RS-230-DPB

Deluxe Keyless Entry & Remote Start

Installation Guide

June 29, 2011

Temporary cover. Color cover is in a separate file.

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Installation Considerations

BEFORE STARTING THE INSTALLATION, READ THIS ENTIRE MANUAL TO DETERMINE INSTALLATION REQUIREMENTS

- VERIFY EACH CIRCUIT WITH A DIGITAL MULTIMETER
- IDENTIFY REQUIRED CIRCUITS 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
- ONLY ACTIVATE THE REMOTE START FUNCTION IN A WELL VENTILATED ENVIRONMENT
- AFFIX THE UNDERHOOD WARNING STICKER
- **AVOID ANY AIRBAG CIRCUITS, USUALLY INDICATED BY A YELLOW SLEEVE OR JACKET AROUND THE WIRING**

6 Pin Main Wire Harness

Most of the main wiring harness connections are high amperage 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. Remember, the goal is for this system to mimic the ignition switch. Keep this in mind when deciding which ignition & accessory circuits to power. Most, if not all will be required.

RED & RED/WHITE WIRES - CONSTANT POWER (+) INPUT

REQUIRED. These wires provide the constant positive 12v power supply for the system's operation. **CONNECTION:** Connect these to a constant +12 volt supply with sufficient amperage for remote starting. The +12v supply to the ignition switch is ideal. Some vehicle's 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. Fuse these wires within 6 inches of the connection to the vehicle. The two 30AMP fuses in the harness protect the system module, NOT THE VEHICLE. Their use is REQUIRED. It is ideal to have a separate supply for each wire but, if the chosen supply is sufficient enough, you can combine both wires at the same point.

PINK WIRE - IGNITION #1 (+) INPUT/OUTPUT

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. It is also the primary ignition output for remote start operation. It turns on when remote start is activated and stays on during engine cranking for the entire remote start sequence. **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.

6 Pin Main Wire Harness (cont'd)

ORANGE WIRE - ACCESSORY (+) OUTPUT

This circuit is designed to drive accessory circuits like climate control, etc.. It turns on when remote start is activated (slightly earlier than the primary ignition output) and turns off only during engine cranking. It will turn back on for the remainder of the remote start sequence.

CONNECTION: An accessory circuit is typically found at the ignition switch. The proper circuit will show +12v when the ignition key is in the ON/RUN position but not in the START position.

VIOLET WIRE - START (+) OUTPUT

REQUIRED. This output supplies positive voltage to the vehicle's starter circuit. If using an anti-grind relay, connected this on the starter side of the relay.

CONNECTION: The starter circuit is typically found at the ignition switch. The proper circuit will show +12v only when the ignition key is in the START position.

PINK/WHITE WIRE - IGN#2/PROGRAMMABLE (+) OUTPUT

This output is programmable to act as an additional ignition, accessory, or start output. It supplies positive voltage for powering any additional circuits required for remote starting the vehicle. The default operation is as an ignition circuit. See installer feature #2 for options.

CONNECTION: The proper circuit will show +12v only when the ignition key is in the position of the desired function. See the PINK, ORANGE, or VIOLET wire description for detail on your desired operation.

14 Pin / 13 Wire Secondary Harness

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.

ORANGE WIRE - STATUS/ANTI-GRIND (-) OUTPUT

This provides a 500mA negative output slightly before and during the large PINK ignition wire's operation.

CONNECTION: This is typically used to activate immobilizer bypass modules. Connect it directly to the module's activation input. It can also be used with a starter interrupt relay for starter anti-grind operation.

BROWN/RED WIRE - BRAKE PEDAL (+) INPUT

REQUIRED. This input is a critical safety circuit which disables the remote start operation whenever the brake pedal is pressed.

CONNECTION: Connect this to the brake switch wire that shows +12 volts when the brake pedal is pressed.

BLACK/WHITE WIRE - NEUTRAL SAFETY (-) INPUT

REQUIRED. This input is a critical safety circuit which allows remote start operation whenever the gear selector is in park or neutral (automatic transmission), or when the parking brake is applied (manual transmission). Remote start will not operate unless this wire sees chassis ground.

CONNECTION: Connect this to the neutral safety switch wire that shows (-) ground when the gear selector is in the park and neutral positions.

VIOLET/WHITE WIRE - TACH SIGNAL INPUT

This input provides the engine's RPM signal to the remote start. This is typically the most reliable form of engine detection. To use the tach wire, you must change installer feature #3 to the tach wire setting.

CONNECTION: This can be connected to any trigger wire for an ignition coil, fuel injector, or the signal to the tachometer in the dash. Use a digital multimeter set for AC volts to test. The appropriate wire will read between 1-6 volts AC and will increase as the engine RPM increases.

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.**

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 CIRCUITWHICH WILL CHANGE RESISTANCE TO GROUND AS YOU TURN THE DIMMER KNOB.**

GRAY WIRE - HOOD TRIGGER (-) INPUT

REQUIRED. This is a critical safety circuit that prevents remote start functions while the hood is opened. It also monitors the doors in manual transmission mode.

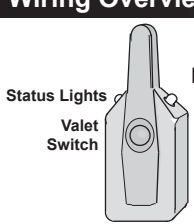
CONNECTION: Connect this wire to the OEM hood switch or light. It will show ground when the hood is opened. You can also use the included pin switch.

WHITE/BLUE WIRE - REMOTE START ACTIVATION (-) INPUT

This input will activate the system's remote start function when it receives a negative pulse. Another pulse during remote start operation will turn off the remote start.

CONNECTION: Connect this wire to any device that you desire to activate the remote start feature. It requires a negative pulse input.

Wiring Overview



WIRE LEGEND

——— Hard wire connection required

- - - - - - Supported via DATA port(s)

Harn

BLADE Programming / interafce Module D

Interface Module D

14 PIN HARNESS

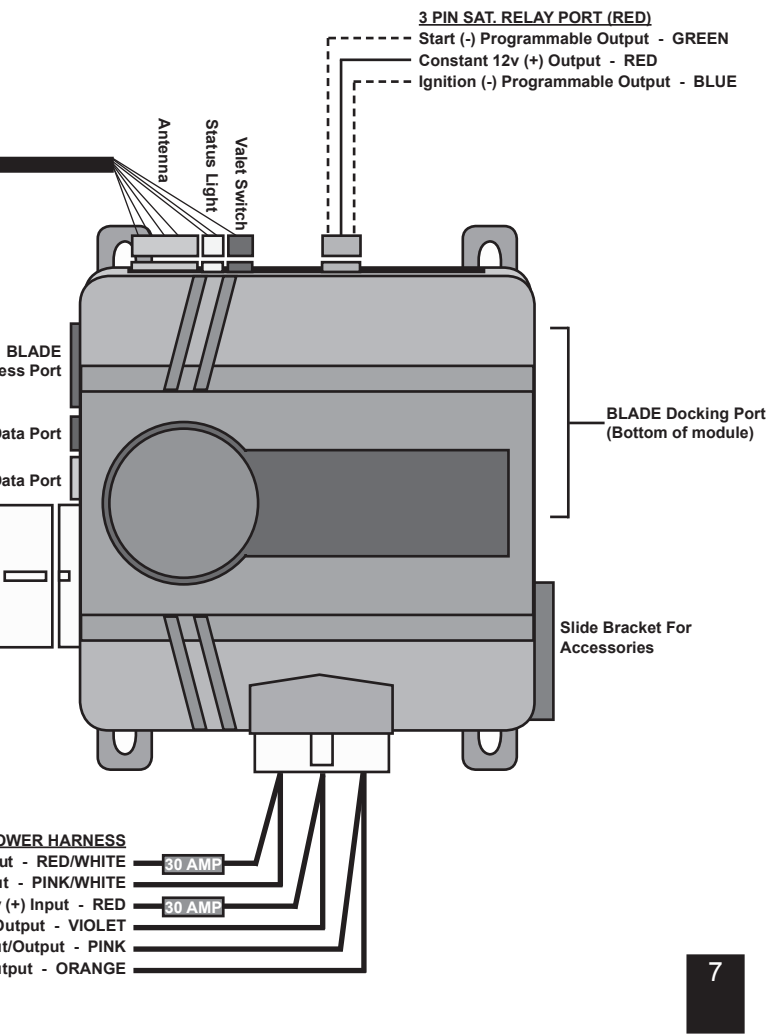
Remote Start Activation (-) Input - WHITE/BLUE
Status / Anti-grind (-) Output - ORANGE
Alarm Ignition Control (+) Output - YELLOW
Flashing Light (-) Output - WHITE/BLACK
OEM Alarm Arm (-) Output - GREEN/RED
Unlock (-) Output - BLUE
System Ground (-) Input - BLACK
OEM Alarm Disarm (-) Output - GREEN/BLACK

Hood Trigger (-) Input - GRAY
Brake (+) Input - BROWN/RED
Tach Input - VIOLET/WHITE
Flashing Light (+) Output - WHITE
Neutral Safety (-) Input - BLACK/WHITE

10 AMP

6 PIN PO

Constant 12v (+) Inpu
Ignition #2 (+) Outpu
Constant 12v
Start (+) O
Ignition #1 (+) Inpu
Accessory (+) Ou


3 PIN SAT. RELAY PORT (RED)
Start (-) Programmable Output - GREEN
Constant 12v (+) Output - RED
Ignition (-) Programmable Output - BLUE
Antenna
Status Light
Valet Switch
BLADE
ess Port
ata Port
ata Port
BLADE Docking Port
(Bottom of module)
Slide Bracket For
Accessories
OWER HARNESS
ut - RED/WHITE
30 AMP
t - PINK/WHITE
(+) Input - RED
30 AMP
Output - VIOLET
t/Output - PINK
tput - ORANGE

14 Pin / 13 Wire Secondary Harness (cont'd)

YELLOW - ALARM IGNITION CONTROL (+) OUTPUT

This output controls the ignition input to an outboard aftermarket alarm or keyless entry. When remote start is activated, this wire prevents the keyless/alarm from receiving an ignition ON input to allow for keyless entry operation. Otherwise, it's a direct pass through of the ignition circuit.

CONNECTION: Connect this wire directly to the outboard keyless entry/alarm's ignition input wire.

LT. GREEN/RED WIRE - OEM ALARM ARM (-) OUTPUT

This output provides a 250mA negative pulse when remote start is turned off and when the system's alarm is armed.

CONNECTION: Connect this wire to the vehicle's OEM alarm arm circuit. Typically, it will show ground when the door cylinder key is turned to the lock position.

LT. GREEN/BLACK WIRE - OEM ALARM DISARM (-) OUTPUT

This output provides a 250mA negative pulse when remote start is activated and when the system's alarm is disarmed.

CONNECTION: Connect this wire to the vehicle's OEM alarm disarm circuit. Typically, it will show ground when the door cylinder key is turned to the unlock position.

BLUE WIRE - UNLOCK (-) OUTPUT

This provides a 0.8 second 250mA negative pulse for any unlocking operations. The pulse timing is programmable by installer feature #9.

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

3 Pin Satellite Relay Port (RED)

GREEN WIRE - START (-) PROGRAMMABLE OUTPUT

This output provides a 250mA negative pulse when the large VIOLET start wire is active. It can also be programmed for PULSE AFTER START, STATUS, or DOME-LIGHT SUPERVISION. See installer programmable feature #5.

CONNECTION: If a negative start output is needed, connect this directly to the vehicle's negative starter circuit. Otherwise, use a relay (or RS-RP module) to convert this to a high current circuit.

RED WIRE - CONSTANT (+) OUTPUT

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

BLUE WIRE - IGNITION (-) OUTPUT

This provides a 250mA negative output slightly before and during the large PINK ignition wire's operation. It can also be programmed for IGNITION operation. See installer feature #6.

CONNECTION: This is typically used to activate immobilizer bypass modules. Connect it directly to the module's activation input.

Green Data Port

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 to see which circuits are supported by this port and compare them to the data functions available from the interface module. This port supports our standard D2D (Trilogix) and ADS (iDatalink) protocols. This port also supports Omega CarLink utilizing the ADS protocol

Black Data/Programming Port

This port provides a direct digital interface for any OmegaLink interface modules. It can eliminate the need for several wire-to-wire connections. Refer to the wire diagram overview on page 6 to see which circuits are supported by this port and compare them to the data functions available from the interface module. This port is also capable of communicating with the standard D2D (Trilogix) protocol and with the ADS (iDataLink) protocol. This is selectable with installer feature #13.

BLADE OPERATIONS: This port is also used to update the firmware for any BLADE cartridge used in lieu of a standard interface module. When connected to the OmegaLink OL-LOADER, this port can also be used to configure all programmable features as well as update the entire system's firmware. These functions may require a BLADE cartridge to be installed.

BLADE Cartridge Port

BLADE CARTRIDGE PORT

On the bottom of the main module, there is a slide door. This door is removed and replaced with any BLADE cartridge being used. The port is keyed so the cartridge will only insert one way. Do not use excessive force to install the BLADE, it should snap in with light to moderate pressure. Also, refer to the install guide for the BLADE firmware being used for further information and details. When this system detects a BLADE module, the data port protocol will automatic switch to the ADS protocol. For more info on BLADE modules, visit www.omegakits.com.

BLADE HARNESS PORT

When utilizing an OmegaLink BLADE module, this 20 pin connector is used for the harness that is included with the BLADE module. This allows you to connect directly to the vehicle's data bus and other required circuits for the interface.

Status Lights

This system includes 2 status lights that are built into the window mount antenna module. It is desirable for these to be visible from as many angles around the vehicle as possible for maximum visual theft deterrence. The control module has a separate port for the status light, so an optional dash/custom mounted light can be utilized if desired.

Valet / Programming Switch

This system includes a valet switch that is built into the window mount antenna module. The control module has a separate port for the valet switch, so an optional custom mounted switch can be used if desired.

Window Mount Antenna Module

This system is equipped with an outboard receiver module. It is designed to be window mounted high on the windshield for optimal performance and range. It is best to mount this module using the double sided stick pad included (be sure to clean glass before adhering). Mount it high in the windshield trying to avoid metal parts of the vehicle as they can create “blind spots” for the antenna. Also, metal based window tint can have an adverse affect on performance. Since the system’s status lights and valet are contained in this module, high visibility is also desired for theft deterrence. Route the harness to the antenna module being sure to avoid sharp metal objects that could compromise the harness jacket.

Tach Programming

When utilizing the tach wire circuit for engine detection, the vehicle’s tach signal must be programmed to the remote start for proper operation. After making the tach wire connection, perform the following steps:

Step 1: Turn the ignition key “ON”

Step 2: Within 5 seconds of step 1, press the brake pedal 5 times.

Step 3: Start the engine. The status lights will turn on to indicate it has learned the current tach signal. If it does not light, check your tach connection and start this procedure again.

Step 4: If the engine has a high idle at startup, it may be necessary to allow the idle to “settle” to around 700 RPM. If needed, you can press the valet switch 1 time to resample the tach signal. The status light will flash off then back on once the signal has been resampled.

Step 5: Turn the ignition key “OFF”.

Programming Transmitters

Step 1 Have all transmitters which are to operate the system at hand. Make sure the system is in an “unlocked” state, then, turn the ignition “on”.

Step 2 Within 5 seconds of turning on the ignition, press the Valet Switch 5 times. The parking lights will illuminate to indicate the system is in programming.

Step 3 Press the “**start**” button on each transmitter one at a time. The parking lights will turn off then back on to confirm that each was learned. If a code is not received within a 10 second period, the learning process will end, indicated by the parking lights turning off.

Step 4 Turn the vehicle’s ignition “off”.

Programmable Features

A matrix of all programmable features and their options are 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 user features (Press 10 times to access installer features). ~ The parking & status lights will turn on.
Step 3 Within 10 seconds of step 2, press the valet switch the number of times corresponding with the desired feature’s number. ~ The the status lights, and the parking lights will flash equal to the selected feature.
Step 4 If the vehicle’s brake circuit only works with the ignition on, turn on the ignition at this point. Change the feature by pressing the brake pedal the number of times that corresponds with the desired setting. ~ The status lights, and the parking lights will flash equal to 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.

User Feature Programming: Ignition on, off, press valet 5 times				
# Feature	**Brake Pedal x 1**	**Brake Pedal x 2**	**Brake Pedal x 3**	**Brake Pedal x 4**
1 Engine Run Time	10 min	5 min	15 min	20 min
2 Steady/Flashing lights for RS	Steady	Flashing		
Installer Feature Programming: Ignition on, off, press valet 10 times				
1 RS Activation	1 press	2 presses	3 presses	4 presses
2 PINK/WHITE wire function	Ignition	Accessory	Start	
3 Engine Detection	Tachless Hi	Tachless Lo	Tach Wire	Datatach
	Crank Only (Brake Pedal x 5)			
4 Gas or Diesel Engine	Gas	Diesel (15 sec delay)	Diesel (20 sec delay)	Diesel (30 sec delay)
5 Sat. Port Green Wire	Starter	Pulse After Start	Status	Domelight
6 Sat. Port Blue Wire	Status	Ignition		
7 Crank Time	0.7 Sec	1.00 Sec	1.5 Sec	2.25 Sec
8 Low Temp Crank Extender	0ms	200ms	300ms	400ms
9 Unlock Output	0.8 Sec	3 sec	Double Unlock	
10 Remote Start Lock Control	Off	N/A	Unlock Before Start	
11 Turbo Timer	OFF	1 min	2 min	3 min
12 N/A				
13 Data Port Protocol	D2D (Trilogix)	ADS (iData)		

Back Cover

Color cover is in a separate file.