



QUICK INSTALLATION GUIDE

To obtain a copy of the full installation guide, please visit our website at www.prostart.org

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The wiring diagram is at the middle of this guide.

The functions of the transmitter are as follows:

Remote Function OPTION 1	Remote Function OPTION 2
BUTTON: STOP	BUTTON: LOCK/UNLOCK
BUTTON: START/STOP	BUTTON: START/STOP
BUTTON & BUTTONS (together): TRUNK	BUTTON & BUTTONS (together): TRUNK

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 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.
2. Connect the Orange handbrake wire located on the 12-pin harness to the vehicle handbrake switch.
3. Connect the Blue/White (+) door input OR the 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 plugged in – 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 loop on the pc board (Yellow wire).
2. Make sure the Orange handbrake wire is not connected to any of the vehicle circuits.
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.

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 **manual** 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 **automatic** 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.

- 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 **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).
- 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.**

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 wire is active.
5 (Manual transmission only)	• Tach signal is not learned.
6	• A tach signal is detected before Ignition.
10	• Hood wire is active.

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.

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

- 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  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.

PUSH TO START

Disabled by default, PTS mode is a special feature that is intended to facilitate the remote starter installation on most Push To Start vehicles. With PTS mode enabled, the remote starter will offer the installer a negative start output (to pulse the vehicle's PTS switch), as well as a (+) brake switch output (no external relay necessary). With PTS enabled, the White/Green wire on the 12 pin harness becomes your negative (-) PTS switch output. It will give a one second output intended to pulse the PTS switch. Also, the Purple crank output becomes your brake switch output (this will turn the brake circuit ON for crank).

HYBRID OPTION



Warning: For automatic transmissions only.

This option is disabled by default. It can be enabled in Mode 2 of the programming options.

HYBRID mode is a special feature that is intended to facilitate the remote starter installation on most Hybrid vehicles. With HYBRID mode enabled, the remote starter will give a four second crank output on its crank wire (It will not rely on VTS to stop the crank cycle). The only way to shorten the four second crank output is to program a tach signal to the remote starter. If a tach signal is programmed, the remote starter will act like normal (the HYBRID feature should be used when a tach reference is not available from the vehicle or the bypass being used at the time of installation).

ENTERING PROGRAMMING MODE

These are the programming buttons:

 <p>The Hood Pin</p>
 <p>The Programming Button (a.k.a. the P.B.)</p> <p>SIDE VIEW OF MODULE</p>

The **P.B.** is located on the side of the module. This push button mimics the **hood-pin switch** in order to avoid having to get out of the vehicle and pressing the hood-pin switch. **The P.B. will work only when the hood pin is installed and the hood is up.**

Complete step by step programming

- 1) Entering Programming Mode
- 2) Programming the transmitter (the remote) to the module
- 3) Entering Programming Options
- 4) Programming the options
- 5) Adjusting the Horn
- 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**.
- While the parking lights are **ON**, press the hood pin once more and release immediately.
The parking lights will turn **ON** and stay **ON** for 20 seconds leaving you time to select one of the sub-menus.

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:

- After flashing the hood, turn the ignition **ON** and wait for the parking lights to come **ON**. Then, press the brake pedal to access the sub-menus.

TRANSPONDER PROGRAMMING

This procedure is detailed in the full installation guide. To obtain a copy of the installation guide, please visit our website at www.prostart.org.

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. In **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.

SMARTSTART™

When teamed up with a SmartStart™ module (ASMC100), 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 position.	
2. With the engine running, apply the parking brake once and release the brake pedal.	2. With the engine running, apply the parking brake twice within 10 sec. Make sure to release the brake pedal. The parking lights will flash 3 times quickly and remain lit. Skip to step 4.
3. Within 20 sec. of engaging the parking brake press and hold  or  on the transmitter. The parking lights will flash 3 times quickly and remain lit.	
4. Remove the key: the engine will continue running.	
5. Exit the vehicle and close all doors, hood and trunk.	
6. For approx. 1 second, press either the  or the  BUTTON .	
7. The parking lights will flash twice to confirm ready mode activation.	

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.
- 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.

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 2 – 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 3 – 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)
FUNCTION 4 – Constant Lock/Unlock or Horn output (when Mode2, Function6, Option1 is programmed)	
OPTION 1	N/A
OPTION 2*	Lock/Unlock constant output when the BUTTON is pressed >3 sec.
OPTION 3	Horn confirmation upon the 1 st press of the BUTTON .
FUNCTION 5 – SmartStart™	
OPTION 1	SmartStart™ ENABLED
OPTION 2*	SmartStart™ DISABLED
FUNCTION 6 – Remote functions	
OPTION 1	Button = Lock/Unlock , Button = Start/Stop , & Buttons = Trunk
OPTION 2*	Button = Stop , Button = Start , & Buttons = Trunk
FUNCTION 7 – Ready Mode Option / Hybrid option	
OPTION 1	Enabled by handbrake
OPTION 2*	Enabled by remote
OPTION 3	Hybrid option ENABLED

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.

OPTIONAL TIME DELAY ADJUSTMENT IN VIRTUAL TACH SYSTEM

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

- In programming mode (page 2).
- Before the lights go out, press and hold the brake pedal and press the **BUTTON** and **BUTTONS** simultaneously — the parking lights will flash 4 times. **Do not release the brake pedal.**
- Press the **BUTTON** if you wish to increase the time delay or the **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 **BUTTON** or the **BUTTON** is pressed.**
- Press the and **BUTTONS** to save the settings you have entered.
- Release the brake pedal – the time delay programming is now complete.

MULTI-SPEED TACH PROGRAMMING

- In programming mode (page 2).
- Before the lights go out, press and hold the brake pedal and press the and **BUTTONS** simultaneously — the parking lights will flash 4 times. At that point, release the brake pedal.
- Start up the engine and allow the vehicle to reach regular engine idle speed.
- Once the engine is running at normal idle speed, press the brake pedal and keep it down until you hear the parking lights output click 5 times.
- 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.

PROGRAMMING THE TRANSMITTER TO THE MODULE

- In programming mode (page 2) - the parking lights will stay on for up to 20 seconds.
- Before the lights go out, turn the ignition key to the Ignition On (Run) position and immediately to the **OFF** position.
- Press and hold the **BUTTON** and keep it down until the parking lights flash **5 times quickly**.
- The transmitter has been stored in memory. Close the hood to end the procedure. Each unit can store 4 remotes in its memory.
- You have 20 more seconds to select one of the sub-menus if needed.

ENTERING PROGRAMMING OPTIONS

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

- BUTTON** to access mode 1;
- BUTTON** to access mode 2;

- The parking lights will flash once or twice to confirm entry into a mode.
- 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.

- BUTTON** to access option 1;
- BUTTON** to access option 2;
- & **BUTTONS** to access option 3

- You have 20 more seconds to select one of the sub-menus if needed.

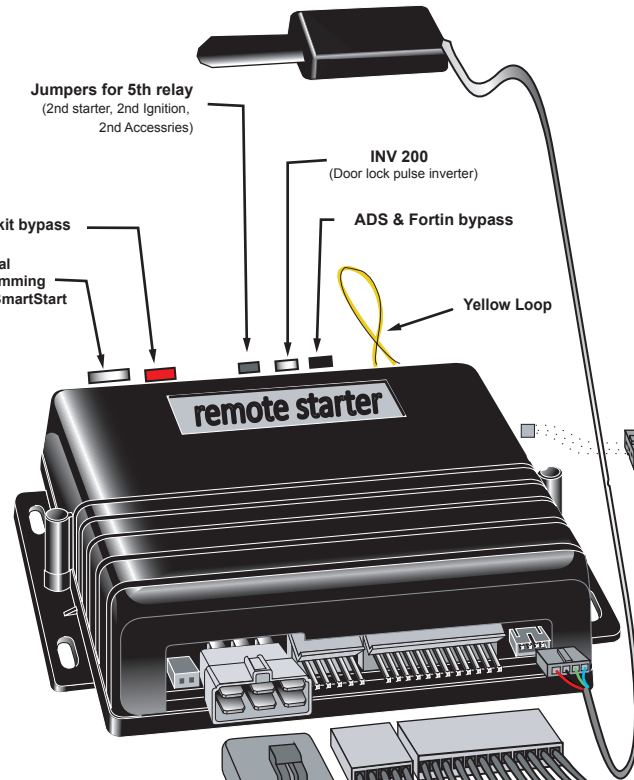
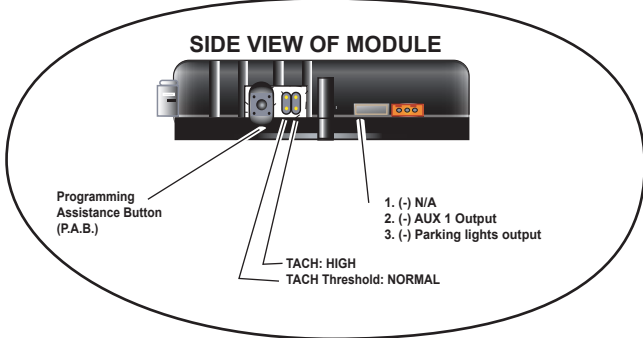
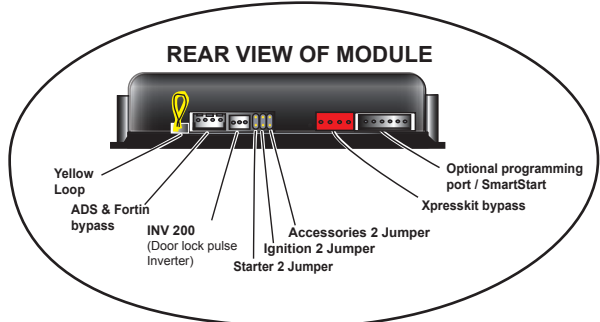
PROGRAMMING OPTIONS

MODE 1	* INDICATES DEFAULT SETTING
FUNCTION 1 – Ignition-controlled door locks	
OPTION 1*	Ignition lock DISABLED
OPTION 2	Ignition lock ENABLED
FUNCTION 2 – Secure Lock	
OPTION 1*	Secure lock DISABLED
OPTION 2	Standard secure lock ENABLED
FUNCTION 3 – Passive / Active arming of the Starter Kill	
OPTION 1*	Starter Kill Passive arming (60 sec.). Will arm 60 sec. after ignition OFF.
OPTION 2	Starter Kill Active arming (only arm after LOCK is pressed)
OPTION 3	Starter Kill Passive arming (60 sec.). Note: When SK is armed, pressing will produce an UNLOCK output when MODE 2, FUNCTION 6, OPTION 1 is enabled.
FUNCTION 4 – 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
FUNCTION 5 – LED flashing	
OPTION 1*	Enabled (will only flash when ignition is OFF)
OPTION 2	Disabled
OPTION 3	Enabled (will only flash when Starter kill engages (depends on Mode 1, Function 3 programming))
FUNCTION 6 – Bypass	
OPTION 1*	Xpresskit
OPTION 2	ADS
OPTION 3	Fortin
FUNCTION 7 – Bypass Type / PTS mode	
OPTION 1*	Two-Way communication / Push to Start DISABLED (For Xpresskit bypass only)
OPTION 2	One-Way communication / Push to Start DISABLED
OPTION 3	Two-Way communication / Push to Start ENABLED (For Xpresskit bypass only)
OPTION 4	One-Way communication / Push to Start ENABLED

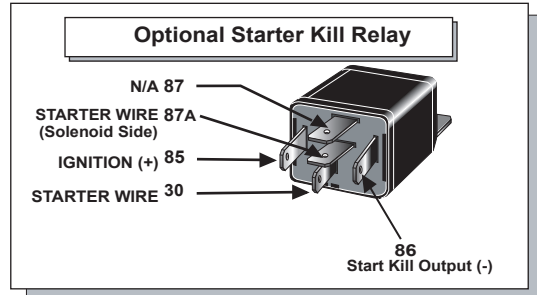
MODE 2	* INDICATES DEFAULT SETTING
FUNCTION 1 – Engine Run Time	
OPTION 1	Run time = 3 minutes in gas mode / 8 minutes diesel mode

WIRING SCHEMATIC

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



- 3. YELLOW/WHITE (-) Parking lights output
- 2. BLUE/WHITE.....(-) Horn output only
- 1. GRAY/LIGHT BLUE.....(-) N/A



- 30 A Fuse
- YELLOW IGNITION
- RED 12V (Battery)
- ORANGE... ACCESSORIES (Heater Blower Motor)
- PURPLE..... STARTER
- GREEN 5th RELAY
- 30 A Fuse
- RED +12V (Battery)
- 15 A Fuse

- 1- BLACK GROUND (-)
- 2- PURPLE..... TACH (AC)
- 3- GREY HOOD SWITCH (-)
- 4- ORANGE BRAKE SWITCH (+)
- 5- YELLOW PARKING LIGHTS (+)

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