

# Installation Instructions

## General Information

The ION Plunger™ recessed transmitter is a reed switch magnet contact that provides concealed protection for doors. The transmitter is powered by a long-life lithium battery that is easily replaceable when a low battery condition is indicated by the control.

## Programming the ID Number

Each ION Plunger has its own unique identification code (serial number) permanently assigned during manufacturing. The electronic serial number (ESN) is located on the label attached to the antenna. This should never be removed. The control unit (receiver panel) is required to "enroll" the transmitter's ID during installation of the alarm system.

**For receiver panel's that require a "Tamper" signal to enroll the sensor, each Plunger automatically sends a "Tamper" signal upon startup when the battery is inserted.** If the unit does not enroll, remove the battery, touch the battery and clips together with a small screwdriver, and try inserting the battery again.

## Preliminary Considerations

### DOORS:

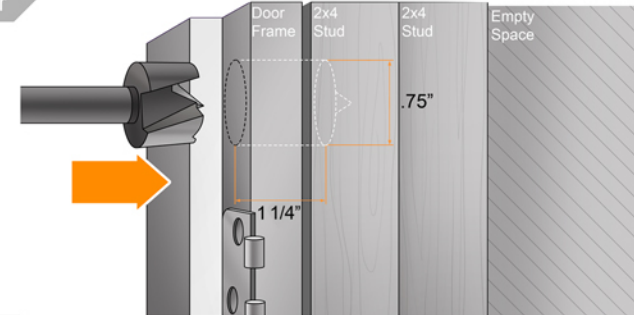
1. A 3/4" hole is drilled into the door frame on the hinge side, at least 4 feet above the floor, and should be 1 1/4" deep. A second smaller hole of 1/4" diameter can be drilled from the center of the first hole further into the frame to accommodate the wire antenna.

The length of the 1/4" diameter hole should be long enough to accommodate the wire antenna without bending. The unit may still operate if the antenna is bent, however the range will be reduced, and should be verified. A plastic antenna guide is included as an aid for the installer, and can be inserted into the 1/4" hole if need be.

The electronics in the MICRA and the PLUNGER are identical, however with the PLUNGER the magnet is captive in the plastic housing, and does not require a separate magnet on the door itself. This makes the installation easier, and minimizes the gap required between the door and the door frame. However, the MICRA can be used on doors as well as windows if so desired.

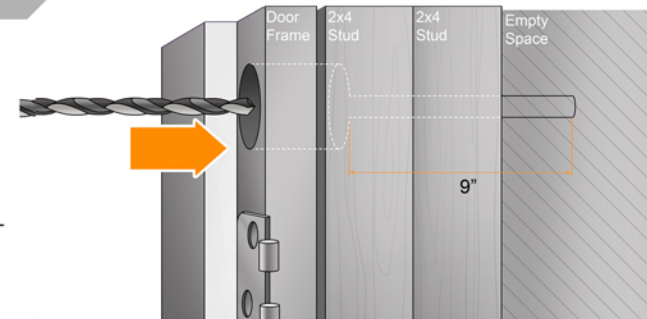
**NOTE: THE PLUNGER IS NOT RECOMMENDED TO BE USED ON WINDOWS, AS IT WOULD REQUIRE A HOLE DRILLED THROUGH BOTH THE INNER AND OUTER SKIN OF THE FRAME, THUS CREATING THE POSSIBILITY OF WATER INGRESS AND DAMAGE.**

## Step 1 Measure and Drill for Plunger



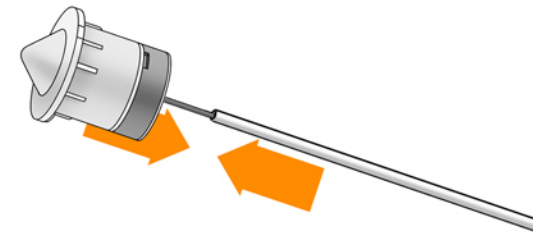
Use a 3/4" Forstner bit to drill into the door jamb to a 1 1/4" depth.

## Step 2 Drill for Antenna



A 1/4" hole must now be drilled in the center of the cavity through the door jamb. This is so the antenna can be inserted through the door jamb frame and the supporting studs.

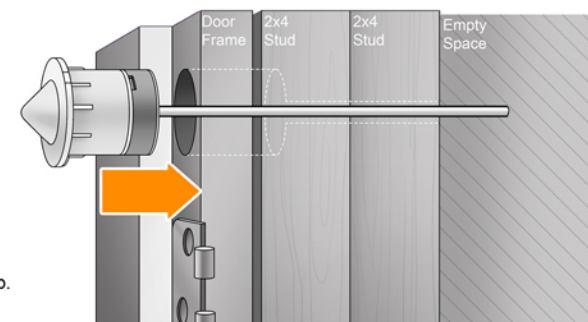
## Step 3 Slide on Straw



Slide the Plunger antenna into supplied antenna guide (straw).

*\*It is important to always keep the antenna straight. Never cut or coil up antenna. You may fold the antenna in half if space is a concern. This may affect range.*

## Step 4 Place and Set



Insert Plunger and Antenna into the door jamb.

# ION PLUNGER™ Recessed Transmitter

**CAUTION:** Before drilling any holes, make sure that successful transmission reception tests have been conducted

**CAUTION:** BATTERY CAUTION: Risk of fire, explosion and burns. Do not recharge, disassemble, heat above 212°F (100°C) or incinerate. Dispose of used batteries promptly. Keep away from children.



## MOUNTING (See Figure 1)

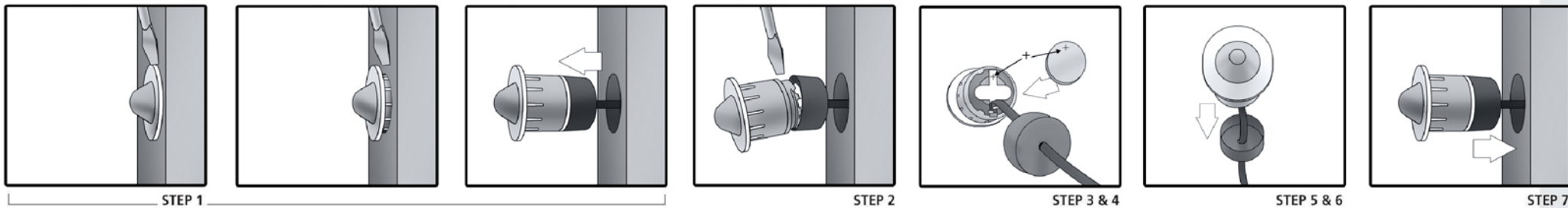
1. Mark the selected location for the transmitter on the "hinge side" of the door frame at least 4' above the floor.
2. Before drilling any holes, make sure that the successful Go/No Go transmission reception tests have been conducted as called for in the ION Plunger section. (see back page)
3. Drill hole at the location marked for the transmitter. (3/4" diameter, at least 1 1/4" in depth)
4. Drill a second hole (1/4" in diameter, at least 7" in depth) at the bottom on the first hole for antenna insertion.
5. Insert the antenna into the provided straw. This is to make the installation easy and ensure the antenna will remain straight. Never coil or bunch up the antenna. The antenna may be folded in half but this may affect range.
6. Insert the Plunger and antenna assembly into the hole so that the Plunger flange is flush with the surface of the door frame.

DO NOT hammer the transmitter into place with hard blows. Press into place either by hand or by simply closing the door which presses it into place. The ION PLUNGER is designed to self-seal in the mounting hole. However, if desired, a thin bead of silicon may be applied for additional moisture protection.

Figure 2

SPECIFICATIONS		ION MICRA transmitters
Dimensions	Dowel Package	0.750" diameter
	Additional Info	Dowel Lid 0.850" diameter x 0.060" thick
	Wire Antenna	7 inch x 1/8" Flexible Antenna extends from sensor
	Fits Cavity Depth	1.00" depth
Power Source	3.0V Lithium Coin Cell Battery CR1620	
Transmit Range	Typically >500 ft. open air	
Temperature Range	10° to 120° F (-10° to 50° C)	
Compatibility	Doors	Wood and Metal Frame
FCC Notice	<p>This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:</p> <ol style="list-style-type: none"> <li>1. This device may not cause harmful interference.</li> <li>2. This device must accept any interference that may be received, including interference that may cause undesired operation.</li> </ol> <p>Changes or modifications not expressly approved by ION Digital LLP can void the user's authority to operate the equipment.</p>	

Figure 3



## TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system. The installer should assume the responsibility of developing and offering a regular maintenance program to the user, as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's operation at all times

REFER TO THE INSTALLATION INSTRUCTIONS FOR THE RECEIVER / CONTROL WITH WHICH THIS DEVICE IS USED, FOR WARRANTY INFORMATION AND FOR DETAILS REGARDING LIMITATIONS OF THE ENTIRE ALARM SYSTEM.

## BATTERY INSTALLATION & REPLACEMENT

1. Remove the transmitter from the door frame by inserting the flat blade of a small screwdriver into the pry-slot on the Plunger assembly and twisting slightly counter-clockwise. The transmitter must be removed from the door frame completely in order to refit the transmitter properly back into the hole once the internal battery has been replaced.
2. Using the flat blade of a small screwdriver in the pry-slot again, separate the white Plunger assembly from the base with a slight counter-clockwise twist. Once open, slide the cap with the transmitter PC board assembly apart from the base. Pull the antenna through the hole in the base just enough to allow the battery to be replaced. Do not pull the antenna completely out of the base.
3. Remove the old battery from its battery holder on the bottom of the PC board.

4. Observe correct polarity (see Figure 3 Step 3 & 4) and insert the fresh battery into the battery holder (positive polarity indicator is shown on the battery holder). Always use Energizer™ or Panasonic™ batteries.
5. Slide the Plunger assembly with the PC board assembly back into its base by gently pulling on the antenna, easing the Plunger assembly into place.
6. Snap the transmitter Plunger assembly back onto the base, locking it into place.
7. Placing the antenna into the cavity first, reinsert the transmitter into its original mounting hole in the door frame.

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