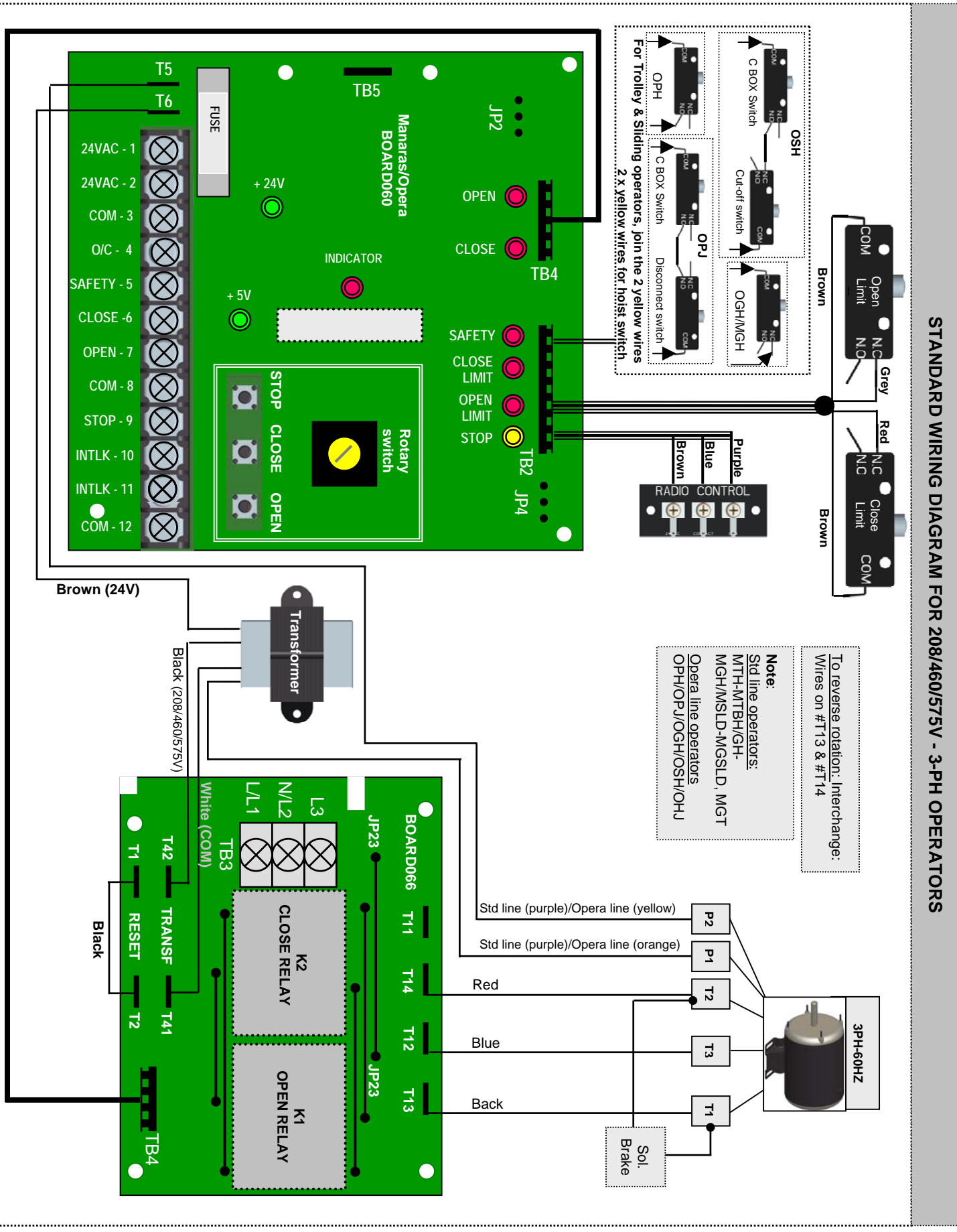
STANDARD WIRING DIAGRAM FOR -115VAC -1PH OPERATORS.



STANDARD WIRING DIAGRAM FOR -220VAC -1PH OPERATORS.



STANDARD WIRING DIAGRAM FOR 208/460/575V - 3-PH OPERATORS



Installation & Programming Instructions

Warning Lights

(RED & GREEN)

&

Single Button Radio

Control

(SBC)

Warning Light Sequence

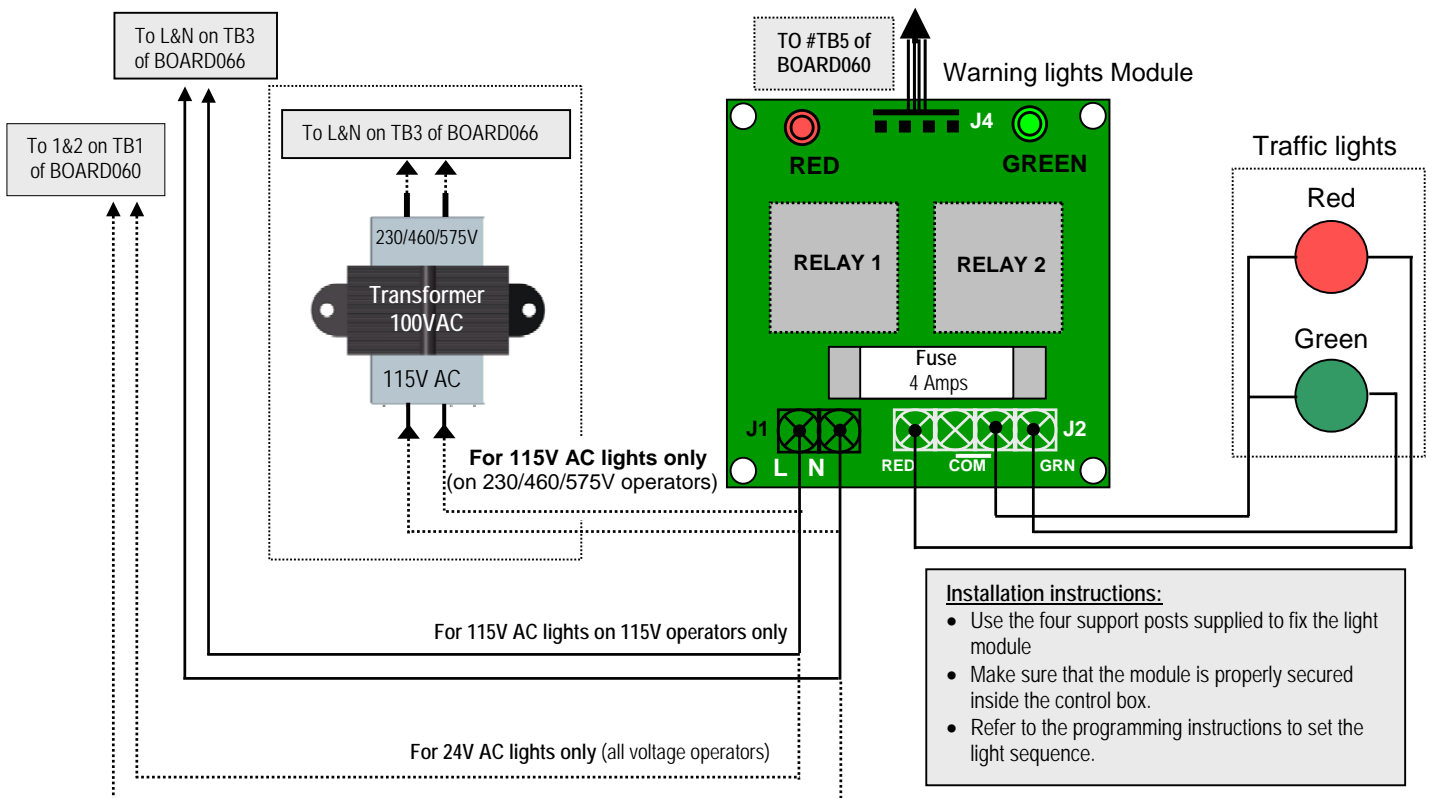
LIGHTS	OPERATING SEQUENCE
RED	The light is solid red when the door is closing and opening. Light turns OFF once the door reaches the fully open or fully closed position
GREEN	The green light is ON only when the door is fully open and stays ON during a preset time (programmed by the Timer to Close)
RED (flashing)	The red light starts flashing once the green light is OFF and when the door is about to close. This is to warn the users that the door will close shortly. It stops flashing once the door start closing.
Warning lights sequence is operational from Mid-Point position in same way as from fully open.	

Programming warning lights sequence (door should be in the closed position)

NOTE: Warning lights is functional only with Timer to Close

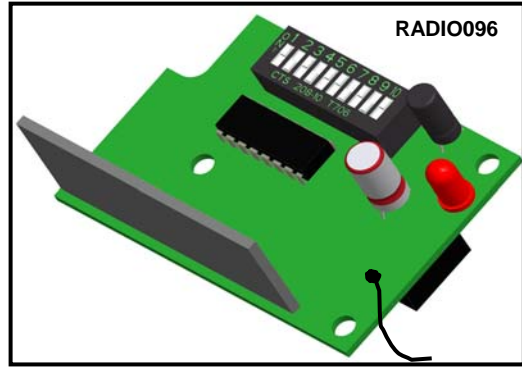
Setting	Activate	Deactivate	Select switch
Timer to close	<ul style="list-style-type: none"> Set select switch on "B" Press "Open" button to add 15 sec or "Close" button to add 1 sec each time (max. 4 minutes & 30 seconds) Set the select switch on T (4) or TS (5) mode 	<ul style="list-style-type: none"> Set select switch on "B" Press "Stop" button the timer to close is reset to 0 sec but still is activated. To deactivate the timer to close completely set the switch on desired position (0, 1, 2 or 3) 	
Red light. (Flashing Time)	Default time setting 5 sec		
	<ul style="list-style-type: none"> Set select switch on "8" Press "Open" to add 1 sec each time to a maximum of 15 sec. Press "Close" to deduct 1 sec each time to a minimum of 0 sec. Press "Stop" to bring the flashing time to 5 sec by default 	<ul style="list-style-type: none"> Set select switch on "8" and press "Close" to bring the flashing time to 0 sec. Or set the select switch to desired position (0, 1, 2 or 3) 	
	Bring back select switch on T (4) or TS (5)		

Connection of Red and Green warning lights (If Warning Lights Module is sold separately)




Single button Radio Programming Instructions

RADIO096 or any Manaras-Opera single channel radio receiver.
 MR-1000 receiver; compatible with MT series transmitters, operational on 24V AC/DC, red LED indicates the unit is activated.



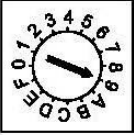
Operating sequence of Single Button Radio control.	
Door operating sequence	
Activation	Door reaction
1 st	Will open
2 nd	Will stop
3 rd	Will close
4 th	Will stop

Single button radio transmitter



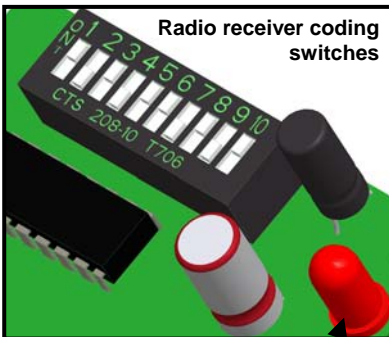
Setting Radio Control Sequences.

Single channel receiver could be programmed as Standard Commercial or as Single Button Radio Control sequence

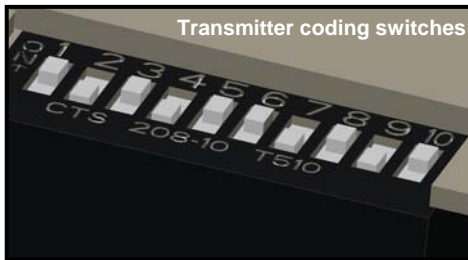
Setting of Single Button Radio Control Sequence (SBC)	
Activating and deactivating a Single Button Radio Control	
<p>Activating SBC sequence: Set select switch on 9 and press <u>Open</u></p> <ul style="list-style-type: none"> - SBC could be used on B2 (1), T (4) and TS (5) mode. 	
<p>Deactivating SBC sequence: Set select switch on 9 and press <u>Stop</u>.</p> <ul style="list-style-type: none"> - The radio receiver is back for Standard Commercial Sequence. - Set the select switch to desired position (0, 1, 2, 3, 4 or 5). 	

Coding the radio receiver and transmitter

Setting single channel receiver and transmitter dip switches.



Red LED, ON only when the receiver is activated



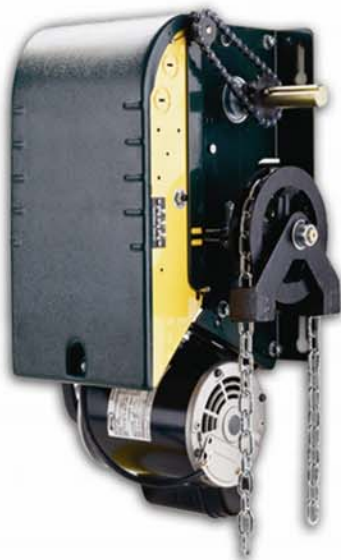
Note
 All the appropriate receivers are available at Manaras-Opera and to all its authorized suppliers

1. Open the back cover of the transmitter to gain access to the 10 coding switches.
 2. Use a small screwdriver or knife to set both the transmitter and receiver coding switches identically (your private code setting) **Do not set all switches in the same position, example: not all on OFF or ON.**
- Note:** The setting shown is an example and should not be repeated on more than one door.

Important
 This coding applies only to a single button transmitter. For two or three button transmitters, please refer to the notes supplied with or call Manaras-Opera's tech support for more assistance.



Commercial Door OPERATOR



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