

FREEDOM Wireless F-TP Touchpad, F-LTRANS and F-TAB INSTALLATION INSTRUCTIONS

WI1439 10/05

GENERAL DESCRIPTION

The NAPCO Freedom Deadbolt-Activated Home Protection System, a revolutionary new concept in residential security, combines intuitive interactive arming with a passive disarming scheme, providing a system which is not only effortless to use, but also 100% false alarm resistant during the critical arming and disarming sequences.

The system is armed with a simple push of a button (**STAY** or **AWAY**) on the F-TP Touchpad control module, followed by the locking of the home's deadbolt. To disarm, simply unlock the deadbolt.

The microprocessor controlled F-TP Touchpad receives information regarding the status of the deadbolt and door through its integral receiver, from the F-LTRANS wireless transmitter and an integral PIR sensor to ensure fool-proof operation.

The F-LTRANS wireless transmitter determines the status of the deadbolt (locked or unlocked) through the F-TAB deadbolt sensor, which is installed in the deadbolt strike hole. The door status (open or closed) is supplied to the F-LTRANS wireless transmitter via a reed switch or door contact sensor (not provided) wired into it. This information is transmitted to the wireless receiver inside the F-TP Touchpad, and is used to arm and/or disarm the system. There are no moving parts in the F-TAB deadbolt sensor to break or wear out; its adaptive inductive system ensures trouble free use. If the position of the bolt in the deadbolt strike hole changes over time due to the door sagging, deadbolt replacement, etc., the F-TP Touchpad microprocessor will automatically ac-

count for, and make, the necessary adjustments for these changes.

The F-TP Touchpad's integral wide-angle PIR motion sensor acts as an occupancy sensor that provides the microprocessor with activity information which prevents the user from making errors during the critical exit and entry periods. For example, if the User presses the AWAY button, opens and closes the door and locks the deadbolt but does not leave, the PIR will sense the User's presence in the home and automatically default to STAY mode arming, preventing a false alarm.

If the system is armed in the AWAY mode, the F-TP Touchpad PIR will generate an alarm if an intruder is detected. After an intruder has been detected, the system may only be silenced by inserting the F-IFOB digital key into the F-IFOB slot on the F-TP Touchpad.

By allowing this level of system control without traditional numeric keypad interaction, the NAPCO Freedom System will provide a significant reduction in false alarms due to user error and also provide comfortable use of the system to those customers whose technophobic tendencies would prevent them from arming and disarming the system using a traditional keypad.

The NAPCO Freedom System is also designed to prevent the arming of the alarm system if all deadbolts are not engaged, a high security feature normally found only in very elaborate highend installations.

INTEGRAL WIRELESS RECEIVER

The F-TP Touchpad incorporates an integral RF receiver. This receiver receives transmissions ONLY from the F-LTRANS wireless transmitter (no other transmitters will work with this receiver). The system uses two different frequencies to reduce "nulls" and prevent noise on a single frequency from disrupting

> communication. Rolling codes are also used to prevent transmissions from being recorded and retransmitted to defeat the system.

> The minimum free air distance is about 600 feet, but walls and other obstructions may significantly reduce this distance. The Primary transmitter should never have a range problem as it should be placed within the same room as the F-TP Touchpad as required for the integral PIR to protect the interior deadbolt latch. However, the signal range should be taken into account when considering the use of a second transmitter to optionally protect a second door/deadbolt.

INSTALLATION

The NAPCO Freedom System utilizes the home's existing deadbolts and requires only that the F-TAB deadbolt sensor be installed into the deadbolt strike hole in the door jamb. This sensor enables the system to detect the status of the deadbolt and is compatible with all $\frac{3}{4}$ " diameter deadbolts with a

5/8" throw or greater. Simply remove the strike plate and dust cup, run the 2 conductor wire from the deadbolt hole to a F-LTRANS wireless transmitter, and insert the F-TAB deadbolt sensor into the strike hole. The F-TP Touchpad installs on a 4-wire bus and also includes an integral siren that produces 85 dB (at 10 feet) as required for UL Residential Burglar and Fire. The Touchpad does not have to be located next to the door, but can be mounted anywhere that allows the integral PIR to protect the door latch, and allows the user to hear the siren chirp when exiting and arming AWAY. The F-LTRANS wireless transmitter is typically mounted adjacent to the doorframe. It may be mounted high enough to be unobtrusive, yet accessible for inspection and battery replacement.

The F-TP Touchpad includes 1 optional on-board input for an auxiliary device such as a motion sensor, glass-break detector or other device. In less time than it takes to install a traditional keypad, this comprehensive module consisting of the Touchpad, deadbolt sensor, door contact, motion sensor and siren can be installed.

NOTE: If protecting a door with glass panels or side lights,

This manual contains the Installation Instructions for the F-TP Touchpad, F-TAB deadbolt sensor and the F-LTRANS wireless transmitter. It is intended to be used in conjunction with the F-8 Panel Installation Instructions (WI1431) and the F-8 Panel Programming Instructions (WI1432).



an acoustic glass-break sensor (connected to the F-TP Touchpad Aux. Zone) should be installed to insure the integrity of the system.

POWER

The F-TP Touchpad is powered by the keypad bus of the F-8 Control Panel. Each F-TP Touchpad draws 55mA (nominal) at 12V DC and an additional 105mA in alarm. Deduct these values from the system standby current, as described in the wiring diagram.

INSTALLING A SECOND F-TAB DEADBOLT SENSOR

The wireless Freedom system can include up to two F-TP Touchpads, and each wireless Touchpad can include up to two F-LTRANS wireless transmitters supervising two doors.

IMPORTANT: For a single F-TP Touchpad installation with two doors protected by two transmitters, one transmitter must be configured as a Primary (NO shunt connector installed into the address jumper) and the other transmitter must be configured as a Secondary (with the shunt connector installed). The Primary transmitter should always be installed to protect the door most often used to ARM the system and EXIT the premises. The Secondary transmitter should be used to protect a second door that will be used only for ENTRY (or to disarm when armed Stay).

Although the Secondary door can, in theory, be used as an exit door, to do so you must always be certain the Primary door deadbolt is locked before arming, thus defeating the foolproof nature of the Freedom system. The Ready light will NOT indicate the status of the Primary door deadbolt (the Ready light will ONLY indicate the status of the Secondary door deadbolt). Therefore, pressing Away and exiting through the Secondary door (with the Primary door deadbolt remaining unlocked) will result in the system automatically reverting to an unarmed state after the exit delay expires. As a result, the homeowner should be instructed to use the door protected by the Secondary transmitter FOR ENTRY ONLY (or to disarm when armed Stay).

Similarly, with a single F-TP Touchpad installation with one exit door protected by one transmitter, the Ready light will always be on regardless of the position of the protected deadbolt. This is designed to allow the arming of the system with the exit door open.

Furthermore, because the Touchpad integral PIR may not always be able to supervise the Secondary transmitter, care must be taken to ensure an intruder can not disarm the system by turning the deadbolt latch at the Secondary transmitter. Using an additional PIR to generate an alarm before the intruder can turn the deadbolt latch may not be sufficient (standard PIR's false alarm features may cause it to take too long to detect an intruder). Additional perimeter and/or interior intruder detection devises, such as window foil, glass breaks or additional PIR's, may be reauired to ensure the intruder will be detected by the system before the deadbolt latch at the Secondary transmitter can be thrown. Note: If the Secondary transmitter deadbolt is unlocked, the READY light will be out; if the READY light is out when attempting to arm the system, all monitored deadbolts (except at the primary door) must be examined and locked before the system can be armed.

Test the Secondary Transmitter

The Secondary transmitter should always be tested prior to installation, as follows: After installing and learning the Primary transmitter, place the Secondary transmitter in the selected mounting location and remove the cover. Remove the F-TP Touchpad from its backplate and have someone observe the receiver LED as the Secondary transmitter tamper switch is pressed and released. The receiver LED should flicker several times. If it does not, try another mounting location. If a location cannot be found, a second F-TP Touchpad must be used.

TRANSMITTER AND RECEIVER OPERATION

When learning transmitters into the F-TP Touchpad receiver, it is necessary to keep the Touchpad faceplate open in order to examine the receiver LED and operate the Mode button (with a pen tip). There are three receiver Modes: **Learn Mode**, **Replace Mode**, and **Clear Mode**.

Learn Mode

Learn Mode allows the learning of the first transmitter detected by the receiver. To make learning transmitters as easy as possible, when power is first applied to the F-TP Touchpad, the receiver LED flashes rapidly, indicating the Touchpad receiver is in Learn Mode. The LED **not** flashing upon power-up indicates the presence of a previously learned transmitter within the Touchpad receiver. In Learn Mode, you cannot re-learn a transmitter that has previously been learned. You will either need to clear ALL data from the receiver, or add a second transmitter to the receiver.

- To clear all data, refer to the Clear Mode section below.
- To learn a Secondary transmitter, press the Mode Button to re-start Learn Mode (the LED will begin to flash rapidly) and a Secondary transmitter can be learned. See page 5, step 17 for this procedure.

Learn Mode is used when installing new systems, or adding a new Secondary transmitter to an existing system.

Replace Mode

Replace Mode is used when an *existing* transmitter within an *existing* system must be replaced. Replace Mode allows a new transmitter to replace (overwrite) existing transmitter data. To enter Replace Mode, start in Learn Mode (rapid flashing), then press the Mode Button again (with a pen tip) and the receiver will slowly flash. This slowly flashing LED indicates the receiver is in Learn Mode. The receiver will overwrite either the Primary or Secondary transmitter data, depending on the state of the transmitter shunt connector (if the shunt connector is removed from the address jumper, the Primary transmitter will be overwritten; if the shunt connector is placed on the address jumper, the Secondary transmitter will be overwritten).

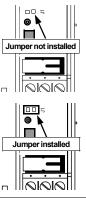
Clear Mode

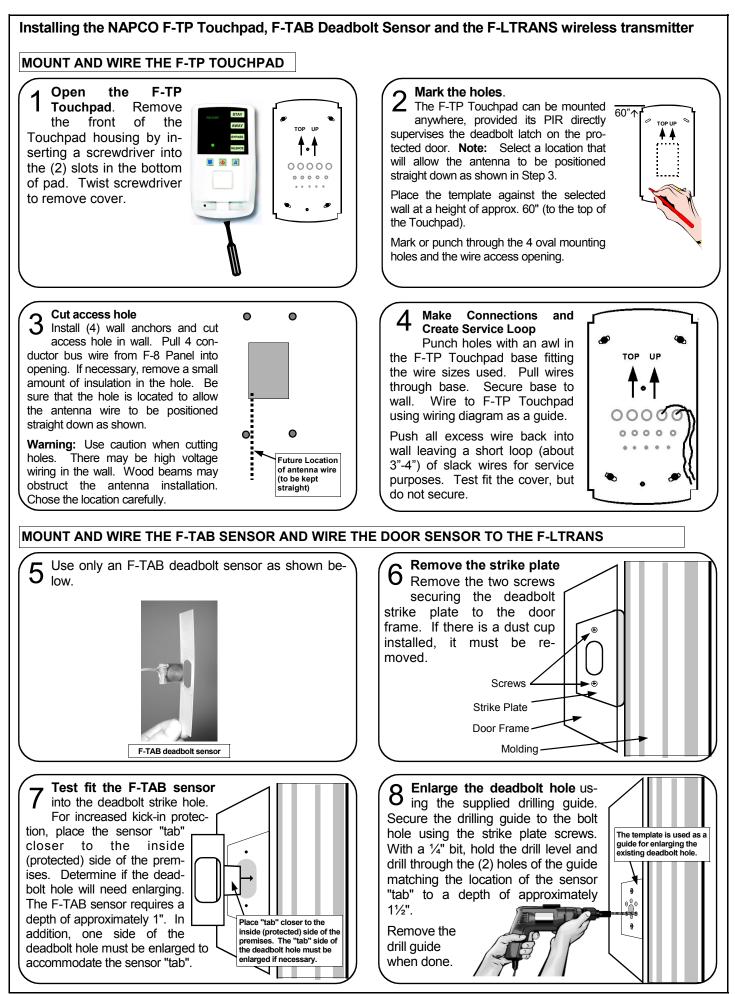
You can erase ALL pre-existing transmitter data from the receiver Touchpad at any time. Simply press and hold the Mode Button (about 6 seconds--use a pen tip) until the LED turns on steady. (While holding the Mode Button, the LED will flash rapidly--after about 6 seconds the LED will then turn on steady). Release the button and the LED will resume flashing rapidly, indicating the receiver is once again in Learn Mode with all pre-existing data erased.

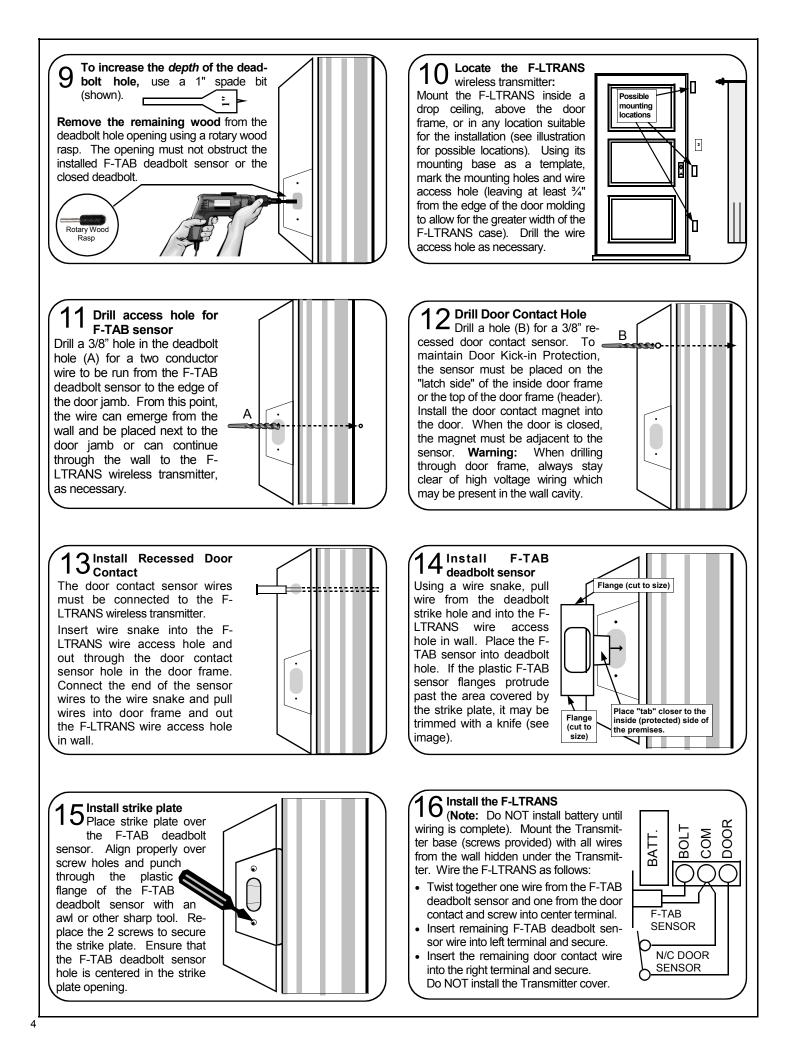
Primary and Secondary Transmitters

The Primary transmitter that is located in the same room as the Touchpad is designated as "Transmitter #1", *and its jumper must* **NOT** *be installed*.

If there is a Secondary transmitter installed ("Transmitter #2"), it MUST have a shunt on the Address jumper.





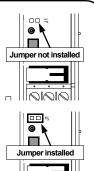


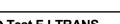
LEARN TRANSMITTERS AND TEST SYSTEM

7 Multiple Transmitters--Notes

The Primary transmitter that is located in the same room as the Touchpad is designated as "Transmitter #1", and its jumper must **NOT** be installed.

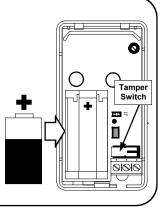
If there is a Secondary transmitter installed ("Transmitter #2"), it MUST have a shunt on the Address jumper. See page 2 for more information. **Remove all transmitter covers before proceeding.**





1 9 Test F-LTRANS Note: Transmitters CANNOT be programmed with their covers on. Remove all transmitter covers.

<u>Unlock and open door</u>. While pressing and holding the tamper switch, insert battery (as shown), then release the tamper switch.



1 Test Transmitters

- I. Close the door. The Touchpad should indicate "READY".
- 2. Press STAY (the STAY light flashes).
- 3. Engage the deadbolt. Both the ARMED and STAY lights on the Touchpad should turn on (the system armed STAY).
- 4. Disengage the deadbolt and the system should disarm and turn back off (READY light turns on).
- 5. Open the door. The Touchpad should sound a chime.

If there is a problem, see Troubleshooting on page 9.

To learn a second transmitter, start again at step 17.

23 IMPORTANT: Seal

First create a service loop of wires that is long enough to allow the receiver button to be pressed and the LED to be observed. Then seal the access holes with putty (supplied) to ensure

F-TP Touchpad is air tight.

This important step is neces-

sary to prevent air drafts from

entering the F-TP Touchpad

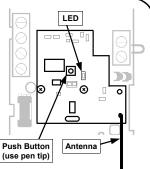
from the wall cavity.

18 Prepare Receiver to Learn Transmitters With all wiring in place, apply power to the control panel. (the Touchpad receiver will power up) To ensure that the receiver is cleared of all data, use a pen tip to push and hold the button in the center of the Touchpad (see

illustration) until the LED is on

steady, then release the button.

The LED will start flashing, indi-

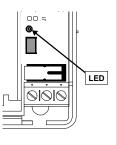


cating the receiver is in Learn Mode and ready to learn new transmitters.

$20^{(Cont'd)}$

For a few seconds, the transmitter will begin a self-diagnostic process, then the LED inside the F-LTRANS wireless transmitter will flicker, indicating the F-LTRANS is transmitting a signal to the receiver.

The Touchpad LED will stop flickering and a chime will sound-indicating that the transmitter is successfully programmed into the Touchpad memory.



22 Test Transmitter Signal Level

Test the transmitter to confirm signal strength. Press and release the tamper switch. The receiver LED should flicker in unison with the transmitter LED; if not, there is a problem with the installation (see Troubleshooting on page 9).

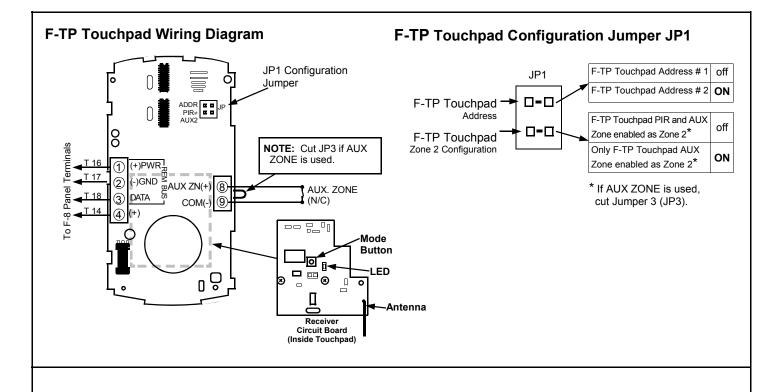
Close the Transmitter Case

Snap the front of the Transmitter cover onto the base by inserting the 2 slots in the top onto the corresponding tabs on the base and then snapping the bottom into place.

$24_{\scriptscriptstyle \mathsf{Face}}^{\scriptscriptstyle \mathsf{Install}}$ the F-TP Touchpad

Double-check all connections to the F-TP Touchpad using the wiring diagram as a guide. The antenna must be carefully pushed through the hole in the case and dangle down the inside of the wall (see step 3). Snap the front of the F-TP Touchpad onto the base by first inserting the 2 slots in the top onto the corresponding tabs on the base and then snapping the bottom into place.





F-TP Touchpad Address

Install JP1.1 for optional second F-TP Touchpad. Jumper should not be installed for F-TP Touchpad 1 or a single F-TP Touchpad installation.

F-TP Touchpad Zone 2 Configuration.

By default (JP1.2 not installed), the F-TP Touchpad's integral PIR AND the F-TP Touchpad AUX zone are configured as Zone 2 (or Zone 7 for optional F-TP Touchpad 2). A violation of either the F-TP Touchpad PIR or the AUX zone will cause a Zone 2 alarm if armed AWAY. If the AUX zone is used, the F-TP Touchpad's JP3 must be cut. See F-TP Touchpad Wiring Diagram above.

If JP1.2 jumper is installed, Zone 2 will be directed to only the AUX zone (Terminals 8 & 9). In this configuration, the F-TP Touchpad PIR will function only as an activity sensor and will not provide any protective burglary functions except to prevent an intruder from disarming the system when armed AWAY.

F-TP TOUCHPAD TERMINAL DESCRIPTIONS

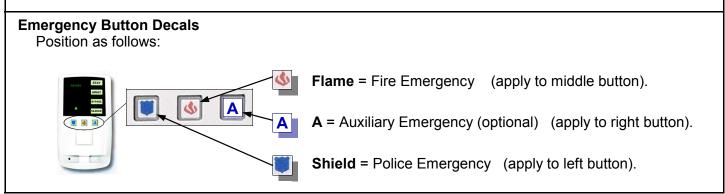
Terminals 1-3: F-TP Touchpad Data Bus Terminals The F-TP Touchpad communicates to the F-8 Panel via the F-8 Panel's 3-wire keypad bus. Wire the F-TP Touchpad to the F-8 Panel as shown on wiring diagram. Terminal 1 is + 12 V DC, Term 2 is GND and Term 3 is Data.

Terminal 4: Alarm Output

Terminal 4 is wired to terminal 14 (+ Bell) of the F-8 Panel to drive the internal alarm sounder of the F-TP Touchpad upon alarm.

Terminal 8 & 9: Zone 2-Aux. Zone

Terminals 8 & 9 are the connections for the Aux Zone. This zone may be wired to a motion sensor, glassbreak sensor, or a magnetic contact. Cut jumper JP3 to enable. If not used, the zone must be shorted. If a powered device is to be used, use terminal 1 (+ PWR) and 2 (GND) for power. Install JP1.2 jumper to disable the F-TP Touchpad PIR and enable AUX Zone as system Zone 2 (or Zone 7 for optional F-TP Touchpad 2).



F-TP TOUCHPAD PIR

The F-TP TOUCHPAD includes an integral PIR sensor which provides the following system functions:

Activity Sensor

The PIR is always gathering activity information which provides the system with data that is used to insure proper use of the system and prevent user errors. For example, if the user presses the AWAY button, opens and closes the door and locks the deadbolt but does not leave, the PIR will sense the user's presence in the home and automatically default to STAY mode arming, preventing a false alarm. If additional PIR sensors are installed, the activity of these sensors will also be included in these decision making processes.

Intrusion Protection Device

When the system is armed AWAY, the PIR provides intrusion protection with a range of 25' at a 90° pattern of protection. An intruder detected in this protected area will cause a Zone 2 alarm (or Zone 8 alarm for TP #2) with a corresponding central station report and audible alarm. **NOTE:** If Touchpad PIR Intrusion Protection is not desired, it may be disabled by installing configuration jumper JP1.2.

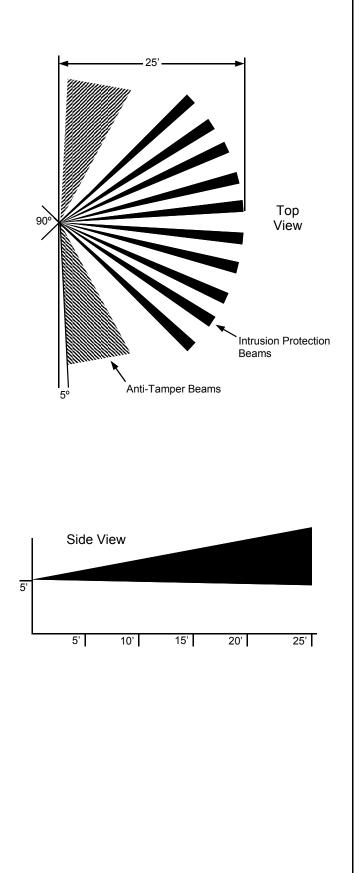
Anti-Tamper Protection

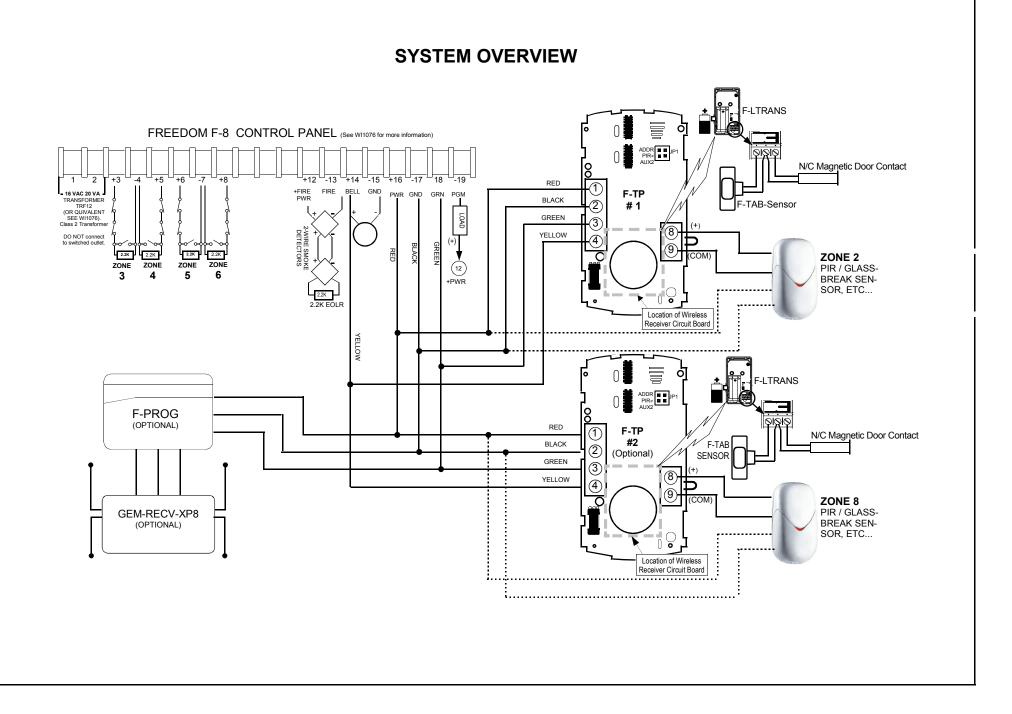
The Touchpad PIR also includes 2 side beams which provide tamper protection for the deadbolt. These side beams provide a 170° pattern of protection, which is intended to prevent an intruder from walking along the wall towards the Touchpad and deadbolt. If an intruder is detected in the Anti-Tamper zone, the system will be put into a lockout state for a period of several minutes, during which the system may only be disarmed with an F-IFOB. In cases where an extremely large signal is generated in the Anti-Tamper zone, an actual Zone 2 alarm (or zone 8 alarm for TP #2) may occur.

If a Secondary transmitter is installed (used only to monitor another deadbolt on exit and for entry), care must be taken to ensure an intruder can not disarm the system by turning the deadbolt latch at this Secondary transmitter. See **INSTALLING A SECOND F-LTRANS** on page 2 for more information.

NOTE: If there are windows on the wall on which the Touchpad is mounted, they should remain closed while system is armed in order to prevent a draft from causing an Anti-Tamper condition.

- If the deadbolt can be accessed from an area that is not covered by the pattern of protection provided by the Touchpad PIR, then additional protection is required. This may include protecting other doors and windows or additional space protection.
- If the Touchpad is installed adjacent to a door with glass panels or side lights, a glass-break sensor (connected to the F-TP Touchpad Aux. Zone) should be installed to insure the integrity of the system.





TROUBLESHOOTING

TOUCHPAD LIGHTS (ON FRONT OF TOUCHPAD) FAIL TO TURN ON WHEN POWER APPLIED

Check F-TP Touchpad power wires (terminals 1 and 2).

TOUCHPAD LIGHTS (ON FRONT OF TOUCHPAD) ALL FLASH TOGETHER WHEN POWER APPLIED

Green wire (terminal 3) either open or shorted.

TOUCHPAD RECEIVER LED ON STEADY

- 1. The receiver Touchpad is defective. Replace with a new F-TP Touchpad.
- 2. The receiver Touchpad is located in a noisy RF environment, which may make operation with a Secondary transmitter difficult.

TOUCHPAD RECEIVER LED FLASHING SLOWLY AND DOES NOT RESPOND TO INCOMING TRANSMISSIONS

The receiver is indicating a trouble, and its LED flashes the number of the transmitter (a sequence of 1 or 2) that most recently reported this trouble. **Note:** The receiver LED will revert to normal operation only after receiving at least 2 transmissions indicating the transmitter trouble was corrected. For example, if a transmitter low battery trouble is detected by the receiver, and the faulty transmitter is corrected with a new battery, at least two transmissions with the corrected battery will need to be received before the receiver LED will revert to normal operation. In addition, the touchpad Trouble light can flash *up to 4 minutes* after the trouble has been corrected.

THE TOUCHPAD FAILS TO CHIME* WHEN OPENING THE DOOR:

- The F-TP Touchpad may have a Secondary F-LTRANS wireless transmitter learned into its memory. Check to be sure that the door this second transmitter is protecting is closed. A door zone is open unless **both** F-LTRANS doors are closed.
- 2. Open the F-LTRANS wireless transmitter and check the transmitter LED flashes. See table below.
- 3. If no Secondary transmitter is intentionally learned, clear the F-TP Touchpad memory and re-learn the transmitter as follows: Using a pen tip, press and hold the F-TP Touchpad receiver button down (about 6 seconds) until the LED turns on steady. Release the button and the LED will flash rapidly, indicating the receiver is in Learn Mode with all pre-existing data erased.
- 4. Note: Transmitters CANNOT be programmed with their

covers on. Remove transmitter cover to be tested (cover for all other transmitters must be installed).

Unlock and open door. While pressing and holding the tamper switch, insert battery as shown, then release tamper switch. For a few seconds, the transmitter will begin a self-diagnostic process, then the LED inside the F-LTRANS will flicker, indicating the F-LTRANS is transmitting a signal to the receiver.

5. With the F-LTRANS cover off and battery installed, press and release the tamper switch. The Touchpad LED will stop flickering and a chime will sound from the Touchpad--indicating that the transmitter is successfully programmed into the Touchpad memory.

THE SYSTEM DOES NOT ARM

- On the F-TP Touchpad, the green READY light should be on. If the READY light is not on, there is another monitored deadbolt in the system (other than the primary exit door) that is unlocked. All other monitored deadbolts must be locked for the system to be able to arm.
- 2. Open the F-LTRANS and check the transmitter LED flashes. See table below.
- 3. If no Secondary transmitter is intentionally learned, clear the F-TP Touchpad memory and re-learn the transmitter as follows: Using a pen tip, press and hold the F-TP Touchpad receiver button down (about 6 seconds) until the LED turns on steady. Release the button and the LED will flash rapidly, indicating the receiver is in Learn Mode with all pre-existing data erased.
- Note: Transmitters CANNOT be programmed with their covers on. Remove transmitter cover to be tested (cover for all other transmitters must be installed).
 Unlock and open door. While pressing and holding the

Unlock and open door. While pressing and holding the tamper switch, insert battery as shown, then release tamper switch. For a few seconds, the transmitter will begin a self-diagnostic process, then the LED inside the F-LTRANS will flicker, indicating the F-LTRANS is transmitting a signal to the receiver.

5. With the F-LTRANS cover off and battery installed, press and release the tamper switch. The Touchpad LED will stop flickering and a chime will sound from the Touchpad--indicating that the transmitter is successfully programmed into the Touchpad memory.

F-LTRANS LED**	Problem	Solution
One flash every 2 seconds	Low battery.	Replace battery.
Two flashes every 2 seconds	F-TAB Sensor Trouble.	The wire to the F-TAB deadbolt sensor is open or shorted, or the F-TAB dead- bolt sensor is defective. The wires to terminals 1 and 2 shorted should read about 4 ohms.
Four flashes every second	Door Shorted.	The F-LTRANS wireless transmitter never sensed the door open during the F- TAB deadbolt sensor calibration sequence. Always open the door before learning transmitters.

F-I TRANS I ED INDICATIONS

* Be aware that the F-8 Control Panel may be programmed to disable Chime.

** The LED will not flash if the tamper is held down (if cover is on).

NOTES

THIS PAGE INTENTIONALLY LEFT BLANK

