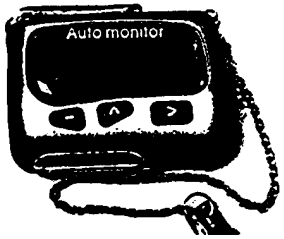


SECURITY & SAFETY

SER'S & INSTALLATION MANUAL

ODEL: **CM-2500**

e Auto Monitor

01

CM-2500 USER'S MANUAL

(Long Range Auto Monitor)

Buttons' Features:

ON/OFF button: Press this button to turn receiver's power " ON ", pressing a few sec will turn the power " OFF " ◦

Audible / Vibration alert button: While power "ON "; Press and hold this button one sec, a "Bi Bi" is heard to confirm the pager in beep mode without icon. Upon a second press , vibration is felt to confirm the pager in vibration alert mode and will show up ◦

RESET/ Backlight button: Press this button to have backlight a few sec. During any alert, pressing of it will mute beep sound and immediately the receiver gets into a standby mode.

※ **Power source for pager receiver: 1.5 V alkaline battery x 1 piece** •

Operation Guide:

1. **POWER-ON**: Icons appear along with audible sound or vibration. Then receiver gets into standby mode 【Note: The main system must be in the "arm mode".】•
2. **POWER-OFF** : All active icons disappear following audible sound or vibration. •

Icon Guide:

1. **Unlock/disarm Mode** :This shows up if the car is disarmed / unlocked. During this mode, only page-out and engine-start functions can still be operated while other functions become invalid
2. **Lock/arm Mode** :This shows up if the car is locked. 15 sec later, the receiver makes a beep sound and displays to confirm that the car gets into ARM MODE.
3. **Range Check Mode** :This shows up during 5 min-range-check if pager can be receiving signal from the car's transmitter immediately after LOCK MODE. This icon stays on within the effective range for the whole 5 min duration. It will disappear either the pager is beyond effective range or 5-min range check is over.
4. **Engine Run Mode**: This will show up audible or vibration alert if the car's engine is running.
5. **Door Open Mode**: This will show up with audible or vibration alert if the door is opened in lock / arm mode.
6. **Hood Open Mode**: This will show up audible or vibration alert if the hood is opened in lock / arm mode.
7. **Trunk Open Mode**: This will show up audible or vibration alert if the trunk is opened in lock / arm mode.
8. **Light Impact Mode**: This will show up audible or vibration alert if the car in lock / arm mode experiences a light impact .

9. **Heavy Impact Mode**: This will show up audible or vibration alert it the car in lock / arm is bumped or shaken with force.
10. **Low Battery Indicator** : This will show up audible or vibration alert when the pager's battery is very low.
11. **Page out Call** :A person in the car can send (within effective range) a page call by pushing the button on the antenna's case to anyone carrying the receiver. He will be alerted by sound like telephone ring or vibration by his receiver. .

Other System features:

1. **Modes and Audible alert**: Different icons and audible alert enable car owner to monitor car's various modes.
2. **Last Status Memory**: After lock mode, the receiver retains the latest car status until it receives UNLOCK report feedback . It will reset itself afterwards.
3. **Page-out Call button:** There is a page-out call button in the center of the circular antenna case which can be used to page a person carrying receiver in case of need.
4. When the main system of the vehicle enters " arm mode", the status LED on the transmitter/ antenna case blinks slowly and steadily and pulse during transmission. This acts as a warning sign against any theft attempt.

※ **Code Learning of receiver** :For replacement or to have a spare receiver, follow the instruction below. Turn pager's power "OFF" first. Then press and hold the ON/OFF button for about 5 sec till one beep is heard when the receiver gets into 20 sec learning mode. Release the button and push the call-out button to transmitter a paging signal which will then be learned by the receiver still active in the learning mode. The receiver will respond with a series of beeps to confirm its success of code learning.

◆ 10 PIN HARNESS

1. **Red wire:** Connect this with 12 volt positive wire. Locate the positive 12V wire of the ignition switch cylinder to connect with this . This is the power supplier for main control module and is always constant positive 12V regardless of the ignition key's position.
2. **Black wire:** This must be grounded and also is the main module's ground wire.
3. **Yellow wire:** The receiver's LCD shows "engine run" icon when this wire has positive input. Connect this with ignition wire. Locate the positive 12V wire which will shows 12 V when the ignition key is turned to "ignition " or "start " position. The main module uses this circuit to diagnose if the engine is running or not.[This feature is generally used for vehicle with remote engine start]

● **Choice of MODE # 1** on the control module , only the orange wire is used to operate the main system "ON " and "OFF"

4. **Orange wire:** When this wire has constant negative input, the system enters into "lock mode." [The receiver's LCD shows up "lock" icon] and the system enters into actual security mode 15 sec afterwards .This wire is generally connected to the start kill output wire which must have negative output while its alarm system enters " arm" mode. If the start kill wire is not available , connect the orange wire with key switch ignition position wire but the disadvantage is that the LCD receiver sounds alert when the vehicle door is opened while the system enters into arm mode.
5. **Blue wire:** When this wire has negative input, the receiver's LCD will show up "trunk open" icon. Connect this wire with switch trigger wire.

● **Choice of MODE # 2** on the control module: Orange wire and blue are used to operate the main system "ON " and "OFF"

The door lock/unlock system is used to operate main system to turn "ON" and "OFF" .Connect the 4th orange wire and the 5th blue wires with the 2 wires from the central lock. The main system is turned "ON" and "OFF" when remote door lock/unlock is activated. While installing ; if the lock/unlock does not conform with the lock/unlock icons on receiver's LCD, interchange the orange and blue wire connection. For this mode, connect the trunk and hood pin wires together.

6. **Purple wire:** If this wire gets positive input , the receiver's LCD shows "door open" icon. If the door switch pin is positive trigger, connect this with the door switch wire. [But if the door switch pin is negative trigger, leave the purple wire unconnected.]
7. **Brown wire**
   - **For Mode # 1:** When this wire gets negative input, the receiver's LCD shows up "trunk open" icon. Connect this with the hood pin trigger wire.
   - **For Mode # 2:** When this wire gets negative input, the receiver's LCD shows up both " trunk open" and " hood open" icons. Connect this with both the trunk and hood pin trigger wires.
8. **Green wire:** When this wire gets negative input , the receiver's LCD shows up "door open" icon. For car whose door pin trigger wire is negative, connect this with door pin wire .[If the door pin trigger is positive, leave the green wire unconnected.]
9. **Void pin**

10. **Blue /white wire:** If the mode # 2 is chosen, [In case the door is opened with a key instead of remote control door opening , the main system might misjudge this as authorized "door open" and disarm] .To correct mis-adjustment problem ,**locate the positive triggering wire of warning lights while remote door lock/unlock is activated** (for example: parking light flash) and connect with blue/white wire.

◆ 4 PIN HARNESS WIRE

1. **RED WIRE:** This is positive output of the main system and used to supply 12 volt current for shock sensor.
2. **BLACK WIRE:** This is the negative output of the main system and is used for ground connection with the shock sensor.
3. **BLUE WIRE:** While the system is in arm mode; if this wire gets negative input, the receiver's LCD shows up light impact icon.
4. **WHITE WIRE:** While the system is in arm mode; if this wire gets negative input, the receiver's LCD shows up heavy impact icon.

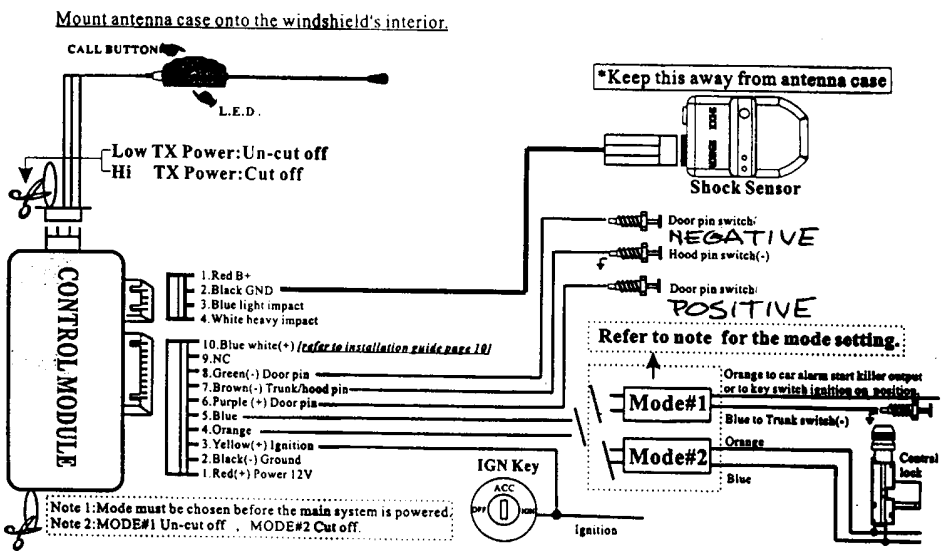
◆ 5 PIN HARNESS WIRE

Connect the wires of RF transmitter modules with the main control modules. Cut off connection between the 4th and 5th wire [originally is connected by the factory] to extend the transmission range by increasing output power.

Choice of mode # 1 or # 2 of the main control module

There is a black wire loop sticking out of the control case. Keep this loop intact for choice of mode # 1 . Cut this loop if mode # 2 is chosen.

CM-2500 *WIRING DIAGRAM*



CM-2500

LONG RANGE VEHICLE MONITOR

INSTALLATION MANUAL

●This can be installed on any vehicle with its normal voltage of 12 Volt.

●LCA-2200 can work on any of the following 3 different circuit types of the vehicle to control "ON" and "OFF" modes of vehicle monitoring. Installation should be done according to the actual circuit condition of the vehicle.

A Type : In this type, vehicle is installed with remote security system which has start kill output to enable main control module to operate the monitoring "ON" and "OFF" functions.

B Type : In this type , the vehicle has neither remote-controlled central locking system or security system. Ignition switch is used to enable the main control module to operate monitoring "ON" and "Off" functions.

C Type : In this type, the vehicle is installed with remote-controlled central locking system. The door lock/unlock output is used to enable the main control module to operate the monitoring ON and Off functions.

※ Note:

1. For A and B types , set the control module to the MODE # 1 .
2. For C type, set the control module to the MODE # 2 . 【Refer to mode setting on control module on wiring diagram.】
3. **If mode is chosen after the main system is powered, you must set the main system at a rest . [To do this, pull out the 10 PIN harness and re-insert it].**

Installation of the control module

Install the control module behind the dashboard, at a suitable position far from the heat source and water tank .

Transmitter module/antenna/call button and Status LED

The RF transmitter module is the integral part for the transmission by the control module and the push button for page-out call. The positioning of this can effect the remote transmitter range. Use the double-faced sticker to fix this module on either left or right upper corner of the interior of the front windshield but make sure it does not block the driver's view and should be at easily accessible place for the convenience of paging out . Clean the sticker's area thoroughly before the fixation of the module. Under "arm mode", the status LED normally blinks slowly and acts as a warning sign against any theft attempt. The LED will blink faster while transmitting.

2 Stage Shock Sensor

This senses any impact on car and reports to the main control module .It must be fixed on to the chassis or any metal surface inside the vehicle [choose its location away from heat source, water tank and RF module to avoid interferences] . Optimize its sensitivity using its adjustment twister. Twist to 【+】 direction to make it more sensitive and to 【-】 direction to make it less sensitive. [To test its sensitiveness , shake or strike the vehicle body with both of your palms and observe if the sensor's light turns green for light impact and the light turns red for heavy impact.]

Hood switch

This helps the main control module to detect the hood being opened. It must be installed onto the metal being grounded. Drill a hole of 1/4 inch in diameter at the decided place for the hood switch. Make proper adjustment after installation. [It must has negative output when the hood is opened and becomes neutral when closed.]

Trunk switch

Most of the vehicles have this switch. This helps main control module detect the truck being opened. It has negative output when the trunk is opened and becomes neutral when closed. [If the trunk switch has positive output, a relay must be added .]

Door Switch

Every vehicle has this switch. This helps the main control module detects the door being opened. [The switch might be either positive or negative trigger depending on the vehicle] . For positive trigger vehicle, the purple wire is used to sense door-open . But for negative trigger vehicle, the green wire is used for same purpose.

Engine Run

In order for the receiver's LCD to monitor the engine run or not [this features is used for vehicle with remote engine start features] , the engine start circuit needs positive input to enable receiver's LCD to show up Engine Run icon. This circuit needs connection with ignition wire. Locate the ignition wire which shows 12 V while the ignition key is turned to "ignition" or "start" position. the control module uses this circuit to diagnose if the engine is running or not.

※ WIRE INSTALLATION GUIDE ※