Remote Mobile Security System

INSTALLATION MANUAL

Model: PL21

For Technical Assistance (800) 638-3600 or visit www.magnadyne.com

Enclosed are the installation instructions for the PL21 alarm control module. Read through the instructions to become familiar with the wiring and functions to insure a successful installation.

Step 1: Component Installation

Mounting the Control Module:

Find a suitable location to secure the alarm control module within the passenger's compartment of the vehicle. Never mount the alarm control module in the engine compartment or in the trunk. In addition, never mount the alarm control module in the direct path of the heater. Secure the alarm control module by using wire ties or drill two 1/8" holes and secure the module to the frame of the vehicle with the screws provided.

Installing Alarm Status LED:

The LED indicator provided utilizes a push in type mounting. Drill a 5/16" hole in the desired location, feed the wires through the hole and push the LED into place. Run the wires to the location of the alarm control module.

Mounting the Override / Valet Switch:

Mount this switch in a hidden but accessible location within reach of the driver of the vehicle. Drill a 1/4" hole and use the nuts and washers provided to secure the switch. Run the wires from the switch to the alarm control housing location.

Step 2: Wire Connections

Warning! Do not plug the 10-pin or 5-pin wire harness into the alarm control module before you begin installing the alarm. The wire harnesses must be plugged into the alarm control module after all connections are made. Failure to follow this procedure could cause some confusion with transmitter operation and or alarm function operation.

5-Pin Wire Harness Connections: (Power Supply Harness)

Red Wire: Connect the red wire to constant battery voltage. It is highly recommended to connect the red wire directly to the (+) positive post of the vehicle battery for best performance of the alarm system.

Yellow Wire: Connect the yellow wire to a (+) power source that is switched On and Off by the ignition key. This connection must be made to the "true ignition wire" directly from the ignition key switch. When tested, the correct wire will indicate voltage when the ignition key is in the On and Start positions. Connecting the yellow wire to any switched power source that does not stay On when the key is in the start position will cause inconsistent operation of the security system.

Black Wire (Main Ground Input): Connect the black wire directly to the frame of the vehicle. Use a bolt and nut to secure the wire. Scrape away any grease or paint that might prevent a good connection.

10-Pin Wire Harness Connections: (Operations Harness)

The main wire harness contains 10 wires which all have a specific purpose. Follow the wiring recommendations enclosed for each wire.

Gray Wire: The gray wire is a pulsed ground output designed to activate the vehicle's existing car horn system in place of or in addition to a siren sounding device. Connect the gray wire to the negative trigger wire on the vehicle's horn relay.

WARNING! Maximum output of this wire is 300mA to trigger the horn relay will require an additional relay to increase current capabilities.

Step 2: Wire Connections (Continued)

10-Pin Wire Harness Connections: (Continued)

Blue Wire with White Stripe: No connection.

Brown Wire: The brown wire is the positive siren output wire. Connect the brown wire from the harness to the brown wire on the siren supplied. Ground the remaining black wire from the siren.

Blue Wire: The blue wire is a negative trigger input that can be used for existing or newly installed grounding type hood/trunk/ hatch pin switches. The blue wire can also be used as an input for additional ground output electronic sensors.

Green Wire: The green wire is the negative (-) door trigger input. If the vehicle you are working on has a negative (-) triggered dome light system, connect the green wire to the common dome light trigger wire. This wire is usually located at the driver's side door jamb switch.

Violet Wire: The violet wire is the positive (+) door trigger input. If the vehicle you are working on has a positive (+) triggered dome light system, connect the violet wire to the common dome light trigger wire. This wire is usually located at the driver's side door jamb switch.

Red Wire with White Stripe: The red/white wire is the output of the parking light relay. Connect the red/white wire to the parking light trigger wire coming from the headlight switch. Do not connect the red/white wire to a dashboard lighting wire. Connecting the red/white into dashboard lighting can damage the dashboard lighting dimmer switch.

Pink Wire: The pink wire is the input wire to the parking light relay. The connection of the pink wire determines the output polarity of the parking light relay. If the parking light system you are connecting to is positive activation, connect the pink wire to battery +12V DC. If the parking light system you are connecting to is negative activation, connect the pink wire the the frame of the vehicle.

Step 3: Arm/Disarm Harness Wiring

3-Pin Harness with White Plug: (Arm/Disarm Harness)

Supplied with the PL21 is a 3 wire harness with a white 3-pin mini plug. This 3 wire harness gets connected to the vehicle's existing door lock switch wires and driver's door lock motor unlock wire to arm and disarm the PL21.

Note: Their are two types of factory keyless entry systems available on 1994 and newer vehicles. Type 1 has the driver's door unlock first feature. Older systems do not offer the driver's door unlock first feature. Follow the wiring information carefully.

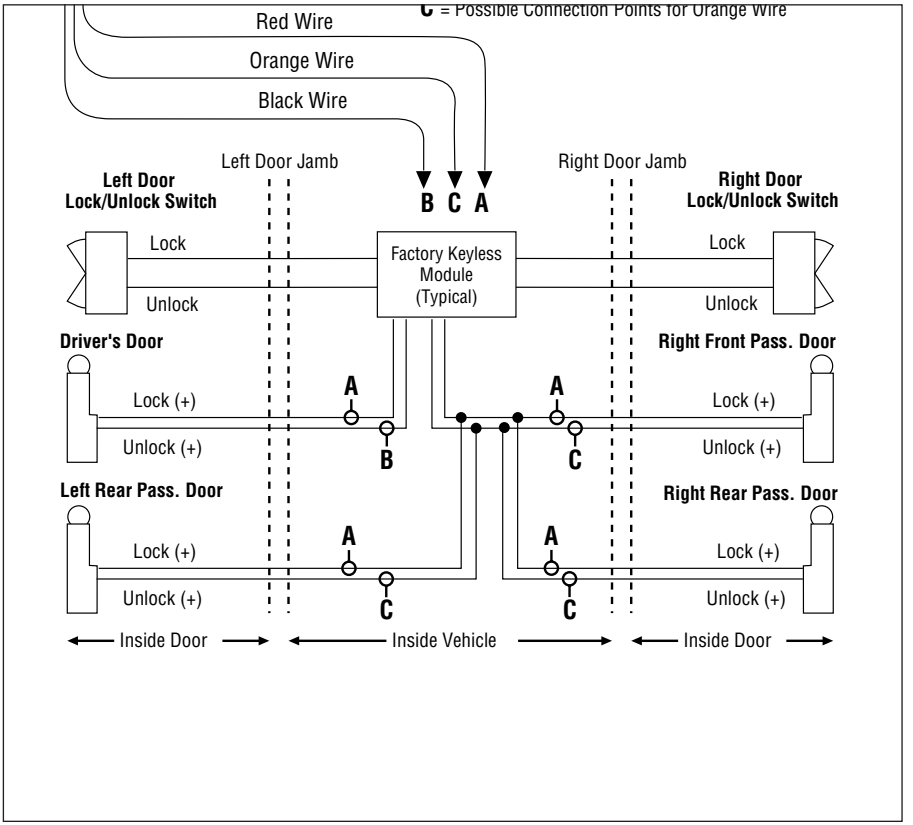
Green Wire: Connect the green wire to any lock output wire controlled by the door lock control switch.

Blue Wire: Connect the blue wire to the unlock from the driver's door lock motor. DO NOT CONNECT THE BLACK WIRE TO THE UNLOCK TRIGGER WIRE FROM THE DOOR LOCK CONTROL SWITCH.

White Wire: Connect the white wire to any unlock output wire controlled by the door lock control switch.

Note: If the keyless entry system you are connecting to does not have the unlock drivers door first feature, connect the white wire to chassis ground. DO NOT LEAVE THIS WIRE DISCONNECTED.

Step 3: Arm/Disarm Harness Wiring (Continued)



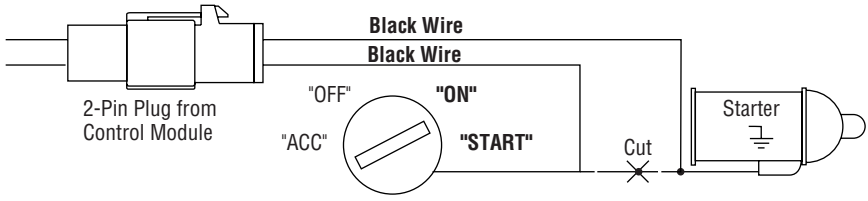
Step 4: Starter Disable Harness Wiring

2-Pin Black Wire Harness Connections: (Starter Disable Harness)

Locate the wire in the ignition switch harness that is used to send voltage to the starter relay. When tested, the correct wire will show voltage when the ignition key is in the start position only. Cut the correct wire and connect one of the black wires from the harness to each cut end. It is recommended to solder and insulate these wires due to the high current they carry. Use the diagram enclosed, as reference for correct wiring.

Step 4: Starter Disable Harness Wiring (Continued)

Starter Disable Harness Connection

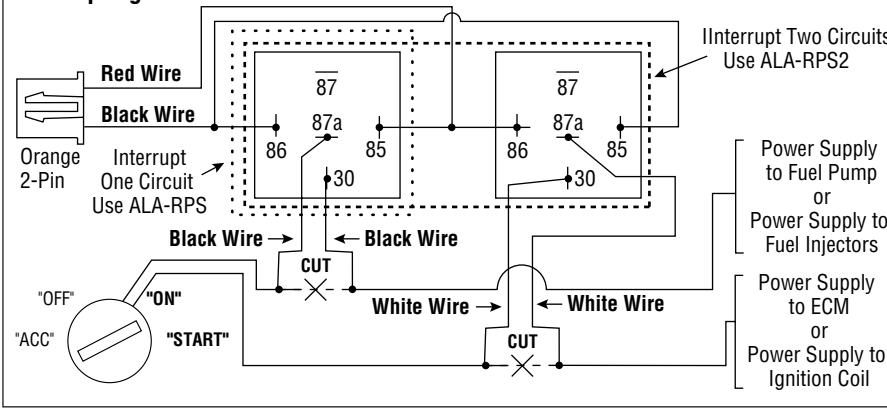


Step 5: Auxiliary Interrupt Wiring

2-Pin Orange Socket: (Auxiliary Interrupt)

To interrupt an additional circuit(s) the alarm modules requires either the ALA-RPS, ALA-RPS2 or ALA-RPS3 relay pack. Follow the wiring instructions below.

Interrupting Other Circuits



Step 6: Ignition Locking Wiring

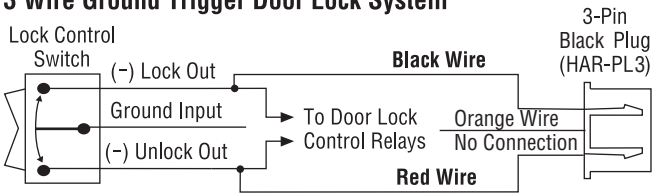
3-Pin Black Socket: (Ignition Controlled Door Locking/Unlocking)

For ignition controlled door lock/unlock operation, follow the wiring diagram enclosed. The 3-pin black connection harness is supplied but some locking systems will require an additional relay pack (ALA-DL1).

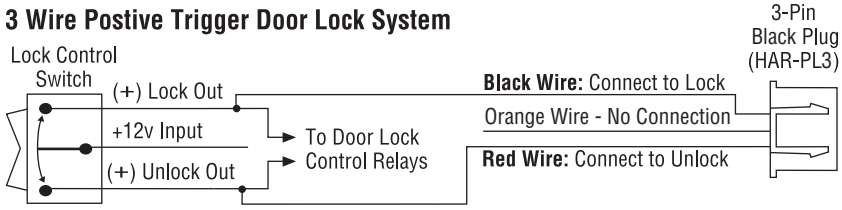
Note: Some vehicle's (Chrysler, Mazda, Ford) use one wire to lock and unlock the doors. To properly interface with these one wire systems you must use part # ALA-DL1. We have developed a patented plug-in fuse resistors to make the installation easier. Simply remove the fuses from ALA-DL1 module and replace them with the correct resistor value fuses that match the vehicle's door lock signal requirements.

Step 6: Ignition Locking Wiring (Continued)

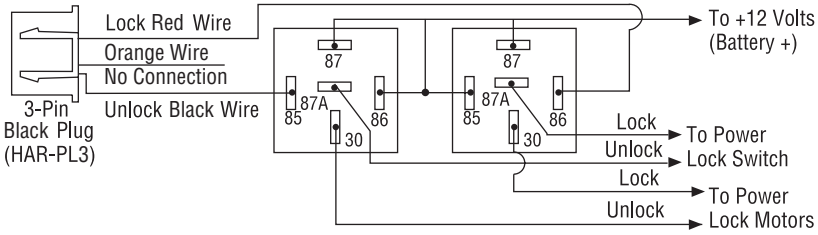
3 Wire Ground Trigger Door Lock System



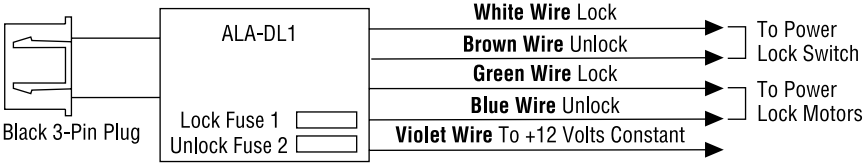
3 Wire Postive Trigger Door Lock System



5 Wire Ground at Rest Door Locking Systems



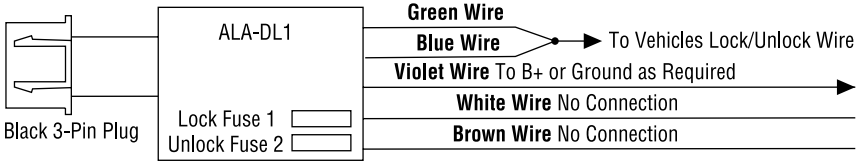
5 Wire Ground at Rest Door Locking Systems



Connect to 3-pin plug on control module for ignition locking.

Step 6: Ignition Locking Wiring (Continued)

One Wire Multiplexing Door Locking Systems

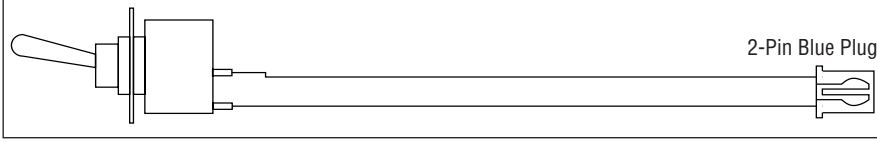


Connect to 3-pin plug on control module for ignition locking.

Step 7: Plug-In Components

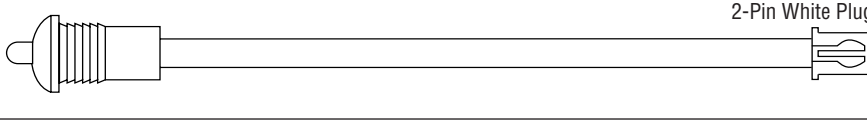
Valet Switch:

Plug the 2-pin blue connector on the valet switch wire harness into the mating blue connector on the alarm control module.



LED Indicator:

Plug the 2-pin white connector on the LED wire harness into the mating white connector on the alarm control module.

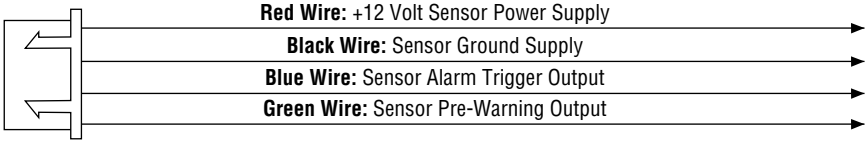


Step 7: Plug-In Components (Continued)

Shock Sensor Port (Shock Sensor is Optional):

The white 4-pin plug on the control module will mate to the ALA90 or ALA95 dual-zone shock sensor. If a different sensor device is desired, the HARPL4 accessory harness can be used to connect any mechanical or electronic sensor to the PL21 control module (HARPL4 not supplied).

Dual Zone Electronic Sensor Plug:



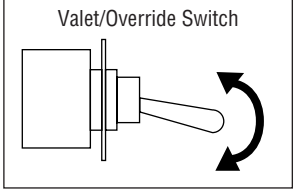
4 Pin White Plug

Note: The black wire can be used to control other devices such as additional relays, window roll up control modules or additional LED indicators. The black wire's electrical capacity is 500mA. The black wire is grounded when the alarm is armed only.

Step 8: Programming the Alarm Control Module

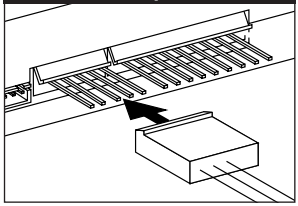
The PL21 control module offers 6 programmable features: panic feature On/Off, chirp status and remote start bypass On/Off, pathway illumination On/Off, automatic arming On/Off, ignition controlled locking system On/Off, and single or double unlock pulse and timing duration. Follow the steps below to adjust the features.

Step 1



Make Sure the Valet/ Override Switch is in the "Off" Position

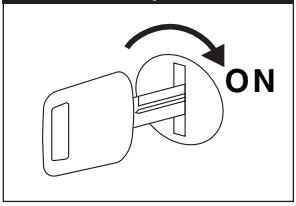
Step 2



Plug In the Power Harness

The horn/siren will start sounding, the parking lights will flash and the LED will begin flashing

Step 3

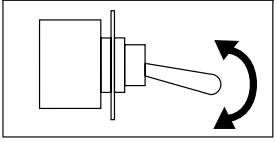


Turn On Ignition

Step 8: Programming the Alarm Control Module (Continued)

Panic Feature

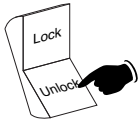
Step 4A



Flip the Valet Switch On/Off 4 Times

A. The horn/siren will chirp 1 long and 1 short

Step 4B



Depress the Factory Power Door "Unlock" Switch:

***1 Time = Panic Feature "On"**

A. The siren will chirp once.

2 Times = Panic Feature "Off"

A. The siren will chirp two times.

* Default Setting

Chirp Status Indication On/Off / Remote Start Bypass On/Off

Step 5A

Push the Valet Switch 5 Times for Red Button 10 Times for Black Button

(Represents 5 Times On/Off)

A. The siren will chirp 1 long and 2 short

Step 5B

Press the Factory Power Door "Unlock" Switch Until the Desired Setting is Reached:

***1 Beep = Chirp Status Indicator is On / Remote Start Bypass is Off**

2 Beeps = Chirp Status Indicator is Off / Remote Start Bypass is Off

3 Beeps = Chirp Status Indicator is On / Remote Start Bypass is On

4 Beeps = Chirp Status Indicator is Off / Remote Start Bypass is On

* Default Setting

Parking Lights Remain On After Disarm

Step 6A

Push the Valet Switch 6 Times for Red Button 12 Times for Black Button

(Represents 6 Times On/Off)

A. The siren will chirp 1 long and 3 short

Step 6B

Depress the Factory Power Door "Unlock" Switch:

1 Time = Parking Light Feature "On"

A. The siren will chirp once.

***2 Times = Parking Light Feature "Off"**

A. The siren will chirp two times.

* Default Setting

Automatic Arming

Step 7A

Push the Valet Switch 7 Times for Red Button 14 Times for Black Button

(Represents 7 Times On/Off)

A. The siren will chirp 1 long and 4 short

Step 7B

Depress the Factory Power Door "Unlock" Switch:

1 Time = Automatic Arming "On"

A. The siren will chirp once.

***2 Times = Automatic Arming "Off"**

A. The siren will chirp two times.

* Default Setting

Step 8: Programming the Alarm Control Module (Continued)

Ignition Controlled Locking System

Step 8A

Push the Valet Switch
8 Times for Red Button
16 Times for Black Button
(Represents 8 Times On/Off)
A. The siren will chirp 1 long and 5 short

Step 8B

Depress the Factory Power Door "Unlock" Switch:

1 Time = Ignition Key "On", Door Locking "On" + Ignition Key "Off, Door Unlocking "Off"
A. The siren will chirp once.

2 Times = Ignition Key "On", Door Locking "On" + Ignition Key "Off, Door Unlocking "On"
A. The siren will chirp twice.

***3 Times = Ignition Key "On", Door Locking "Off" + Ignition Key "Off, Door Unlocking "Off"**
A. The siren will chirp three times.

Door Lock Output Pulse and Output Duration

Step 9A

Push the Valet Switch
9 Times for Red Button
18 Times for Black Button
(Represents 9 Times On/Off)
A. The siren will chirp 1 long and 6 short

Step 9B

Press the Factory Power Door "Unlock" Switch until the Desired Setting is Reached:

***1 Beep = .8 Sec. Door Lock/Unlock Outputs with Single Unlock Pulse**

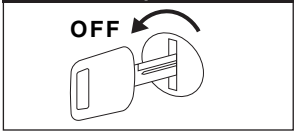
2 Beeps = .8 Sec. Door Lock/Unlock Outputs with Double Unlock Pulse

3 Beeps = .6 Sec. Door Lock/Unlock Outputs with Single Unlock Pulse

4 Beeps = .6 Sec. Door Lock/Unlock Outputs with Double Unlock Pulse

* Default Setting

Step 10



Turn Off Ignition
A. 1 short and 1 long chirp indicates you have exited learning.

Step 9: Programmable Feature Testing

Remote Panic:

To test the remote panic feature follow the instructions below.

1. Ignition key must be Off.
2. Press the LOCK button on the factory transmitter 4 times.
3. The siren will begin to sound and the parking lights will begin to flash.
4. Press the UNLOCK button on the factory transmitter. The siren will stop sounding and the parking lights will stop flashing.

Note: If the panic function is not turned off by the transmitter, the siren will continue to sound for 60 seconds and then turn off by itself.

Chirp Delete:

The control module can be programmed in feature programming for no arm/disarm status chirps. The four chirp tamper disarm warning indicator will always be on.

Step 9: Programmable Feature Testing (Continued)

Pathway Illumination:

If the pathway illumination function has been programmed on the vehicle's parking lights will illuminate at the time the security system is disarmed by the remote transmitter. The parking lights will remain on for 30 seconds after the security system is disarmed. Turning On the ignition key will turn off the parking lights before 30 seconds.

Last Door Automatic Arming:

If the security system was programmed to automatically arm without using the transmitter, repeat the following procedures to test and operate this feature:

1. Enter the vehicle and close all the entrances.
2. Set the ignition key switch to the On position and wait for 5 seconds.
3. Set the ignition key switch to the off position and exit the vehicle. Upon closing the door, you will hear a beep from the horn/siren. The beep is an indicator that the automatic arming timer has started counting. You will also notice that the LED indicator is flashing fast. This is also an indicator that the automatic arming timer is counting down.
4. Within 30 seconds, the horn/siren will beep once again. This is an indication that the security system is now in the armed mode. The LED will begin flashing at a normal rate.

Note: Once the ignition key switch is turned off, the automatic arming timer will start counting after the last protected entrance is closed. Reopening any protected entrance within the 30 second time will stop the counter and reset it. Closing the entrance will start the counter once again but you will not get a beep when closing the door for the second time.

Ignition Key Controlled Door Locking/Unlocking:

If the ignition key lock/unlock function has been programmed on the doors will automatically become locked 3 seconds after the ignition key is set to the On position or Unlocked after ignition key is turned off.

1. Enter the vehicle and close all protected entrances.
2. Turn the ignition key to the On position.
3. Within 3 seconds the door locks will become locked.
4. Turn off the ignition key. The door locks will become unlocked.

Notations About Ignition Controlled Locking

A. If a protected door is open, the ignition door locking function is disabled.
B. If the door locks are manually locked, the alarm system will still unlock them when the ignition key is turned off.
C. The control module can be programmed to "not" unlock the doors when the ignition is turned off.

Remote Start Bypass:

If the Remote Start Bypass Feature has been programmed On, the trigger inputs for the hood, trunk, shock sensor, starter disable and ignition will be turned off during the factory remote start procedure and will continue to be disabled for 10 seconds after the factory remote start function is completed.

Fast Test:

1. Enter the vehicle and close all the entrances.
2. Press the LOCK button on the factory remote transmitter to arm the PL21.
3. Wait a few seconds then push the LOCK switch on the drivers door.
4. Insert the ignition key and start the vehicle. The vehicle should start and the PL21 should not trigger.

Note: If the dome light circuit is active during or after the factory remote start procedure, the PL21 will become triggered through the door trigger input.

5. Shut off the engine and wait 10 seconds.
6. Attempt to restart the vehicle. The PL21 should trigger and the engine should not start (requires the starter disable wires to be connected).

Wiring Diagram