

SMARTKEY SYSTEM

Alibaba Model : ALI-ST800

An Installmen Guide of *Alibaba*



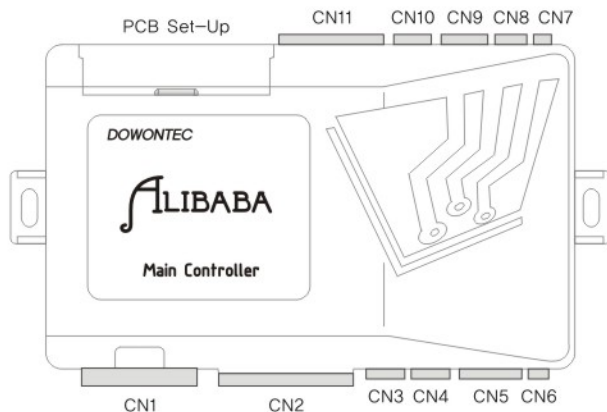
- Warranty services are not available if your smart key is installed by non-qualified agencies.
- For some vehicle types, costs may be added due to separate parts to be installed. Warranty services are guaranteed only if you use only DOWONTEC parts.
- The types and functions of this product can change to improve performances without any notice.



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For your safety, read this installment guide carefully, and observe the instructions for right installment.



Wiring Description

CN1 Connector	2	CN7 Connector	5
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We really appreciate your using DOWONTECH Alibaba ST800 and ST PLUS. The company is doing its utmost to provide its best products which are easy and convenient to install.

► Meaning of Warning Signs

If you do not observe the instructions of this sign, it may cause damages to products and vehicles, and injuries to humans, or accidents.

⚠ Danger If you do not observe the instructions of this sign, it may cause damages to products and vehicles, and injuries to humans, or accidents.

⚠ Warning If you do not observe the instructions of this sign, it may cause human accidents such as death, serious injuries, etc. or serious damages.

Notice This sign informs you of supplemental descriptions or the instructions you must observe while handling the product.

⚠ Warning

- * The installer is responsible for the damages due to errors during installment. Please, read the installment guide through before installment.
- * Make sure to install the product into the vehicle types regulated as applicable ones only. (Refer to the installment instructions when you purchased the product, or the company's website)
- * For your safe installment, avoid the sloping places.
- * Since a car manufacturer may change wiring colors and options without any notice, refer to the installment guide and check it up using a tester before wire connecting. (Do not use a tester with high current)
- * For the wire requiring 250mA-output, make sure to check up the operating-current value of the connector you will work on before wiring.
- * Make sure poor contacts do not occur during wire connecting. Ensure that main modules and individual sensor modules do not shake and that humidity does not penetrate before installment.
- * For the vehicle where airbags have been applied, make sure to cut off airbag fuses and power, install the product, and connect the cut-off airbag power.
- * Do not use PCB loop lines for a manual transmission vehicle after cutting them. If using the PCB loop lines for a manual transmission vehicle, the installer shall be responsible for any problem.
- * Make sure to put your car on the lift before designating the speed. (Do not set up the speed during running)
- * Before connecting the main power (B+–1, B+ 2), check it up that it passed through more than 30A. The power supply is composed of 2 lines. Remove foreign objects from the car body, tighten bolts at respectively different areas, and connect them securely.
- * For safe wiring, make sure to use the wires included in the product. To prevent fires due to short circuits and overheating.
- * In case the worker is color-blind, allow a person who is able to identify colors to help him install.
- * For more specific information on wire connecting and installing by vehicle types, visit the company's website and request member level-up.

Wiring Descriptions

- * Separate all wiring-connectors on main modules of the product, connect wires in the order of the following installment description.
- * Read the installment guide carefully, understand the characteristic of each wire, and using insulation tapes, tape the wires not used with caution on shorts.

► CN1 Connector (Main Power Wire)

Insert the (Y) connector included in the product into the key box connector fitting into its female and male area, find wires, and connect them.

* Green Wire (IG_1 [+]12V Output)

This wire is an important power line for supplying power to all devices required to operate your car, such as an engine, ECU, airbags, gauge boards, etc. (+)12V is output in Key Switch Step 2, and the power is maintained even during start. Find the same wire as above among wires for (Y) connecting, and connect it to the green wire of the main wires.

* White Wire (IG_1 [+]12V Output)

This wire is used to supply power to all the devices with high current, such as air conditioning devices, wipers, headlights, power windows, etc. (+)12V is output in Key Switch Step 2, and it may be shorted during start. Find the same wire as above among wires for (Y) connecting, and connect it to the white wire of the main wires.

* Blue Wire (IG_1 [+]12V Output)

This wire is used to supply power to other accessories including a cigar socket, audio lights, a watch, etc. (+)12V is output in Key Switch Step 2, and it may be shorted during start. Find the same wire as above among connector wires for (Y) connection, cut it, and connect with the blue one of the main wires toward the vehicle direction. Connect the wire cut toward the key box direction with the blue wire (ACC Input Wire).

Danger

Make sure to cut the wire before connecting it.

* Yellow Wire (START [+]12V Output)

This wire the (+) 12V output line used to operate the start motor during engine start. (+) 12V is output in Key Switch Step 3. Find the same wire as above among connector wires for (Y) connection, cut it, and connect with the yellow one of the main wires toward the vehicle direction. Connect the wire cut toward the key box direction with the CN11 yellow wire (START Input Wire).

Danger

- * The main module of the product has a START Motor Cut-off Relay built in. That's why you must connect them after cutting the start wires of the connector for (Y) connection and distinguish the ones for input and output.
- * Make sure to identify input and output, connect the START output wire of CN1, and connect START Input wire of CN11 toward the key box direction.
- * Unless you cut the START wire of the connector for (Y) connection, the START motor continuously operates, which may result in damages to your car and the START Motor.
- * In the meantime, unless connecting START Input Wire, you may not use START Cut-off Function, as well as you need not to cut the START Wire of the connector for (Y) connection.

* Red Wire B+1/Orange Color Wire B+2 (B+12V Power Line)

This wire is used to continuously supply power to the key box through fuses with more than 30A, and it operate ACC, IG1, IG2, and START. For some vehicle types, it is divided into 2 wires. Find the same wire as above among the wires of the connector for (Y) connection, and connect the red wire and orange-colored wire.

Warning

- * In case there is one (+) main power line in the key box, make sure to combine the red wire and orange-colored wire of the main ones into one wire before connection.
- * Make sure to use the main power line in the key box which passed through fuses with more than 30A.
If you connect the main power line to the product from the battery, it may cause fires and accidents, which result in damages to humans and properties.
(Main fuses are not included in the product)

► CN2 Connector (Main Output Line)

* Black Wire 1, 2 Self-Grounding([-] Power Line)

This wire is the power line (-) used for operating all functions of the product and for safe running.

Ground the power line by tightening bolts on the car body so that it does not shake.

Warning

- * If foreign objects coated on in the car body, makes sure to remove them and fix the power line.
- * If the power line (-) shakes and thereby poor contacts occur, the engine can stop during running.
- * Since this connector is composed of 2 lines for safety, ground them at respectively different areas.

* Black/Green Belt Wire (Key Insertion (Bipolar) Output)

Find the wire of the vehicle in which (+) polarity or (-) polarity is output when the genuine key is inserted, cut it, and connect with the black/green belt wire of the main ones toward the vehicle direction. (In case of a Smart key vehicle, find the lever signal button.) For the opposite wire cut, connect it with CN11 green wire (key insertion-input wire).

* 2 Purple Color Wires (Blinker Left/Right [+]/12 V Output)

Find the lamp wire in which +12 V signal turns on and off when the directional signal operates, connect it to the right/left.

* Brown Wire (Trunk Output) Connection after Checking Up Polarities

This brown wire is connected to the trunk switch wire of the vehicle with an electric motor for Trunk Open only. When you operate a trunk switch, make sure to check up the polarity output and select the same output polarity of the trunk cap switch [CAP2] in PCB set-up, and connect this brown wire to the trunk switch wire. (See 8P)

Danger

There are 2 trunk cap switches. To change the polarity, remove all wires, and insert them the same as before. If the direction is incorrect to insert, shorts may occurs.

* Green Wire (Door Lock [-]259mA Output)

Connect the wire to the switch line for Door Lock of the vehicle.
Connect this green wire to the switch wire in which (-) polarity is output during Door Lock.

* Yellow Wire (Door Unlock [-]250mA Output)

Connect the wire to the switch wire for Door Lock system.
Connect this yellow wire to the switch wire in which (-) polarity is output during Door Unlock.

Notice

The Door Lock/Unlock output of this product is (-)250mA. To additional install Door Lock actuator into the vehicle, use DOOWONTECH's exclusive relay, or 5P relay. (See 8P)

* Grey Line (1G-1 [-] 250mA Output)

This wire is applied to output (-) polarity in a state of 1G-1. It is used for the solenoid (vacuum) valve for Musso and the main power shift module for vehicles produced in North America, such as Winstorm, etc.

* White Wire (Speaker [+]) Output)

Connect the wire to the (+) polarity wire included in the product. Ground the (+) polarity speaker wire. Securely fix the speaker to the engine room. In this case, do not allow water flow in. For the wire connected to the engine, make sure its coating area on such a surface as an iron plate is not damaged.

▶ CN3 Connector (Not used)

▶ CN4 Connector (Impact Sensor)

* Fix the connector inside of the vehicle. Connect all of the connector after completing wiring work, test the sensitivity in a state of the doors open.

▶ CN5 Connector (START Button)

* Attach the connector to the surface of the key box, in which secure enough space for wiring.

Notice

A push button type is included in this product, but it is possible to apply a human body detection - touch type also.

This touch type can be purchased through the agency. [When using the touch type, change the installment environments in PCB set-up] (See 8P)

Warning

Attach the wire to the vertical side of the vehicle.
When attaching the connector to the horizontal side, it may cause malfunctions due to foreign objects.

▶ CN6 Connector (Bypass Module)

* The wires in this connector are the bypass module power line and operation line used for an e-mobile vehicle.

* The red wire is a (+) 12V power line, and the black ones are a (-) power line and an operation line.

Notice

The bypass module is not included in the product. It is possible to purchase it at the branches.

▶ CN7 Connector (Not used)

▶ CN8 Connector (LF Smart Antenna)

* Fix the connector into the upper are of C pillar which is located between the driving seat and the trunk. This antenna is installed for wireless communication so that Smart functions (Keyless Ent, Keyless Go) can be performed. If this antenna is hidden by the car body covered with an iron board, the proximity distance can be somewhat shortened.

▶ CN9 Connector (Antenna)

* Attach and fix it to the inside of the front glass Depending on tinting glass elements, RF reception may decrease.

▶ CN10 Connector (Digital Key)

* Vertically attach the connector to the glass inside the driving seat. This module is for setting up programs, which can set up all of the system. It is possible to set up the touch sensitivity from step 1 to step 5 using the remote controller after fixing. (See 18P)

For the vehicle whose front windows are tinting-filmed, since the touch sensitivity may decrease depending film elements, cut the area where the digital key will be attached before attachment.

▶ CN11 Connector (Basic Detection Wire)

* **Green Wire (Key Insertion Inout)** : This wire is connected to input key insertion signal(bipolar). When you work on CN2 Black / Green Output wiring, cut the wire, and connect it toward the key box direction. (See 2P)

* **Blue Wire (ACC [+]**Input**)** : This wire is connected to detect the cancelation of the handle lock device.
When you work on the Blue ACC Output wiring, cut the wire, and connect it toward the key box direction. (See 2P)

* **Yellow Wire (ACC [+]**Input**)** : In the main module, a manual key start–cutoff relay is built.
When you work on CN1 Yellow START Output wiring, cut the wire, and connect it toward the key box direction. (Refer to 3P)

* **Sky Blue Wire (L Terminal Detection)** : This detection wire is used to recognize START operated.
1. In case of detecting START operated in L terminal, connect the wire to L terminal wire of the generator.
2. In case of recognizing START operated detecting voltage increase, connect the wire to B+ 1 red wire.
3. In case of START operated through noise signals, change the cap switch inside the main cover into NOISE in L terminal. [This detection is not used.] (See 8)
4. In case of recognizing START operated without using the detection wire, designate it into an imaginary one in setting up a program.

Notice

- * The initial value for setting up a program is set up into L terminal (medium), when it is possible to detect the generator and noise right away.
- * It is necessary to set up the detection of voltage increase and the detection of imaginary recognition, but since it is impossible to use a turbo function and a manual transmission– remote automatic reservation function. (See the user guide 24P)

* **Grey Color [Total Door [–]**Detection**]** : When a signal for Door Open is detected in the door detection board, connect the wire to the wire where (–) signal is detected. In case of Door Open, this wire do not allows you car to enter Alert, and when the Open(–) signal is detected after Alert, this wire makes a warning occur and stops the system till cancellation.

* **Orange Color Wire [Parking [+]**Detection**] / *Red Wire [Parking [–]**Detection**]**
Connect the signal suitable for the polarity when the vehicle's transmission is located in [P] to this detection wire.
This wire is a very important line since it detects the parking, or running state of the vehicle, and thereby operates START button, or other functions.

Danger

- * This detection wire must be connected to the switch in "Parking" position, but most of vehicles are programmed so that (parking [–] detection) is available in START Output wiring. However, when you work on START Output wiring, check it up using a voltage tester whether less than 1.5V is detected in P/N gear location in a state of IG1, and more than 4 V in other gears.

* **Brown Wire (Brake [+]**Detection**)** : This wire detects + 12V output when the brake operates.
Find the pressure switch of the brake pedal and the signal in the STOP light.

* **Purple Wire (LPI/Warming–Up [–]**Detection**)**
This detection wire allows AUTOMATIC START after detecting real time warming–up in LPI/diesel vehicle. For most of vehicle types, find the signal on gauge board wiring (LPI/Warming–Up) and connect.

Notice

- The vehicle whose warming–up detection signal is not correct may be randomly delayed in its program set–up. (See the user guide 24P)

► Optional Wiring!

When installing this optional wire, the costs for installing the option are added.

*** White Wire (Trunk [–]**Detection**)**

Connect the wire to the one in which (–) signal is detected in a trunk open detection pin when the trunk is opened. You car cannot enter Alert when the trunk is opened. If the signal(–) is detected after Alert, an alarm occurs, and this wire is used to stop the system till cancellation.

*** White/Black Wire (Hood [–]**Detection**)**

Connect the wire to the one in which the (–) signal is detected in a hood open detection board. Your car cannot enter Alert when the hood is opened. If the signal (–) is detected after Alert, an alarm occurs, and this wire is used to stop the system till cancellation.

*** Green/Black (Speed [+]**Detection**)**

This wire is a functional line used for detecting speed response–typed Door Lock, rapid speed reduction, emergency light on and off, and running state. It is connected to the speed pulse line of the vehicle.
It is possible to use this detection wire along with the parking detection wire, but in case you replace the speed wire with a running detection function, ground the parking (–) detection red wire.

⚠ Warning

The speed detection wire recognizes running and stop states. However, if does not recognize the ungeared state (P/N), make sure to check up the said ungeared state before ENGINE START.

*** Black Wire (Imaginary Door 250mA [–]**Output**)**

This detection wire is applied to the vehicle in which all the doors must be opened after Vehicle Power OFF. Connect this detection wire to the driving seat–door detection pin.

Notice

For some vehicles, all the door pins and a driving seat–door pin must be operated at the same time. In this case, connect the wire using the diode as seen in the picture.

*** Pink/Black (Blinker 250mA [–]**Output**)**

This output wire outputs the (–) signal so that it can be used to the vehicle where (+) output wiring work is difficult to do. This wire is connected to the wire where (–) signal is detected when the emergency light switch of the vehicle is on.

Notice

This wire is used only in case the emergency light switch is a lock type.

*** Grey/Black Wire (AUX1:250mA [–]**Output**)**

This output wire is used to select a function in digital key set–up and thereby to operate separate power using the remote controller. Mostly relays are used to operate the power.

*** Yellow/Black Wire (AUX2:250mA [–]**Output**)**



This output wire is used to select a function in digital key set–up and thereby to operate separate power using the remote controller. Mostly relays are used to operate the power.

* **Blue/Black Wire (DOWONTEC Product Communication)** : This wire is used as a communication line informing DOWONTEC product of Key ON Signal. In this case, since the wire is supposed to output the lower signal less than 50mA, make sure not to use the products other than the ones DOWONTEC designates. (See the user guide 27P)


*** Orange Color/Black Wire (AUX [–]**In**out)**

It's a detection wire used when operating this product's optional mode (AUX designation A–A–A). (See the user guide 31P)

► Main Cover PCB Set-Up





-  Noise Sensitivity VR (Adjust the noise after selecting it in CAP1).
The vehicle with low noise is adjusted clockwise.
-  Set up VR when the START Output Wire perceives Parking (Measurement of IG_1 State : Less than 1.5 V in P/N gear, More than 4V in other gears)
— Only some vehicles use it.

-  CAP2_S/W: Select Trunk Output
-  Polarity
(+) ↔ (-)

 **Danger**
 Make sure to insert 2 ones the same

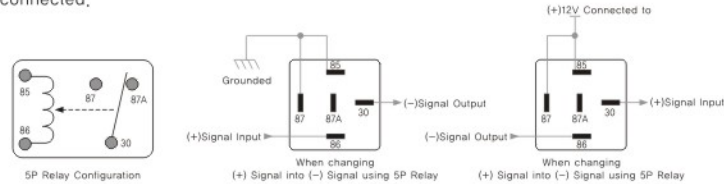
-  LED (Green) SPEED PULSE
(Check it up through Light On and Off)
-  LED (Red) START OPERATED
(Check it up through Light On and Off)

(Noise) ↔ (L Terminal)

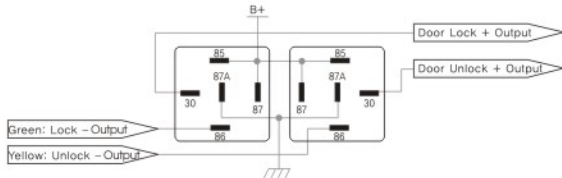
-  CAP1_ S/W : Detection ↔ L Terminal (Including Voltage Increase)
* Regardless of Engine Imaginary Detection
-  DIP3_ S/W : Key Insertion Output during Remote and Turbo START Operation,
ACC Power Used (ON used ↔ OFF not used)
-  DIP2_ S/W : Select START Button Type (On Touch Button Type ↔ OFF Push Button Type)
-  DIP1_ S/W : Select Main Power System (ON Winstorm System ↔ Vehicle Type System beofore OFF, Door Cut Function Set-Up)

► 5P Relay Description

No.85 and No.86 are the coil terminals of the electromagnetic, which have no polarities. If you do not provide voltage to both ends of this coil, No.30 and No.87A are connected. If you provide voltage, No. 30 and No. 87A are disconnected and No.30 and No. 87 are connected.



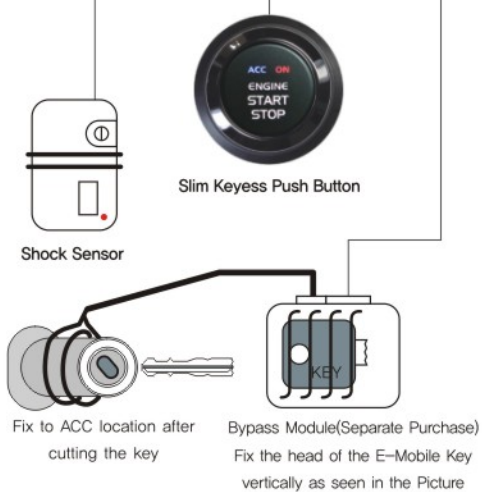
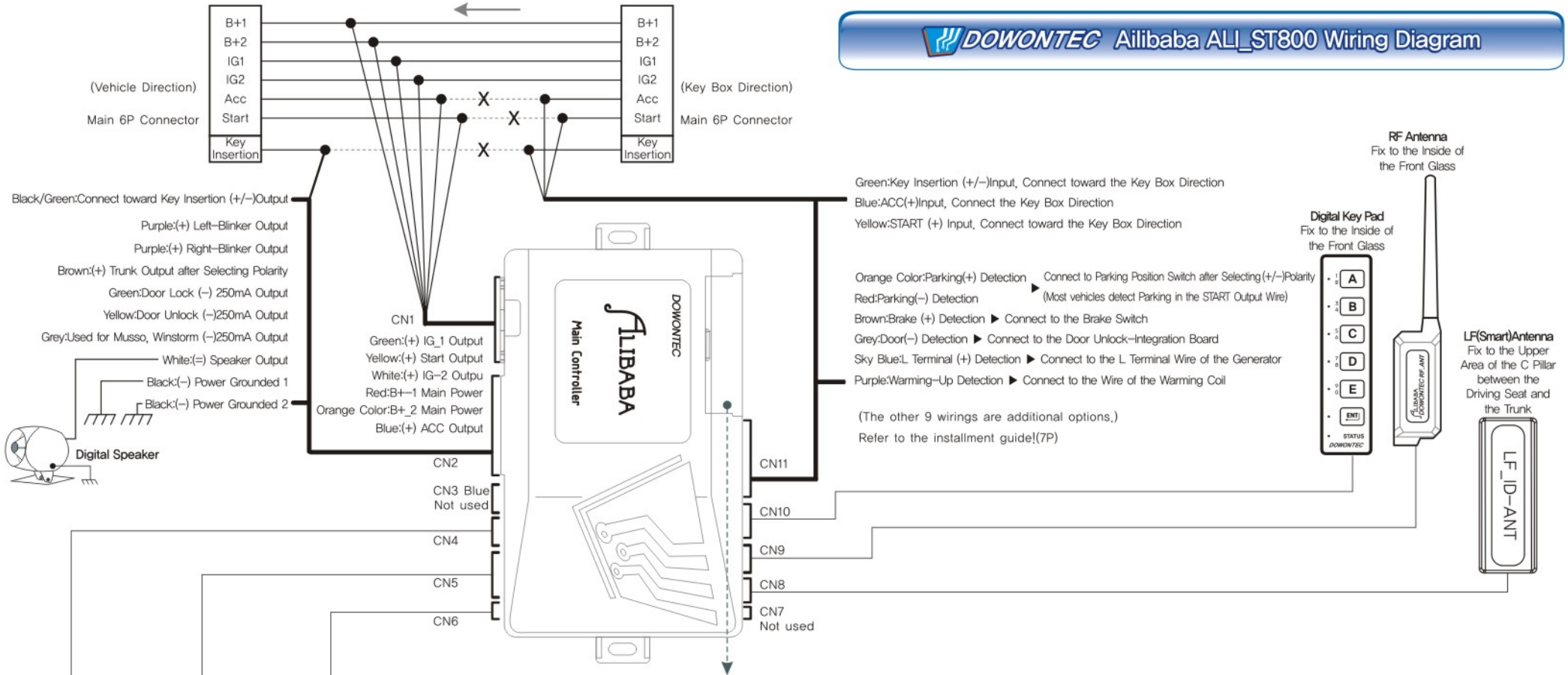
* For the vehicle where the door lock actuator is additionally installed, use DOWONTECH's exclusive Door Lock Relay, or apply 5P Relay referring to the following wiring diagram.



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The remote controller of DOWONTECH Alibaba can be designed by applying a manufacturer's, or a group's logo. Please, contact DOWONTECH for your custom-built.

DOWONTEC Ailibaba ALI_ST800 Wiring Diagram



Main Cover PCB Set-Up

Noise level VR (Select noise from CAP1 and adjust). If the noise is low turn it clockwise and adjust

Setting VR only when parking is sensed from start output
 Applies on few selected cars only
 IG1 status check-P/N below 1.5V, the rest gear above 4V

CAP2_S/W : Trunk Output Select Polarity
 Note insert both exactly the same way

(+) ↔ (-)
Notice Make sure to insert 2 ones the same

LED (Green) Confirm speed pulse
 LED (Red) Engine start confirm

(Noise) ↔ (L Terminal)
 CAP1_S/W: Noise / L Terminal Voltage Increase

DIP3_SW : When remote started use on mode(Key insert, ACC power) / off mode not used
 DIP2_SW : two types of button touch type or push type on / OFF Push
 DIP1_SW : Main power selector(ON basic output / off mix output) door cut feature included

Warning

Cut loop wire only with automatic transmission cars, when its cut it can not be used on manual trans car, we will not be responsible if its used on manual again

Do not use the loop lines cut inside the PCB for a manual transmission vehicle m,
 If using the PCB loop lines for a manual transmission vehicle after cutting them, the installer shall be responsible for any problem,

- * This wiring map is provided for your reference. Please, read the user and installment guides before use.
- * In this product, a START Cut-off Relay is built in, Connect it identifying in/out/output. (Same wire connection as the Key Insertion to ACC)
- * Before you connect the main power (B+_1, B+_2), make sure to check it up whether it passed through the fuses with more than 30A, (This product does not include the fuses,) Since this connector is composed of 2 lines for safety, ground them at respectively different areas.
- * For more specific information on wire connecting and installing by vehicle types, visit the company's website and request member level-up.