



AL-100-DP

**Full-Feature Vehicle Security System for Factory-
Equipped Remote Keyless Entry Transmitters**

Installation Guide

Table Of Contents

Installation Considerations	2
5 Pin Main Harness	3
Red Wire - Constant Power (+) Input	3
Black Wire - System Ground (-) Input	3
Yellow Wire - Ignition (+) Input.....	3
Gray Wire - Trunk Release Disarm (+) Input.....	3
Orange Wire - Starter Interrupt (-) Output & Relay.....	3
8 Pin Secondary Harness	4
Pink Wire - 3rd Channel (-) Output.....	4
White/Black Wire - Flashing Light (-) Output	4
White Wire - Flashing Light (+) Output.....	4
Brown Wire - Siren (+) Output.....	4
Violet Wire - Door Trigger (+) Input	4
Blue Wire - Hood Trigger (-) Input	4
Green Wire - Door Trigger (-) Input	4
Brown/Black Wire - Horn Honk (-) Output	4
6 Pin Arm & Disarm Harness	5
White Wire - Arm Override Input	5
Brown Wire - Disarm Override Input	5
Pink Wire - Arm Sensing Input	5
Gray Wire - Disarm Sensing Input.....	5
Blue Wire - Lock (+) Pass-Through.....	5
Green Wire - Unlock (+) Pass-Through.....	5
Wiring Overview Diagram	7
6 Pin Arm & Disarm Harness Wiring	8
Standard Connection (Type #5)	8
Parking Light Override Connection	8
3 Pin Door Lock/Unlock Port (RED)	9
2 Pin Backup Battery Port (WHITE)	9
Data Port (GREEN)	9
Dual Zone Sensor Port (WHITE)	9
The Status Light	9
Valet / Programming Switch	9
Installer Programmable Features	10
Programmable Features	11
Programmable Feature Matrix	11

Installation Considerations

BEFORE STARTING THE INSTALLATION, READ THIS ENTIRE MANUAL TO FAMILIARIZE YOURSELF WITH ANY INSTALL REQUIREMENTS

- Be sure to verify each circuit with a Digital Multimeter
- Identify which circuits are required for the vehicle in question
- Mount any system components and route wiring away from moving parts or parts of the vehicle that generate excessive heat
- Tape off or remove any unused wiring to prevent possible short circuits
- **Avoid any airbag circuits, usually indicated by a yellow sleeve or jacket around the wiring**

Most of the main wiring harness connections are primary power circuits, so high reliability connections must be made. It is recommended to solder and adequately insulate each connection. Many of these connections are made at the vehicle's ignition switch so be sure to properly route the harness away from steering wheel tilt mechanisms or anything that could compromise the wire insulation.

RED WIRE - CONSTANT POWER (+) INPUT

REQUIRED. This wire provides constant positive 12v power supply for the system's operation.
CONNECTION: Connect this to a constant +12 volt supply with sufficient amperage (15A). The +12v power supply to the ignition switch or direct connection to the car battery is ideal. Some vehicles have low amperage ignition switches in which case you would need to find a power supply at a fuse block or at the vehicle's battery. Be sure this wire is fused within 6 inches of the connection to the vehicle. The 15AMP fuse protects the system module, NOT THE VEHICLE.

BLACK WIRE - SYSTEM GROUND (-) INPUT

REQUIRED. This input provides negative ground for all system operations.
CONNECTION: Using a properly sized ring terminal, connect this wire to the vehicle's chassis. Using an existing bolt is preferred, but make sure that the connection point is clean and free of dirt, grease, or paint. Bright, shiny metal at the connection point is desired.

YELLOW WIRE - IGNITION (+) INPUT

REQUIRED. This connection is required and is critical to the operation of the system. It is an "IGNITION ON" input when the ignition key is turned on.
CONNECTION: The vehicle's primary ignition circuit is typically found at the ignition switch. The proper circuit will show +12v when the ignition key is in the ON/RUN and START positions.
NOTE: When installing with an aftermarket or OEM remote start systems be sure the wire shows +12V with remote start operation as well as key start operation.

GRAY WIRE - TRUNK RELEASE DISARM (+) INPUT

The Gray wire is the (+) Trunk Release Disarm Input; a 12v pulse on this wire will disarm the AL-100-DP.

CONNECTION: Connect this wire to the vehicle's existing trunk release motor wire which shows 12V when the OEM remote is used to open the trunk.

ORANGE WIRE - STARTER INTERRUPT (-) OUTPUT & RELAY

This provides 500mA negative ground while the alarm is armed for the starter kill relay.
CONNECTION: This wire is connected to the ORANGE input wire on the included starter interrupt relay socket. Then, locate the vehicle's (+) starter wire at the ignition switch and cut it. Connect the starter interrupt relay's RED wire to the ignition switch side of the cut starter wire. Connect the starter interrupt relay's WHITE wire to the starter side of the cut starter wire.

8 Pin Secondary Harness

PINK WIRE - 3RD CHANNEL (-) OUTPUT

This output provides a 250mA negative output for 800ms when the CH3 sequence is activated by the controller. This sequence is selectable with programmable feature #10

CONNECTION: Connect this wire to any desired add-on accessory that can utilize a negative activation input.

WHITE/BLACK WIRE - FLASHING LIGHT (-) OUTPUT

This output provides a 250mA negative output to flash the vehicle's parking lights (typically). If the vehicle has a positive parking light circuit, use the WHITE wire instead.

CONNECTION: Connect this wire to the vehicle's negative parking light circuit. It will show ground when the parking lights are on. **BE SURE NOT TO CONNECT TO THE DIMMER CIRCUIT WHICH WILL CHANGE RESISTANCE TO GROUND AS YOU TURN THE DIMMER KNOB.**

WHITE WIRE - FLASHING LIGHT (+) OUTPUT

This output provides a 10 amp positive output to flash the vehicle's parking lights (typically). If the vehicle has a low current negative parking light circuit, use the WHITE/BLACK wire instead.

CONNECTION: Connect this wire to the vehicle's positive parking light circuit. It will show +12 volts when the parking lights are on. **BE SURE NOT TO CONNECT TO THE DIMMER CIRCUIT WHICH WILL CHANGE VOLTAGE AS YOU TURN THE DIMMER KNOB.**

BROWN WIRE - SIREN (+) OUTPUT

This output provides a 1 amp positive output to operate an optional siren.

CONNECTION: Safely route this wire to the chosen mounting location of the siren and connect it to the siren's red wire. Connect the siren's black wire to chassis ground.

VIOLET WIRE - DOOR TRIGGER (+) INPUT

This input is used to detect entry into the vehicle via any door opening.

CONNECTION: Connect this wire to the vehicle's existing dome light circuit or door pin circuit. The circuit will show +12 volts when any door is opened. If you are required to connect to each individual door pin, diode isolation is required. Use one 1-2 amp diode for each door, facing the diode's cathode (stripe) towards the alarm module.

BLUE WIRE - HOOD TRIGGER (-) INPUT

This input is used to detect entry into the hood area of the vehicle.

CONNECTION: Connect this wire to the vehicle's existing hood switch or light. It will show ground when the hood is opened. You can also use the included pin switch and mount it to the radiator core support.

GREEN WIRE - DOOR TRIGGER (-) INPUT

This input is used to detect entry into the vehicle via any door opening.

CONNECTION: Connect this wire to the vehicle's existing dome light circuit or door pin circuit. The circuit will show ground when any door is opened. If you are required to connect to each individual door pin, diode isolation is required. Use one 1-2 amp diode for each door, facing the diode's cathode (stripe) towards the vehicle wiring.

BROWN/BLACK WIRE - HORN HONK (-) OUTPUT

This output provides a 250mA negative output to honk the vehicle's horn. If the vehicle has a positive parking horn circuit, use a relay to convert the output.

CONNECTION: Connect this wire to the vehicle's horn circuit. It will show ground when the horn button is pressed.

NOTE: The AL-100-DP will learn the resting state of the following connections upon power-up. The following must be wired to the vehicle and plugged into the AL-100-DP before main power is applied. Any changes to these wires will require that the AL-100-DP be power cycled to ensure proper operation.

WHITE WIRE - ARM OVERRIDE INPUT

This wire is the “lock” override wire. In Standard Operation, any change in polarity of this wire at the same moment that the Pink wire changes state, will cause the AL-100-DP not to arm. In Parking Light Override Operation, (feature #9) a change in polarity within 1 second of the Pink wire will cause the AL-100-DP to arm.

CONNECTION: In Standard Operation this wire is connected to Ground. In Parking Light Override Operation this wire is connected to a Hazard/Parking light wire that flashes when the OEM remote is used. If no wire can be found this wire is connected with the Pink wire.

BROWN WIRE - DISARM OVERRIDE INPUT

This wire is the “unlock” override wire. In Standard Operation, any change in polarity of this wire at the same moment that the Gray wire changes state, will cause the AL-100-DP not to disarm. In Parking Light Override Operation, (feature #9) a change in polarity within 1 second of the Gray wire cause the AL-100-DP to disarm.

CONNECTION: In Standard Operation this wire is connected to the All Door Unlock Motor wire that shows a 12V pulse when the switch is used to unlock the doors. In Parking Light Override Operation this wire is connected to a Hazard/Parking light wire that flashes when the OEM remote is used.

PINK WIRE - ARM SENSING INPUT

This wire is the “arm” input wire. In Standard Operation, any change in polarity of this wire, with no change in the White wire will cause the AL-100-DP to arm. In Parking Light Override Operation, (feature #9) this wire must see a change in polarity within 1 second of the White wire for the AL-100-DP to arm.

CONNECTION: In both operation modes this wire is connected to the all Door Lock Motor wire that shows a polarity change when the OEM remote is used to lock the vehicle.

GRAY WIRE - DISARM SENSING INPUT

This wire is the “disarm” input wire. In Standard Operation, any change in polarity of this wire, with no change in the Brown wire will cause the AL-100-DP to disarm. In Parking Light Override Operation, (feature #9) this wire must see a change in polarity within 1 second of the Brown wire for the AL-100-DP to disarm.

CONNECTION: In both operation modes this wire is connected to the Door Unlock Motor wire that shows a polarity change when the OEM remote is used to unlock the vehicle.

BLUE WIRE - LOCK (+) PASS-THROUGH

This wire is a pass-through wire connected to the Pink wire. This circuit is diode-isolated to the arm wire and can only be used in Positive-switching circuits.

CONNECTION: This wire will pass through any positive voltage applied to the Pink wire.

GREEN WIRE - UNLOCK (+) PASS-THROUGH

This wire is a pass-through wire connected to the Gray wire. This circuit is diode-isolated to the disarm wire and can only be used in Positive-switching circuits

CONNECTION: This wire will pass through any positive voltage applied to the Gray wire.

Wiring Overview Diagram

WIRE LEGEND

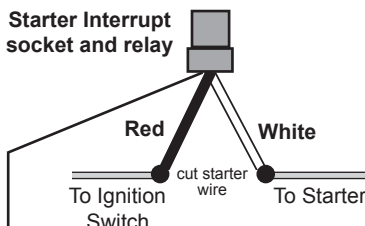
- Hard wire connection required
- - - - - Supported via DATA port

6 PIN ARM/DISARM HARNESS

- *Arming Override - WHITE - - - - -
- *Disarm Override - BROWN - - - - -
- *Arm Sensing - PINK - - - - -
- Lock (+) Pass-Through - BLUE - - - - -
- *Disarm Sensing - GRAY - - - - -
- Unlock (+) Pass-Through - GREEN - - - - -

*** These 4 wires MUST be connected when The unit is powered-up. After power-up, you have a 1 minute window to activate Lock/Arm to auto-learn parking light override mode (feature #9). See page 8 for more info.**

Starter Interrupt socket and relay



5-PIN MAIN HARNESS

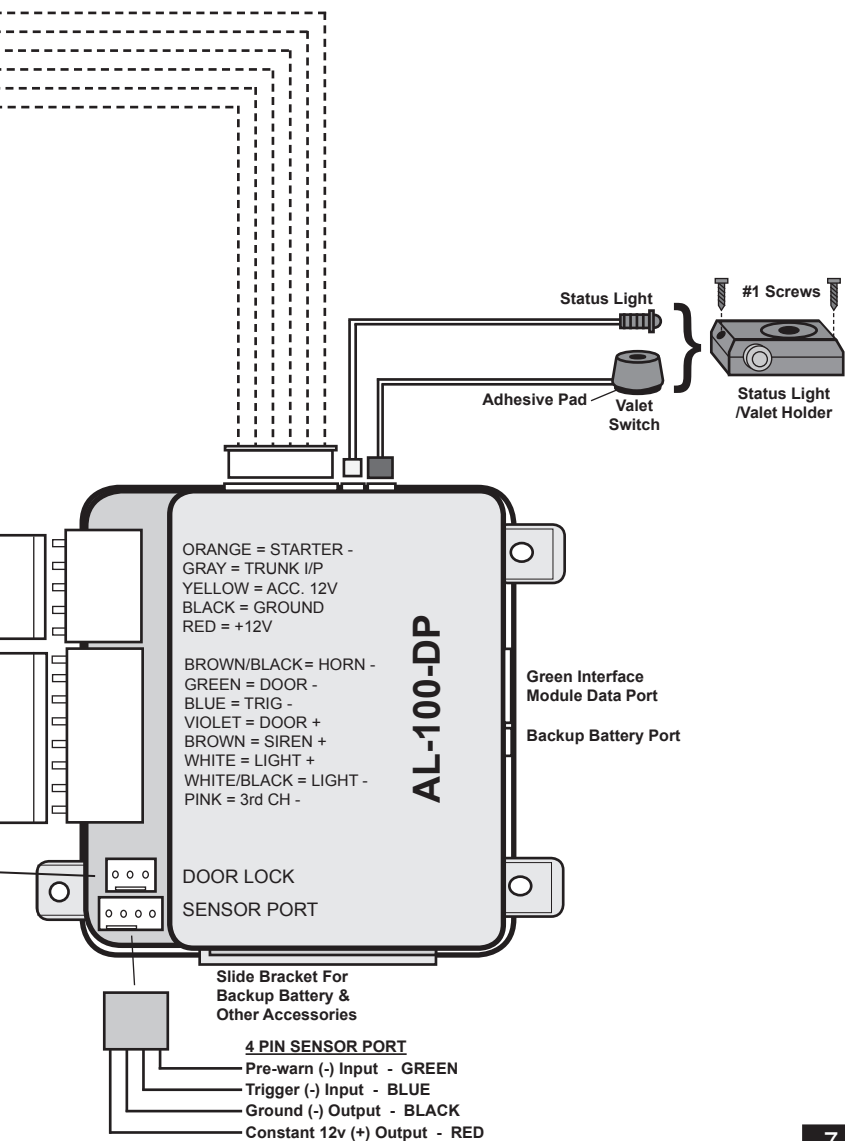
- Starter Interrupt (-) Output - ORANGE
- Trunk Release Disarm (+) Input - GRAY
- Ignition Power (+) Input - YELLOW
- System Ground (-) Input - BLACK
- Constant Power (+) Input - RED

8-PIN SECONDARY HARNESS

- Horn Honk (-) Output - BROWN/BLACK
- Door Trigger (-) Input - GREEN
- Hood Trigger (-) Input - BLUE
- Door Trigger (+) Input - VIOLET
- Siren (+) Output - BROWN
- Parking Light (+) Output - WHITE
- Parking Light (-) Output - WHITE/BLACK
- 3rd Channel (-) Output - PINK

3 PIN DOOR LOCK PORT

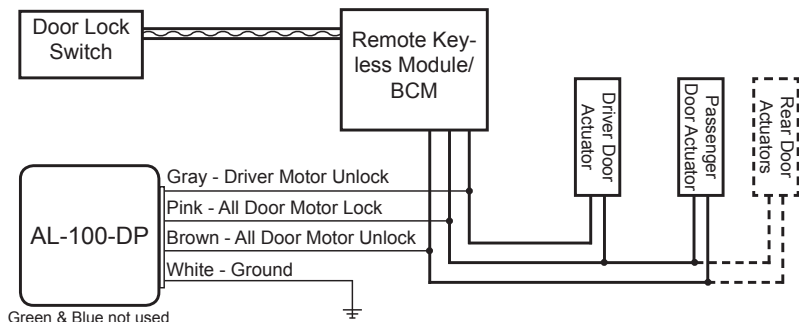
- Lock (-) Output - GREEN
- Constant 12v (+) Output - Center Pin
- Unlock #1 (-) Output - BLUE



6 Pin Arm & Disarm Harness Wiring

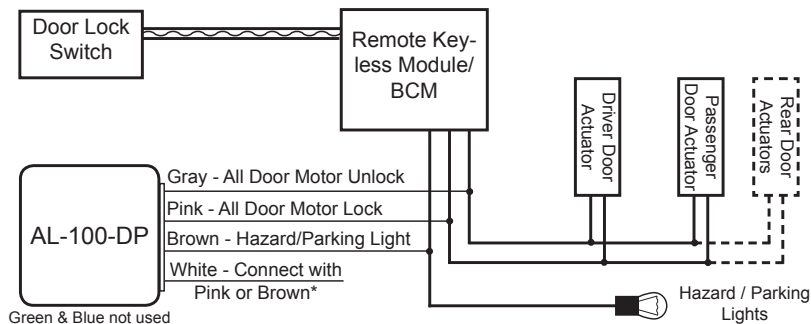
STANDARD CONNECTION (TYPE #5)

The Standard Connection can be used in vehicles that unlock only the driver's door with the first press of the OEM remote Unlock button.



PARKING LIGHT OVERRIDE CONNECTION

Parking Light Override Connection can be used in vehicles that flash the Hazard/Parking lights when the OEM remote Lock or Unlock buttons are pressed.



* If the Hazard/Parking lights flash when Locking with the OEM remote, connect the White wire with the Brown to the Hazard/Parking light circuit. If the Hazard/Parking lights do not flash with the Lock operation connect the White wire with the Pink to the All Door Motor Lock circuit.

Feature #9 Auto Learn - Within 60 seconds of applying power to the AL-100-DP, you can press the Lock button on the OEM remote twice to select the proper setting for feature #9. The AL-100-DP will monitor the Pink & White input wires and automatically set feature #9 as needed and arm upon the second Lock press. If nothing is done during this window no change will be made. At any time you can enter programmable features to change this feature manually.

3 Pin Door Lock/Unlock Port (RED)

GREEN WIRE - LOCK (-) / UNLOCK (+) OUTPUT

This provides a 0.8 second 250mA negative lock pulse and positive unlock pulse for any locking or unlock operations.

CONNECTION: Connect this directly to the vehicle's lock circuit if a negative pulse is required or unlock circuit if a positive pulse is required. Otherwise, a doorlock interface and/or relays are required to convert the output.

CENTER PIN - CONSTANT (+) OUTPUT

This output provides a 500mA positive output to drive the positive pin of added relay coils.

BLUE WIRE - UNLOCK (-) / LOCK (+) OUTPUT

This provides a 0.8 second 250mA negative unlock pulse and positive lock pulse for any locking or unlock operations.

CONNECTION: Connect this directly to the vehicle's unlock circuit if a negative pulse is required or lock circuit if a positive pulse is required. Otherwise, a doorlock interface and/or relays are required to convert the output.

2 Pin Backup Battery Port (WHITE)

This system includes a bracket and harness for utilizing the backup battery option. Thanks to its innovative design, it only requires a 9 volt battery. Simply insert the battery into the supplied bracket and mount the battery pack on the slide bracket next to the backup battery port. Then connect the harness to the battery and module. When running on backup battery power, the system will only maintain the starter interrupt, siren, door trigger, and hood trigger functions to maintain maximum battery life.

Data Port (GREEN)

This port provides a direct digital interface for any Omega IntelliKit or OmegaLink interface modules. It can eliminate the need for several wire-to-wire connections. Refer to the wire diagram overview on page 6-7 to see which circuits are supported by this port and compare them to the data functions available from the interface module. This port is capable of communicating using the standard DBI protocol.

Dual Zone Sensor Port (WHITE)

This system is equipped with a white dual zone sensor port. Any Omega single or dual zone sensor will plug directly into this port. A dual zone shock sensor is included with this system.

The Status Light

The included LED light can be dash mounted by drilling a 9/32" hole or it can be placed in the included valet switch/status light holder.

Valet / Programming Switch

The included valet switch can be dash-mounted directly or using the combo valet switch/status light holder.

Installer Programmable Features

Note: User Features 1 thru 8 are listed in the owner's manual

Feature #9 - Parking Light Override Mode

On (press "**lock**" button to program)

Off (press "**unlock**" button to program) - **DEFAULT**

This feature configures how the system monitors the lock/unlock circuit in the vehicle to properly arm/disarm operation. Complete wiring and operation is described on Page 8.

Feature #10 - 3rd Channel Activation

Lock/Lock (press "**lock**" button to program)

Lock/Unlock/Lock (press "**unlock**" button to program) - **DEFAULT**

This feature controls the remote sequence used to activate the 3rd channel output, described on page 7 of AL-100-DP Owners Manual.

Feature #11 - 15 Second Entry Delay

Off (press "**lock**" button to program) - **DEFAULT**

On (press "**unlock**" button to program)

This feature allows a 15 second delay upon entering the vehicle to disarm by turning the ignition "on" before triggering the alarm. This feature requires the system be armed via Last Door Arming.

Feature #12 - Lock/Unlock Outputs w/ Arm/Disarm

On (press "**lock**" button to program)

Off (press "**unlock**" button to program) - **DEFAULT**

This feature allows the lock/unlock outputs to operate every time the system is armed/disarmed. This allows the addition of non-OEM locks on vehicle additions like locking tool boxes or cargo covers.

Feature #13 - Arm/Disarm Input Pulse

80ms (press "**lock**" button to program) - **DEFAULT**

120ms (press "**unlock**" button to program)

This feature sets the door lock pulse width requirement for the arm/disarm input.

This device complies with FCC Rules part 15. Operation is subject to the following two conditions, (1) This device may not cause harmful interference and, (2) This device must accept any interference that may be received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

PROGRAMMING FEATURES

A matrix of all programmable features and their options are listed below. For detailed information on each feature, please refer to the operation manual. Use the procedure below to make any necessary changes.

Step 1 Turn the ignition key "ON", then "OFF"

Step 2 Within 5 seconds of step 1, press the valet switch 5 times to access features.

~ The siren/horn will sound and the status light will begin to flash.

Step 3 Within 10 seconds of step 2, press the valet switch the number of times corresponding with the desired feature's number.

~ The siren/horn will sound and the status light will flash equal to the selected feature.

Step 4 Change the feature by pressing the Lock/Unlock button that corresponds with the desired setting.

~ The siren/horn will sound and the status light will turn on or off to confirm the selected setting.

Step 5 If you wish to change more features, repeat steps 3 & 4 at this time.

Step 6 To exit programming, turn the ignition key "ON" then "OFF". Or, you can wait 10 seconds for programming mode to expire.

Programmable Feature Matrix

Feature Programming: Ignition on, off, press valet 5 times.		
# Feature	Lock Button	Unlock Button
User Features		
1 Confirmation Chirps	On	Off *
2 Last Door Arming	On	Off *
3 Automatic Rearming	On	Off *
4 Lock w/ Last Door Arming	On	Off *
5 Lock w/ Automatic Rearm	On	Off *
6 Ignition Lock & Unlock	On	Off *
7 Ignition Anti-Carjacking	On	Off *
9 Door Anti-Carjacking	On	Off *
Installer Features		
9 Parking Light Override Mode	On	Off *
10 3rd Channel Activation	Lock, Lock	Lock, Unlock, Lock *
11 15 Second Entry Delay	Off *	On
12 Lock/Unlock Outputs w/ Arm/Disarm	On	Off *
13 Arm/Disarm Input Pulse	80ms *	120ms

* Default

Feature #9 Auto Learn - Within 60 seconds of applying power to the AL-100-DP, you can press the Lock button on the OEM remote twice to select the proper setting for feature #9. The AL-100-DP will monitor the Pink & White input wires and automatically set feature #9 as needed and arm upon the second Lock press. If nothing is done during this window no change will be made. At any time you can enter programmable features to change this feature manually.

**Visit us online at
www.CarAlarm.com**



Tech Support: 800-554-4053



**Find us on Facebook
<http://facebook.com/OmegaRD>**

Copyright 2016, Omega Research & Development Technologies, Inc.