iNOVONICS®
WIRELESS CORPORATION

FA401

Single Transmitter / Single Output Receiver

FA401R

Single Transmitter / Single Relay Output Receiver

Frequency Agile® 900MHz
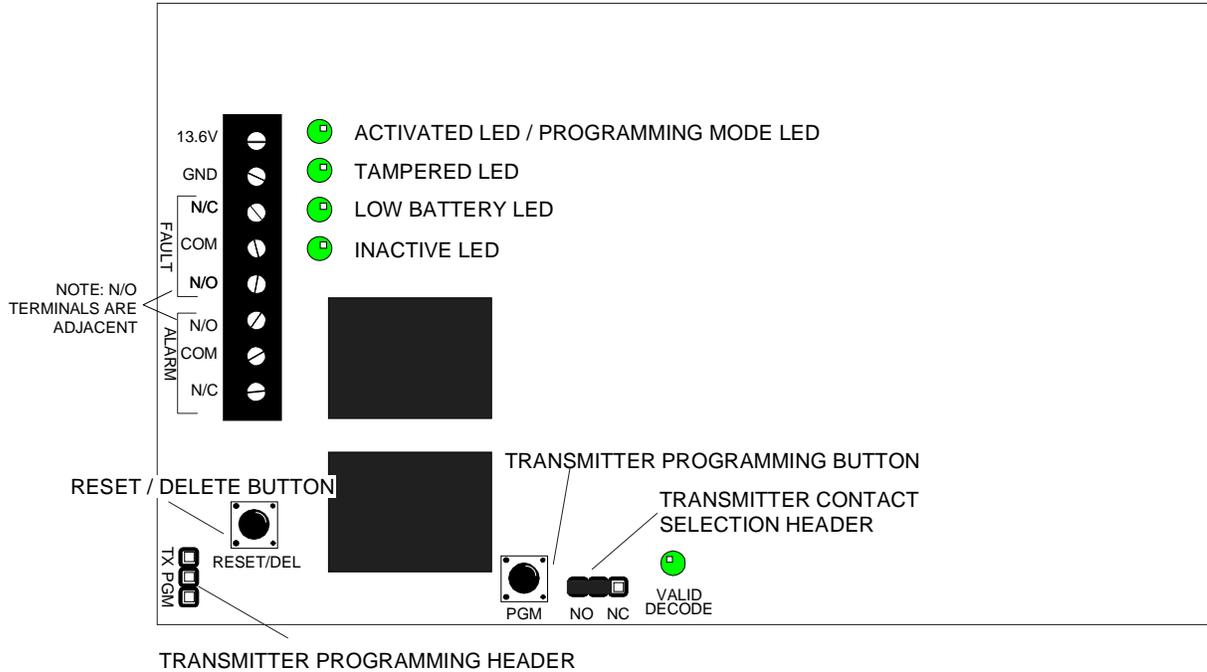
Installation Instructions

02305C

Note:
The FA401 is intended to be installed by professional security technicians. This receiver is intended for use with *indoor* security systems. Use in outdoor applications may impair performance.

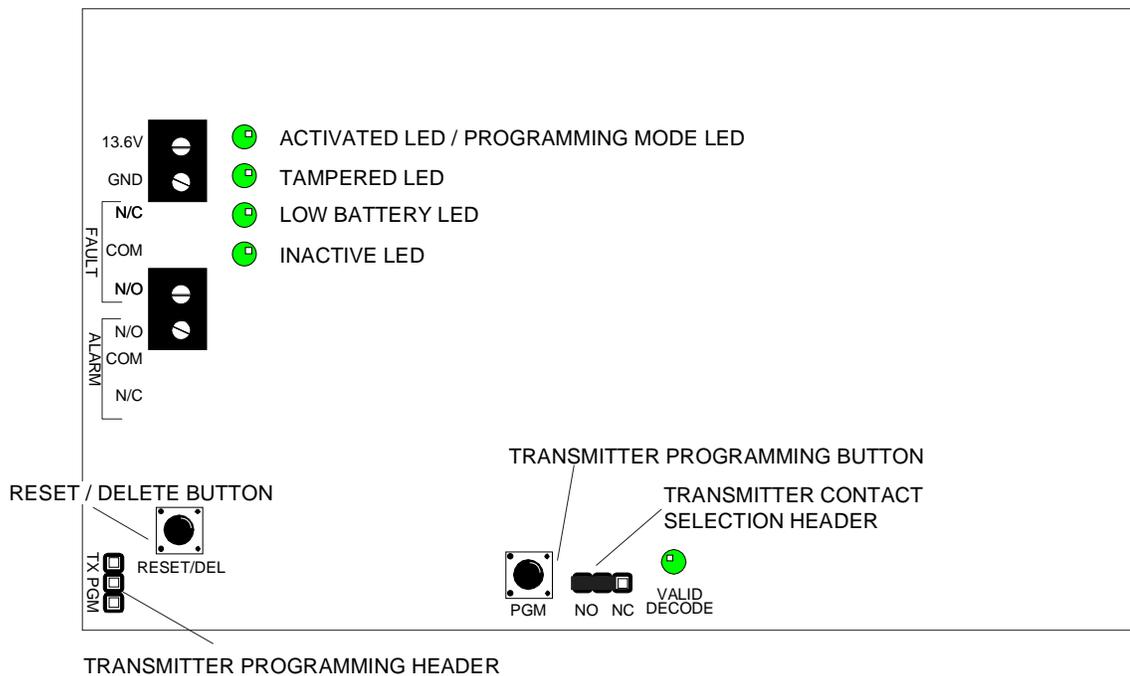**ISO 9001 CERTIFIED COMPANY**

MADE IN USA

Overview:

FA401 and FA401R slave receivers fully supervise a single wireless transmitter. The FA401 has open collector Alarm and Fault outputs. The FA401R has Form-C Alarm and Fault relay outputs.

FA401R receiver

13.6V
GND

FAULT
N/C
COM
N/O

ALARM
N/O
COM
N/C

ACTIVATED LED / PROGRAMMING MODE LED
TAMPERED LED
LOW BATTERY LED
INACTIVE LED

NOTE: N/O TERMINALS ARE ADJACENT

RESET / DELETE BUTTON

TX PGM

RESET/DEL

TRANSMITTER PROGRAMMING HEADER

TRANSMITTER PROGRAMMING BUTTON

TRANSMITTER CONTACT SELECTION HEADER

PGM   NO NC   VALID DECODE

FA401 receiver

13.6V
GND

FAULT
N/C
COM
N/O

ALARM
N/O
COM
N/C

ACTIVATED LED / PROGRAMMING MODE LED
TAMPERED LED
LOW BATTERY LED
INACTIVE LED

RESET / DELETE BUTTON

TX PGM

RESET/DEL

TRANSMITTER PROGRAMMING BUTTON

TRANSMITTER CONTACT SELECTION HEADER

PGM   NO NC   VALID DECODE

TRANSMITTER PROGRAMMING HEADER

Technical Specifications:

Dimensions (housing):	6.38" x 3.60" x 1.10"
Weight:	6.9 oz.
Environmental:	
Operating temperature:	32°-140F (0°-60°C)
Relative Humidity:	95% (non-condensing)
Electrical:	
Power Requirement:	11-14 VDC
Power Consumption:	120mA (max, relays activated)
Typical:	40mA (quiescent)
FA401R output relay	Form C, 2A @ 120VAC, 2A @ 300VDC
Receiver:	
Type:	frequency-hopping spread spectrum
Operating frequency:	902-928 MHz

The **VALID DECODE LED** indicates transmissions from transmitters programmed to the receiver.

The receiver programs the transmitter with the following fixed parameters:
- No EOL resistor.
- No Internal Contact. (The receiver will not support the FA200W or FA210W widegap internal magnet contact.)
- 60-second supervisory check-in. (The transmitter sends a supervisory signal every 60 seconds. Some transmitters check in at 150-second intervals.) The receiver, with a fixed 60-minute supervisory window, will declare the point inactive if no supervisory signal is received within 1 hour of the latest signal.
- The Fault Output is Latching for low battery or tamper faults. It is Follower for Inactive faults.
- The Alarm Output is Follower (follows the state of the transmitter).
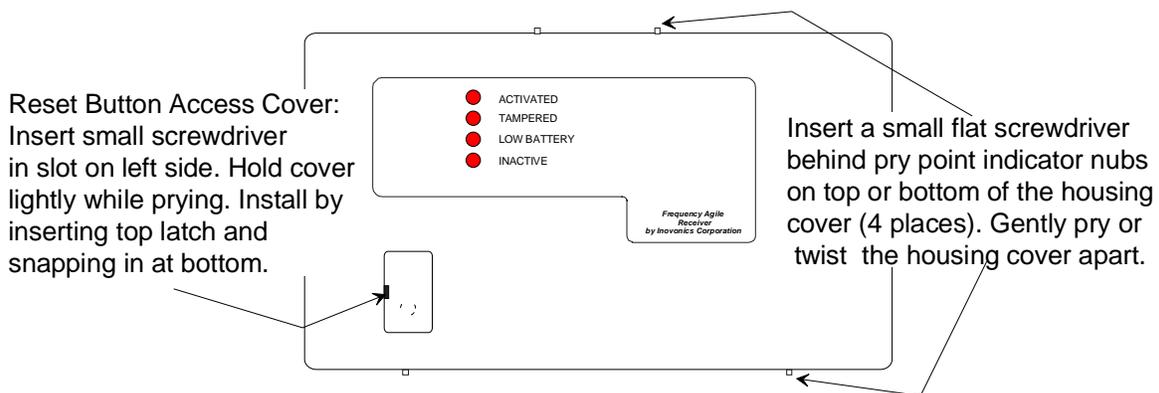
Note: FA transmitters have non-volatile memory. It is not necessary to reprogram transmitters after losing power or changing batteries. Press the transmitter reset button to restore programming.

Installation:

Power: Supply power and ground to terminals marked *13.6V* and *GND* on the terminal block.

Mounting: Use supplied hardware to attach FA401 or FA401R housing to wall or surface. To route wiring out the back of the unit, use a small flat screwdriver or utility knife to remove the knockout in the housing base. If possible, orient the antenna side of the receiver toward the transmitter. This enhances reception.

Opening the housing:

Reset Button Access Cover: Insert small screwdriver in slot on left side. Hold cover lightly while prying. Install by inserting top latch and snapping in at bottom.

ACTIVATED
TAMPERED
LOW BATTERY
INACTIVE

Frequency Agile Receiver by Inovonics Corporation

Insert a small flat screwdriver behind pry point indicator nubs on top or bottom of the housing cover (4 places). Gently pry or twist the housing cover apart.

Programming the transmitter:

1) Select Normally Open (NO) or Normally Closed (NC) transmitter contact by positioning the jumper on the receiver's 3-pin **TRANSMITTER CONTACT SELECTION HEADER**.

2) Plug programming cable to 3-pin **TRANSMITTER PROGRAMMING HEADER** on the receiver. Orientation of the cable connnector to the header pins makes no difference.

3) Press the **TRANSMITTER PROGRAMMING BUTTON** on the receiver. It is located next to the **TX PGM HEADER**. Hold for at least 1 second.The receiver goes into program mode. It exits as soon as the transmitter is programmed or times out after 30 seconds.

4) The **PROGRAMMING MODE LED** will flash if no transmitter has been programmed to the receiver. If the LED is on solid, press **RESET / DELETE** button to clear previous transmitter.

5) Connect the programming cable to 3-pin header on transmitter. Orientation of the connector to header pins does not matter.

6) Press the <u>transmitter</u> reset button. (Refer to pages 5 and 6 for locations of transmitter reset buttons.)

7) If programming is successful, program mode will terminate: the **INACTIVE LED** will go out immediately and the **VALID DECODE LED** will resume normal operation, flickering intermittently.

Receiver Operation:

Output activation: Output activation: The FA401 has N/O open collector Alarm and Fault outputs. Output is open relative to ground. On activation, output pulls to common ground. The FA401R has Form C Alarm and Fault relay outputs. Output activation is indicated by illumination of the **ACTIVATED LED.**

Note: if a receiver is being connected to a normally closed zone, the FA401R <u>must</u> be used.

Connection to hardwire panels: When an FA401 or FA401R receiver is used with a hardwire security panel, the panel will typically supply power and ground to the receiver. When the ground supplied to the receiver is common to the return loops of the hardwire panel, use one wire to connect the FA401 receiver outputs to the zone input of the panel. The examples below show typical connections of both the FA401 and the FA401R.
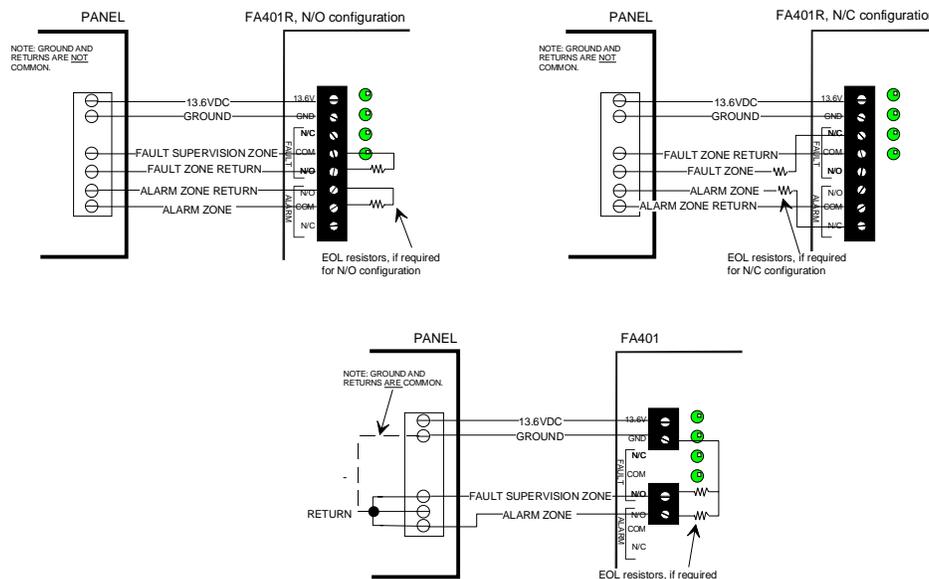
## *Frequency Agile*™ Series Transmitters

FA200
Universal Transmitter

Reset button

Programming header

Battery

Tamper switch

Battery terminals
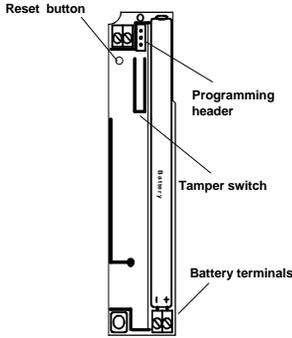
Program contacts:	N/O or N/C, as needed
Typical battery life:	3 years
Battery type:	4.5V alkaline battery pack
Switch trigger:	1.5 seconds, minimum
Dimensions:	1.25" x 6.00" x 0.750"

FA200W
Universal Widegap Transmitter

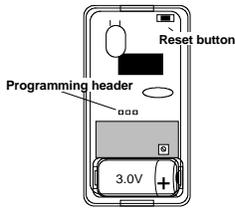**Widegap Magnet
not supported
by the FA401**

FA202
Smoke Detector

Reset Button   Programming Header
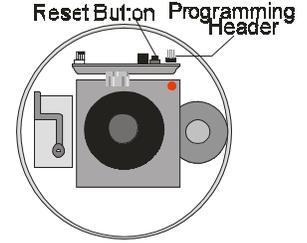
Program contacts:	N/C
Typical battery life:	1 year
2 Batteries:	3.0V lithium
Dimensions:	6.0" Diameter

Note: Remove jumper to program,
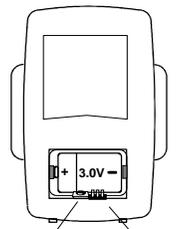replace jumper after programming.

FA203
Pendant Transmitter

Reset button

Programming header

3.0V

Program contacts:	N/O
Typical battery life:	3-5 years
Battery (or equivalent):	3.0V lithium Sanyo CR2
Dimensions:	3.10" x 1.62" x 0.750"

* To extend battery life, actual check-in
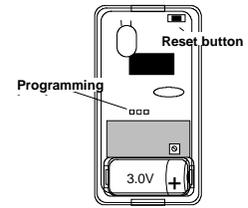 interval of the FA203 is 2 to 3 times the
  programmed value.

FA204
Pendant Transmitter

+ 3.0V −

Reset button   Programming header

**Note: Remove battery cover to access
Reset Button and Programming Head**

Program contacts:	N/O
Typical battery life:	2 years
Battery	3.0V Sanyo LiMn CR14250
Dimensions:	2.8" x 1.7" x 0.83"

FA205
Beltclip Transmitter

Reset button

Programming

3.0V

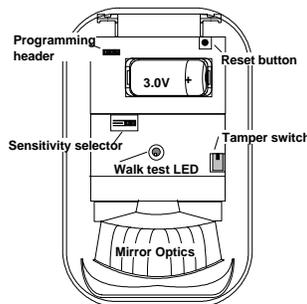|	
Program contacts:	N/O
Typical battery life:	3-5 years
Battery (or equivalent):	3.0V lithium Sanyo CR2
Dimensions:	3.10" x 1.62" x 0.750"

* To extend battery life, actual check-in
  interval of the FA205 is 2 to 3 times the
 programmed value.

FA206S
PIR Motion Detector

Reset Button   Programming header

3.0V −   +

Tamper switch   Battery
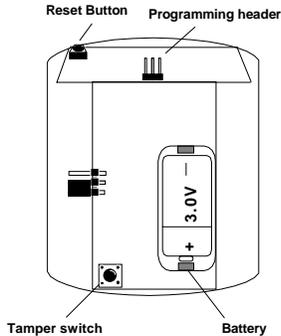
Program contacts:	N/C
Typical battery life:	2 years (with 2 batteries)
Battery:	3.0V lithium DL123A
Sleep after trip:	90 seconds
Dimensions:	3.75" x 2.88" x 2.40"

FA206DS
PIR Motion Detector

Programming header   3.0V +   Reset button

Sensitivity selector   Tamper switch

Walk test LED

Mirror Optics

Program contacts:	N/C
Typical battery life:	2 years
Battery:	3.0V lithium DL123A
Sleep after trip:	180 seconds
Dimensions:	3.75" x 5.75" x 2.50"

FA207
Glassbreak Detector

Programming header
(with tamper shunt)

Reset button

+ 3.0V
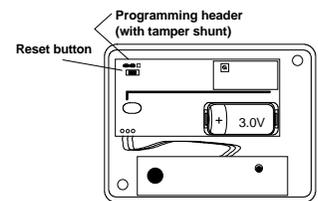
Program contacts:	N/O
Typical battery life:	2 years
Battery:	3.0V lithium DL123A
Dimensions:	4.25" x 3.12" x 1.63"

Note: Remove jumper to program,
replace jumper after programming.

Note: Batteries are always supervised. Lithium batteries are capacity-tested at 18-hour intervals. Typical battery life is based on 60-second check-in. The transmitter will deactivate 2 weeks after low battery is detected. **Test weekly.**
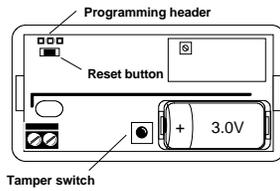
Frequency Agile™ Series Transmitters (Continued)

FA209
Billtrap Transmitter
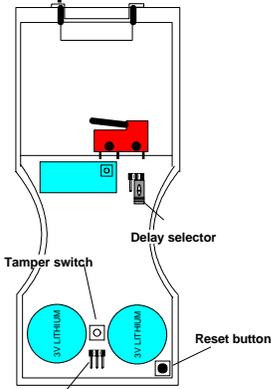
Program contacts: N/O
Typical battery life: 1-2 years
Battery type (Qty. 2): 3.0V lithium CR2450N
Dimensions: 2.63" x 6.19" x 0.750"

FA210
Reduced-size
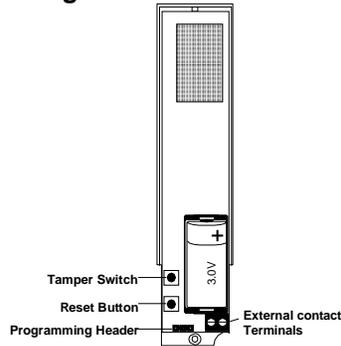**Universal Transmitter**

Program contacts: N/O or N/C, as needed
Typical battery life: 4 years
Battery type: 3.0V lithium DL123A
Switch trigger: 1.5 seconds, minimum
Dimensions: 3.55" x 1.70" x 0.920"

FA210W
Reduced-size
Universal Widegap Transmitter

Widegap Magnet
not supported
by the FA401

FA250
High PowerTransmitter

Program contacts: N/O or N/C, as needed
Typical battery life: 1-2 years
Battery type: 3.0V lithium DL123A
Switch trigger: 1.5 seconds, minimum
Dimensions: 1.25" x 6.00" x 0.750"

Note: Batteries are always supervised. Lithium batteries are capacity-tested at 18-hour intervals. Typical battery life is based on 60-second check-in. The transmitter will deactivate 2 weeks after low battery is detected.**Test weekly.**

Warranty & Disclaimer

Inovonics Wireless Corporation ("Inovonics") warrants its products ("Product" or "Products") to conform to its own specifications and to be free of defects in materials and workmanship under normal use for a period of twenty-four (24) months from the date of manufacture. Within the warranty period Inovonics will repair or replace, at its option, all or any part of the warrantied product. Inovonics will not be responsible for dismantling and/or reinstallation charges. To exercise the warranty, the User ("User", "Installer" or "Consumer") must be given a Return Material Authorization ("RMA") Number by Inovonics. Details of shipment will be arranged at that time.

This warranty does not apply in cases of improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than Inovonics.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express, or implied, including any warranty of merchantability or fitness for a particular purpose. Inovonics will not be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties.

This warranty will not be modified, varied or extended. Inovonics does not authorize any person to act on its behalf to modify, vary or extend this warranty. This warranty will apply to Inovonics Products only. All other products, accessories or attachments used in conjunction with Inovonics equipment, including batteries, will be covered solely by their own warranty, if any. Inovonics will not be liable for any direct, incidental or consequential damage or loss whatsoever, caused by the malfunction of Product due to products, accessories, or attachments of other manufacturers, including batteries, used in conjunction with Inovonics Products.

This warranty does not warrant the replacement of batteries that are used to power Inovonics Products.

The User recognizes that a properly installed and maintained security system may only reduce the risk of events such as burglary, robbery, personal injury and fire. It does not insure or guarantee that there will be no death, personal damage and/or damage to property as a result. **Inovonics does not claim that the Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection.**

Inovonics shall have no liability for any death, injury or damage, however incurred, based on a claim that Inovonics Products failed to function. However, if Inovonics is held liable, directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, Inovonics' maximum liability will not in any case exceed the purchase price of the Product, which will be fixed as liquidated damages and not as a penalty, and will be the complete and exclusive remedy against Inovonics.

⚠ **Warning**: **The User should follow all installation, operation and maintenance instructions.** The User is strongly advised to conduct Product and systems tests at least once each week. Changes in environmental conditions, electric or electronic disruptions and tampering, may cause the Product to not perform as expected.

⚠ **Warning:** **Inovonics warrants its Product to the User.** The User is responsible for exercising all due prudence and taking necessary precautions for the safety and protection of lives and property wherever Inovonics Products are installed. Inovonics strongly advises the User to program Products to be supervised whenever used in applications affecting life safety. Users are warned that unsupervised devices are subject to undetected failure due to malfunction, battery failure, tampering, or changes in environment.

Frequency Agile® Receivers
from *Inovonics*:

FA401	1-transmitter / Single output
FA401R	1-transmitter / Single relay output
FA404	4-transmitter / Single output
FA404R	4-transmitter / Single relay Output
FA416	16-transmitter / 4-output
FA416D	16-transmitter / 4-output with display
FA416R	16-transmitter / 4-relay output
FA416DR	16-transmitter / 4-relay output with display
FA464DR	64-transmitter / 16-relay output with display

Receiver Accessories:

FA116	Executive Programmer for FA416 / FA464
FA516	Display module for FA416 and FA416R
FA541	Single form 'C' relay module

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