

2 WAY REMOTE STARTER & ALARM SYSTEM

MODEL: ECHO

User's Manual

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.

Caution : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Table of Contents

SECTION 1: SYSTEM CONNECTION..... 4

1.1 ANTENNA CONNECTION 4

1.2 MOUNTING THE CONTROL MODULE..... 4

1.3 POWER AND GROUND CONNECTION 4

1.4 REPROGRAM FACTORY CODE 4

SECTION 2: SYSTEM MODE & OPERATION..... 5

2.1 SYSTEM MODE 5

2.2 REMOTE LCD SCREEN..... 5

SECTION 3: SYSTEM OPERATION (BASIC FUNCTION)..... 6

3.1 REMOTE SYSTEM ARM (ON)..... 6

3.2 REMOTE SYSTEM DISARM (OFF) 6

3.3 TRUNK RELEASE (OPTION) 6

3.4 PERSONAL PROTECTION ALARM (EMERGENCY PANIC) 7

3.5 REMOTE ENGINE START..... 7

3.6 REMOTE ENGINE STOP 7

SECTION 4: SYSTEM OPERATION (ENHANCED FUNCTION)..... 7

4.1 ONE TIME SOFT CHIRP 7

4.2 EMERGENCY DISARM WITH A KEY (IF YOU LOST A REMOTE AND CAN NOT SHUT OFF THE ALARM SYSTEM)..... 7

4.3 3RD CHANNEL CONTROL (OPTIONAL)..... 8

4.4 TURBO COOL DOWN MODE (IF REMOTE START IS INSTALLED.) 8

4.5 REMOTE START RESERVATION 8

4.6 STATUS CHECK 8

SECTION 5: USER PROGRAMMABLE FEATURES 9

5.1 PERMANENT SIREN CHIRP ENABLE/DISABLE (FACTORY DEFAULT SETTING: SIREN CHIRP ENABLE)..... 9

5.2 PASSIVE/ACTIVE MODE (FACTORY DEFAULT SETTING: ACTIVE MODE)..... 9

5.3 DRIVE LOCK MODE (FACTORY DEFAULT SETTING: DRIVE LOCK MODE OFF) 9

5.4 SHOCK SENSOR ADJUSTMENT 9

SECTION 6: DEALER PROGRAMMABLE FEATURES 10

SECTION 7: RESET DEALER PROGRAMMABLE FEATURES TO FACTORY DEFAULT SETTING:..... 12

SECTION 9: THE TRANSMITTER BATTERY REPLACEMENT INSTURCTIONS 12

SECTION 10: WIRING DIAGRAM 14

SECTION 1: SYSTEM CONNECTION

IMPORTANT NOTE BEFORE YOU BEGIN

- Read through the manual completely BEFORE beginning the installation procedure.
- Remove the courtesy light fuse to avoid running down the battery during installation.
- Roll down the driver's side window to avoid locking the ignition keys in the vehicle.
- Use fender aprons and seat covers to protect the vehicle during installation.
- Verify the system contents

1.1 Antenna Connection

1. Mount the Antenna at the front windshield.
2. Antenna should not obstruct the driving view. Since the tinted portion of the glass can affect the range, do not place antenna on a tinted portion of the glass for maximum operating range.
3. Plug the antenna into the white 7-pin antenna connector. The operating range of the alarm is approximately 2000 feet. (Maximum 3000 feet) However, the operating range can change depending upon the vehicle, placement of the antenna, transmitter battery condition, and environmental condition.

1.2 Mounting the Control Module

1. The control module must be attached to an under dash surface that is flexible, such as a thick wire loom. Allow access to the sensitivity adjustment knobs for the internal dual stage shock sensor. It is important that the module has some freedom of movement. Unit should not bind.
2. Mount the control module using tie wrap.

1.3 Power and Ground Connection

1. Remove the fuses, and connect Red wires to constant source of +12VDC.
2. Choose a good chassis ground location. Connect Black wire to constant ground.
3. Upon verification of all other connections, plug in fuses.

1.4 Reprogram Factory Code

Programming Function	Programming Method	Chirp	Light
Code Program	Open the door and Turn Ignition On. Within 10 seconds, Ignition on/off 5 times (3 chirp, 3 light). Press the button #1 of the new transmitter (1 chirp, 1 light). Press the button #1 of the 2 nd transmitter (1 chirp, 1 light). And then the button #1 of the 3 rd transmitter (1 chirp, 1 light)	1	1

When the Dealer installs the unit he programs your unique code which is in permanent memory. Any Authorized Dealer can add a new or an additional pre-coded transmitter and delete an existing code from memory.

To program a new code:

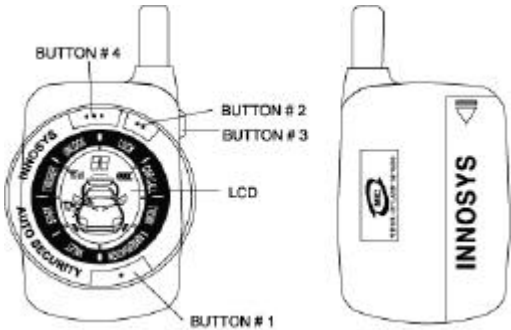
1. Open the door.
2. With your vehicle key in key cylinder, turn it to ignition on position (Driving Position).
3. Within 10 second ,turn it off and on five (5) times.
4. CODE CHANGE MODE is confirmed with three chirp sound and three parking light flash
5. Within 5 seconds, PRESS AND RELEASE THE BUTTON #1 of the new transmitter. One chirp and one parking light flash will confirm the acceptance of new code. This operation will erase all previous codes.
6. Within 5 seconds, PRESS AND RELEASE THE BUTTON #1 of the 2nd transmitter. One chirp and one parking light flash will confirm the acceptance of second code.

- 7. Within 5 seconds, PRESS AND RELEASE THE BUTTON #1 of the 3rd transmitter. One chirp and one parking light flash will confirm the acceptance of third code.
- 8. Code program will exit when 5 second is passed or when all three codes are programmed.

Note: Module will accept three different the transmitters.

SECTION 2: SYSTEM MODE & OPERATION

2.1 System Mode










BUTTON	PRESS TIME	MODE	CHIRP	LIGHT	LED	DOOR
#1	1 sec.	ARM (ON)	1	1	SLOW FLASH	LOCK
#1	1 sec.	DISARM (OFF)	2	2	OFF	UNLOCK
#1	3 sec.	PANIC	1	1	FAST FLASH	LOCK
#2	2 sec.	Trunk Release	2	2	-	UNLOCK
#3	2 sec.	ENGINE START	1	1	SLOW FLASH	LOCK
#3	3 sec.	ENGINE STOP	2	2	SLOW FLASH	-
#4	1 sec	Status Check	-	-	-	-
#4	2sec	Ch3 On	-1	-1	-	-
#4	2sec	Ch3 Off	-	-	-	-



2.2 Remote LCD Screen

LCD SCREEN	FUNCTION
	Strength Indication of RF signal

	Battery Indication
	Car call
	Trunk Release
	Door open
	Light flash
	Sensor Triggered
	Remote Start Engine Run time

SECTION 3: SYSTEM OPERATION (Basic Function)

The Echo is very sophisticated, but the operation is simple. Your four button RF the transmitter is easy to use for arm, disarm, personal protection, keyless locking and unlocking, trunk release, remote engine start and stop.

3.1 Remote System Arm (On)

1. Press and release the transmitter button #1.
2. One siren chirp sound and a light flash verify the operation.
3. Doors Lock (If optional keyless entry is installed).
4. Visible theft warning LED light flashes slowly.
5. DEFECTIVE ZONE BYPASS: If you hear four chirp sounds, the system has detected a faulty sensor or you have delayed interior light.
 - Faulty sensor is detected because of a door open, or because of a faulty door pin switch or shock sensor. The system will bypass a detected faulty sensor until it is restored to normal. If your alarm indicates a faulty sensor, check your door to see if they are closed properly. If problem persist, contact your local dealer.
 - If you have delayed interior light (in other words, your interior lights do not turn OFF when you close your car door), it is normal to hear four chirps. The system will protect all openings once the interior light turns off.

3.2 Remote System Disarm (Off)

1. Press and release the transmitter button #1.
2. Two siren chirps and two light flashes verify this operation.
3. Door will unlock (If optional keyless entry is installed).
4. No LED theft warning light is seen.
5. LED is active as test signal for sensors.

Note: If you hear three chirp sounds, the system has been triggered and the alarm was activated while you were away from the vehicle. Please refer to following chart. This diagnostic report will turn off when ignition switch is turned on.

Diagnostic Report	Audible - Chirp	Visual - LED
Shock Sensor	3 chirps, 3 light flash	Double Flashes
Door or Trunk Input Trigger	4 chirps 4 light flash	Rapid Flashes

3.3 Trunk Release (Option)

1. Press and hold down the transmitter button #2 for approximately two seconds.
2. Two chirp sounds and two flashing light signals verify the trunk release.
3. Trunk release solenoid unlatches the trunk automatically. Alarm is disarmed.

3.4 Personal Protection Alarm (EMERGENCY PANIC)

1. Press and hold down the transmitter button #1 for approximately three seconds.
2. Personal Panic alarm is activated and siren sounds and lights flash for 30 seconds.
3. Press and release the transmitter button #1 to cancel the panic alarm.

3.5 Remote Engine Start

1. Press and release the transmitter button #3
2. Alarm system arms and starts your vehicle. One chirp sound and a light flash verify arming.
3. Parking lights flash five times then blink on to verify start and run.
4. Climate control or accessory circuit turns on during engine runs
5. Engine runs for 15 minutes then shuts down automatically.
6. Parking lights turn off to visually verify engine shut down.

Diagnostic Method

To find out the reason why vehicle failed to start. The system will flash the parking light in group of 1 to 6 flashes to report the reason.

1. Parking light will flash in group of 1 to 6 flashes to report shut down reason. (See table below)
2. To exit this mode, turn off ignition.

Parking Light Flash	Shut Down Reason	Remedy
2 times	Key is On position	Check Key cylinder
3 times	Door Opened	Check Door pin
6 times	Not in Reservation	Put into Reservation Mode

3.6 Remote Engine Stop

1. Press and release the transmitter button #3 for approximately two seconds.
2. Engine stops running. Two chirps and two light flashes will verify the operation.

Optional Remote Entry Method

1. Press and release the transmitter button #1.
2. Doors will unlock and the system will disarm.
3. Enter your vehicle and insert your key in the key cylinder. If you do not open the door in 20 seconds, the system will automatically arm and lock the system.
4. Turn your key to ON position (Normal driving position).

WARNING: Do not attempt to start your vehicle! Your vehicle has started and it is already running.

5. Press and release the brake. The remote start functions turn off but the engine is still running due to the key in the driving position.
6. Put in gear and drive normally.

SECTION 4: SYSTEM OPERATION (Enhanced Function)

4.1 One Time Soft Chirp

Arm/Disarm chirp can be temporarily softened from your remote the transmitter.

To use temporary chirp disable,

1. PRESS AND RELEASE THE TRANSMITTER BUTTON #2.
2. Press and release the transmitter button #1, #2 or #3 for desired function.

Example: To arm the system with soft chirp sound, press button #2 first. Then press button #1.

4.2 Emergency Disarm with a Key (If you lost a remote and can not shut off the alarm system)

1. Turn ignition key on and off five (5) times within ten (10) seconds (2.5 seconds each on/off cycle).

2. If your key is correct, the system will disarm immediately.

4.3 3rd Channel control (Optional)

1. Press and hold down the transmitter button #4 for approximately two seconds.
2. One chirp sound and one flashing light signal verify the operation.
3. Installed optional function will operate.

4.4 Turbo Cool Down Mode (If remote start is installed.)

Turbo Cool Down means that vehicles with turbo engines can be cooled down by using this function. Since those vehicles with turbo engines need to have an engine cool down period of at least 2 minutes after driving, this feature will leave the engine on after the ignition key is turned off and removed from the ignition. Engine automatically turns off after 2 minutes.

With the engine on, step on the brake. Then press and hold the transmitter button #3 for Turbo Cool Down Mode

1. One chirp sound and one parking light flash will confirm Turbo Cool Down Mode
2. Engine will stay running even after the key is removed. Exit the vehicle.
3. Press and release the transmitter button #3 to arm the system.
4. Engine will shut off in 2 minutes for Turbo Cool Down Mode
5. To turn off the engine before the run time period, press and release the transmitter button #2.

4.5 Remote Start Reservation

To use the automatic start features, you need to make a remote start reservation before you turn off the engine. If you want to use automatic start features all the time, you need to make a remote start reservation after each driving.

Also for manual transmission vehicles, you need to make a remote start reservation before you turn off the engine. Without a remote start reservation, even if a start condition is met, the vehicle WILL NOT START!

1. When you use Turbo Cool Down Mode, you automatically make a remote start reservation.
2. With the engine on, step on the brake. Then press and release the transmitter button #3.
3. One chirp sound and one parking light flash will confirm this operation.
4. Engine will stay running even after the key is removed. Exit the vehicle.
5. Close the door. Engine will shut off immediately.
6. Press and release the transmitter button #1 to arm the system. Remote Start Reservation is complete.
7. To cancel the remote start reservation, disarm the system by pressing and releasing the transmitter button #1 then open and close the door.

Note : The door input wire must be connected when installing a manual transmission Remote starter model.

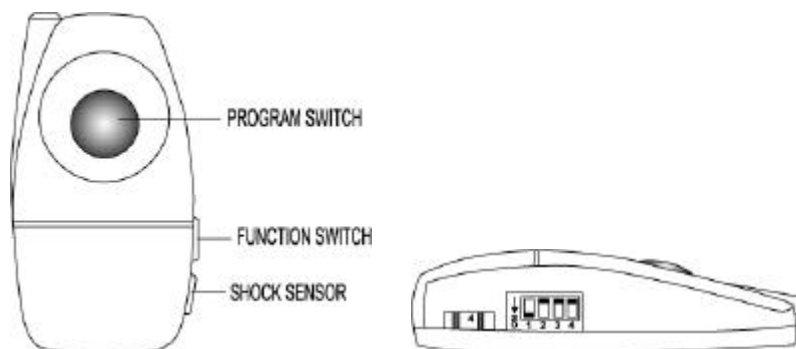
Before activation, manual transmission starters must be put into Reservation Mode. This set-up must be done each time vehicle is parked. It will be necessary to repeat this set-up if door is opened after being set into Reservation Mode

4.6 Status Check

To check the status of the system, press and release the transmitter button #4. Antenna will be displayed first then the current status of the system will be displayed on the LCD screen.

In pager mode, if the system is triggered, LCD screen displays siren and lock or unlock icon. Siren with lock means that shock sensor or optional external sensor triggered the system. Siren with door means that the system was triggered by doors or hood.

SECTION 5: USER PROGRAMMABLE FEATURES



5.1 Permanent Siren Chirp Enable/Disable (Factory default setting: Siren Chirp Enable)

Siren chirp can be permanently enabled and disabled from Function switch.

1. Switch #2 ON = Chirp disable
2. Switch #2 OFF = Chirp enable

5.2 Passive/Active Mode (Factory Default Setting: Active Mode)

Passive arming mode means that the system will automatically arm thirty seconds after the ignition key is turned off and the last door of the vehicle is closed. Sometimes referred to as Automatic Arming. *While in passive mode the system has a CONTINUOUS REARMING feature. This means that the alarm rearms thirty seconds after each temporary disarm or after an activation of the optional trunk release feature. In passive mode the system can be MANUALLY ARMED anytime during the thirty second automatic arming cycle.*

Active arming mode means that the system will not arm until you manually turn it on by pressing the arming button on your radio frequency transmitter. Sometimes referred to as Manual Arming.

1. Switch #3 ON = Passive.
2. Switch #3 OFF = Active.

Note: All original factory and/or programmed settings are retained in permanent memory

5.3 Drive Lock Mode (Factory Default Setting: Drive Lock Mode Off)

Drive Lock Mode means that all doors will lock automatically two (2) seconds after the ignition key is turned on and will unlock automatically when the ignition key is turned off. This assumes that the keyless entry option has been installed by your Dealer. Sometimes referred to as Ignition Lock.

1. Switch #4 ON = Drive Lock Mode On.
2. Switch #4 OFF = . Drive Lock Mode Off

5.4 Shock Sensor Adjustment

Shock sensor can be adjusted from Volume in RF Antenna.

To adjust sensitivity:

1. Turn clockwise To increase sensitivity
2. Turn **counterclockwise** To decrease sensitivity

Adjustment**MIN ← 10-8-6-4-2-0 → MAX****SECTION 6: DEALER PROGRAMMABLE FEATURES****To program DEALER FUNCTIONS: Method 1**

1. Open the door.
2. With your vehicle key in key cylinder, turn it to ignition on position (Driving Position).
3. Press and hold antenna switch and Press and release the Transmitter button
4. The system will exit programming mode, if there's no transmitter activity for 10 seconds, if ignition is turned off, or if door is closed

	FUNCTION	Remote Button	Set	Reset
1	Start Disable	1	Disable	Enable *
2	Shock Sensor Disable	2	Disable	Enable*
3	Passive Lock Mode	3	OFF	ON*
4	Drive Lock Only Mode	4	ON	OFF*

*Note: Factory default settings are highlighted.

6.1 Remote Start Enable/Disable (Factory default setting: Remote start Enable)

Remote Start Function can be enabled and disabled from This Function.

6.2 Shock Sensor Disable/Enable (Factory Default Setting: Shock Sensor Enable)

The Shock Sensor Disable means that the on-board body shock sensor can be eliminated through Function switch at any time it is desired or necessary.

NOTE: The keyless entry option must be installed by your Dealer for the functions described above under keyless entry mode to be operational.

6.3 Passive Lock Mode (Factory Default Setting: Active Lock Mode)

Passive Lock Mode means that all doors will lock automatically when the system arms in the passive mode. This assumes that the Keyless Entry feature has been installed by your Dealer and that the system has been programmed to Passive Mode.

CAUTION: If the automatic door lock feature is installed and the system is programmed to passive lock mode the doors will lock automatically when the system arms. It is always advisable to remove the ignition key each time you exit the vehicle.

6.4 Drive Lock Only Mode (Factory Default Setting: Drive Lock Mode)

DRIVE LOCK ONLY MODE : All doors lock automatically two seconds after the ignition key is turned on but do not unlock automatically when the ignition key is turned off.

6.5 Valet Mode (Factory Default Setting: Valet Off)

The Valet Mode is activated through the ignition key switch and means that all normal system functions are turned off. This feature is useful when valet parking, refueling, or servicing your vehicle. (See Section 3: Figure A. SYSTEM MODE & OPERATION for more details.)

To program DEALER FUNCTIONS: Method 2

6.6 Valet Mode/Keyless Entry Mode (Factory Default Setting: Valet Off)

The Valet Mode/Keyless Entry Mode is activated through the ignition key switch and means that all normal alarm system functions are turned off but all convenience features remain functional. Keyless Entry Mode allows you the convenience of remote control access into and egress from your vehicle using the RF transmitter. This feature is useful when valet parking, refueling, or servicing your vehicle.

To activate the VALET MODE, turn the ignition key to the on position and within ten (10) seconds PRESS BUTTON #1 for a five (5) second interval. The valet mode is confirmed with one chirp sound and one parking light flash.

To deactivate the VALET MODE follow the same procedure as above under activating valet mode. The deactivation of valet mode is confirmed with two chirp sounds and two parking light flashes.

NOTE: Factory standard setting is with valet off.

NOTE: The keyless entry option must be installed by your Dealer for the functions described above under keyless entry mode to be operational.

6.7 Long Door Lock Pulse (Factory Default Setting: Long Door Lock Pulse Off)

Long Door Lock Pulse means that the system can accommodate the factory central locking systems of import vehicles having vacuum door lock actuators that require a three second lock pulse. Once this feature is programmed by your Dealer it never needs to be changed.

To activate the Long Door Lock Pulse, turn the ignition key to the on position and within ten (10) seconds PRESS BUTTON #2 for a five (5) second interval. The valet mode is confirmed with one chirp sound and one parking light flash.

To deactivate the Long Door Lock Pulse, follow the same procedure as above under activating valet mode. The deactivation of valet mode is confirmed with two chirp sounds and two parking light flashes.

NOTE: Factory standard setting is with valet off.

6.8 Dual Unlock Pulse (Factory Default Setting: Dual Unlock Pulse Off)

Some vehicles require dual unlock pulse outputs to unlock all doors.

To activate the Dual Unlock Pulse, turn the ignition key to the on position and within ten (10) seconds PRESS BUTTON #3 for a five (5) second interval. The valet mode is confirmed with one chirp sound and one parking light flash.

To deactivate the Long Door Lock Pulse, follow the same procedure as above under activating valet mode. The deactivation of valet mode is confirmed with two chirp sounds and two parking light flashes.

NOTE: Factory standard setting is with valet off.

6.9 Voltage Drop/Last Door Closed Arming (Factory Default Setting: Voltage Drop On / Last Door Closed Arming Off)

If circumstances exist where the voltage sensing circuit would be triggered by a mechanical clock or signal output from a cellular phone, that circuit can be eliminated and hardwire to door method will be used to protect any openings. Since last door closed arming mode requires hardwire to door, elimination of voltage drop will enable the last door closed arming mode.

To activate the Voltage Drop/Last Door Closed Arming, turn the ignition key to the on position and within ten (10) seconds PRESS BUTTON #4 for a five (5) second interval. The valet mode is confirmed with one chirp sound and one parking light flash.

To deactivate the Long Door Lock Pulse, follow the same procedure as above under activating valet mode. The deactivation of valet mode is confirmed with two chirp sounds and two parking light flashes.
NOTE: Factory standard setting is with valet off.

SECTION 7: RESET DEALER PROGRAMMABLE FEATURES TO FACTORY DEFAULT SETTING:

To RESET DEALER PROGRAMMABLE FEATURES TO FACTORY DEFAULT SETTING:

1. Open the door.
2. With your vehicle key in key cylinder, turn it to ignition on position (Driving Position).
3. Within 10 seconds, press and hold the antenna button for 7seconds.
4. RESET TO FACTORY DEFAULT SETTING is confirmed with three chirp sounds and three parking light flashes.

Note: This operation will also reset customer programmable features to factory default setting.

SECTION 8: REMOTE START SELECTABLE FEATURES

DIP SWITCH	ON	OFF
1	GASOLINE ENGINE	DIESEL ENGINE
2	AUTOMATIC TRANSMISSION	MANUAL TRANSMISSION
3	TACH SIGNAL MODE	TACHLESS MODE
4	TACH SIGNAL MODE	TACHLESS MODE

8.1 DIP SWITCH #1 Engine Type Select

Engine Type Select means that both gasoline and diesel engine vehicles can be accommodated for the remote engine start function of your system. Your Dealer will select the correct setting. For Gasoline Engine turn dip switch #1 to the on position. For Diesel Engine turn dip switch #1 to the off position.

NOTE: Factory setting is ON.

8.2 DIP SWITCH #2 Transmission Type Select

For Automatic transmission turn dip switch #3 to the off position. For Manual transmission turn dip switch #3 to the on position.

NOTE: Factory setting is ON.

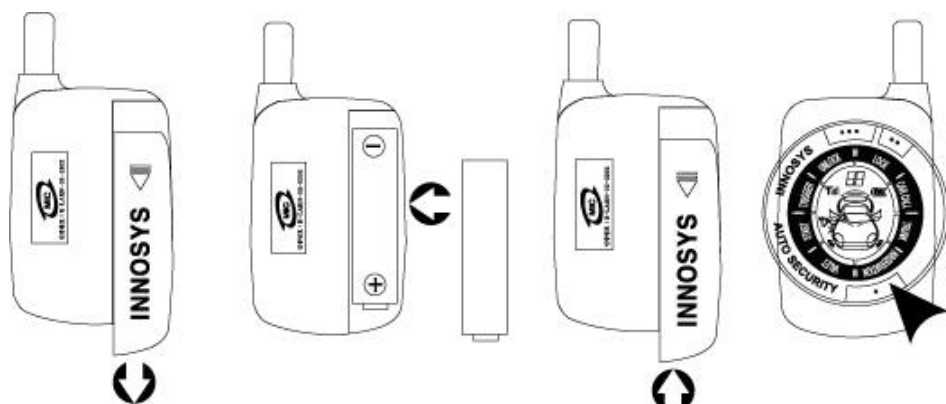
8.3 DIP SWITCH #3,4 Remote Start Confirmation

Remote Start Confirmation means that once you have initiated the ignition on and remote start functions through the RF transmitter, the engine will automatically crank start and the start run condition will be visually verified with five (5) parking light flashes. The parking lights will flash for the duration of the engine run condition. Your Dealer will select the correct method of start verification. For Tachometer Signal turn dip switch #3,4 to the off position. For Tachless mode turn dip switch #3,4 to the on position.

NOTE: Factory setting is ON.

SECTION 9: THE TRANSMITTER BATTERY REPLACEMENT INSTRUCTIONS

Battery Size: +1.5V AAA



1. Remove the battery cover from the back of the transmitter.
2. Remove the old battery carefully.
3. Replace with fresh new battery and close the cover.
4. Press any button, check LCD screen.

NOTE: Normal battery life is approximately 8 weeks but varies depending on usage. For optimum performance and RF range, replace the battery at least once a month.

SECTION 10: WIRING DIAGRAM
