



# The Communicator

## Wireless Transmitter/Receiver

### Installation Instructions

#### IMPORTANT

Any user that changes or makes modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1- Re-orient or relocate the receiving antenna
- 2- Increase the separation between the equipment and receiver
- 3- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- 4- Consult the dealer or an experienced radio/TV technician for help.

#### TRANSMITTER INSTALLATION:

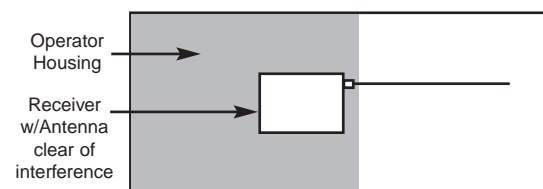
- 1- Remove lid from top of the MWCT01 Transmitter to reveal mounting holes. Position the Transmitter near the bottom of the door and mark the mounting hole locations.
2. Remove the Transmitter from door, drill holes and mount the Transmitter with screws supplied. **NOTE: DO NOT** drill any holes in the transmitter box. Only use holes in the 4 corners of the box. Any additional holes in the transmitter box will cause water to enter and a loss of warranty.
- 3- Loosen wire fitting nut and feed the 4-wire sensing edge leads into the Transmitter housing trimming off excess wire.
- 4- Attach the 4-lead wires to the large green two-part terminal block connector as White White, Black Black. Tighten the wire fitting nut to assure water tight connection.
- 5- Adjust Dip Switches: 1= Address Selector 2= Address Selector 3= Address Selector 4= Address Selector  
5= Always OFF 6= Edge Input ON=N/O OFF= N/C 7= Always OFF 8= Always OFF  
**(SEE FIGURE 1 FOR SWITCH CONFIGURATIONS.)** NOTE: DIP address switches must be set identically on the transmitter and receiver.
- 6- Be sure that the battery strap is connected and insert 9 Volt battery into the lid of the unit, and replace the lid. The Green LED light should light up for 3 seconds indicating that the unit is functioning properly.



Proper Mounting Location

#### RECEIVER INSTALLATION:

- 1- Hold the MWCR01 Receiver in the mounting position near the operator: mark and drill mounting holes.
- 2- Attach a 24VAC (at least 200mA) source to the Red & Black wires. A 24 VDC source may also be used with Red to positive (+) and Black to negative (-). When using 24 VAC, check to see if one leg is connected to the operator case. If connected to the case, connect that leg to the Black wire of the receiver.
- 3- Connect the white wires to the safety input for the motor operator. The output relays will bear a resistive load of 1A at 24VAC. The state of the relay is shown with a Yellow LED. The LED is illuminated when the channel is in a SAFE operating condition and will go out under fault condition. Relay contacts can be selected N/O or N/C by moving jumpers (shunts) inside the enclosure.
- 4- Adjust Dip Switches: 1= Address Selector 2= Address Selector 3= Address Selector 4= Address Selector 5= Always OFF  
**(SEE FIGURE 1 FOR SWITCH CONFIGURATIONS.)**
- 5- Mount the Receiver near the operator using the 2 screws supplied. Take care to make sure the rigid wire antenna completely extends past any metal of the operator enclosure
- 6- Attach Coax Rigid Wire antenna. (The unit **will not work** unless the rigid antenna is properly attached.)



Proper Mounting Location

## WARNING!

**TO REDUCE RISK OF SEVERE INJURY OR DEATH, READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS**

**TO PREVENT ELECTROCUTION: DISCONNECT POWER AT FUSE BOX OR CIRCUIT BREAKER AND DOOR OPENER BEFORE WIRING PERMANENTLY.**

**IMPROPER WIRING COULD CAUSE ELECTROCUTION OR DAMAGE TO CIRCUITRY. FOLLOW ALL LOCAL BUILDING CODES AND NATIONAL ELECTRICAL CODES.**

### NORMAL START-UP SEQUENCE

1. Apply power to receiver; the Green LED (**POWER ON**) should come on with 2 Yellow LEDs (**SAFE RELAY MODE**), near antenna (wires) end of receiver.
2. Within 60 seconds, (**Very Important Time Factor**) start the door down from any position; the Green LED in the transmitter will begin blinking. Press on the edge for several seconds; then look for the corresponding Green LED (**SIGNAL ACQUIRED ON**) and Yellow LED (**SENSING EDGE ACTIVE**) on the receiver (near the address switches).
3. When the safety edge is pressed (fault mode), the Yellow LED (**RELAY1**) should go out .
4. The door/gate should stop and reverse.
5. If the Red LED comes on during this sequence, you missed the 60 second time window and must repeat the Power On start-up sequence.

### TROUBLE SHOOTING HINTS

- 1- No Power-on Green LED is illuminated
  - a) Check with a VOM to see if 24 volts in receiver is present and is capable of supplying a minimum of 200 mA of current.
  - b) If using DC power, check to make sure Red is positive and Black is negative.
- 2- Transmitter Green LED never comes on
  - a) Check to make sure the battery is connected and check battery voltage (should be 8.2 volts or higher).
  - b) Remember: the transmitter only comes on when it first senses motion, and when the sensing edge is pressed while the transmitters Green LED is blinking.
- 3- Transmitter Green LED comes on, but no green LED (Signal Acquired) comes on - Check address DIP switches, they must be set identical. If they are identical, symptom could be a result of low RF signal strength. Check antenna location: should be outside of any metal enclosure(s), and pointing away from the operator case.
- 4- If Red LED (Maint. Required) is on:
  - a) **Slowly Blinking:** Verify battery voltage. It should be 8.2 volts or higher, if not replace with same type (Lithium 9 Volts).
  - b) **Fast Blinking:** Check the 4 wires to the safety edge: One is not being sensed as connected.
  - c) **Solid:** Receiver has not heard from the transmitter within last 60 minutes. Use motion to activate transmitter, and press the sensing edge at least once.
- 5- Channel 1 Relay Yellow LED not illuminated, Green signal acquired LED illuminated, Edge tested good, door/gate always goes to fault location.
  - a) Check edge wire connections to make sure the colors are correct and that bare wire is contacted inside the terminal block.
  - b) Check for wire short circuit between the Black sensing edge wires and the White sensing edge wires.

ACTION	TRANSMITTER	RECEIVER
Door starts moving downward	Green LED ON Solid (3 sec.) sending RF signal	Green LED (Signal Acquired) ON (3 sec.) receives RF signal
Door continues moving longer than 3 seconds (up to 30 sec.)	Green LED Blinks, No RF signal, microprocessor is awake	Green LED (Signal Acquired) OFF
Door encounters an obstacle, edge is compressed (Closed)	Green LED Blinks Faster, sending RF signal, microprocessor is awake	Yellow LED (Edge Activation) ON Green LED (Signal Acquired) ON Yellow LED (Relay1 closed) OFF
Door has edge fault (Broken Wire) when door moves	Green LED ON (13 sec.) Blinking, sends RF signal	Red LED (Maint. Req.) blinks quickly Yellow LED (Edge Activation) ON Green LED (Signal Acquired) ON Yellow LED (Relay1 closed) OFF
Transmitter has LOW BATTERY when door starts to move	Green LED ON Solid for first (3 sec.) then Blinking for next 20 seconds	Red LED (Maint. Req.) blinks slowly Green LED (Signal Acquired) ON Yellow LED (Relay1 closed) OFF
Door starts moving but goes to Full Open position. Receiver has not heard from the Transmitter for 1 hour	Green LED ON Solid for first (3 sec.) then Blinking for next 30 seconds (if working), else; OFF if dead.	Red LED (Maint. Req.) ON solid Green LED (Signal Acquired) ON 3 sec. Yellow LED (Relay1 closed) OFF

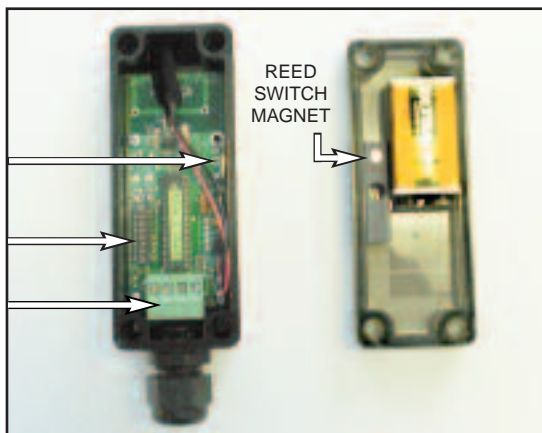


# The Communicator Wireless Transmitter/Receiver Wiring Diagram

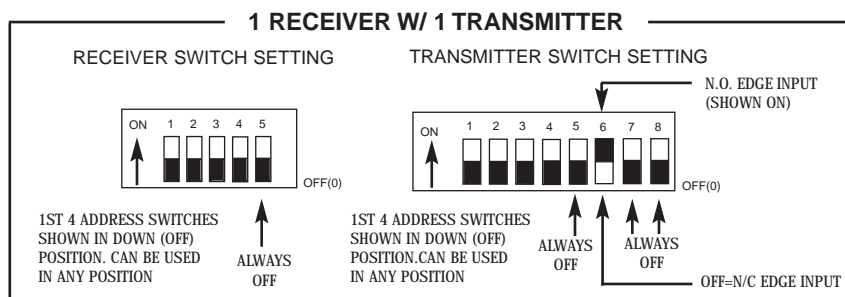
TAMPER SWITCH (REED TYPE) OPTIONAL  
(MUST BE STANDING STRAIGHT UP)

8 POS. DIP SWITCH SETTINGS (See Figure 1)

4 WIRE SENSING EDGE INPUT  
(White, White, Black, Black)



**FIGURE 1**



Power Input  
(Red & Black Wires)  
12-24V AC/DC (200mA min.)

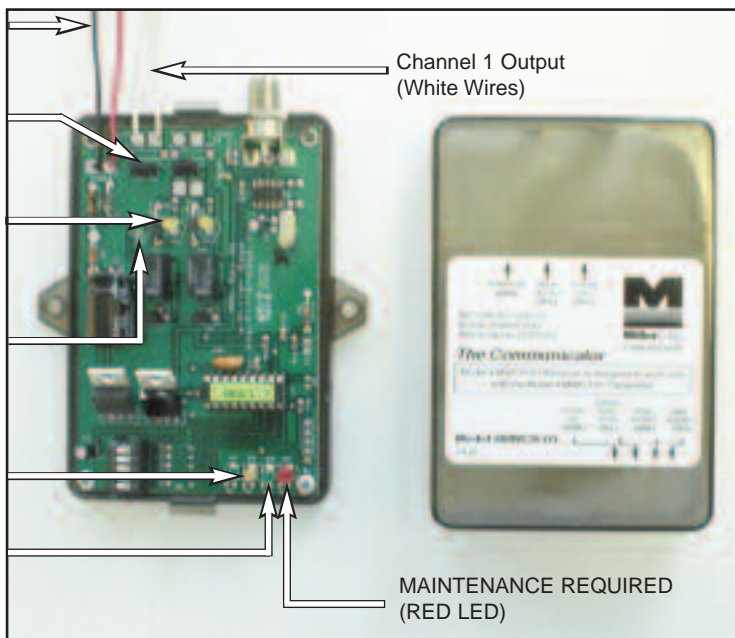
RELAY JUMPER/SHUNT  
LEFT PAIR=N/C  
RIGHT PAIR=N/O

CHANNEL 1 RELAY  
(YELLOW LED)  
(OFF = FAULT)

POWER  
(GREEN LED)  
(Normal = ON)

SAFETY EDGE ACTIVE  
(Yellow LED)

SIGNAL ACQUIRED  
(GREEN LED)  
ON when receiving signal  
from transmitter with  
correct address



## OUTPUT CONNECTIONS

Relay outputs are connected to the door/gate motor operator safety input terminals.