



### Installation Instructions and owner's manual

Model MK00648 External radio Receiver and

Model MK00647, MK00659 transmitters

\*READ THIS MANUAL CAREFULLY BEFORE BEGINNING INSTALLATION

#### Package Contents:

1. Receiver
2. Antenna
3. Connecting clips (3)

#### Product features:

MICANAN MK00648 external radio receiver is designed for use with automatic garage door/gate operators. The radio receiver can be programmed after installation using the "LEARN" button on the receiver. The radio receiver can be connected directly to the operator or can be mounted remotely. This MICANAN external radio receiver can only be used with the Micanan single button or 3-button (3-channel) transmitters.

#### Radio Receiver Specifications

Temperature Range:.....-22 F to 160 F  
 Input Power.....18 to 28 V AC or DC  
 Relay Output Contacts..... Normally-open (NO)  
 RF Center Frequency:..... 372 MHz  
 Antenna Length:..... 7.2 inch



## WARNING

- Disconnect power to the operator before installing radio receiver to prevent unintended operation.
- Improper wiring could cause damage to circuitry.
- Do not allow children to play with radio receiver or transmitter. The door could close and cause serious injury or death.

#### Safety Precautions:

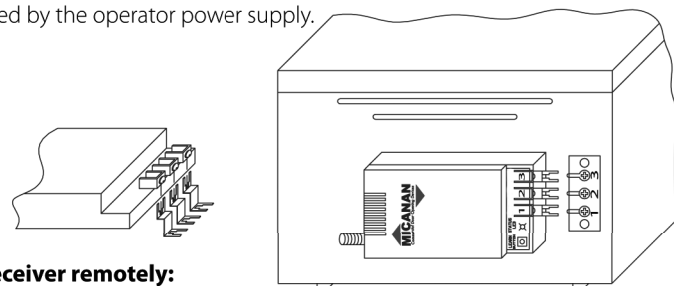
1. Before installing this receiver, read the door or gate operator's instruction manual completely, so you are aware of all of the unit's functions and features.
2. Wear protective gloves and eye protection when using tools.
3. Only install receiver on a properly functioning door or gate operator.
4. Installation and wiring must comply with local building and electrical codes. This product is not intended and must not be installed in an explosive environment.
5. To prevent electrical shock and/or fire hazards, do not connect this receiver to any voltages greater than 28 V AC or DC.

#### Installation:

##### Mounting receiver directly to the operator:

Connect the receiver directly to the operator using extension terminals as shown in figure 1. The radio receiver gets powered by the operator power supply.

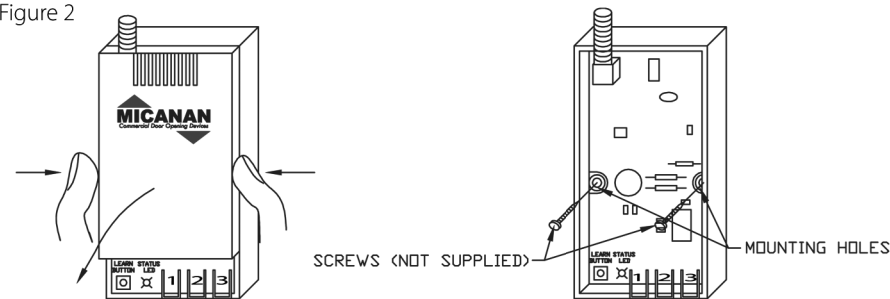
Figure 1



##### Mounting the radio receiver remotely:

1. Select a location four to six feet from other receivers. Receiver can be attached to metal, wood, or plastic surfaces.
2. Open the top housing by squeezing the sides, and lifting straight out towards you.
3. Use screws (not supplied) or other fastening means to attach receiver (See Figure 2).
4. If receiver is mounted inside a metal enclosure, use an antenna extension kit (not provided) to extend the antenna outside of the enclosure. Do not allow antenna to touch metal
5. Re-install the top housing, line up correctly and snap lock into position
6. Use solid Copper wires (use only 22 AWG or larger; CL2X or better) to connect the receiver terminals to the External Receiver terminal on the outside of the operator

Figure 2

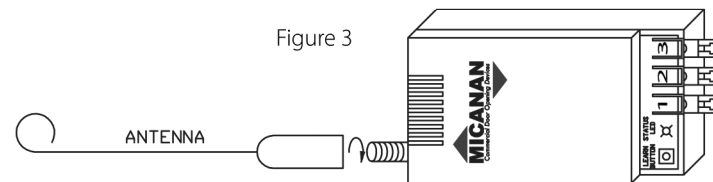


#### Installing the antenna

##### Direct Connection:

Attach antenna to the F connector on the top side of the receiver. (See figure 3) For best reception keep antenna wire straight and away from metal objects.

Figure 3



##### Indirect Connection (using an extension coax cable):

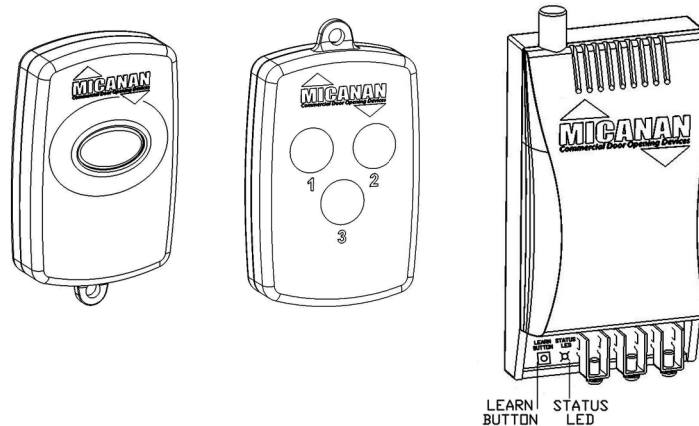
1. Connect coax extension cable (not provided) to the F connector on the top side of receiver.
  2. Route cable outside metal enclosure.
  3. Route and secure cable away from moving parts.
  4. Mount antenna holder (not provided) outside enclosure.
  5. Attach antenna to extension wire.
- NOTICE:** Do not route coax cable near any moving parts of the operator. If necessary, secure coax wire away from any moving parts.
6. Position antenna wire straight. For best reception, keep antenna away from metal.

#### Programming the receiver

**WARNING: During programming, door or gate operator shall activate. Keep people and objects away from door or gate.**

1. Reconnect power to the door or gate operator.
2. Press and release the receiver's LEARN button once. ( See figure 4)The receiver's STATUS LED will turn ON and remain ON for 25 seconds, indicating that the receiver is ready to learn a transmitter code.

Figure 4



3. To program a single button transmitter, press the button on the transmitter. The receiver's STATUS LED will blink twice indicating a successful programming.
4. Press the button on the transmitter once more to confirm operation of the door or gate operator, the door/gate operator will activate.
5. To program a 3-channel transmitter, press any one of the three buttons on the transmitter. The receiver's STATUS LED will blink twice indicating a successful programming. Press the same button on the transmitter once more to confirm operation of the door or gate operator. This button is now associated with that particular receiver. You can repeat the programming process for the other two buttons to control two other receivers
6. Test range of transmitter. Repositioning antenna may provide greater range.
7. Repeat Transmitter Programming steps for additional transmitters (up to 16 different transmitters can be programmed to the same receiver).

#### Operation

Whenever this receiver senses a valid signal from a learned transmitter, the relay will activate for 0.4 second and, therefore, activate the operator.

1. Press and release button on MICANAN transmitter.
2. Receiver LED will light momentarily and the unit will cycle.

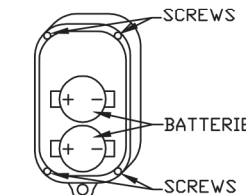
#### To Erase All Learned Transmitters:

1. Press and hold down the LEARN button.
2. After 5 seconds, the STATUS LED will blink for 5 seconds.
3. Release the LEARN button during the time the STATUS LED is blinking.
4. After you released the button, the STATUS LED will blink 5 times indicating all transmitters are erased from the receiver's memory.

#### Replacing the remote control batteries:

The batteries (lithium, 3V) should produce power up to 5 years. To replace the battery, open the transmitter by removing the screws as shown in figure 5. Match the positive and negative terminals of the battery to the positive and negative terminals in the receiver.

Figure 5



#### Troubleshooting:

1. Receiver's STATUS LED does not turn ON when programming button pressed.
  - Check power source to receiver. Insure proper power source (between 18 to 28 V AC or DC).
2. Poor transmitter range (less than 50 ft).
  - Insure antenna is not near any metal. Reposition antenna from vertical to horizontal position or vice versa.
  - Possible near-by radio interference.
  - Replace transmitter battery.
3. With transmitter activation, the receiver's STATUS LED lights and a "click" is heard within receiver, but receiver does not activate operator.
  - Check relay wire connections. Insure relay wire is not broken or damaged. Insure relay wire is connected to proper terminals on operator.
  - Using insulated pliers or insulated screwdriver, Pin #1 terminal and Pin #2 terminal on receiver and this should activate operator.
  - Test operator for proper operation.
  - Remove receiver from the 3-pole terminal strip (located on operator control box). Rotate receiver 180° and reconnect to the 3-pole radio terminal strip.
4. Cannot learn transmitter.
  - Insure transmitter is a correct transmitter for this receiver. Check this receiver's RF frequency and the companion transmitter's frequency to insure they are identical.
  - Test receiver with another transmitter.

#### FCC compliance:

The receiver and transmitter comply with part15 of the FCC rules with RSS-210 of industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**The FCC warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

#### Warranty:

MICANAN SYSTEMS warrants that material and workmanship are free from defects for a period of one (1) year from date of Invoice. Materials returned to Micanan that are defective after examination will be repaired or replaced at the option of the Manufacturer. Micanan systems shall not be responsible for any labor charges for removing or replacing defective material. All returned material must be received prepaid or it will not be accepted. This warranty is limited, and in lieu of all other warranties expressed or implied. There is no expressed liability due on the part of the seller. Shortages, damage or product problems (such as crushed control box for example) must be reported to Micanan within 30 days of receipt of shipment.