

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 of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

# TEC-2WAY COLOR



## 1. What is included

| 1. MAIN UNITS                                                                      |                                                                                    | 2. ACC. PARTS                                                                       |                                                                                      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1. Control Module                                                                  | 2. LCD 2Way Remote                                                                 | 1. 6-Tone Siren                                                                     | 2. Paging Sensor                                                                     |
|   |  |    |   |
| 3.rx 2Way Antenna                                                                  |                                                                                    | 3. Shock Sensor                                                                     | 4. Wiring Harness                                                                    |
|  |                                                                                    |  |  |

## 2. Standard Icon configuration of Remote

|                                                                                     |                                                                                     |                                                |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------|
|  |  | Indicating Transmitting & Receiving            |
|                                                                                     |  | To enter a mute mode                           |
|                                                                                     |  | To exit a mute mode                            |
|                                                                                     |  | Vibrate mode                                   |
|                                                                                     |  | The automatic door open cancellation           |
|                                                                                     |  | Indicating the siren on                        |
|                                                                                     |  | Indicating the siren off                       |
|                                                                                     |  | Battery level indicator(Full)                  |
|                                                                                     |  | Battery level indicator(Replace)               |
|                                                                                     |  | Indicating the system is arming                |
|                                                                                     |  | Indicating the system is disarming             |
|                                                                                     |  | Indicating a paging                            |
|                                                                                     |  | Indicating the shock sensor has been triggered |
|                                                                                     |  | Indicating the timer mode                      |
|                                                                                     |  | Indicating an alarm mode                       |



Disarm Unlock



My car number



Calling



Shock detected



Trunk released



Vibrate enable



Siren set up



Arm lock

### 3. Diagram of using Transmitter

| Button      | Press Time | Sound               | Description                                           |
|-------------|------------|---------------------|-------------------------------------------------------|
| I           | 1sec       | Beep                | Arm / Disarm                                          |
|             |            |                     | Door Lock / Unlock                                    |
|             | 3sec       |                     | Panic Mode                                            |
| II          | 1sec       | Beep                | To start & stop the Engine                            |
| III         | 3sec       | Beep                | Trunk Release                                         |
| Check       | 2sec       | Beep                | To confirm the status of the system                   |
|             | keep going | Beep Beep           | Manner option<br>(Beep mode/Silent mode/Vibrate mode) |
| Aux         | 2sec       | Beep                | To find my car                                        |
| II + III    | 3sec       | Beep                | To set the clock of Remote                            |
|             | 4sec       | Beep Beep           | To set the alarm clock of remote                      |
|             | 5sec       | Beep Beep Beep      | To set of remote control                              |
|             | 6sec       | Beep Beep Beep Beep | The car number input                                  |
| Check + Aux | 3sec       | Beep                | To engage & disengage the silent mode of the system   |
|             | 4sec       | Beep Beep           | To engage & disengage the valet mode of the system    |
|             | 5sec       | Beep Beep Beep      | To engage & disengage the mode of LPG engine          |

## 1. REMOTE CODE LEARNING

After finish the installation and powering up the system, start the remote code learning to the system as follows ;

\* **Note** : This system will accept one more additional remote control transmitter.



\* **Note** : To program the Additional Transmitter

Press number one button of additional remote control within 5 seconds, after finish learn the code of first remote control.



**Important :**

1. **DONOT CLOSE THE DOOR WHILE CODE LEARNING.**
2. If the remote dose not work, **PLEASE RE-START CODE LEARNING** from **THE 1ST. STEP.**

## 2. To enter programming mode



1. After finish the installation, please start to set the functions one by one as follows :  
1). To choose engine run time => 2). To choose ignition output time => 3). To choose or delete shock trigger input => 4). To program "Turbo function"  
2. After program or choose one function, press button number one for next programming.  
You can confirm the next programming function by the numbers of "beep" sounds and letters(ex: EN, DL, SH, TB) on the LCD of remote.
3. To exit programming mode, take no action for 20 seconds or take out the key from the ignition.

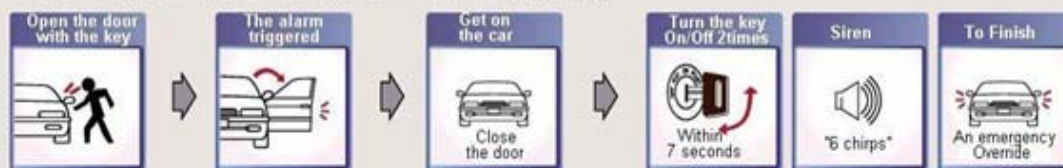
## 3. Disarming without a transmitter



- NOTE! :**
1. In Valet Mode, the siren will chirp before the system has changed to "Silent Mode."
  2. In Valet Mode, only the Lock and Unlock functions will work.  
Most of other functions(arm, disam, remote start, etc) will not to continue to work.

### Disarming without transmitter (Emergency override)

If your remote control transmitter is lost or damaged, you can mannually disarm your vehicle security system.  
To disarm the system without a transmitter, you must have the vehicle's ignition key.



- 1). Open the door of the vehicle with the key and the siren will sounding.
- 2). After 3 to 5 seconds to open the door of the car, the parking light will start to flash.
- 3). Get on the car and close all doors. **Turn the key On & Off 2 times** within **7 seconds** from the first parking light flash
- 4). The siren will sound 6 times and the system will disarm.
- 5). If the system does not disarm, you may have waited too long : To start from the first step again.

## 4. Warning

### WARNING! SAFETY FIRST

The following safety warnings must be observed at all times :



#### NEVER INSTALL THE VEHICLE WITH MANNUL TRANSMISSION

Use of this product in a manner contrary to its intended mode of operation may result in property damage, personal injury, or death. (1) **Never install the system** to the vehicle with **mannual transmission**.



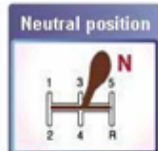
#### NEVER REMOTELY START...

- (1). Never remotely start the vehicle with the vehicle in gear, and
  - (2). Never remotely start the vehicle with keys in the ignition.
- The user must also have the neutral safety feature of the vehicle periodically checked, wherein the vehicle must not remotely start while the cars in gear.



#### ALL INSTALLATIONS MUST BE PERFORMED BY AN AUTHORIZED DEAERS.

After the remote start module has been installed, contact your authorized dealer to have him or her test the remote start module by performing the Safety Check outlined in the product installation guide. If the vehicle starts when performing the Neutral Safety Shutdown Circuit test, the remote start unit has not been properly installed. The remote start module must be removed or installer must properly reinstall the remote start system so that the vehicle doesnot start in gear.



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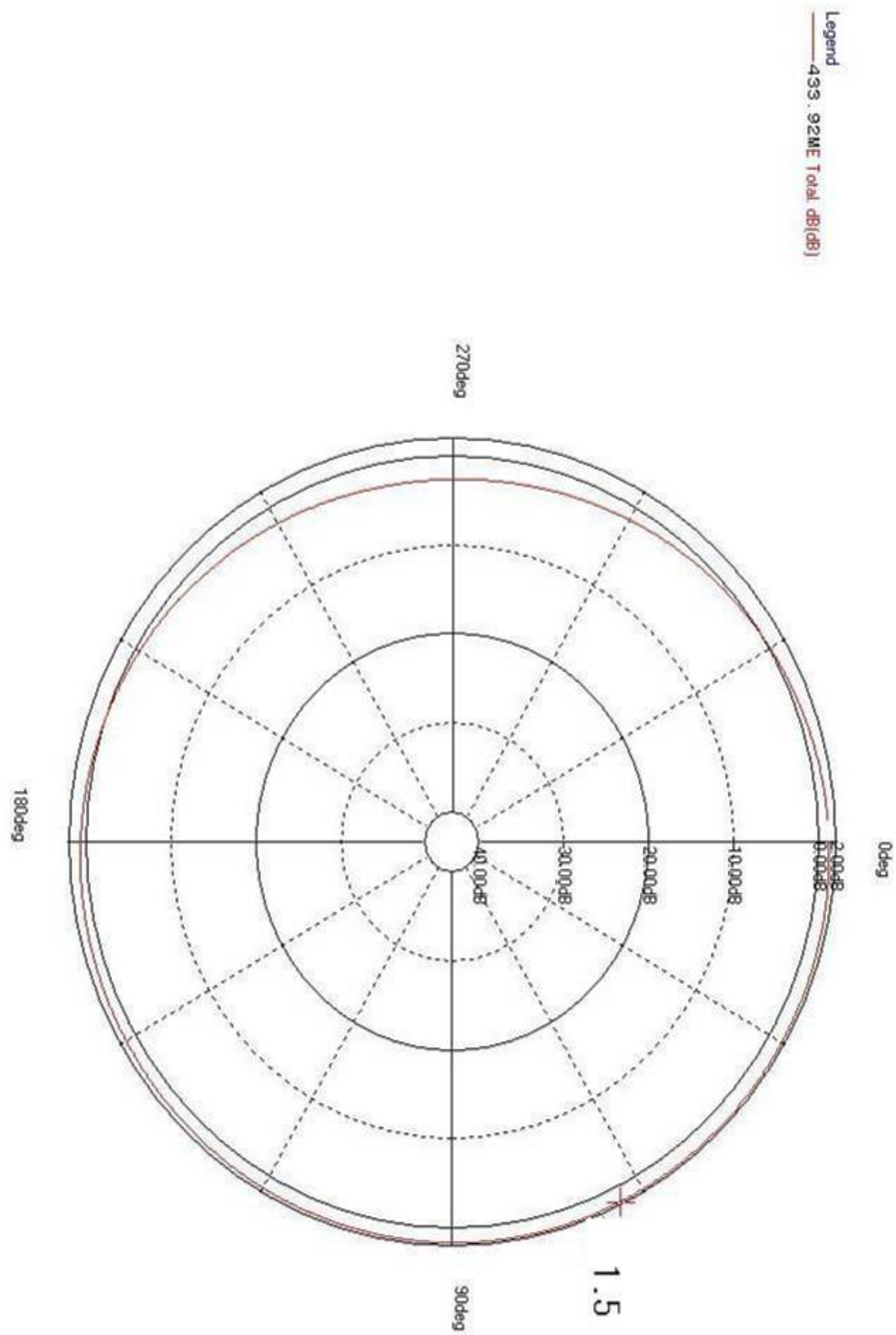
FILE NO : 200602-01  
ISSUE DATE : 2006. 02. 15  
RECEPTION : DETECTOR Electronics Co., Ltd  
CONSULTATION :  
SUBJECT : ANTENNA SPECIFICATION

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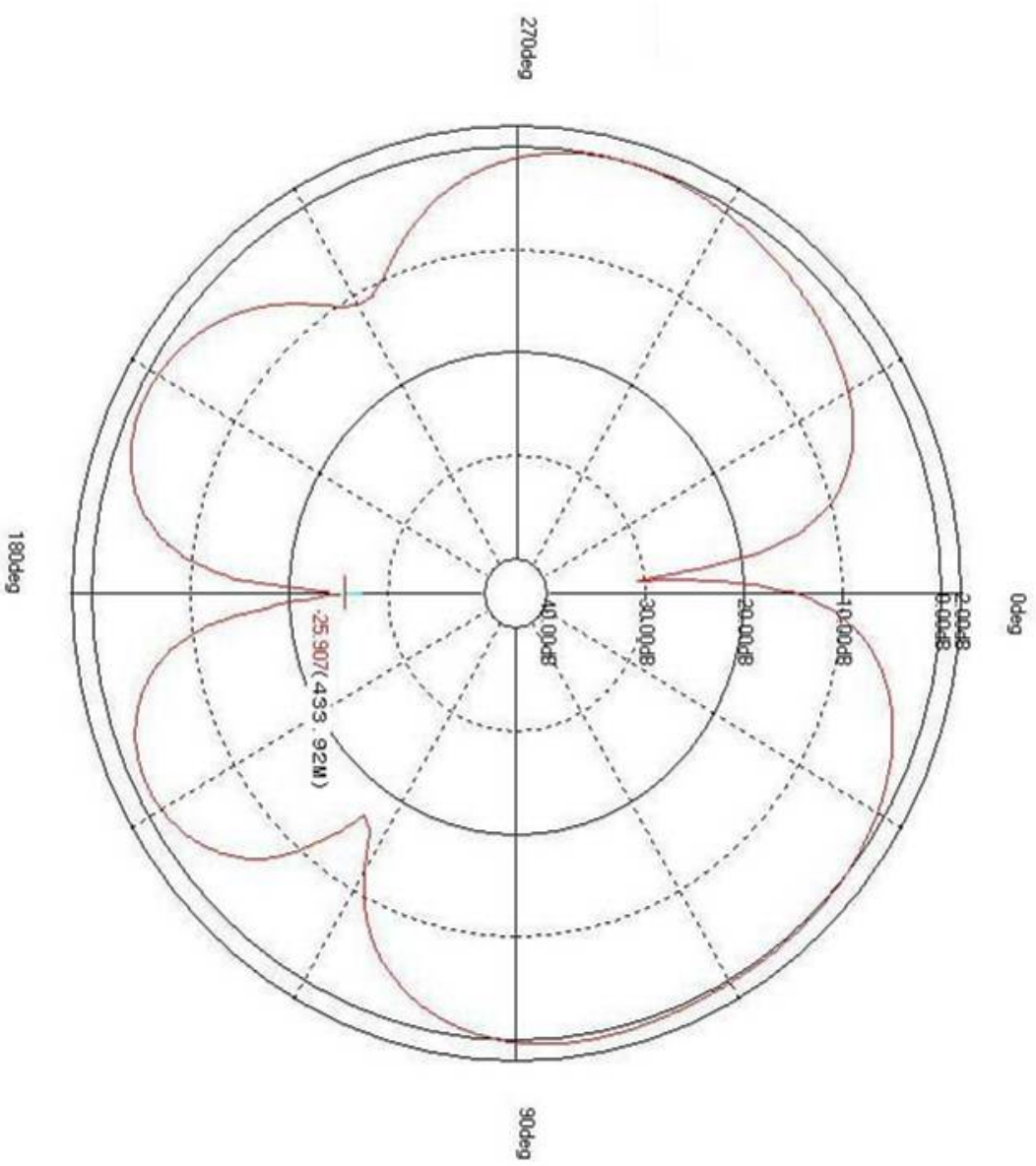
## ANTENNA SPECIFICATION

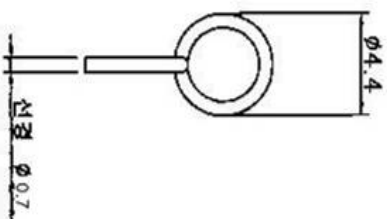
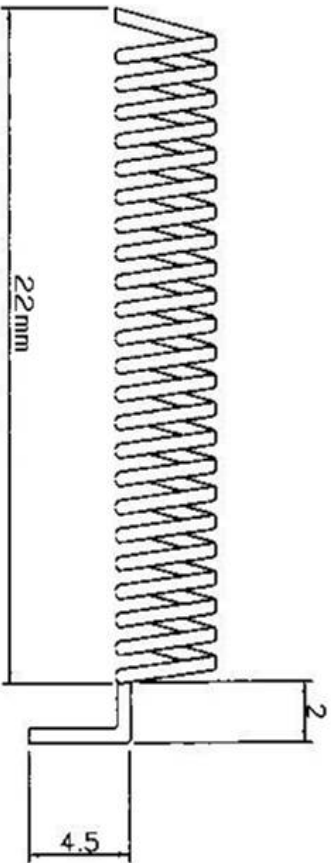
- 1 TYPE AND FORM OF ANTENNA
    - o HELICAL ANTENNA
  - 2 GAIN AND INTENTION QUALITY OF ANTENNA
    - o GAIN : 1.5dBi
    - o INTENTION QUALITY : OMNIDIRECTIONAL
  - 3 PARTIAL QUALITY OF ANTENNA
    - THERE IS NOT CORRESPONDENCE
  - 4 CONNECTION FROM OF TRANSMISSION SYSTEM
    - o PCB AND HELICAL ANTENNA SOLDERING CONNECTION
  - 5 MODEL AND MANUFACTURER OF ANTENNA
    - o MODEL NAME : HELICAL ANTENNA
    - o MODEL NO : RF-17
    - o MAKER : KUM YOUNG
-

1) ANTENNA PATTERN



Legend  
433.92Mhz





| NO. | PART NAME | QTY/SET | MATERIAL | MFG | REMARK | MODEL NO | RF-17 | TEL : 02)2613-4448                       |
|-----|-----------|---------|----------|-----|--------|----------|-------|------------------------------------------|
| 1.  | SPRING    | 1       | SWC      | NI  |        | SCALE    |       | FAX : 02)2689-5355                       |
| 2.  |           |         |          |     |        | QUANTITY |       | KUM YOUNG<br>ELECTRONICS & COMMUNICATION |
| 3.  |           |         |          |     |        | DATE     |       |                                          |
| 4.  |           |         |          |     |        |          |       |                                          |
| 5.  |           |         |          |     |        |          |       |                                          |
| 6.  |           |         |          |     |        |          |       |                                          |
| 7.  |           |         |          |     |        |          |       |                                          |

# TEC – 2WAY COLOR INSTALLATION GUIDE

|     |        |                                           |
|-----|--------|-------------------------------------------|
| M/1 | ORANGE | (-)400mA Starter Kill/Option #1/Option #2 |
| M/2 | BLACK  | (-)Chassis Ground Input                   |
| M/3 | WHITE  | (+)Output to Second Ignition Circuit      |
| M/4 | RED    | (+)Constant 12V Input                     |
| M/5 | YELLOW | (+)Output to Starter Circuit              |
| M/6 | BLUE   | (+)Output to Ignition Circuit             |

|     |        |                                  |
|-----|--------|----------------------------------|
| A/1 | RED    | (+)10A Lock Output               |
| A/2 | BLACK  | (+)10A Unlock Output             |
| A/3 | GREEN  | (-)400mA Lock Output             |
| A/4 | YELLOW | (-)400mA Unlock Output           |
| A/5 | PURPLE | (-)400mA Optional Channel Output |
| A/6 | RED    | (+)400mA Optional Channel Output |

|     |             |                        |
|-----|-------------|------------------------|
| B/1 | ORANGE      | (-)Door Trigger Input  |
| B/2 | BLUE        | (+)Light Flash Output  |
| B/3 | BLUE        | (+)Light Flash Output  |
| B/4 | BROWN/WHITE | (+)Siren Output        |
| B/5 | Empty       |                        |
| B/6 | PINK        | (+)Parking Light Input |
| B/7 | BLACK/WHITE | (+)Generator Input     |
| B/8 | Empty       |                        |

|     |              |
|-----|--------------|
| C/1 | Shock Sensor |
| C/2 |              |
| C/3 |              |

|     |         |
|-----|---------|
| D/1 | Antenna |
| D/2 |         |
| D/3 |         |
| D/4 |         |
| D/5 |         |

|     |                   |
|-----|-------------------|
| E/1 | Paging Sensor/LED |
| E/2 |                   |
| E/3 |                   |

## DIP SWITCH

OFF ON

|   |                          |   |
|---|--------------------------|---|
| 1 | <input type="checkbox"/> | 1 |
| 2 | <input type="checkbox"/> | 2 |
| 3 | <input type="checkbox"/> | 3 |
| 4 | <input type="checkbox"/> | 4 |
| 5 | <input type="checkbox"/> | 5 |
| 6 | <input type="checkbox"/> | 6 |
| 7 | <input type="checkbox"/> | 7 |

## DIP SWITCH

|   |     |                                                             |
|---|-----|-------------------------------------------------------------|
| 1 | OFF | Starter Relay Turn-on                                       |
|   | ON  | LPG or Vacuum valve                                         |
| 2 | OFF | For vehicle with LPG engine                                 |
|   | ON  | For vehicle with automatic transmission                     |
| 3 | OFF | Programming pre-ignition output time(4 or 6 seconds)        |
|   | ON  | Programming Pre-ignition output time(8 or 12 seconds)       |
| 4 | OFF | Programming Crank Time(0.8 seconds)                         |
|   | ON  | Programming Crank Time(1.5 seconds)                         |
| 5 | OFF | Programming Reservation Type A for next Remote Engine Start |
|   | ON  | Programming Reservation Type B for next Remote Engine Start |
| 6 | OFF | Starter Output shut down(Power Noise)                       |
|   | ON  | Starter Output shut down(Generator input)                   |
| 7 | OFF | The Vehicle with Vacuum Valve                               |
|   | ON  | For LPG Engine                                              |

## WARNING!

FOR SAFETY,  
DO NOT INSTALL THE REMOTE ENGINE START SYSTEM  
THE VEHICLE WITH GEAR SHIFT TRANSMISSION.

# Ignition/Start/Power Wire Connection Guide

## ■ Wiring Diagram

|     |        |                                           |
|-----|--------|-------------------------------------------|
| M/1 | ORANGE | (-)400mA Starter Kill/Option #1/Option #2 |
| M/2 | BLACK  | (-)Chassis Ground Input                   |
| M/3 | WHITE  | (+)Output to Second Ignition Circuit      |
| M/4 | RED    | (+)Constant 12V Input                     |
| M/5 | YELLOW | (+)Output to Starter Circuit              |
| M/6 | BLUE   | (+)Output to Ignition Circuit             |

## ■ Wire Description

### M/1 ORANGE

1. (-)400mA Output when arm the system(For Starter Relay Turn-on)
2. (-)400mA Output when remote engine starts.(To open the vacuum valve)
3. (-)400mA output when closing the door after program the remote engine start reservation.  
(To burn the rest LPG gas in the engine in winter time)

### M/2 BLACK (-)Chassis Ground Connection

Connect this wire to a clean, paint-free sheet metal location(driver kick panel) using a factory bolt that DOES NOT have any vehicle component grounds attached to it. A screw should only be used when in conjunction with a two-sided lock washer. Under dash brackets and door sheet metal are not acceptable ground points. It is recommended that all security components be grounded at the same location.

### M/3 WHITE Output to Second Ignition Circuit.

Connect this wire to the second ignition wire in the vehicle.

NOTE: For vehicle that do not have a second ignition wire, this connection is not required.

### M/4 RED (+)12V input

Remove the two 30 amp fuses prior to connecting these wires and do not replace them until the satellite has been plugged into the control module. These wires are the source of current for all the circuits the relay satellite will energize. They must be connected to a high current source. Since the factory supplies (+) 12V to the key switch that is used to operate the motor, it is recommended that these wires be connected there.

### M/5 YELLOW Starter Output

Connect this wire to the starter wire in the vehicle.

### M/6 BLUE Ignition Output

Connect this wire to the ignition wire in the vehicle.

## Door Lock/Optional Output Harness

### ■ Wiring Diagram

|     |        |                                  |
|-----|--------|----------------------------------|
| A/1 | RED    | (+)10A Lock Output               |
| A/2 | BLACK  | (+)10A Unlock Output             |
| A/3 | GREEN  | (-)400mA Lock Output             |
| A/4 | YELLOW | (-)400mA Unlock Output           |
| A/5 | PURPLE | (-)400mA Optional Channel Output |
| A/6 | RED    | (+)400mA Optional Channel Output |

### ■ Wire Description

|            |                                                       |
|------------|-------------------------------------------------------|
| A/1 RED    | Direct Output to Lock Wire of Door Lock Servo Motor   |
| A/2 BLACK  | Direct Output to Unlock Wire of Door Lock Servo Motor |
| A/3 GREEN  | Output to Door Lock Wire                              |
| A/4 YELLOW | Output to Door Unlock Wire                            |
| A/5 PURPLE | (-)400mA Output                                       |
| A/6 RED    | (+)400mA Output                                       |

When the system receives the code controlling Channel 2, the PURPLE wire will supply an output for one second. This is often used to operate a trunk release or other relay driven function.

## Primary harness Wire Connection Guide

### ■ Wiring Diagram

|     |             |                        |
|-----|-------------|------------------------|
| B/1 | ORANGE      | (-)Door Trigger Input  |
| B/2 | BLUE        | (+)Light Flash Output  |
| B/3 | BLUE        | (+)Light Flash Output  |
| B/4 | BROWN/WHITE | (+)Siren Output        |
| B/5 | Empty       |                        |
| B/6 | PINK        | (+)Parking Light Input |
| B/7 | BLACK/WHITE | (+)Generator Input     |
| B/8 | Empty       |                        |

### ■ Wire Description

#### **B/1 Orange** (-)Door Trigger Input

Most Vehicles use negative door trigger circuits. Connect the ORANGE wire to a wire showing ground when door is opened.

#### **B/2, B/3 BLUE** (+)Light Flash Output

Connect this wire to (+)parking Light Wire of the vehicle.  
When you connect to the signal light, connect these wires to the signal light wires.

#### **B/4 B/W** (+)Siren Output

Connect this to the brown/white wire of siren.  
Connect the black wire of the siren to (-)chassis ground.

#### **B/6 PINK** (+)Parking Light Input

This is used to warn a driver that the lights of the vehicle on when arm the system.  
Connect this wire to (+)parking light wire.

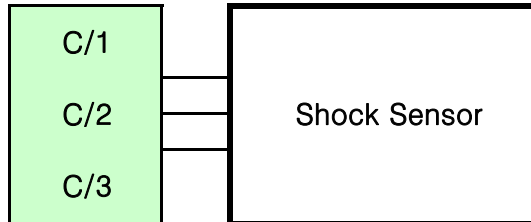
#### **B/7 B/W** (+)Generator Input

This input provides the control module when the engine of the vehicle starts to run.  
Connect this wire to generator or oil lamp wire showing (+)power when engine starts to run.

## Peripheral Plug-In harness

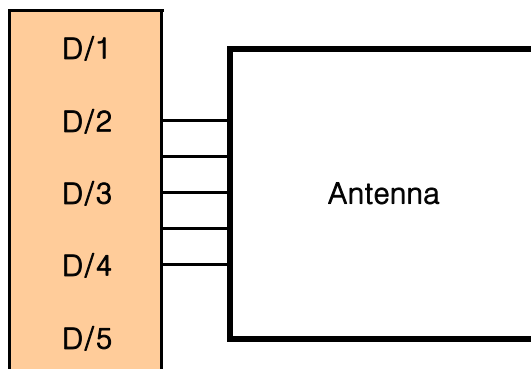
### Shock Sensor 3 Pin White Plug

: (-)White Input



Input will trigger full alarm sequence and siren will sound for 10 seconds.

### Antenna 5 Pin White Plug



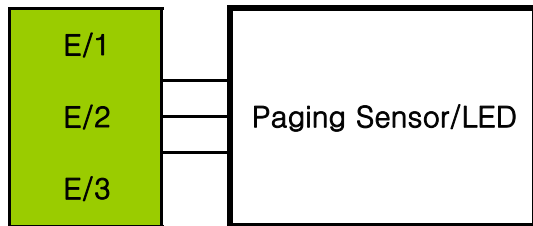
Receiver/Antenna position should be discussed with the vehicle owner prior to installation, since the antenna may be visible to the vehicle's owner.

The best location receiver/antenna is high on front wind shield.  
For optimal range, the antenna should be mounted horizontally.  
Metallic window tint can also affect range, so this should be a consideration when determining the mounting location.

After determining the best mounting location, follow these steps;

1. Clean the mounting area with a glass cleaner to remove any dirt or residue.
2. Mount the receiver/antenna using the supplied double sided tape.
3. Route the receiver/antenna cable to the control module and plug into the five-pin antenna connector.

### Paging Sensor/LED 3 Pin Yellow Plug



This sensor is used to page a absent driver and has LED circuit inside.

Paging sensor/LED position should be discussed with the vehicle owner prior to installation.

The best location sensor/LED is left side bottom of front windshield.  
After determining the best mounting location, follow these steps;

- 1). Put sensor on guide sticker using the supplied double-side tape.
- 2). Put guide sticker on front windshield.
- 3). Route the sensor cable to the control module and plug into the 3-pin paging sensor/LED connector.

# Programming DIP SWITCH

These dip switches are used to determine and program the various functions (ex: output time etc.) of control module.

## No.1 Dip Switch

### 1. OFF : 400mA Armed Output

This dip switch is used to determine the M/1 output.

The M/1 output wire will supply a (-)400mA ground as long as system is armed.

And this output ceases as soon as the system disarmed.

## No.1&7 Dip Switches

### No.1/ON & No.7 OFF :

400mA Output when you start the engine by remote.

These dip switches are used to determine the M/1 output.

This M/1 output wire will supply a (-)400mA ground as long as system runs engine to open the vacuum valve of the vehicle.

And this output ceases as soon as the system stopped the engine running.

## No.1,7 & 2 Dip Switches

### No.1/OFF & No.7 ON & No.2 OFF :

400mA Output for LPG engine.

These dip switches are used to determine the M/1 output and remote start reservation for the vehicle with gear shift transmission.

At winter time, most of the vehicle with LPG engine needs to burn the rest of LPG gas in the engine.

If the system was programmed as the above, the system will supply the ignition output to continue the engine running even a driver turned off the engine with key.

After exit and close all doors of the vehicle, M/1 output will supply (-)400mA ground to operate an optional really for LPG vehicle.

And this output ceases as soon as the input stopped from the generator wire of the vehicle.

## No.2 Dip Switch

### 1. OFF : To operate LPG Wire.

This dip switch is used to determine the operating mode of M/1 output.

The system will supply the ignition output when a driver turned off the engine with key to continue the engine running.

And this output ceases as soon as the door is locked.

### 2. ON : Remote engine start

## No.3 Dip Switch

### 1. OFF : To Program the Ignition Output Time(4 or 6 Seconds)

This function is used for the gasoline engine vehicle.

### 2. ON : To Program the Ignition Output Time(8 or 12 Seconds)

This function is used for the diesel engine vehicle.

#### No.4 Dip Switch

1. OFF : To Program the Crank Time(0.8 seconds)  
This function is used to determine crank time shortly for the new car.
2. ON : To Program the Crank Time(1.5 seconds)  
This function is used to determine crank time longer for the used car.

#### No.6 Dip Switch

1. OFF : Starter output shut down(Power Noise)  
This function is used to determine the mode of crank shut down.  
The system will stop the start output when the system detects the power noise of the vehicle after engine running.
1. ON : Starter output shut down(Generator Input)  
This function is used to determine the mode of crank shut down.  
The system will stop the start output when the system detects the generator wire input of the vehicle after engine running.

Realistic 65,000 True Color Base  
Finished with Phone LCD Product

**2WAYCOLOR**  
Remote Control Auto Security System

## Mobile Security System

DEL : TEC-2WAY COLOR

genuine Accessories of Hyundai MOBIS

– 9001 registered mobile electronic products



## Features

- ◆ 5 button 2-way remote start / security / Keyless entry system
- ◆ **65,000 color LCD**
- ◆ Super high Frequency
- ◆ System's status check Via LCD display
- ◆ Remote Engine Start
- ◆ Find Location
- ◆ Programmable running time ( 15, 25 minutes )
- ◆ Arm / Disarm by remote
- ◆ Arm in mute & Valet mode by remote
- ◆ Door lock & unlock by remote
- ◆ Parking light flash
- ◆ Door & Shock Detect
- ◆ Power Trunk Release
- ◆ Paging sensor

## Remote Control diagram

- ① button – Door Lock / Unlock
- ② button – To start & stop the Engine
- ③ button – Trunk Release

Check button – To confirm the status of the system

Aux button – Find the my car

## **FCC Information**

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 interface, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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 correct the interference by one or more of the following measures:

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

## **WARNING**

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.