

# **CYCLONE™**

**MOTORCYCLE SECURITY**

# **866F**

**ADVANCED MOTORCYCLE SECURITY**



*Owner's Guide*



*FreyMoto*  
Industries

© 2006-2011 All Rights Reserved

Ver. 2.4, Apr.'11

**Thank you** for purchasing this CYCLONE 866F Motorcycle Security System. The 866F is a state of the art device that will provide you with years of trouble free service if used properly. Please familiarize yourself with the content of this Owner's Guide to get the most out of your new system. We trust you will enjoy using the product.

# TABLE OF CONTENTS

---

---

<b>Limited Lifetime Warranty</b> .....	<b>1</b>
<b>Technical Specifications</b> .....	<b>2</b>
Alarm Unit .....	2
Status LED .....	2
Transmitter .....	2
<b>System Overview</b> .....	<b>3</b>
Hardware .....	3
Options .....	3
Included Items .....	3
<b>Main Features Explained</b> .....	<b>4</b>
<b>Installation</b> .....	<b>5</b>
Before You Begin .....	5
Connecting & Mounting the Alarm Unit .....	6
After Installation Testing .....	8
Shock Sensor Adjustments .....	9
<b>System Operation</b> .....	<b>4</b>
Transmitter Functions .....	11
Feature Programming .....	14
Transmitter Learning .....	17
<b>Troubleshooting</b> .....	<b>18</b>
<b>Quick Reference Guide</b> .....	<b>19</b>

**NOTICE!** Although reasonable efforts have been taken to ensure accuracy in this Owner's Guide, FreyMoto Industries shall not be held liable for any errors, omissions, property damage, loss or injury resulting from the use of this information.

All product specifications and features are subject to change without notice.

## LIMITED LIFETIME WARRANTY

---

---

The CYCLONE 866F system alarm unit and transmitter are backed by a limited lifetime warranty against defective components and/or improper product assembly to the original purchaser for as long the vehicle is owned by that same purchaser, contingent upon proper product installation. All product warranties become void if the CYCLONE 866F system was not installed properly or the system is moved to another vehicle. All other parts and/or accessories that connect to CYCLONE 866F systems, including the internal backup battery, are warranted for one (1) year from the original date of purchase. Any damage caused to the alarm system by internal backup battery failure is covered only for one (1) year from the original date of purchase. (Transmitter batteries are not covered under this warranty.)

During the warranty period, FreyMoto will repair or replace, at its sole discretion, any system component that is found defective in material or assembly during the warranty period, provided that the product is returned to FreyMoto with a clear and legible copy of the original purchaser's receipt. Any malfunction or damage to your CYCLONE 866F system that results from *water, electronic shorts, normal wear-and-tear, accidents, improper use, neglect, faulty wiring, charging or changing the bike's battery without first disconnecting Cyclone's main wiring harness, incorrect installation, improper mounting, opening the alarm unit case without written approval to do so from FreyMoto, alteration or repair outside FreyMoto or its certified dealers* immediately voids this warranty.

This warranty is limited to defective parts only and does not provide any compensation whatsoever for damages associated with the CYCLONE 866F system or its accessories. This warranty does not cover installation labor, product removal and/or reinstallation fees. This warranty is valid for the original purchaser only and may not be transferred to another party. FreyMoto makes no warranty against theft or vandalism of the vehicle in which the CYCLONE 866F system was installed. This warranty shall not be interpreted as an insurance policy against loss, nor shall FreyMoto be liable in any way for such loss, financial or otherwise.

**⚠ WARNING! DO NOT ATTEMPT TO INSTALL THIS CYCLONE 866F PRODUCT YOURSELF UNLESS YOU HAVE SPOKEN TO FREYMOTO IN ADVANCE TO LEARN WHAT IS REQUIRED. YOUR WARRANTY IS VALID WITHOUT PROFESSIONAL INSTALLATION, HOWEVER PROFESSIONAL INSTALLATION IS HIGHLY RECOMMENDED.**

# TECHNICAL SPECIFICATIONS

## Alarm Unit

<b>Operating Voltage:</b>	12Vdc (8v min.; 15v max.)
<b>Current Consumption:</b>	Armed or Disarmed = 4.9mA (@8.0~13.0vdc, AVG.); Full Siren Blast = 270mA; SLEEP = 1.7mA (Immob. Off)
<b>Int. Battery Charging:</b>	Approx. 3~7 hours (while IG=ON, Temp. = 0~65°C)
<b>Int. Batt. Siren Duration:</b>	1 hour (battery used only when 12v line is cut)
<b>LED Flashing (Armed):</b>	1 flash every 2 sec. (LED is off when Disarmed/SLEEP)
<b>Operating Temp.:</b>	-20°C to +65°C (limited by specifications of int. batt.)
<b>Siren Blast Volume:</b>	120dB @ 30cm/1ft. (105dB when driven by int. batt.)
<b>Siren Chirp Volume:</b>	110dB @ 30cm/1ft. ("Soft Chirp")
<b>Housing:</b>	Water-resistant ( <u>not</u> "waterproof")

## Status LED

<b>Light Color:</b>	Blue
<b>Housing:</b>	Waterproof (intended for outside-bike use)

## Transmitter

<b>RF Output:</b>	303.875MHz (SAW filter)
<b>Digital Code:</b>	66-bit Rolling Code (anti code grabbing)
<b>Batteries:</b>	Two CR1616, 3V Lithium cells
<b>Transmit Range:</b>	15m / 50ft. (typical in-city use)
<b>Batt. Life:</b>	1 year avg. @ 6 presses per day
<b>Housing:</b>	Waterproof (submergible to 2 meters)

### TRANSMITTER NOTES:

- *Even though the transmitter is waterproof, it is not advised to swim or surf or dive with the transmitter, or press buttons underwater. If water does get inside, immediately remove the batteries and allow to thoroughly dry out for 24 hours.*
- *Avoid leaving in direct sunlight for extended periods, and avoid leaving near sources of intense heat.*
- *There are no screws used to hold the case together. To open, you may use a flat head screw driver, but note that excessive force may dent the plastic.*

# SYSTEM OVERVIEW

## Hardware

- World's smallest all-in-one security system for motorcycles.
- Built-in Digital Tilt Sensor (3° alarm trigger)
- Built-in 2-stage Shock Sensor (separate adjustments for 1st/2nd stages)
- Built-in High Power 120dB Piezo Siren (selectable 10s or 30s blast duration)
- Built-in Backup Battery (activates siren if Armed & main power disrupted)
- Built-in Starter Immobilizer Relay (25A "switching")
- Waterproof System Status LED (cool blue illumination)
- Waterproof 2-button rolling code RF transmitter (2<sup>66</sup> codes)
- Water-resistant Alarm Unit Housing

## Options

- Pro Install Kit (bike-specific kit that makes installation faster and easier)
- Spare/Replacement 2-Button Transmitters
- Pager Output for adding 3rd party paging or tracking systems.

## Included Items

QTY	DESCRIPTION	DIMENSIONS (mm)
1	Alarm Unit	58 x 83 x 28
1	Transmitter	32 x 52 x 14
1	2-Sided Tape (for Alarm Unit)	42 x 1.2
2	Wire Ties (for Alarm Unit)	250 (length)
1	Mini Phillips (+) Head Screw Driver	42 (length), 3 (head)
1	Universal Installation Harness	1500 (wire length)
1	LED	20 (body diameter) 1500 (wire length)

# MAIN FEATURES EXPLAINED

---

---

---

- **Digital Tilt Sensor**

When armed, system records bike inclination on two separate axis. If bike is then tilted  $\pm 3^\circ$  or more on either axis, the siren will be triggered. Note that the siren may trigger even when bike has not been tilted due to the shock sensor.

- **2-Stage Shock Sensor**

When armed, system can be set to trigger Warning Chirps and/or Full Siren Blast based on the level of shock to the bike. Sensor 1st and 2nd stage triggers are user-adjustable, and either setting or both can be turned completely off.

- **Starter Immobilizer**

Used to cut ignition or fuel lines when system is Armed (optional in Sleep).

- **Panic Siren**

Allows siren to be activated via transmitter to alert others in an emergency.

- **Sleep Mode**

Shuts down most functions to conserve power. Useful to prevent battery drain when bike not used for extended periods. Also acts as a **Valet mode**.

- **Silent Mode**

Disables full siren blast and Warning chips, but allows Confirmation chirps. Useful when using an optional paging system without alerting the thief.

- **Manual Disarm**

Allows you to disarm the system if you lose your transmitter or its battery dies. (See bottom of page 11 for details.)

- **Auto Arm**

*NOTE: CYCLONE will never Auto Arm while the Ignition is on.*

Enabled by default. When enabled, Arms 5 min. after the ignition goes off. You can also program which sensors are to be enabled for Auto Arm (pg. 14).

- **Sector Bypass System (SBS)**

Prevents siren from becoming a public nuisance. Shock, tilt or ignition sensors will be individually bypassed if they trigger 5 times. You can disable this feature.

- **Siren Trigger Memory**

When you disarm, system informs you (via siren chirps and LED flashes) if the siren went off in your absence.

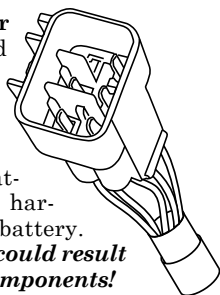
# INSTALLATION

## Before You Begin

**⚠ WARNING!** Never route security system wires in a way that would impede safe operation of the vehicle in which you are installing. Ensure the operator of the vehicle cannot become tangled in security system wires or otherwise be hindered in a way that could cause a traffic accident. Take time to ensure all wiring is connected, mounted and covered so that electrical shorts will not occur. As the installer, you are responsible to verify the safety of your work.

### ⚠ POINTS TO CONSIDER:

- This system is only intended for use in vehicles with 12v batteries.
- The **5-pin Alarm Unit main wiring connector** (pictured at right) which mates with the included Installation Harness is waterproof but the other two (smaller) connectors are not waterproof. Protect the smaller 2-pin connectors from water.
- If you need to disconnect or charge your bike's battery, **FIRST** disarm then disconnect main wiring harness at the connector AND **THEN** disconnect the battery.  
**⚠ Failure to disconnect the Cyclone harness first could result in damage to Cyclone's speaker or other alarm components!**
- When operating the 866F, if you see smoke or detect some abnormal operation, immediately discontinue using the system and consult with the vendor who sold you the CYCLONE system.
- In cases where the bike is not driven for an extended period (greater than 2 weeks) or in the event the battery voltage is already very low, it is strongly suggested to either use SLEEP mode or start the engine from time to time to ensure the battery does not die. You may also wish to check the battery voltage now and then if you have other 3rd party electronics installed.
- If the battery dies or the voltage level drops very low, the 866F may not have adequate voltage to function properly. In this case, you will not be able to start the engine (due to the immobilizer) until the battery is recharged. ⚠ Disconnect Cyclone's harness **before** charging your battery!





## ⚠ CAUTIONARY POINTS:

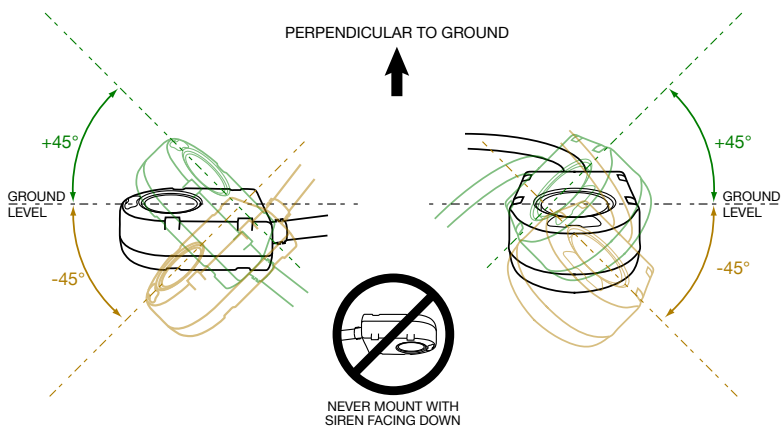
- Although the 866F alarm unit is water-resistant, it must NEVER be submerged in water. Your installation location must NEVER allow water to collect around, spray onto, or flow over the alarm. Install only where protected from the outside elements, such as within the seat. WATER DAMAGE IS NOT COVERED UNDER WARRANTY.
- Do not leave the 866F mounted in locations with condensing humidity, high temperatures, and/or a high concentration of dust or airborne particles.

## Connecting & Mounting the Alarm Unit

**⚠ IMPORTANT!** *The installation described here does not include details of connecting the Universal Installation Harness. Please consult the CYCLONE Installation Guide for a detailed wiring diagram and further instructions. Once the Universal Installation Harness is installed, you may then continue the installation according to the following 4 steps.*

- 1. Ensure the bike's battery is connected and the Installation Harness is properly installed.**
- 2. Plug the Installation Harness connector into the 5-pin Alarm Unit main wiring connector.** Note that the full alarm blast will go off when the connection is made. Press button-1 on the transmitter (for about 1 sec.) to stop the siren sound. The siren will then chirp 3 times to confirm the system is disarmed. *(If you later need to disconnect the vehicle battery, remember to first disconnect the Alarm Unit main wiring connector and then you may proceed with disconnecting the battery.)*
- 3. Consider a mounting location for the 866F alarm unit somewhere inside the seat.** ALWAYS PROTECT THE ALARM UNIT FROM WATER! Keep in mind that your mounting location may impact the range of the transmitter. If you later find the transmitter range to be unacceptable, you will need to relocate the 866F alarm unit. For this reason it may be best to avoid affixing the 2-sided tape or the wire ties until you have confirmed that the transmitter range is acceptable. (Included tape is useful for flat-surface mounting, while the wire ties are for mounting the alarm unit on a support bar.)

**Proper Mounting Tips.** Mounting the 866F alarm unit on its side (with the siren facing to the side instead of straight up) may cause sensitivity problems for the onboard tilt sensor. Prior to mounting, it is recommended that you first test the operation of the tilt sensor to confirm it will work in your intended mounting position. To help you decide an appropriate mounting position, please consider **Fig. 1** below.

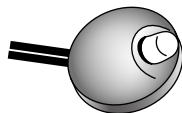


**FIG. 1** Positioning the alarm unit for maximum tilt sensitivity

As shown, the tilt sensor achieves maximum sensitivity when the siren is mounted face-up. Sensitivity declines rapidly for tilt angles outside the  $\pm 45^\circ$  shown (on two axis).

For some bikes, vertical mounting may be the only means of installing the alarm unit. In this case the tilt sensor may still work, but the sensitivity will be adversely affected. This may or may not be acceptable to the user. However, you must avoid mounting the alarm unit face down because it may cause the tilt sensor to false-trigger the siren.

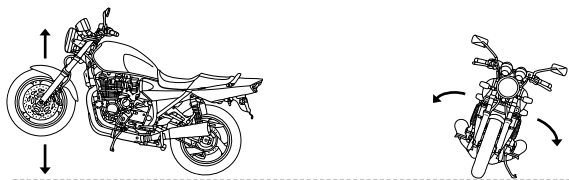
- Now it's time to connect the Status LED.** Note that there are two "2-pin" connectors at end of the alarm unit harness. The larger of the two plugs is for connecting to an optional paging system. The smaller connector is the one you plug into the LED connector.



After connecting, run the LED to a suitable location on the bike, preferably near the ignition keyswitch (for visibility). The circular LED body is waterproof, so you are relatively free to mount it anywhere, so long as the 2-sided tape on the bottom can adhere to the mounting surface.

### After Installation Testing

**TILT SENSOR.** With Cyclone Armed, tilt the bike on two axis (see diagram below) and ensure the siren blasts for 10 or 30 sec. (*program preset*). After an 8 sec. delay, the siren should go off again if the bike remains tilted. (*NOTE: After tilting, it may take up to 3s for the siren to go off.*)



**SHOCK SENSOR.** When light shocks are administered to the bike, the siren should generate 2 chirps. Harder shocks should trigger the full siren (10 or 30s). If the factory default shock sensitivity is undesirable, adjustments can be made by removing the rubber cap on the alarm unit and adjusting the two POTs with the included screw driver — *don't twist too hard!* See “Shock Sensor Adjustments” on the next page for details.

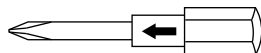
**IGNITION SENSOR.** Switch ON the Ignition and the siren should blast for 10 or 30 sec. If the Ignition remains ON, the siren should blast again after a 45 second delay (*LED flashes on/off 30 times—the highest Manual Disarm Code*). If SBS is set to ON, then the siren will cycle on and off up to 5 times and then stop. With SBS off, the siren will cycle on and off an unlimited number of times, as long as the ignition switch is turned on.

**IMMOBILIZER.** When the 866F is Disarmed, the internal relay should switch closed when IG is turned on (WHT & GRN wires are shorted). The relay remains switched for 20 sec. after IG is turned off. When Armed, the relay will switch open when IG is turned on to prevent engine starting.

**AUTO ARM.** If you don't want Cyclone to Auto Arm 5 minutes after you turn off IG, please see pg. 14. (*Also see “Auto Arm Sensor Enable” on pg.14.*)

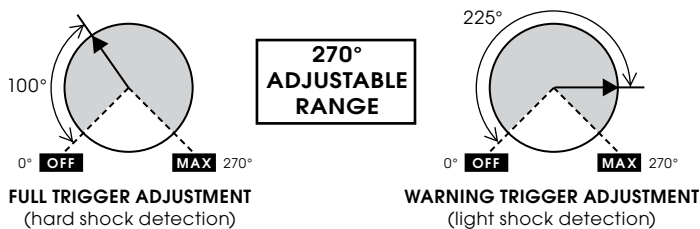
**BACKUP BATTERY.** If you have at least 3 hours, turn on the Ignition and allow Cyclone's internal battery to charge. When charged, you should be able to disconnect the Cyclone's main 5-pin harness and hear the siren go off (only when Armed & IG is off). (*Siren will go off for up to 1 hour when the battery is fully charged. A full charge could take up to 7 hours.*) To stop the siren, reconnect the main wiring harness and Disarm. (If the siren went off until the battery died, it will go off again when power is connected.)

## Shock Sensor Adjustments



**Sensitivity POTs.** Remove the rubber cap, located just above the siren speaker on the front of the Alarm Unit. You will then see two small holes for accessing the shock sensor adjustment potentiometers (POTs). See **Fig. 3 on the next page**. ⚠ ALWAYS put the rubber cap back on properly or water could destroy the electronics! Such is NOT covered under warranty!

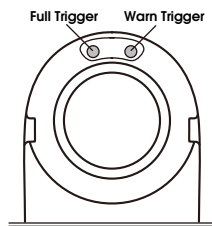
**Screw Driver.** Adjustments can easily be made using the included mini Phillips (+) screw driver. (*Don't twist too hard or you will break the POTs!*) Note the arrow on the side of the screw driver handle. This arrow can help you be more precise in your adjustments by indicating what sensitivity level you are at, with respect to the illustrations in **Fig. 2** below.



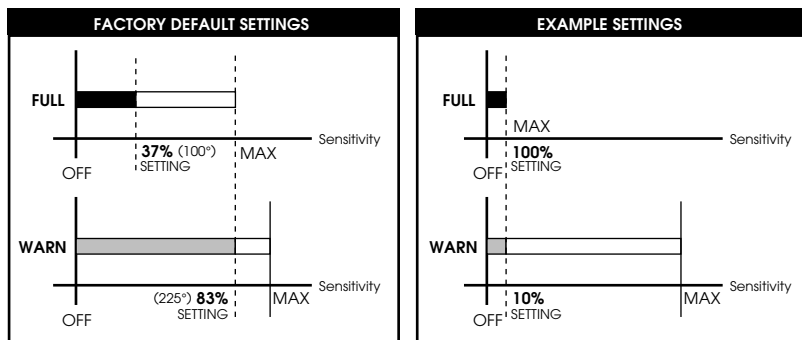
**FIG. 2** Shock sensor factory default settings for Full & Warn triggers

When you insert the screw driver into the adjustment holes, try to align the arrow on the handle in the same position as the arrows shown above in **Fig. 2**. If you find the shock setting is different from the factory default, or if you twist by mistake, simply turn both POTs to the far left OFF position, then align the arrow on the screw driver to the OFF position, and then you can adjust as appropriate. In this way, the arrow on the screw driver handle will show you precisely where you are in the 270° adjustment range.

**Adjust “Warn Trigger” First.** It is important to adjust the Warn Trigger *before* the Full Trigger. This is because the Warn Trigger adjustment defines the “maximum sensitivity level” of the Full Trigger. If you turn the Warn Trigger completely OFF, for example, the Full Trigger is also automatically set to OFF. Conversely, the higher (closer to MAX) you set the Warn Trigger, the greater range of control you have over the Full Trigger. Simply put, the Full Trigger can never be more sensitive than the Warn Trigger. This is illustrated graphically in **Fig. 4** below.



**FIG. 3** Sensitivity POTs



**FIG. 4** Relationship between Warn & Full shock sensor adjustment ranges


In **Fig. 4** above, you can see that the “factory default settings” (also shown in **Fig. 2**) allow a wide range of adjustment for the Full Trigger, without making the Warn Trigger overly sensitive. In the “example settings” bar graph shown, the Warn Trigger is set to 10% of Max. And even though the Full Trigger is set to 100% of Max in this example (*POT turned all the way to the right*), the adjustable range of the Full Trigger is very narrow because it’s Max sensitivity is defined by the Warn Trigger setting. To get more sensitivity out of the Full Trigger, you must first set the Warn Trigger sensitivity higher.

The 866F shock sensor digitally filters out “environmental vibrations” (e.g., large truck driving nearby, wind, rain, jackhammers, etc.) in order to minimize false triggers. However, please note that setting the Warn Trigger to Max may cause the 866F to detect these otherwise “harmless” vibrations.

# SYSTEM OPERATION

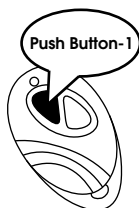
## Transmitter Functions

**NOTE:** Ignition = "IG" in this guide.

**ARMING**  (Also see "Auto Arm" on pages 15-16)

- **With Tilt Sensor and Shock Sensor Enabled**

Ensure IG key is turned off. Press Btn-1 on the transmitter for about 1 second and then release. (Note that the 866F will Arm automatically 5 minutes after IG is switched off.) If Arming was successful, the siren will chirp 1 time, and the LED will flash 1 time; then 5 seconds later, the system Status LED will start flashing continuously and *both* sensors will become active.



- **With Tilt Sensor or Shock Sensor Enabled**

By default, pushing Btn-2 to Arm enables only Tilt and disables Shock. You can *disable* Tilt and *enable* Shock by changing the "Single Sensor" setting (see page 14, Feature No.3).

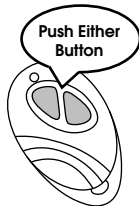
Pushing Btn-2 results in 1 siren chirp and 1 LED flash, and then 5 sec. later the LED will flash continuously and your **Single Sensor** choice will become active.



**⚠ NOTE:** During the first 5 seconds after arming, the sensors are not yet active. Please avoid tilting or shaking the bike during this time.

## DISARMING

With the Ignition key off, press either transmitter button for about 1 second and then release. If Disarming was successful, and if the siren was not triggered in your absence, the siren will chirp 3 times and the Status LED will flash 3 times. See **Table-1** for details on the different siren chirps and LED flashes produced after Disarm.

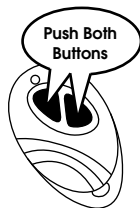


**Manual Disarming** (useful if the transmitter is lost or battery dies)

Turn IG on and the full siren blast should go off. During the 10s or 30s siren blast, turn IG off. When the siren blast stops, you have 8 sec. to turn on IG again. Keep your hand on the Ignition key and count the number of Status LED flashes. When the number of flashes matches your Disarm Code (see pages 14 & 16), turn IG off. The siren should then chirp 3 times, indicating the system is now disarmed.

**PANIC SIREN** 

With IG key off, press both transmitter buttons for about 1 second. The siren will then go off for 10s or 30s. Push either button to stop the siren. When the siren sequence stops, Cyclone will arm itself.

**SILENT MODE** 

Stops siren triggers but allows Arm/Disarm confirmation chirps. Useful with an optional paging system, alerting you to theft attempts without the thief knowing.

**Activate.** Disarm and within 20 sec. turn on IG, then press transmitter Btn-1 (about 3 sec.) until the siren chirps *1 time*. Turn off IG. Press Btn-1 to Arm.

**Deactivate.** Disarm and within 20 sec. turn on IG, then press Btn-1 until the siren chirps *2 times*, then turn off IG.

**SLEEP MODE** 

This mode allows you to conserve vehicle battery power by reducing the electric current consumption of the 866F. This feature is useful when you will not be riding the bike for extended periods. All security features are disabled by default. You can enable the Starter Kill Immobilizer for greater security (avg. current consumption < 2mA).



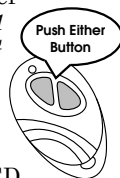
**TIP:** Sleep Mode also acts as “**Valet Mode**,” useful to disable security features when sending the bike in for maintenance.

**Activate Sleep.** Disarm Cyclone, and within 20 sec. turn on IG and press Btn-2 (about 3 sec.) until you hear 3 siren chirps in rapid succession. The 3 chirps confirm that Sleep Mode is activated. Turn off IG.



**⚠ NOTE.** *Within 20 sec. of activating Sleep Mode, if you turn IG off and then press a transmitter button, you will enable the Starter Kill Immobilizer in Sleep Mode. This will cause the status LED will flash. See next page for details on Enabling/Disabling the Immobilizer.*

**ENABLE Starter Kill Immobilizer.** While in Sleep Mode, turn on IG for 3 sec, then Turn off IG and within 20 sec. press either transmitter button (about 1 sec.) until the siren chirps 1 time. The status LED will now flash continuously. (If IG goes on with the Immobilizer on, the siren won't trigger.)



**DISABLE Starter Kill Immobilizer.** Turn on IG and wait 3 sec. Within 20 sec. press either transmitter button (about 1 sec.) until the siren chirps 3 times. The status LED will stop flashing. (To then disabled Sleep Mode, see below.)

**Deactivate Sleep.** Turn on IG and wait 3 sec. Within 20 sec. press button-2 (about 3 sec.) until you hear 5 siren chirps. The 5 chirps confirm that Sleep Mode is now deactivated. You can now turn off IG. (If you hear only 3 chirps, it means you merely Disabled the Immobilizer. Turn on IG and press Btn-2 again (3sec.) until you hear 5 chirps to Deactivate Sleep.)



**LOST TRANSMITTER WHILE IN SLEEP.** If you lost your only transmitter, please start by purchasing a replacement from your Cyclone dealer. Next, ensure IG is off, and then **Disconnect** Cyclone's main harness (noting that the siren may blast due to the backup battery), wait a few seconds, then **reconnect** the harness. Sleep Mode is now deactivated. Now use Manual Disarming (pg. 11) to Disarm. After Disarming, quickly perform Transmitter Learning steps 2, 3 & 4 as described on page 17.

**TABLE-1 Siren & Status LED Response to Changes in System State**

ACTION or STATE	SIREN	STATUS LED
Arming	1 chirp	1 flash
Disarming (nothing triggered)	3 chirps	3 flashes
Disarming (Shock triggered)	3 + 1 chirps	3 + 1 flashes
Disarming (Tilt triggered)	3 + 2 chirps	3 + 2 flashes
Disarming (Ignition triggered)	3 + 3 chirps	3 + 3 flashes
Armed	—	Short flash every 2s
Warn Trigger	2 chirps	2 flashes
Full Trigger	10s or 30s	Flashes for 10/30s
Panic Siren	10s or 30s	Flashes for 10/30s
Sleep Mode + Immobilizer Enabled	disabled	Short flash every 2s



## Feature Programming

- 1) Arm and then Disarm Cyclone.
- 2) Within 20s of Disarming, turn on the Ignition.
- 3) Within 5s of turning on the Ignition, press both transmitter buttons (at the same time) *until* the Status LED lights solid (press for about 5s). (*If you hear 1 or 3 chirps, you've entered Silent or Sleep Modes by accident.*)
- 4) Press button-1 the same “No.” of times as the feature you want to change in Table-2. The siren will chirp and LED will flash the same “No.” of times as the feature you chose. You now have 20s to change that feature.
- 5) Press button-2 to toggle the feature “Selection.” The siren will chirp and LED flash according to the new Selection (see “Chirps” column below).
- 6) To program another feature, repeat Steps 4 & 5. To exit Feature Programming, turn off the Ignition. The LED will then flash according to the number of your Manual Disarm Code, and then the siren will chirp 3 times.

TABLE-2		Feature Selection Menu	
No.	Feature Description	Selection	Chirps
1	Auto Arm Sensor Enable <i>(tied to No. 3 "Single Sensor" below)</i>	<b>Both Sensors</b>	<b>2</b>
		Single Sensor	1
2	Shock Sensor “Full Trigger”	<b>ON</b>	<b>2</b>
		OFF	1
3	Single Sensor <i>(for Btn-2 Arming &amp; Auto Arming)</i>	<b>Tilt</b>	<b>2</b>
		Shock	1
4	Duration of Full Siren Blast	<b>30 sec.</b>	<b>2</b>
		10 sec.	1
5	Sensor Bypass System (SBS)	<b>ON</b>	<b>2</b>
		OFF	1
6	Auto Arm	<b>ON</b>	<b>2</b>
		OFF	1
7	Manual Disarm Code	<b>6</b>	<b>6</b>
8	Rest Settings to Factory Default	Press Btn-2 until siren chirps	8
<b>FACTORY DEFAULT SETTINGS ARE BOLD &amp; HIGHLIGHTED ABOVE</b>			

## Description of Programmable Features

**NOTE:** *When you select any of the 8 programmable features, the siren will chirp the same number of times as the feature you just selected, and the Status LED will also flash the same number of times. When exiting the Feature Selection Menu, the Status LED will flash the same number of times as the Manual Disarm Code and then the siren will chirp 3 times.*

- 1. Auto Arm Sensor Enable.** Allows you to choose either a single sensor or both sensors to be active when the 866F automatically Arms. You can choose your preferred “Single Sensor” in Feature No. 3 (*see below*).
- 2. Shock Sensor “Full Trigger.”** When set to OFF, even hard shocks produce only Warning Chirps. Of course, you could just turn off the shock sensor Full Trigger (10/30s siren blast) simply by turning the sensitivity POT all the way to the left (*see pages 9-10*). But this programmable feature allows you to disable the Full Trigger while keeping your desired Full Trigger level set on the POT. This is useful if you sometimes wish to disable the Full Trigger and then later re-enable it. (*SBS still limits “hard shock” triggers—see Feature No. 5 below.*)
- 3. Single Sensor.** Allows you to choose either the Tilt sensor or the Shock sensor to become active during these two conditions: (1) Auto Arm and (2) Button-2 Arming. (*This feature is tied to feature No. 1 above.*)
- 4. Duration of Full Siren Blast.** You can program the siren to go off for either 10s or 30s. The Full Siren Blast goes off during a Shock Sensor Full Trigger, Ignition Switch Trigger, Digital Tilt Trigger, Panic Siren mode, and when the power is cut to the system while Armed (siren sounds via Cyclone’s internal backup battery).
- 5. Sensor Bypass System (SBS).** SBS prevents the 866F from becoming a public nuisance. With SBS on, the system will individually bypass the Tilt sensor, Shock sensor (Full Trigger only), or the Ignition sensor after each sensor triggers 5 times. For example, if the Tilt sensor triggers 5 times, SBS will disable it but the Shock and Ignition sensors remain active (until they too individually trigger 5 times). If noise pollution is not an issue for you, SBS can be turned off.
- 6. Auto Arm.** Set to ON by default. When programmed ON, Cyclone will Arm itself automatically 5 minutes after the Ignition goes off. (*Turning the Ignition off is what activates the Auto Arm timer. Cyclone will not Auto Arm at all if you merely Disarm with the transmitter.*)



**Auto Arm TIPS:** (1) Cyclone won't Auto Arm while the Ignition is ON. (2) If you like Auto Arm ON but sometimes want to Disable it, simply Arm & Disarm after you turn off the Ignition. (3) Don't forget that you can program 1 or 2 sensors to be enabled during Auto Arming (Feature No.1).

7. **Manual Disarm Code.** Manual disarming is useful if your transmitter is lost or the battery dies. The factory default code is set to: **6**. This feature allows you to set your own code. (30 possible code choices)

When you select this feature with transmitter Button-1, the siren will chirp 7 times and the Status LED will flash 7 times. Now push Button-2 and the Status LED will then light solid for 10 seconds and then start flashing slowly, up to 30 times. You must program your code during the time that the LED flashes 30 times.

When the LED flashes the same number of times as the code you wish to set, immediately turn off the ignition. The Status LED will then blink the same number of times as the code you just programmed, and the siren will chirp 3 times, and this will auto-exit the Feature Selection Menu.

**For example**, let's say you wish to set your secret code to "1." In this case, you would enter the Feature Selection Menu and select feature No. 7 using transmitter Button-1 (the LED will blink 7 times to confirm). Now press Button-2 and the LED will glow solid for 10 seconds. When the 10 sec. is finished, the LED will turn off and then blink once — now quickly turn off the Ignition. If you turned off the Ignition in time, the LED will then blink once (to confirm your new code) and the siren will chirp 3 times.

8. **Reset Settings to Factory Default.** If you have altered the settings in the Feature Selection Menu, this feature will allow you to restore all settings to their factory default, as shown in **Table-2** on page 14.

When you choose Feature No. 8, the siren will chirp 8 times and the Status LED will flash 8 times. After the 8 chirps finish, press and hold transmitter button-2 until you hear 1 siren chirp (press for about 5 seconds). If you heard the single chirp, all Cyclone feature settings are now reset. The LED will now flash the same number of times as your Manual Disarm Code, and then the siren will chirp 3 times to indicate Cyclone has exited from Feature Programming.

**Transmitter Learning**

**⚠ NOTE.** *If you lost your transmitter while Cyclone was in Sleep Mode, please refer to the “LOST TRANSMITTER WHILE IN SLEEP” note on page 13.*

Transmitter Learning is useful if you wish to purchase an optional remote for your 866F system, or if you lose your existing remote and require a replacement. The 866F can store up to 3 transmitters total in memory.

When you learn new transmitters, all previously learned transmitters will be deleted from memory for security. Therefore, each time you initiate the learn process, you must re-learn all your transmitters.

Transmitter Learn Procedure:

- 1. Arm and Disarm the system.** *(If you lost all your remotes, you'll need to start by purchasing a new remote. With your new remote ready, ensure IG is off, then kill power to Cyclone and restore power after a few seconds. Next, use Manual Disarming as described on page 11, and then proceed to Step-2 below.)*
- 2. Within 20 sec. of Disarming, turn the Ignition key on and off 10 times.** *The Status LED will blink 10 times and then light solid on for 10 seconds. (If the Ignition is turned on at this stage, you will exit out of transmitter learn, and the previously learned transmitters will remain in memory.)*
- 3. During the 10 sec. that the Status LED is lit solid, press and release button-1 on the first transmitter you wish to learn.** *Previously learned transmitters will now be deleted, and the siren will chirp 1 time, and the Status LED will dim 1 time. **REPEAT** this step for all other transmitters you wish to learn. You have 15 sec. to learn each transmitter.*
- 4. After all transmitters are learned, turn Ignition on and off.** *(Or wait 5 seconds.) The Status LED should then blink the same number of times as your Manual Disarm Code, and the siren should chirp 3 times.*

# TROUBLESHOOTING

## ENGINE WON'T START

- You should not see the Status LED flashing when you attempt to start your bike's engine. Be sure the 866F is *disarmed* and that you don't have the immobilizer enabled in Sleep mode. If you find your transmitter is not working, Cyclone is likely in Sleep Mode (see pages 12-13).
- Check your bike's battery voltage. It could be too low to start the bike.
- Keep in mind that water damage to Cyclone could prevent starting.

## WORRIED TRANSMITTER BATTERY MAY DIE

- You can disarm without a transmitter. See "**Manual Disarming**" on pg.11.
- CR1616 batteries can usually be purchased at any convenience store.

## SIREN SOUND NOT LOUD ENOUGH

This could be due to the mounting location. Some bikes offer more insulation inside the under-seat compartment than others, which may decrease the sound level.

## WHAT FUNCTIONS WORK IN WHAT MODE? (See *Table-3* below.)

TABLE-3		866F FUNCTIONS VS. MODE		
Function	Normal Mode	Silent Mode	Sleep Mode	
Immobilizer	✓	✓	Enable/Disable	
Panic Siren	✓			
Tilt Sensor	✓	✓		
Shock Sensor	✓	✓		
Ignition Sensor	✓	✓	Listen to Tx for 20s	
Transmitter Operation	✓	✓	20s from IG on	
Status LED	✓	✓	If Immob. Enabled	
Warning Chirps	✓			
Full Siren Blast	✓			
Confirmation Chirps	✓	✓	20s from IG on	
Sleep Mode ON/OFF	✓	✓	✓	
Silent Mode ON/OFF	✓	✓		
Transmitter Learning	✓	✓		

# QUICK REFERENCE GUIDE

## CYCLONE 866F TRANSMITTER FUNCTIONS

- (S) stands for a **short** press — any press *less than 2 sec.*
- (L) means a **long** press of *at least 3 sec.*
- **USAGE TIP:** There is no need to press excessively hard on the buttons.  
If there is no response on your first press, try again with a slightly longer press.

### ARMING, with Tilt & Shock Enabled



With **IGN off**, push **button 1**. (S)  
*Note that Auto Arm is enabled by default.  
See page 14 to disable it.*



1 CHIRP

### ARMING, with Tilt or Shock Enabled



With **IGN off**, push **button 2**. (S)  
*Your "Single Sensor" selection will be enabled. (Tilt is Default)  
(See page 14 for details.)*



1 CHIRP

### DISARMING



Push **either button (1 or 2)**. (S)  
*Security system will disarm.*



3 CHIRPs

### PANIC SIREN



Push **both buttons (1 & 2) at same time**. (S)  
*Panic siren will sound, except when in SLEEP mode.  
Panic siren cannot be produced with IGN on.*



Full Siren Blast  
(10s or 30s)

### SILENT Mode



Turn on **IGN & press button 1**. (L)  
*Repeat to exit Silent Mode. Warning chirps and full siren  
blast will be muted, but Arm & Disarm chirps remain audible.*



1 CHIRP (On)  
2 CHIRPs (Off)

### SLEEP Mode

*Turn IGN on for 3 sec. before using transmitter.*



Turn on **IGN & press button 2**. (L)  
*Repeat to exit Sleep Mode. Security & RF receiver deactivated  
to conserve power. Must turn on IGN to use transmitter.*



3 CHIRPs (On)  
5 CHIRPs (Off)

### IMMOBILIZER (Starter Kill) in SLEEP Mode

*Turn IGN on for 3 sec. before using transmitter.*



**ON:** Turn IGN On & Off. Within 20 sec., press btn. 1 or 2. (S)  
**OFF:** Turn IGN Off & On. Within 20 sec., press btn. 1 or 2. (S)  
*Added security while in Sleep mode. LED will flash when ON.*



1 CHIRP (On)  
3 CHIRPs (Off)

### MANUAL DISARMING (useful when transmitter is lost or battery dies)



**Siren must go off for the full 10/30 sec.** Turn IGN on & off. The siren will trigger. When siren stops, you have **8 sec.** to turn IGN on. Keep your hand on the IGN key and count LED flashes until the number equals your Manual Disarm Code, then immediately turn IGN off.



3 CHIRPs

⚠ **NOTE:** If you lose your transmitter in Sleep Mode, see pg.13.

### **FCC Statement**

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.

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.

Any changes or modification not expressly approved by the party responsible could void the user's authority to operate the device.

### **Statement of Compliance**

This device has been certified to comply with the following standards for Australia, New Zealand, Europe and other countries:

- EMC Directive 1999/5/EC, 92/31/EEC, 93/68/EEC for CE:  
EN301 489-3 v1.2.1:2002  
EMI: EN55022:1998+A1:2000+A2:2003 Class B  
EMS: EN61000-4-2:1995+A1:1998+A2:2001, EN61000-4-3:2002
- LVD EC Directive 73/23/EEC, 93/68/EEC for CE:  
EN60950-1:2001
- C-TICK Class B:  
AS/NZS CISPR22:2002  
CISPR22:1997+A1:2000+A2:2002 CLASS B  
EN55022:1998+A1:2000+A2:2003 CLASS B

All CYCLONE 866F products are engineered in Japan, manufactured at a QS9000/ISO9001/TS16949 certified facility and tested in strict accordance with Japanese QC standards.

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

**FREYMOTO INDUSTRIES**

720 Jefferson Street, Stanley, WI 54768 USA  
TEL/FAX: 800-374-0933 • EMAIL: [sales@freymoto.com](mailto:sales@freymoto.com)

*CYCLONE is a trademark of KIRAMEK, Inc.*