INSTALLATION MANUAL

Remote Control Auto Starter

Model PL65

Installer Warnings

This remote starter system is designed to be installed on fuel injected vehicles with an automatic transmission ONLY.

- Never install this remote starter on a manual transmission vehicle.
- Some automatic transmission vehicles [mainly older GM vehicles with a purple starter wire] have a mechanical-type park safety switch instead of an electrical safety switch. The mechanical type does not interrupt the starter circuit when the transmission is any gear and does not offer the 100% level of safety required for remote starting purposes. Therefore, our system should never be installed on any vehicle that uses a mechanical type park safety switch.
- Once you install this system, you must verify that the vehicle will not start in any forward or reverse gear. Regardless of the type of vehicle.
- Read the owners manual for the operating routine.
- Do not install any component near the brake, gas pedal or steering linkage.
- Some vehicles have a factory installed transponder immobilizer system that can severely complicate the installation. There is a possibility that this system can not be installed on some immobilizer equipped vehicles.
- Most newer GM vehicles have a white or a pink/white 2nd ignition wire that must be powered when running on remote. Failure to power this wire will cause the check engine light to activate and store a defective transmission code in the computer.
- Most vehicles have an SRS air bag system. Use extreme care and do not probe any wires of the SRS system.

Installation

Hood Safety Switch

The supplied weatherproof hood safety switch is a required component you must install to prevent bodily.

- The switch prevents operation of the remote starter when the hood is raised.
- The mercury hood safety switch should not require adjusting. It is internally pre-adjusted for a 25 degree tilt.
- The switch mounts on the underside of the hood. On normal installations, the switch can be mounted using the supplied quick clip. Once the switch is mounted, the wires of the switch should be towards the firewall of the vehicle.
- Connect one wire to the blue wire on our 10-pin harness.
- Connect the other remaining wire to ground.

6-Pin White Power Harness Connector: [7 Wire Harness]

The heavy power wire connections should be made close to the ignition switch.
The heavy power wires supply power to the vehicle ignition switch wires in the same sequence as the vehicles ignition switch does, when it's rotated. You should probe and verify the vehicles wire circuit you are connecting to.

Orange wire: [Starter Output]
- Provides [+] 12 volts while cranking by remote control.
- Connect to the vehicle starter wire that goes hot in the start position.

Black Wire: [Ground Input]
- Supplies constant ground to the control module.
- Connect to bare metal on the vehicle.

Brown Wire: [Heater/AC Output]
- Provides [+] 12 volts after the engine starts running on remote control.
- Connect to the vehicle's ignition harness wire that goes hot only in the run position.
- Never connect the brown wire directly to the blower motor of the vehicle.

Yellow Wire with White Stripe: [Ignition 2 Output]
- Provides [+] 12 volts while cranking and while running on remote control.
- Some vehicles have [2] ignition wires that must be powered.
- Connect to the vehicle's 2nd ignition wire that goes hot in the start and remains hot in the run position.
- If this wire is not used, cap the end of the wire.

Red Wires: [2 Constant +12 Volts Inputs]
- Receives constant [+] 12 volts from the vehicles battery +12V hot wire[s].
- Connect both of our red wires to the vehicle's [+12] volt battery source wire.
- The two red wires have a 20 amp fuse in each wire. Both wires must be connected.

Installation (continued)

Yellow Wire: [Ignition 1 Output]
- Provides [+] 12 volts while cranking and while running on remote control.
- Connect to the vehicle ignition wire that goes hot in the start position and remains hot in the run position. This yellow wire must be connected.

10-Pin White Connector

Cavity #1:
- Noted Used

Cavity #2:
- Noted Used

Cavity #3 Blue/White Stripe Wire: [Tach Input Wire]
The blue/white wire sends the vehicle's tach data to the control module.
- The blue/white wire is used for tach mode only.
- If used, connect the blue/white to the vehicle's coil [-] wire.
- No connection of this wire is required, if you use voltage or fixed cranking time mode.

Cavity #4:
- Noted Used

Cavity #5 Blue Wire: [Hood Switch Input]
- The blue wire turns “OFF” the remote starter when it sees a ground signal.
- Connect the blue wire to one wire of the hood safety switch.
- Connect the other wire of the mercury hood switch to ground.

Cavity #6:
- Noted Used

Cavity #7:
- Noted Used

Cavity #8:
- Noted Used

Cavity #9 Red/White Stripe Wire: [Parking Lights Output]
The red/white wire activates the vehicle's parking lights when the remote starter is activated.
- The red/white wire can be programmed to send out a [-] or a [+] signal.
- You must determine the polarity of the vehicle's parking light switch output.
- If necessary, move the small black 2 pin program jumper [on the control module] to select the matching polarity. [Shipped with jumper in [+] output position]
- Connect the red/white to the vehicle's parking light wire.

Warning!
1. For [-] parking lights, the maximum output current for is 300mA.
2. For [+] parking lights the maximum output current for is 10 Amps. [Relay output].
3. Do not connect the red/white to the dash lights dimmer switch wire.
4. Use a voltmeter to make sure the wire does not change voltage as you rotate the dimmer switch.

Cavity #10 Pink Wire: [Brake Switch Input]
- The pink wire turns off the remote starter when it sees a [+] voltage signal.
- Connect to the vehicle's wire that goes hot when the brake pedal is depressed.

2-Pin Blue Connector: [Program Switch/Harness]
- Used to enter and perform feature-programming changes.
- Connect the blue connector to blue header of the remote starter module.

Installation (continued)

2-Pin Black Jumper: [Parking Light Polarity Program Jumper]
- Place jumper on the appropriate pins to select a [+] or [-] for the parking lights.

2-Pin Green Connector: [Factory Disarm and After-Market Remote Keyless/System]
- The green wire can be used to disarm a factory security system. The green wire sends a [-] .5 second pulse upon a remote start signal.
- The white/black wires activates and turns "OFF" the remote starter each time it sees a momentary ground signal. Normally used to activate our remote starter module from an after-market Remote Control system with a separate channel output.

5-Pin Small White Connector: [Factory Remote Interface Harness]
This 5-pin harness can be used to activate our Remote Starter Module from a Factory Remote Keyless Entry System.

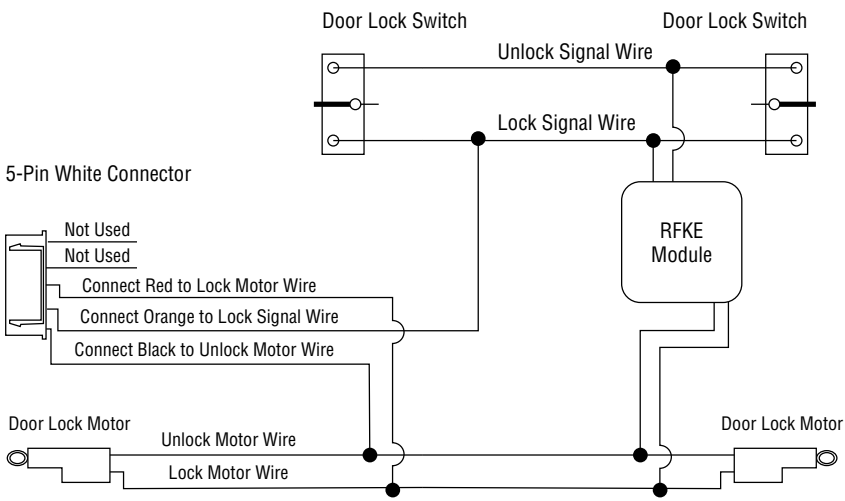
- Pink- Sends out +12 volts at all times. (Not used)
- Gray- Sends out Ground at all times. (Not used)
- Red- Connect this red [3 pulse] trigger wire to the vehicle's door [LOCK] motor working current wire.
- Orange- Connect this monitor wire to the vehicles normal door [LOCK] switch wire.
- Black- Connect this black wire to the vehicle's door [UNLOCK] motor working current wire.

5 Pin Wire Functions/Operation/Hook-Up:
When the red wire receives three [+ 12] volt pulses within 3 seconds the remote starter will activate. Once activated, if the red wire receives 3 pulses within 3 seconds the remote starter will turn "OFF". This red wire also allows feature-programming changes.

The orange wire is an override wire that prevents the remote starter from activating or turning "OFF" if someone rapidly depresses the normal door lock switch three times inside the vehicle etc.
Connect our orange monitor wire to the vehicle's door switch wire that engages the factory door lock relay.

The black wire must be connected as it allows feature-programming changes.

Remote Factory Keyless Entry Interfacing



Installation (continued)

2 Pin Orange Port [Pass-Key, Pass Lock, Transponder and Anti-Starter Grind]

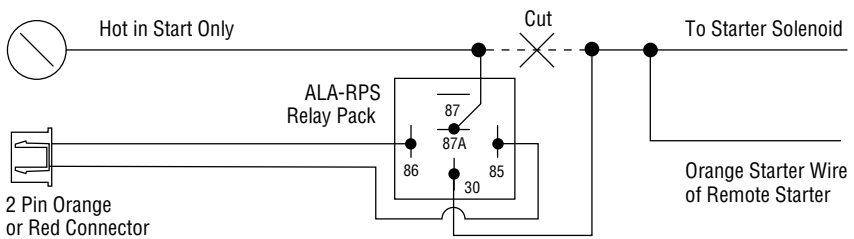
The orange port on the control module can be used to interface with Pass-Key, Pass-Lock and Transponder vehicles or for anti-starter grind purposes. We have various relay modules and an RS-TIM [transponder module] that plugs into our remote starter.

- The gray wires goes to ground upon a remote start signal.
- The yellow wire goes hot when the ignition circuit activates.

Anti-Starter Grinding Using ALA-RPS Relay Pack

We have optional modules available for (1), (2), and (3) circuits. The starter interrupt relay must be installed up line from the remote starter's orange wire. This allows the remote starter to start the vehicle by remote control. It prevents the starter from grinding if the consumer turns the key to start position while the vehicle is running on remote control.

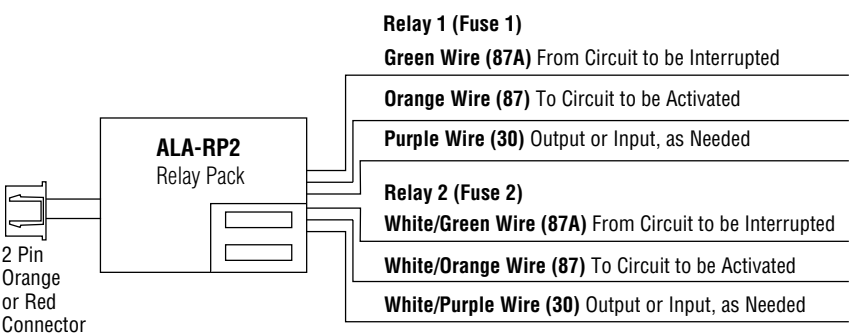
1. Locate and cut the starter wire of the vehicle.
2. Connect the ends of the vehicle's cut wires to the black wires of the ALA-RPS.
3. Plug the connector of the ALA-RPS into the orange port on the control module.



To Interrupt or Make (2) Different Circuits Using ALA-RP2

The ALA-RP2 module may be used to make or break (2) different circuits.

- Plug the connector of the ALA-RP2 into the orange port on the control module.
- Both internal relays engage at the same time.



Installation (continued)

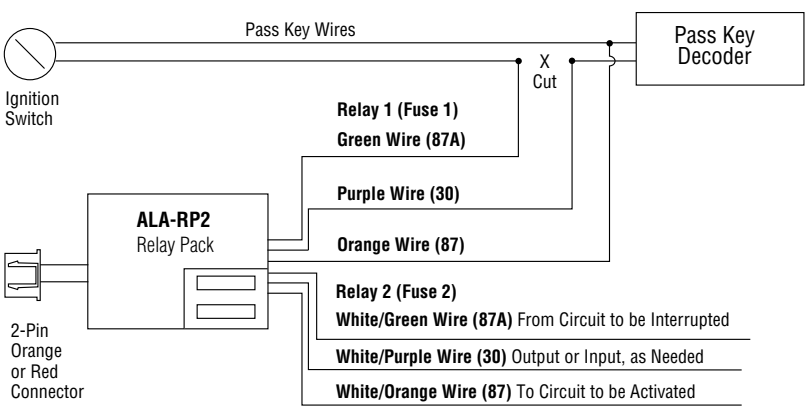
Transponder Interfacing

- You will need a Transponder Key that's already programmed to the vehicle.
- You will also need a Transponder Interface Module. Our RS-TIM Module plugs directly into the Remote Starter Module.
- Detailed instructions are included with the RS-TIM Module.

Pass-Key Interfacing Using ALA-RP2

If you are not using our module you can still follow these instructions by relay terminal # and using a normal resistor instead of our resistor fuses. To avoid confusion, do not make any connections to the Pass-Key system until the remote starter is installed and working properly. To allow temporary remote starting, simply insert the ignition key fully into the lock cylinder.

1. Use an ohms meter, and set meter to R X 1K.
2. Connect test meter probe to each side of ignition key pellet. Record the reading.
3. Locate the (2) small 22awg Pass-Key wires on lower side of steering column. The wires are usually (white or yellow) and inside an orange protective jacket.
4. Cut either one of the Vats-Pass Key wires of the vehicle.
5. Verify the car will not start using the ignition key. (Activates 7 minute timer)
6. Connect the cut wire coming from ignition switch side to the green (87a) of relay.
7. Connect the remaining cut wire (decoder side) to the purple (30) of relay.
8. Connect our orange wire to the uncut pass key wire of the vehicle.
9. Replace fuse #1 with correct value resistor fuse. (Same value as Key)



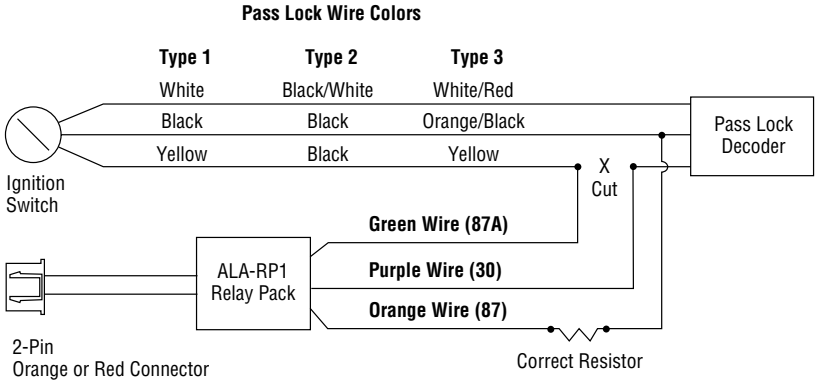
Replace fuse #1 of ALA-RP2 with the matching value resistor fuse. The number after the prefix indicates the resistance value.

GM Code Key code # and resistor fuse numbers:

1=F6R-402	4=F6R-887	7=F6R-1.8K	10=F6R-3.74K	13=F6R-7.50K
2=F6R-523	5=F6R-1.13K	8=F6R-2.37K	11=F6R-4.75K	14=F6R-9.53K
3=F6R-681	6=F6R-1.4K	9=F6R-3.01K	12=F6R-6.04K	15=F6R-11.80K

Installation (continued)

Pass-Lock Interface



The Pass-Lock system is similar to the Pass-Key system except the resistor is inside the steering column instead of the ignition key.

1. Locate Pass-Lock wires coming down the steering column. (3 bonded wires)
2. Determine wire color type. Cut the yellow or black Pass-Lock decoder wire.
3. Use a digital ohm meter and connect the red lead of test meter to the cut yellow wire that goes to the ignition lock cylinder.
4. Connect the black lead of test meter to the orange/black wire.
5. Turn the ignition key "ON" and momentarily crank the engine.
6. Do not turn "OFF" the key. Record the reading on your digital meter and turn "OFF" the key.
7. Connect the green wire (87a) of ALA-RP1 to the cut wire that goes to the ignition lock cylinder.
8. Connect the purple wire (30) of ALA-RP1 to the cut wire that goes to the Pass-Lock Decoder.
9. Connect one side of correct resistor to the orange wire (87) of ALA-RP1.
10. Connect other side of the resistor to the orange/black or black wire of the vehicle.
11. Verify the vehicle starts "OK" with the ignition key.

Pass-Lock 1 Vehicle Only (For Older Pass-Lock Vehicles Only)

In addition to the above connections, the first generation Pass-Lock systems will also require the bulb test circuit to be energized with a ground signal during cranking. This will require an ALA-984H relay.

1. Connect 85 and 30 of relay to ground.
2. Connect 86 of the relay to our orange starter wire.
3. Connect 87 of relay to the vehicle's black bulb test wire.****

**** The bulb test wire will show ground when the ignition switch is rotated to the start position only. Do confuse the bulb test wire with the black Pass-Lock wire. Do "not" connect the relay to the black wire that's in the 3 ribbon wire cable.

About Feature Programming

Basic Overview on How to Perform Feature Programming:

- Turn “ON” the ignition key.
- Depress the program switch [10] times.
- Depress the remote transmitter “LOCK” or “UNLOCK” button to change the feature.
- Turn “OFF” the ignition key.

- The factory default settings is always [1] Parking light flash.
- Therefore, when you first depress the “LOCK” or “UNLOCK” button on the transmitter, it advances the module to the next feature setting.
- In this case, the module would advance to [2] parking light flashes etc.
- Simply keep re-depressing the transmitter button again until the module advances to your desired setting.

Remote Starter Feature Programming

To Enter Remote Starter Feature Programming:

1. Turn “ON” the ignition key.
2. Depress the program switch [10] times within 30 seconds after turning “ON” ignition.
3. The parking lights will flash [10] times.
4. You are now in remote starter feature programming mode.

Remote Run Time with Gas or Diesel Engine: [Default is 14 minutes and Gas Engine]
The module can be programmed for a 14 or 21 minute run time. In addition, the delay before cranking is programmable for a gas or diesel engine. Gasoline engine setting is [5] second delay before cranking. Diesel engine is [18] second delay.

For 21 Minute Runtime with a Gasoline Engine:

- Depress the remote transmitter “LOCK” button.
- The parking lights will flash [2] times.

For 14 Minute Runtime with a Diesel Engine:

- Depress the remote transmitter “LOCK” button.
- The parking lights will flash [3] times.

For 21 Minute Runtime with a Diesel Engine:

- Depress the remote transmitter “LOCK” button.
- The parking lights will flash [4] times.

To Program the Module Back to 14-Minute Runtime with a Gasoline Engine: [Factory Default Setting]

- Depress the “LOCK” button.
- The parking lights will flash [1] time. The horn will chirp [1] time.

Starter Release Circuitry: [The Factory Default Setting is Voltage Mode]
You can program the Remote Starter for voltage, tach signal or fixed cranking time. For voltage mode there are no extra hook-ups or additional programming required.

For Tachometer Mode:
For Tach mode, you must program our module to look for a tach signal. In addition, you must connect our blue/white tach wire to the vehicle tach wire.

To Select Tach Mode:

- Start the engine with the ignition key and wait for the RPM's to slow down.
- Depress program switch [10] times to enter Remote Start Feature Programming.
- Depress the remote transmitter “UNLOCK” button.
- The parking lights will flash [2] times.
- Depress and hold in the program switch to learn the [RPM] tach signal.
- [The Parking lights will be “ON” steady while learning the RPM's]
- Once the module learns the RPM's, the parking lights will flash [10] times.
- Release the program switch and turn “OFF” the ignition key to exit tach learning.

Remote Starter Feature Programming (continued)

To Select Fixed Starter Cranking Mode:
- Depress the remote transmitter "UNLOCK" button.
- The parking lights will flash [3] times.

To Program the Remote Starter Back to Voltage Mode: [Factory Default Setting]
- Depress the remote transmitter "UNLOCK" button.
- The parking lights will flash [1] time.

Note: In voltage or fixed cranking time mode you will not have an over rev turn "OFF".
It does not matter if the tach wire is connected or not. If the tach wire is connected, you can program back and forth from voltage to tach mode, as desired.

Remote Starter Checkout Procedures

1. Apply the under-hood caution label on the radiator-housing shroud.
2. Remove all tools and close the hood.
3. Verify the transmission is in "PARK" position and apply the parking brake.
4. Remove the ignition keys and connect the 6-pin connector to the control module.
5. While seated in the driver's seat, start the vehicle by remote control.
6. The engine should start and run on remote control.
7. Verify that the parking lights illuminate while running on remote control.
8. Verify that the heater and air conditioning system operates as selected.
9. Depress the brake pedal to turn "OFF" the remote starter.
10. Start the vehicle by remote control. Turn off the vehicle by remote control.

Warning! Verify the parking brake is fully applied and be prepared to depress the foot brake before performing the following step.

11. Try starting the vehicle by remote control with the transmission in drive/reverse.
12. The engine should not start. If it cranks, depress the brake pedal and call for help.
13. Return transmission to "PARK". Depress the brake pedal to insure the system is "OFF".
14. Start the vehicle by remote and gently raise the hood. System should turn "OFF".
15. Start the vehicle by remote and verify the programmed remote run time.

Warning! Make sure that no components will interfere with the gas pedal, brake or steering linkages of the vehicle

Trouble Shooting

1. Remote Starter Module Will Not Activate:
- The hood switch may be pointed in the wrong direction. Disconnect and retry.
- Probe the pink brake wire to verify the wire is not until the brake is depressed.
- Probe the heavy red wires [both sides of the fuses] to verify +12 volts on each.
- Probe and verify ground is present on the black wire of the 6-pin harness.
- If using After-Market Remotes- Verify the triggering means is connected to our white/black wire in the 2-pin green connector.
- If using Factory Remotes- Verify the red [3-pulse] trigger wire is connected to the vehicle's door Lock motor working current wire.
- Disconnect and Reconnect 6-pin power plug.

Trouble Shooting (continued)

2 Remote Starter Activates the Ignition, but Will Not Crank the Engine:

- Our orange starter wire is not connected to the correct starter wire of the vehicle.
- Our orange starter wire may be connected on the wrong side of an interrupt relay.
- Probe the starter wire of the vehicle and verify voltage is present with ignition switch in start position. Activate the remote starter and re-probe the exact same wire during cranking.

3. Remote Starter Activates and Cranks, but Engine Will Not Start or Remain Running:

- The vehicle may have a factory immobilizer type system. Insert ignition key into the switch and try again by remote control. If vehicle starts and runs "OK" the vehicle has a transponder system. See transponder interfacing.
- While the engine is cranking on remote control, turn "ON" the ignition key. If the engine starts "OK", turn "OFF" the ignition key. If the engine dies, our yellow ignition wire is not connected to the correct ignition wire or vehicle has 2 ignition wires.

If you are confused, disconnect our yellow and our brown wires from the vehicle.

- Probe the vehicle's ignition wires, while rotating the ignition key.
- Determine which vehicle's wires go hot in both the run and start positions.
- Connect our yellow ignition wire to the wire that goes hot in both run and start.
- If you found a second ignition wire, connect our yellow/white to the that wire.
- Our brown [Heater-AC] wire does not go hot during cranking and therefore will not supply power to start the engine.
- Connect our brown wire to the vehicle wire that goes hot in the run only position.

4. Vehicle Cranks but Will Not Start on Cold Mornings:

- Some vehicles have [2] isolated starter wires. One cranks the engine and the other is a cold start signal wire that causes extra fuel to be delivered, if needed.

5. Vehicle Will Start in Gear by Remote Control:

- Our orange starter wire is connected on the wrong side of the vehicle's park safety switch or the vehicle does not have an electrical park safety switch.

Warning! This system shall never be installed on a manual transmission vehicle or on a vehicle with an automatic transmission, that does not have an electrical park neutral safety switch.

6. Engine Does Not Run Long Enough or Runs Too Long on Remote Control:

- Program the control module for [14] or [21] minutes run time.

7. Vehicle Does Not Turn Off When the Brake Pedal is Depressed:

- No voltage is being applied to our pink brake wire.
- Verify the vehicles brake lights illuminate when brake pedal is depressed.
- Depress the brake pedal and probe both our pink and the vehicles brake wire.
- If the brake lights did not illuminate, check the brake light fuse of the vehicle.
- If the fuse is "OK", check adjustment of vehicles brake light switch.

8. Vehicle Will Not Turn Off When the Hood is Raised:

- The blue wire is not seeing a ground signal when the hood is raised.
- One wire of hood switch should be grounded.
- The other wire should be connected to our blue wire of 10-pin harness.
- When the switch is elevated approximately 25 degrees the mercury inside the housing competes the circuit between the two wires.
- The hood switch may be mounted [pointed] in the wrong direction. The wires of the switch should be pointing towards the firewall. [hood hinge side]

9. Vehicle's Check Engine Light Activates:

- Later model GM vehicles have a white or a pink/white 2nd ignition wire that must be also powered. Failure to power this wire will cause the engine check light to activate and store a defective transmission code in the computer.

Wiring Diagram