

Specifications:

Operating Voltage	9VDC to 15VDC	LCD Transceiver Battery:	1.5V AAA
Frequency	433.92 MHZ	Static Current Control Unit:	<6ma.
Modulation	FSK	Static Current Remote:	<100ua

**Internatrix Motorcycle Security System**

**TW-1000**

**FCC ID : WW6TW-1000**

This device complies with part 15 of the FCC Rules. 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.

**Freq. 433.92 MHz**

Country of Origin: China

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 can 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:

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

**Internatrix, LLC**

[www.internatrix.com](http://www.internatrix.com)

**InterNatrix**  
**Motorcycle Security System**

**Model TW-1000**

**Installation Guide and  
Owners Manual**

<http://www.internatrix.com>

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Dear Customer,

Thank you for purchasing the InterNatrix Model TW-1000 Motorcycle Security System. The TW-1000 is the second generation Internatrix Alarm\* and is one of the best , if not the best price/performance alarm on the market today.

Installation of the alarm is not difficult, but it does require a few basic skills and some knowledge about your motorcycle. If you have any doubts about your skill, you may prefer to have a professional do the installation, or consider the minimal installation (see manual), and let the professional install the final wires for the ignition disable and directional flashing.

Internatrix has provided you with a quality product, the TW-1000 has gone through a burn in and has been final tested and programed before shipping. Please remember that you are installing the TW-1000 on a motorcycle and extra care should be taken in the installation. If you plan on riding in extreme conditions you may want to use conductive grease on the connector pins and seal all the connections with RTV after the installation and initial test.

Providing our customers with a quality product at a fair price is one our goals, another goal is customer satisfaction. Each TW-1000 receives a final test as a complete unit before shipment .

Please take the time to read the following Installation guide lines. We also have a complete FAQ on our web site, along with some photos of actual installations.

We are always interested in hearing from our customers, if you have any comments, or suggestions please let us know.

Thank you for buying our product and Safe Riding.

InterNatrix

**TW-1000 Security System**  
**ONE-YEAR LIMITED WARRANTY**

*This product is warranted to the original consumer purchaser for a period of one(1) year from the original purchase date. This product is warranted against defective materials or workmanship. This warranty is void if the product has been damaged by accident, unreasonable use, misuse, neglect, improper installation, improper use, repairs by unauthorized personnel or other causes not arising out of defects in materials or workmanship. This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume for Internatrix, LLC any other liability in connection with the sale of this product. There shall be no claims for defects or failure of performance or product failure under any theory of tort, contract or commercial law including, but not limited to, negligence, gross negligence, strict liability, breach of warranty and breach of contract. Internatrix, LLC is not responsible or liable for indirect, special or consequential damages arising out of or in connections with the use or performance of the product or other damages with respect to loss of property, or loss of revenues or profit. During the one year period, a product with a defect will be either repaired or replaced with a reconditioned comparable model ( at Internatrix, LLC option) when the product is returned to Internatrix, LLC. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights that vary from state to state. Proof of purchase in the form of a bill of sale or receipted invoice that is evident that the unit is within the warranty period must be supplied to obtain warranty service.*

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

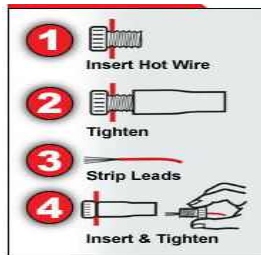
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\* First generation was the TW-400

**Emergency Disarm** – If the alarm is armed and you loose or damage the remote control, the TW-1000 will allow you to disarm the alarm without the remote, however you must have the key for your motorcycle. When using this technique the alarm will go into the Panic mode until the procedure is completed. Turn the ignition switch from off to on 10 times repeatedly, on the 10<sup>th</sup> time leave the ignition switch on for 2 seconds until the alarm is disarmed. Once disarmed the alarm can not be re-armed until the unlock button on an already programed remote is pressed or a new remote is programed to the alarm.

**Anti-Hijacking** – To activate the anti hijacking mode, press and hold the lock key on the front of the remote for 2 seconds. The lights on the motorcycle will blink on and off and the siren will go into panic mode. In 20 seconds the ignition disable will activate. The alarm will remain in this state until the unlock button is pressed.

### Additional Information



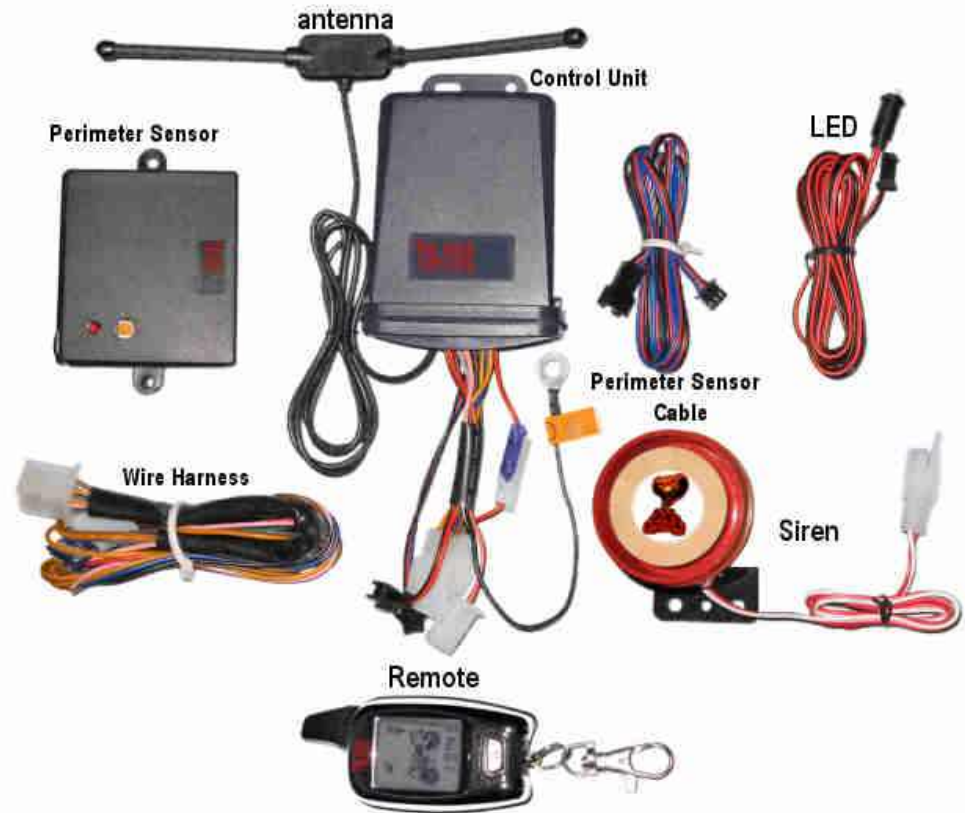
### Using the Posi-Taps

Posi-taps have been provided to make your installation easier. Unscrew the base of the posi-tap and slip it on the wire you wish to splice into such as the directional signal wires. Screw the body back on the base and the pin in the body will penetrate the wire insulation. Remove the top, strip ¼" of insulation from the wire you wish to connect, insert in the the top and screw into the body of the Posi-Tap. The connection is made without cutting splicing or soldering the wires.

(12)

### List of Components

Control Unit – 4" x 2 7/8" x 1 1/4"  
 LCD Transceiver/Pager - 2 7/8" x 1 3/8" x 5/8"  
 Siren – 2 " Diameter x 1 7/8" High  
 LED – High Intensity Blue  
 Antenna – 5/8" x 1 1/2" x 3/8" with 2 2 1/2" antennas  
 Perimeter Sensor – 2 5/8" x 2 1/4" x 1/2"  
 Wiring Harness  
 Battery – 1.5V "AAA"



(1)

## Getting Familiar with the TW-1000

All our systems are tested and programmed before shipping. However, you might want to familiarize yourself with the alarm before you start the actual installation. You can check the basic functions of the alarm by connecting 2 wires. Connect the red wire to Battery Positive (12VDC) and the black wires (the one in the harness) to the Battery Negative (ground). Plug in the siren, LED, and perimeter sensor (be careful plugging and unplugging the perimeter sensor .)

On the remote slide the battery cover down to remove, and insert the AAA battery in the remote, with the (+) to the left looking at the back of the remote. When the battery is inserted the remote will play a cascading tune and the icons on the LCD will be displayed.

Pressing the lock button once will arm the alarm and cause the alarm to shriek once and the remote to play two notes and display the speaker icon. Pressing the lock button a second time will put the alarm in to silent mode and speaker icon will now have a diagonal line through it Pressing the unlock button disengages the alarm.

The brown wire will be connected to a point on the motorcycle that receives +12VDC when the ignition switch is in the On position (such as the ACC), and receives no voltage when the ignition switch is in the Off position. The brown wire performs 2 functions:

1) To activate the reminder function. With the alarm in an unarmed condition, touch the brown wire to the (+) on the battery and then remove it, this simulates the ignition going from the On position to the Off position and will activate the reminder. The alarm will give 3 short chirps and then the remote will vibrate play a tune and blink the display indicating the alarm is not set.

2) When the alarm is armed turning the ignition to the On position will place the alarm in panic mode, this can be simulated by pressing the lock button to arm the alarm and then touching the brown wire to (+) 12VDC simulating the key being turned on the motorcycle, the alarm will panic and remote will vibrate and light display danger icons and an audible tone. For further information on other features such as the perimeter sensor see the rest of the manual.

- The remote will make a twinkling sound and the screen will turn green and go out. Adjust the sensitivity by pressing the Lock button on the front of the remote and releasing. The sensitivity is changed each time you press the lock button is the alarm acknowledges by the number of shrieks that come from the siren ranging from 1 to 5. When the desired level is archived hold the unlock button until the alarm gives double shriek and the remote screen turns green and goes out, the sensitivity is now set.

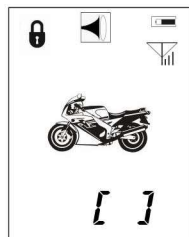
**Activating the Perimeter Sensor, setting the Time and Alarm** – The time, alarm and activation and deactivation of the perimeter sensor are all set with this procedure. Press the lock and unlock button simultaneously for about 1 second, this will put the remote in the program mode for these 3 functions. The screen will turn green and “set time will be displayed in the upper left of the LCD screen and the minutes display will start blinking. Pressing the unlock button changes the setting within the function, for example when the minutes are blinking pressing the unlock button will increment the minutes. Pressing the Lock key changes the function. TIME SET – Minutes -> TIME SET –Hour -> ALARM ON/OFF -> ALARM SET -Minutes -> ALARM SET- hour -> PERIMETER SENSOR ON/OFF -> SAVE/EXIT. The Perimeter sensor is on when the Perimeter icons [ ] are blinking, when they are solid the perimeter sensor is off. To exit the setup mode, press the lock button to toggle through the functions until the top of the screen displays SET on one side and EXIT on the other side. Press the lock and unlock together the siren will chirp and the remote will return to stand by mode. See following Diagram.



**Power Off Memory-** If the battery is removed and replaced the TW-1000 will return to its prior status, when power is re-applied.

**Auto-rearm** – If the alarm is armed and the unlock button is pressed the alarm will disarm, if the motorcycle is not started in 25 seconds it will assume that it was a false disarm signal and re-arm the alarm and signal the remote it re-armed.

**Motion Sensor (perimeter sensor)** – if the alarm is set so the perimeter sensor is on and the microwave detector detects any movement for 5 seconds the alarm will shriek 5 times ( unless in the silent mode ), flash the lights on the motorcycle, disable the ignition and turn the display green on the remote, display the perimeter icon [ ] and flash the headlight icon. If the microwave detector detects movement for 15 seconds the lights will flash the alarm will sound to 30 seconds in various tones (unless in silent mode), disable the ignition and the remote will turn yellow display the perimeter icon [ ] and blink the headlight icon and display the hammer icon. Note: see section on setting the Perimeter sensor, time and alarm. See Diagram



**Motorcycle Locator** – Pressing the  bell button the side of the remote causes the siren to sound and go through it's various tones to aid in locating the motorcycle. Pressing the bell button again will silence the siren and return to it's original status

**LED** – The LED blinks twice every 2 seconds when the system is armed. If the alarm was tripped the LED will blink 4 times every 2 seconds until the alarm is reset (ignition switch turned on then off) .

**Back Light** – press any button and the remote will light 2 seconds.

**Battery Indicator** – The LCD transceiver also has a battery icon that indicates the state of the battery. Note: when inserting the battery, the LCD/remote will play a tune and display each of the icons on the display, as it does a self check.

**Antenna Icon** – The LCD also has an antenna icon with power bars to indicate the remote in contact with the motorcycle.

**Setting The Shock Sensor Sensitivity** – The shock sensor has 5 levels of sensitivity that can be set from the remote. 1 is the most sensitive and 5 is the least sensitive. The alarm is set to 3 when you receive it. To change the sensitivity:

- Make sure the alarm is not armed.
- Press and hold the unlock button until the siren shrieks once.

## Instructions

All the basic components required including connectors and wire ties have been shipped with the TW-1000.

However, before beginning the installation of your alarm there are a couple of items that you may want to consider purchasing for the installation. If you will be riding in extreme conditions, you may want to purchase some conductive grease for the pins on the connectors and a tube of RTV silicone to seal the final connections on the connectors.

The next thing is to determine what features you want to install on your motorcycle. For the sake of simplicity there are three different levels of wiring the alarm.

The first requires no skill and consists of connecting 3 wires, one to the battery positive(+), one to the battery negative(-) and on to the motorcycle frame. Of course you will have to plug in the siren, LED and perimeter sensor. With these 3 wires connected the alarm has all the features, with the exception of the ignition switch protection, reminding, ignition disable and flashing directionals.

Second, to add the reminding and ignition switch protection, one additional wire (Brown) has to be wired to the ACC terminal on your ignition switch or to any point that receives +12VDC when the ignition switch is on and no power when the ignition switch is off.

Third, two wires (yellow) can be wired to the directional signal wires to cause the directional signals to blink when the alarm is alarming or changing functions.

Finally, two wires (pink & Gray) can be added to disable the ignition. (Note: wiring to your directionals and the ignition disable require some knowledge of your motorcycle and some basic wiring ability)

## The Installation

**Determine where to place the components** – Most motorcycles have a limited amount of space, it is recommended that you place all the components where you would like to install them before doing any wiring. Our WEB page <http://www.internatrix.com> has some examples. This is one of the most important parts of the installation, so take your time and plan your installation well. The dimensions of the various parts are on the previous page. On some bikes it may take some real ingenuity.

**Control Unit** – Generally the control unit can be mounted under the seat, in the toolbox, tail section, or select a location best for your motorcycle that will have minimal exposure to water and excessive heat. If mounting under the seat, make sure the seat can be replaced without damaging the control unit.

**Antenna** – The Antenna can be mounted in any location with minimal exposure to water and heat, such as under the seat or any location that is best for your motorcycle that will have minimal exposure to water or excessive heat. Do not secure the antenna until you have tested the alarm, in case it is necessary to re-position, for greater range.

**Siren** - The siren can also be mounted in any location using the double sided tape. Where ever you feel is best for your bike ,see our WEB page for examples. When mounting the Siren try and place it in a location that is somewhat hidden from plain sight, but will not block the sound.

**LED** – The LED can be mounted in any convenient place but we recommend that it be attach to the frame using tie wraps and double sided tape. Or drilling a whole in your license plate and mounting where there will be no permanent hole in the motorcycle. Note: this is a high intensity LED.

**Perimeter Sensor** – The perimeter sensor is a microwave detector, it will detect any movement by transmitting a very low power microwave signal. The signal will transmit thru the seat, so it is recommended to mount under the seat, or on any horizontal surface that will have a minimal exposure to water and excessive heat. Since the signal is balloon shaped it is best that the sensor is mounted horizontal to allow the signal to surround the sensor. After installing and testing the alarm it may be necessary to adjust the sensitivity. The sensitivity can be adjusted by watching the red LED on the motion sensor and adjusting the potentiometer on the sensor. After adjusting, place a small piece of electrical tape over the adjustment hole.

Note: The Perimeter sensor range is limited by design, to prevent the alarm from alarming when an automobile parks next to the motorcycle or a person walks past the motorcycle.

(4)


If triggered by shock again within 10 seconds after being triggered the first time the siren will sound for 30 seconds with several different sounds, the ignition will be disengaged and the remote will be yellow showing the shock and headlight icons and will vibrate 8 times after alarming. When the alarm has been tripped the LED will continue to blink at a rapid rate indicating the alarm was tripped. The alarm also will return to the armed standby level.

**Silent mode** – If the lock button on the front of the alarm is pressed a second time the alarm will go into the silent mode. In the silent mode the remote will display a diagonal line through the speaker to indicate the alarm is in the silent mode. The remote will display the same as in the normal mode, the lights will flash on the motorcycle but the siren will be silent.

**Panic Mode** – If the alarm is armed, and an attempt is made to start the motorcycle the alarm will panic. The remote will flash green to red and display the headlight icon the shock icon and the exhaust icon, disengage the ignition and shriek the siren in various modes for 30 seconds. In the panic mode the silent mode of the alarm is over ridden.

**Siren Pause** – When the alarm is alarming, pressing the lock button on the remote will pause the alarm .

**Arm reminder** – After turning off the ignition, if the system is not armed in 8 seconds the alarm will give 3 short chirps of the siren flash the lights and vibrate the remote as a reminder to arm the system.

**Disarming the Alarm** – Press the  unlock button on the side of the remote to disarm the alarm system.. The LCD Remote will display the following:



If the engine is not started within 25 seconds, the alarm will consider it a false disarm and re-arm the system. To override the false disarm, press the unlock button, wait 5 seconds and press it a second time.

(9)




## Operating Instructions

**Encoding the LCD Remote/s** –The alarm is shipped with the remote/s already programed, programing should not be required unless you purchased a replacement remote.

### With the alarm not armed!

Press the button on the back of the control unit and hold until the LED comes on, press any button on the remote and the LED will flash twice and the siren shriek twice and the remote will play a tune indicating the code was learned. If programing a second remote, while the button is still pushed, press any button on the second remote, the LED will flash 4 times and the alarm will shriek 4 times and the remote will play a tune indicating the code was learned.

**Arming the Alarm** – Press the  lock button the front of the remote once, the siren will sound once, and the lights will flash once. In three seconds the system will **arm** and the LED will blink twice every two seconds. The remote will display the lock icon and the speaker icon as shown in the diagram.



When triggered by shock for the first time, the siren will sound 5 times, the lights will flash 5 times and the ignition will be disengaged. The LCD transceiver will turn green display the shock and headlight icons as shown in the diagram.



(8)

## Wiring the Alarm

The alarm is supplied with several plugs and connectors and a wiring harness to make the installation simple. However, if you are not comfortable installing your own alarm you may prefer to have a professional do the installation. You may also elect to do a minimal installation yourself and have the final 4 wires installed by a professional. In a minimal installation, you would not connect the two yellow wires to your turn signals or the gray wire and pink wire used for the ignition disable function. In a minimal installation, the lights would not blink and the ignition would not be disabled when in alarm condition, all other functions would work.

- 1) Plug the LED connector into the matching connector on the Control Unit.
- 2) Plug the Siren Connector into the matching connector on the Control Unit.
- 3) Plug the cable with the connector from the control box into the matching connector on the Perimeter sensor cable and the other end into the Perimeter sensor. Be careful when unplugging, do not pull off by the wire.
- 4) Connect the Black wire coming out of the control unit to frame ground, with the supplied connector. (This is not the black wire in the wiring harness).

The alarm is supplied with a wiring harness that plugs into a connector on the Control Unit. Wire the harness before plugging into the control unit. We recommend that you remove the fuse.

- 1) Black Wire – To the battery Ground (-). Use the supplied crimp lug.
- 2) Red Wire (with fuse) – To Battery Positive (+). Use the supplied Crimp lug.
- 3) Brown wire to ACC on the key switch. Use the small crimp lug. This can be determined by the Motorcycle manual wiring diagram or using a meter to determine what contact gets +12VDC when the key switch is in ACC position. If you do not have an ACC on your motorcycle, connect this wire to any circuit that gets +12VDC when the ignition switch is in the on position, and no voltage when in the off position.
- 4) Yellow Wires (2) – Using the supplied Posi-Taps, One wire goes to the right directional and one to the left directional, this can be determined by the Motorcycle manual wiring diagram, or by tracing the wires from the rear directional. This connection is optional, and causes the directional lights to flash when in alarm condition. If you are doing a minimal configuration, do not connect these wires.

**Caution!! If these wires are not connected make sure they are insulated from ground.**

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5) Gray Wire and Pink Wire are for the ignition disable feature.

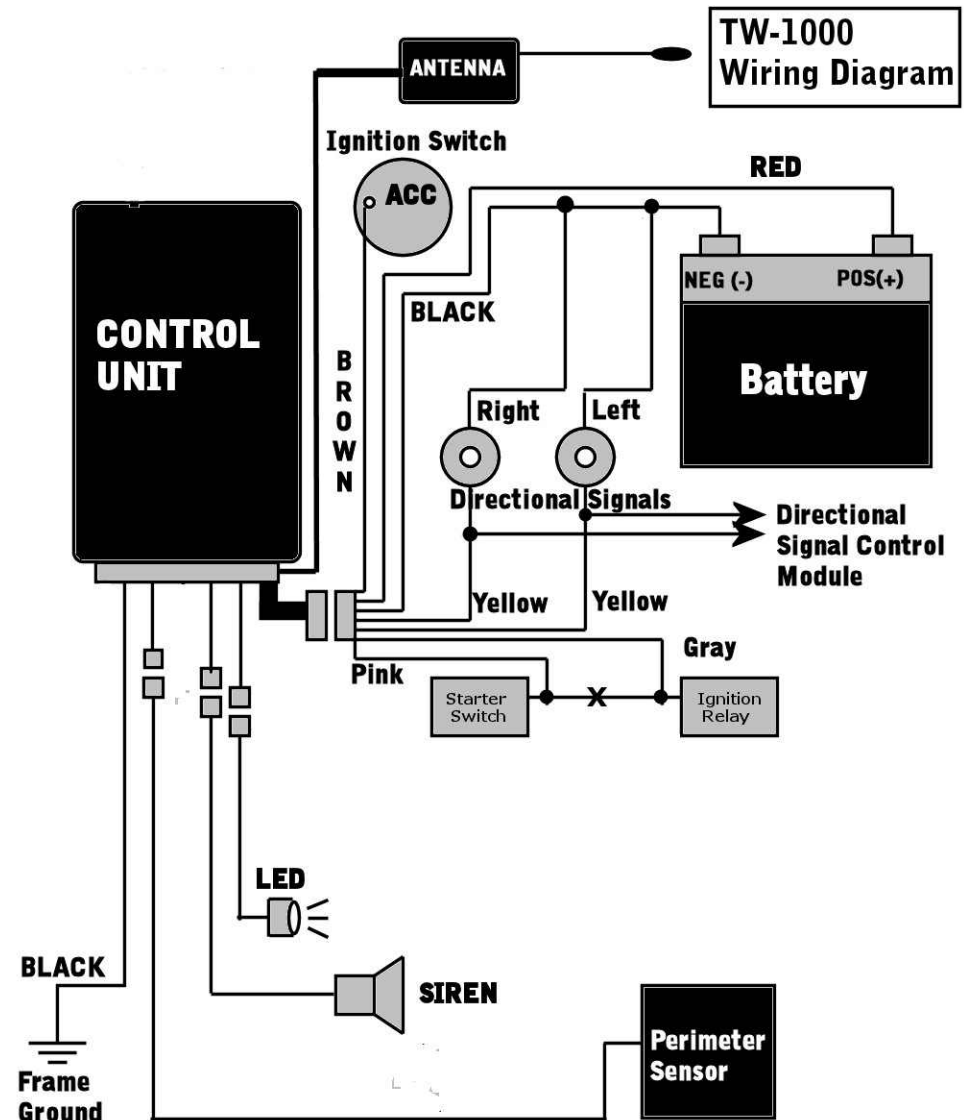
The pink and gray wires are connected to the contacts on a Normally Closed relay in the control unit. When the alarm is off or in the arm mode the connection acts as closed switch, between the pink and gray wires. When the system alarms the relay opens and breaks the circuit and acts as an opened switch, between the pink and gray wires. Since the connection is normally closed, and only opened in alarm condition, if the alarm became non functional for some reason the motorcycle would still run as usual. Refer to the wiring diagram on page 7. The best way to wire in the ignition disable can vary from motorcycle to motorcycle and personal preferences. We recommend connecting the ignition disable between the starter switch and starter relay, this prevents the bike from being started when the alarm is an alarming condition.

**Caution:** When connecting the ignition disable, use the suggested method between the Starter switch and starter relay, other methods could cause the bike to loose power if the lock button is accidentally pressed.

**Installing the Battery in the LCD Remote** – Slide the battery cover down and insert the supplied AAA battery into the LCD remote, with positive (+) terminal to the left side when looking at the back (non spring side). The LCD transceiver will play a tune, while displaying the various icons on the LCD.



(6)



(7)