QUICK INSTALLATION GUIDE

Table of Contents

The wiring diagram is at the middle of this guide.

MANUAL OR AUTOMATIC TRANSMISSION SETUP

This module may be installed on vehicles with manual or automatic transmissions. It is originally configured for manual transmissions. If the vehicle you are working on is automatic, it is mandatory to make a few quick and easy modifications before the unit is connected. In the event that the configuration requires changes afterwards, a complete reset **(page 5)** will be necessary before those changes become effective.

To install this unit in a vehicle with a **MANUAL** transmission:
1. Make sure the Yellow loop on the PC board is connected (default).
2. Connect the Orange handbrake wire, located on the 12-pin harness, to the vehicle handbrake circuit (-).
3. Connect the Blue/White (+) OR Grey (-) door input wire, located on the 12-pin harness, to the vehicle door pin wire which monitors all the doors of the vehicle (only use 1 of the 2 door trigger inputs).
4. Make sure the Purple TACH wire is wired to a tach source – the TACH wire MUST be hooked up when the module is set for a manual transmission.
5. Make all your regular connections.
6. Power up the unit by first inserting the 5-pin connector, then the 6-pin connector and finally the 12-pin connector. The parking lights will flash **4 times**.
7. When learning the transmitter, the parking lights will flash **5 times** quickly.
8. Upon the first successful remote start, the system will lock the transmission settings to manual mode.

To install this unit in a vehicle with an **AUTOMATIC** transmission:
1. Cut the Yellow loop on the PC board (Yellow wire).
2. Make sure the Orange handbrake wire is not connected to any of the vehicle circuits (cut and tape).
3. Make all the regular connections.
4. Power up the unit by first inserting the 5-pin connector, then the 6-pin connector and finally the 12-pin connector. The parking lights will flash **4 times**.
5. When learning the first transmitter, the parking lights will flash **5 times** quickly then give **2 slow flashes**.
6. Upon the first successful remote start (once the yellow loop has been cut), the system will lock the transmission settings to automatic mode.

Note: If upon pressing the **START/STOP** button the parking lights give **3 slow flashes**, make sure that the Orange handbrake wire is not connected, the hand brake is not engaged and that the yellow loop is cut and isolated/taped.

Notice
The manufacturer will accept no responsibility for any electrical damage resulting from improper installation of the product, be that either damage to the vehicle itself or to the unit. This unit must be installed by a certified technician using all safety devices supplied. Please note that this guide has been written for properly trained Autostart technicians: a certain level of skills and knowledge is therefore assumed. Please review the installation guide carefully before beginning any work.
Warning
Before installing the unit, if installing on a vehicle with a <u>manual</u> transmission, test that the OEM Door Switch contacts of the vehicle work well, and that the Parking Brake system operates properly. If installing on a vehicle with an <u>automatic</u> transmission, test that the vehicle does not start when the gearshift lever is in the "Drive" position. If it starts in gear, reset the remote starter to manual transmission.

ENTERING PROGRAMMING MODE

These are the programming buttons:

The Hood Pin
The Programming Button **(a.k.a. the P.B.)**
The **P.B.** is located on the side of the module. This push button <u>mimics the hood-pin switch</u> in order to avoid having to get out of the vehicle to press the hood-pin switch. **The P.B. will work only when the hood pin is installed and the hood is up.** (Ground on the hood line.)

Complete step by step programming
1)   Entering Programming Mode
2)   Programming the transmitter to the module
3)   Entering Programming Options
4)   Programming the options
5)   Adjusting the Horn/Siren output (if installed)
6)   Setting up the TACH, VTS or Multi-speed Tach

Entering programming mode using the **Hood Pin**
• Press and hold the hood pin down for 4 seconds.
• Release the hood pin.   The parking lights will turn **ON** for 1 second.
• While the parking lights are **ON**, press the hood pin once more and release immediately.   The parking lights will come **ON** solid for 20 seconds. • You now have 20 sec. to select a submenu.
Note 1: To exit programming mode, close the hood.
Note 2: For vehicles that require the ignition to be turned **ON** to activate the brake circuit, follow these steps to select a submenu: • After flashing the hood pin, turn the ignition **ON** and wait for the parking lights to come **ON** (4 seconds). Then, press the brake pedal to access the sub-menus.

PROGRAMMING THE TRANSMITTER TO THE MODULE

1. **In programming mode (page 2)** - the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, turn the ignition key to **OFF** (if not OFF already), then **ON**, then **OFF**.
3. Press and hold the 🔒 button and keep it down until the parking lights flash **5 times quickly.**
4. The transmitter has been stored in memory. Each unit can store 4 remotes in its memory.
5. You have 20 more seconds to select one of the sub-menus if needed.

To program a transmitter on the second vehicle for multi-car operation; press the 🔳 button (instead of 🔒) in step 3 of the transmitter association procedure.

ENTERING PROGRAMMING OPTIONS

1. **In programming mode (page 2)** — the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, press and hold the brake pedal and then press one of the following buttons.

- **LOCK** to access mode 1;
- **UNLOCK** to access mode 2;
- **TRUNK** to access mode 3;
- **START/STOP** to access mode 4.

3. The parking lights will flash 1, 2, 3 or 4 times to confirm entry into a mode.

4. Release the brake pedal.

Once the desired mode has been selected, the unit will fall (by default) into function #1 of that mode; you can now select the option you want in function 1. Once this option has been chosen, the unit will move on to function 2 of the mode selected, and so on.

- **LOCK** to access option 1;
- **UNLOCK** to access option 2;
- **TRUNK** to access option 3;
- **START/STOP** to access option 4.

5. After the programming of any mode is completed, the parking lights and the LED on the antenna will turn ON for 20 sec. During those 20 seconds, select one of the sub-menus if needed.

PROGRAMMING OPTIONS

MODE 1   ** INDICATES DEFAULT SETTING*

FUNCTION 1 – Ignition-controlled door locks

OPTION 1*	**Ignition lock DISABLED**
OPTION 2	Ignition lock **ENABLED**
OPTION 3	Ignition unlock only
OPTION 4	Ignition lock only

FUNCTION 2 – Secure Lock

OPTION 1*	**Secure lock DISABLED**
OPTION 2	Standard secure lock **ENABLED**
OPTION 3	Smart secure lock **ENABLED**

FUNCTION 3 – Door lock / unlock pulse timing

OPTION 1*	**7/10-sec. lock / unlock pulses**
OPTION 2	4-sec. lock / unlock pulses
OPTION 3	7/10-sec. lock pulse and two ¼ -sec. unlock pulses
OPTION 4	1/10-sec. lock / unlock pulses

FUNCTION 4 – AUX 3 Programming / TRUNK output

OPTION 1*	**Constant**
OPTION 2	1-sec. output, disarm and passive rearm after 30 sec.

FUNCTION 5 – AUX 2 Programming

OPTION 1*	**Car Finder**
OPTION 2	Toggle ON – max. 30 sec.
OPTION 3	Constant output

MODE 2   ** INDICATES DEFAULT SETTING*

FUNCTION 1 – Home Valet™

OPTION 1	N/A
OPTION 2*	**N/A**

FUNCTION 2 – Safe Start

OPTION 1	Safe start **ENABLED**
OPTION 2*	**Safe start DISABLED**
OPTION 3	"Swap Start"

FUNCTION 3 – Engine Run Time

OPTION 1	Run time = 3 minutes in **gas** mode / 8 minutes **diesel** mode
OPTION 2*	**Run time = 15 minutes in gas mode / 20 minutes diesel mode**
OPTION 3	Run time = 25 minutes in **gas** mode / 30 minutes **diesel** mode

FUNCTION 4 –Idle Mode & Turbo Mode (auto) / Turbo Mode (manual)

OPTION 1	Idle mode & turbo mode **DISABLED (AUTO)** / turbo mode **DISABLED (MANUAL)**
OPTION 2*	**Idle mode & turbo mode ENABLED (AUTO) / turbo mode DISABLED (MANUAL)**
OPTION 3	Idle mode & turbo mode **ENABLED (AUTO)** / turbo mode **ENABLED (MANUAL)**

FUNCTION 5 – Engine type and Cold Weather Mode

OPTION 1	Diesel mode with 20-minute run time in cold weather mode (30-sec. wait to start delay)
OPTION 2*	**Gas mode with 3-minute run time in cold weather mode**
OPTION 3	Diesel mode with 8-minute run time in cold weather mode (18-sec. wait to start delay)
OPTION 4	Diesel mode with 8-minute run time in cold weather mode (7-sec. wait to start delay)

MODE 3   ** INDICATES DEFAULT SETTING*

FUNCTION 1 – Chirps

OPTION 1	Warning chirps only – Lock confirmation upon 2nd press of **LOCK** button
OPTION 2*	**Chirps ENABLED**

	OPTION 3	Chirps **ENABLED** with open-zone notification
		(siren / horn warning 10 sec. after arming if a door is opened)
	OPTION 4	Chirps **DISABLED** – Lock confirmation upon 2nd press of **LOCK** button

FUNCTION 2 – Arming
	OPTION 1	Active arming
	OPTION 2*	**Passive arming (30 sec.) (*two-stage disarm)**
	OPTION 3	Passive arming (30 sec.) (*single-stage disarm)
	OPTION 4	Active arming with disarm notification

FUNCTION 3 – Ignition monitoring with Siren / Horn mode
	OPTION 1	Siren mode with ignition monitoring **DISABLED**
	OPTION 2*	**Siren mode with ignition monitoring ENABLED**
	OPTION 3	Horn mode with ignition monitoring **DISABLED**
	OPTION 4	Horn mode with ignition monitoring **ENABLED**

FUNCTION 4 – Shock Sense / Warn-away
	OPTION 1	Shock Sense – **DISABLED** / Warn Away – **DISABLED**
	OPTION 2*	**Shock Sense - ENABLED / Warn Away – ENABLED**
	OPTION 3	Shock Sense - **ENABLED** / Warn Away – **DISABLED**
	OPTION 4	Shock Sense - **DISABLED** / Warn Away – **ENABLED**

FUNCTION 5 – Ignition Valet
	OPTION 1	Ignition valet — **DISABLED**
	OPTION 2*	**Ignition valet — ENABLED**

MODE 4   ** INDICATES DEFAULT SETTING*

FUNCTION 1 –SmartStart™
	OPTION 1	SmartStart™ **ENABLED**
	OPTION 2*	**SmartStart™ DISABLED**

FUNCTION 2 – Ready Mode Option
	OPTION 1	**ENABLED** by handbrake
	OPTION 2*	**ENABLED by remote**

FUNCTION 3 – Bypass
	OPTION 1	ADS (1-way D2D)
	OPTION 2*	**Xpresskit (2-way D2D)**
	OPTION 3	Fortin (1-way D2D)

FUNCTION 4 – Bypass Type
	OPTION 1	One-Way communication
	OPTION 2*	**Two-Way communication**

HORN / SIREN ADJUSTMENT

1. **In programming mode (page 2).**
2. Press and hold the brake pedal, then simultaneously press the **UNLOCK** and **START** buttons —— the horn / siren will chirp 5 times.
3. Release the brake pedal.
4. To change the timing:
    1. To increase the horn / siren pulse by 3 ms, press the **LOCK** button.
    2. To decrease the pulse by 3 ms, press the **UNLOCK** button.
    3. To increase the pulse by 10 ms, press the **START/STOP** button.
    4. To decrease the pulse by 10 ms, press the **TRUNK** button.
5. To save the new settings: press **LOCK** and **UNLOCK** simultaneously. If 3 chirps are returned, the new setting has been saved.
6. After the programming of any mode is completed, the parking lights and the LED on the antenna will turn ON for 20 sec. During those 20 seconds, select one of the sub-menus if needed.

SETTING UP THE TACH

VIRTUAL TACH ADJUSTMENT

Warning: For automatic transmissions only.

Virtual Tach System combines the latest microcontroller technology and a complex algorithm that took years to develop. VTS is able to effectively monitor the engine starting sequence and release the starter at the right time without physically connecting the tach wire to the remote starter. The VTS constantly monitors the data and readjusts itself automatically in order to maximize its capability to start the engine properly in any weather or deteriorating battery condition.

❑ **Shock and warn-away trigger.** Make sure that the shock works well and is not too sensitive so that it unnecessarily triggers the alarm.

❑ **Most comebacks are the result of misunderstandings about how a product works or performs. Take the time to properly explain all functions and features to the customers before they leave the premises. Doing this will save time and money.**

TROUBLESHOOTING

DIAGNOSTICS – PARKING LIGHT FLASH TABLE

Diagnostic table for start failure.

Parking lights flashes	Cause
1 (Manual transmission only)	• Ready mode is not activated.
1 slow ➔ 2 quick	• The system is set to Valet™ mode.
1 slow ➔ 2 quick ➔ 2 quick	• The system is in Home Valet™
3 (Automatic transmission only)	• The parking brake is active. • Yellow loop is connected.
4	• Brake was triggered.
5 (Manual transmission only)	• Tach signal is not learned.
6	• A tach signal is detected before Ignition.
10	• Hood was triggered.

Diagnostic table for shutdown.

Parking lights flashes	Cause
1	• Runtime has expired.
2	• Shutdown by remote. • Ready mode is activated.
3	• Failed start (VTS or tach failure, depending on selected).
4	• Brake shutdown.
10	• Hood shutdown.
Flash for 30 sec.	• Panic mode.
Flash for 60 sec.	• Alarm triggered.

Note: The installer can also use the PRG-1000 to diagnose shutdown and remote start failures. Refer to the PRG-1000 manual guide.

position.

2. With the engine running, apply the parking brake once and release the brake pedal. 3. Within 20 sec. of engaging the parking brake, press and hold 🔒, 🔓 **or** ⚡ on the transmitter (SmartStart™ uses only the SmartStart™ icon). The parking lights will flash 3 times quickly and remain lit. Release the button.	2. With the engine running, apply the parking brake twice within 10 sec. 3. Make sure to release the brake pedal. The parking lights will flash 3 times quickly and remain lit.

4. Remove the key: the engine will keep on running.

5. Exit the vehicle. All doors should be closed, including the hood and trunk.

The engine keeps going until you press either;

- 🔒 to lock the doors and shut down the engine;

- 🔓 to unlock the doors and shut down the engine;

- ⚡ to shut down the engine without affecting the doors.

WARNING: Engine runs until the pre-programmed run time expires.

6. The Parking lights will flash **twice** to indicate Ready mode is set.

The system will exit ready mode if a door, the hood or the trunk is opened, if the brake pedal is pressed, if the parking brake is disengaged or if the ignition key is turned to the **IGNITION ON (RUN)** position.

❑ **Remote-start the engine and listen for starter drag.** If the starter cranks for too long, carry out another tach programming procedure or VTS adjustment **(page 4)**.

❑ **Hood switch shutdown.** With the vehicle running remotely, open the hood; the vehicle should shut down. If it does not shut down, check the hood pin-switch and its connector.

❑ **Brake shutdown circuit.** With the vehicle running remotely, press and release the brake pedal. The engine should shut down immediately. If it continues to run, check the brake switch connection.

❑ **Parking brake shutdown circuit (manual transmissions only).** With the vehicle running under remote start, disengage the parking brake. The engine should shut down immediately. If the engine continues to run, check the parking brake switch connection.

❑ **OEM alarm control.** Make sure the module is able to arm and disarm the OEM alarm (if applicable).

❑ **Door locks and trunk testing.** Make sure each of these options respond to the transmitter (if installed).

❑ **Door pin shutdown circuit (manual transmissions only).** Make sure the system exits ready mode when each door is opened. (Test each door.)

❑ **Starter kill option.** Sit inside the vehicle with all doors closed. Arm the vehicle, then try to start the engine with the key. The engine should not start. If the engine starts, rewire the starter kill to reach proper operation.

❑ **Valet mode.** Make sure the remote car starter is able to properly enter and exit valet mode. When setting the remote car starter into valet mode, pressing the lock button will lock the doors without activating the starter kill. (Refer to the user guide for further information on valet mode.)

❑ **Idle mode.** Make sure the vehicle properly enters and exits idle mode.

❑ **Door.** Make sure that when the system is armed, opening any door or opening the trunk will trigger the alarm (if installed).

❑ **Hood trigger.** Make sure that when the system is armed, opening the hood should trigger the alarm.

OPTIONAL TIME DELAY ADJUSTMENT IN VIRTUAL TACH SYSTEM

Follow these steps to program crank time adjustment, if needed:

1. **In programming mode (page 2).**
   Before the lights go out, press and hold the brake pedal and press the **LOCK** and **UNLOCK** buttons simultaneously — the parking lights will flash 4 times. **Do not release the brake pedal.**
2. Press the **LOCK** button if you wish to increase the time delay or the **UNLOCK** button if you want to decrease it. **The time delay will be increased or decreased by 50 ms and the parking lights will flash once every time the LOCK or UNLOCK button is pressed.**
3. Press the **TRUNK** button to save the settings you have entered.
4. Release the brake pedal – the time delay programming is now complete.

MULTI-SPEED TACH PROGRAMMING (IF INSTALLED)

1. **In programming mode (page 2).**
2. Before the lights go out, press and hold the brake pedal and press the **LOCK** and **UNLOCK** buttons simultaneously — the parking lights will flash 4 times. At that point, release the brake pedal.
3. Start the engine and allow the vehicle to reach regular engine idle speed.
4. Once the engine is running at normal idle speed, press the brake pedal and keep it down until you hear the parking lights flash 5 times.
5. Release the brake pedal — the tach programming is now complete.

Caution! – Tach jumper settings:
Some new vehicles have a higher TACH voltage threshold, which would fall out of the normal TACH trigger circuit of the remote car starter. Changing the jumper to TACH Threshold HIGH will allow the module to properly detect the TACH signal. *BUT*, if you are having trouble with the TACH, please call our tech support team. Problems requiring changing the TACH jumper settings are very rare.

RESETTING THE MODULE

WARNING! By resetting the module, all programmed values are erased — i.e.: tach, transmitter as well as programming options. The programming options are returned to their default values.

1. **Enter programming Mode (page 2).**
2. Once having reached the programming mode, quickly press and release the brake pedal until the parking lights flash 8 times.

BYPASS

Remote starters of this series have the ability to work in two way mode (D2D) with **Xpresskit** bypass modules. They also offer one way communication with **Xpresskit, ADS** and **Fortin** brand bypass modules. **Note:** For Hardware 5.0 and higher there can only be one bypass connected to the unit.

NEW FEATURE – SMARTSTART™

When teamed up with a SmartStart™-compatible module, remote start features can be accessed using a smartphone. These features include lock/unlock, engine start/stop, trunk release, panic and alarm notifications. For alarm notifications, the Xpresskit™ bypass option (D2D) must be enabled.

To use these features, connect the SmartStart™ module to the SmartStart™ port located at the back of the remote start module (see the wiring diagram). The SmartStart™ feature must be enabled using the programming options list found in this guide.

TESTING

Before putting the vehicle back together, it is recommended to check that the system operates properly. The following testing procedures should be used to verify proper installation and operation of the system. Before testing, make sure that all connections are soldered and that the unit is plugged in.

❑ **Make sure the system properly enters and exits ready mode:**
   Ready mode is a sequence of steps that must be followed in order to allow manual transmission vehicles to be remote started. To get into ready mode:

If Ready Mode is enabled by remote	If Ready Mode is enabled by handbrake
1. Ensure that all the doors, hood and trunk are closed. Make sure that the gear selector is in the neutral	

WIRING SCHEMATIC

REAR VIEW OF MODULE

Yellow Loop
ADS & Fortin bypass
INV 200 (Door lock pulse Inverter)
Shock Sensor
Accessories 2 Jumper
Ignition 2 Jumper
Starter 2 Jumper
Xpresskit bypass
Optional programming port / SmartStart

SIDE VIEW OF MODULE

Programming Assistance Button (P.A.B.)

5. Yellow................(–) parking lights
4. Blac/Brown.......(–) Priority door
3. Black/Green.....(–) Aux2 output
2. White/Purple....(–) Horn output
1. Grey/Blue.........(–) N/A

TAd: HIGH
TACH Threshold: NORMAL

For Automatic transmission:
Cut the yellow loop before plugging the module.

Jumpers for 5th relay
(2nd starter, 2nd Ignition, 2nd Accessries)

Shock Sensor

INV 200 (Door lock pulse inverter)

Xpresskit bypass

ADS & Fortin bypass

Optional programming port / SmartStart

Yellow Loop

remote starter
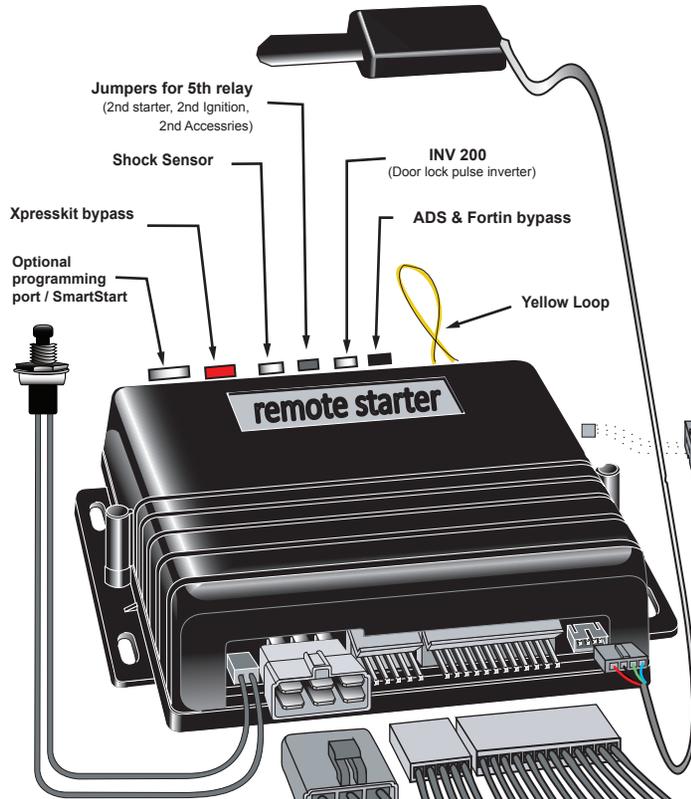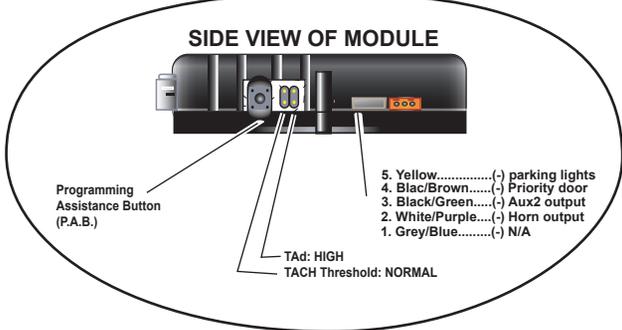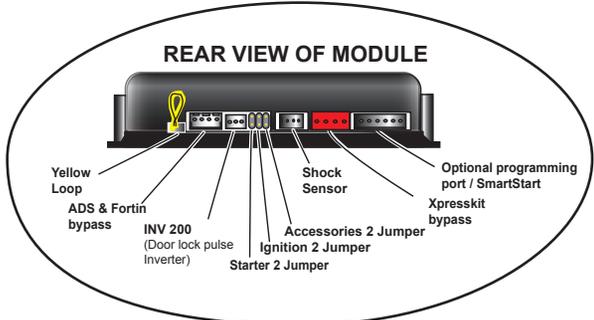
5. Yellow...............(–) parking lights output
4. Black/Brown....(–) Priority door output
3. Black/Green.....(–) Aux2 output
2. White/Purple....(–) Horn output
1. Grey/Blue.........(–) N/A

Optional Starter Kill Relay

N/A 87
STARTER WIRE 87A (Solenoid Side)
IGNITION (+) 85
STARTER WIRE 30
86 Start Kill Output (–)
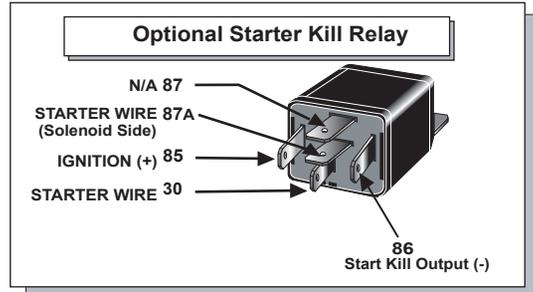
YELLOW .... IGNITION
RED ....12V (Battery)
30 A Fuse

ORANGE...ACCESSORIES
(Heater Blower Motor)

PURPLE............. STARTER

GREEN .... 5th RELAY

RED ....+12V (Battery)
30 A Fuse

12- YELLOW .... (+) Glow plug input
11- GREY .... (–) NEG. Door input
10- WHITE .... (–) GROUND when running output
9- PURPLE .... (+) Siren output
8- ORANGE .... (–) Parking Brakes input
7- WHITE/ORANGE .... (–) Starter kill output
6- BLUE/WHITE .... (+) POS. Door input
5- WHITE/GREEN .... (–) DISARM output
4- WHITE/BROWN .... (–) REARM output
3- GREEN .... (–) UNLOCK output
2- BROWN .... (–) LOCK output
1- BLUE .... (–) TRUNK output

1- BLACK .... GROUND (–)
2- PURPLE........................... TACH (AC)
3- GREY .... HOOD SWITCH (–)
4- ORANGE .... BRAKE SWITCH (+)
5- YELLOW ....PARKIN LIGHTS (+)
15 A Fuse

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