

• B L A C K W I D O W •

I N S T A L L A T I O N M A N U A L



Please read this BlackWidow manual carefully before attempting to install this system.

BEFORE INSTALLING THE BW-1600

- DO read through this installation manual.
- DO NOT install the alarm brain in an engine compartment.
- The alarm may arm itself when power is first connected. This is a normal condition.

ITEMS SUPPLIED WITH THE BW-1600

- BW-1602** Receiver and Control Module
- BW-385** 2-Button, Code Learning Transmitters (2)
- MTS-20W** Six-tone, soft chirp, 120 dB Siren
- BW-12016DL** Door Lock Harness
- BW-260P** Valet/Override Switch
- BW-180P** LED Status Indicator
- BW-12016** Wiring Harness, Fuseholder, & Fuse
- BW-296P** Dual Zone Electronic Shock Sensor

OPTIONAL ACCESSORIES

- Radar Field Sensor.....**MAS-2**
- Window Rollup.....**WRM-2**
- Power Door Lock.....**PDL-50**
- Relay.....**SPDT**
- 5-wire Door Lock relay & socket.....**BRS-008PR**
- (+) Door Lock Inverter.....**BW-345**
- Backup Battery.....**BW500**
- Remote Starting.....**RAS-101**
- Trunk Release.....**TR-100**
- Relay Socket.....**BRS-003**
- Glass Sensor.....**BWS-200**

SPECIFICATIONS

- Operating voltage.....+12VDC Neg. Ground
- Code Learning.....3 Codes Max.
- Current consumption.....5 mA (max) disarmed.
- Siren output drive.....3 Amperes
- Automatic reset.....60 seconds.
- Door Lock/Unlock Output.....(-) 500 mA.
- Channel 2 Output Drive.....(-) 500 mA variable.
- Remote control transmit freq.....310 mHz.
- Passive arming delay.....30 Seconds approx.
- Auxiliary output drive.....250 mA maximum.
- Flashing output drive.....10 Amp maximum.
- Trigger inputs.....1) Neg. pnswtch.
- 2) Pos. pnswtch. 1) Neg. sensor or aux. pnswtch.

INSTALLATION INSTRUCTIONS

IMPORTANT: Make all wiring connections to the vehicle before connecting the main 10-pin harness and all plug-in connectors to the receiver control module.

1. Before mounting the BW-1602 Receiver and Control Module, you must set the PROGRAMMING DIP-SWITCHES for the kind of operation the customer wants.

These are the switch settings available; Standard (Default) settings are in “**BOLD**” type:

Switch #1 Door Lock and Unlock Pulse Time: **ON = 3/4 seconds**. OFF = 3 seconds.

Switch #2 Door Lock and Unlock with ignition: **ON = YES**. OFF = NO.

Switch #3 Door Locking with Passive Arming: **ON = YES**. OFF = NO.

Switch #4 Passive or Active Arming: **ON = Passive Arming**. OFF = Active Arming.

2. Mount the Receiver and Control Module in a secure area, away from vehicle computers and heating/air conditioning ducts. The location should be convenient for your installation, but well hidden from thieves. Try to mount the unit as far away from metal objects as possible. This will increase the range of its Remote Control Transmitter.

3. Route the wires of the harnesses to areas in which the different accessories will be mounted. You may need to extend some wires. **DO NOT plug the wiring harnesses into the Receiver Control Module until all connections have been completed.**

When running the harness wires through the vehicle, be careful to run them where they CANNOT be DAMAGED or SHORTED to GROUND or other WIRING. Keep them away from ALL MOVING PARTS of the vehicle or where HIGH HEAT can damage their insulation. Always protect the harness wires where they pass through holes in metal panels by using RUBBER GROMMETS.

4. Mount the MTS-20W Siren under the vehicle's hood. Mount it away from heat sources such as radiators, exhaust manifolds, and turbochargers. Mount it in an area where it will not be in the way for mechanics, and so that it cannot be easily reached from below the vehicle. Mount it so that its opening points down to prevent it from collecting water, snow, or ice. Connect its BLACK wire to a good clean GROUND point, and its RED wire to the BROWN wire of the main harness.

5. Mount the BW-296P Shock Sensor Somewhere *inside* the vehicle such as under the dash, strapped to the steering column, or under a seat. **Do Not Mount The Sensor Under The Hood!** Connect the 4-pin harness from the shock sensor to the 4-pin male plug on the circuit board of the Receiver Control Module.

6. Mount the BW-180P LED Status Indicator in an easily seen location such as the center of the dash or the inside top edge of the driver's or passenger's door. Connect the RED 2-pin connector from the LED to the RED 2-pin male plug on the circuit board of the Receiver Control Module.

7. Install the BW-260P Valet/Override Switch in a hidden location that is easily reached by the driver. Remember that the code learning and valet/override sequence require using this switch in conjunction with the ignition switch, so it should be hidden, but convenient to use when needed. Connect the BLUE 2-pin connector from the Override Switch to the BLUE 2-pin male plug on the circuit board of the Receiver Control Module.

8. Mount the optional BRS-003 Relay Socket and SPDT Relay in a location where it is hidden from potential thieves. Find the vehicle's STARTER wire and cut it in half. Connect the colored wires of the Relay Socket as follows:

BLACK = To STARTER wires on Starter side.

YELLOW = To STARTER wires on Switch side.

GRAY = ORANGE wire of the main harness.

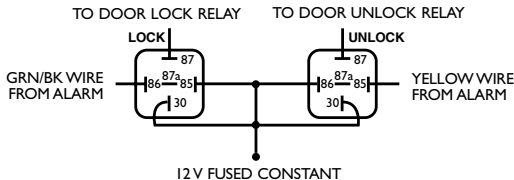
9. Mount and connect any optional function modules included in the installation, following the mounting and wiring directions supplied with them.

POWER DOOR LOCK DIAGRAMS:

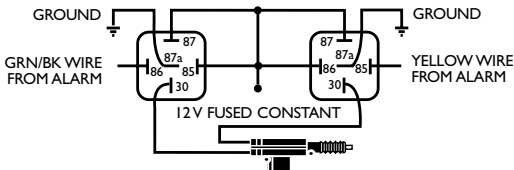
The BVV-1600 comes equipped to handle ground door lock installations. The Blue and Green wires from the Receiver Module are ready to tap into grounding door lock systems.

The following door lock diagrams require two SPDT Relays or the appropriate accessories not included with the BVV-1600. These items must be ordered separately.

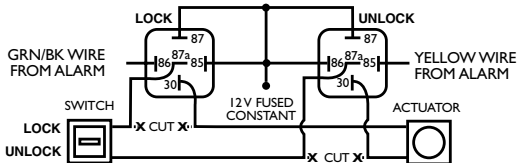
POSITIVE TRIGGER DOOR LOCK CIRCUIT*:



REVERSE POLARITY (DIRECTLY TO AD-ON ACTUATORS)†:

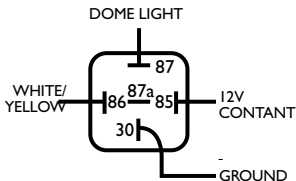


REVERSE POLARITY USING FACTORY SYSTEMS†:

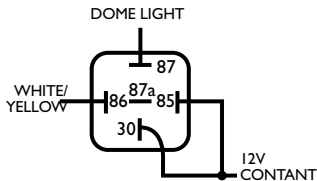


DOME LIGHT RELAY

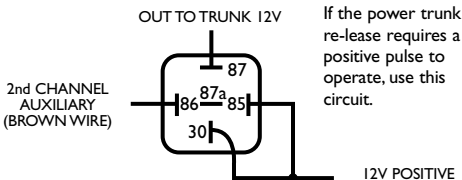
(-) Dome Lights



(+) Dome Lights



TRUNK RELEASE CIRCUIT DIAGRAM:



† For these reverse polarity applications, use the relay circuits shown above or you can also use a 5-wire relay & socket kit (BRS-008P).

• B L A C K W I D O W •

I N S T A L L A T I O N M A N U A L

BW-650 KEYLESS ENTRY

Please read this Black Widow manual carefully before attempting to install this system.

CONNECTOR PIN NUMBERS AND WIRE COLOR CODES

10-PIN HARNESS

#	WIRE COLOR	FUNCTION	NOTES
1)	White	Ignition	Connect to a source of TRUE IGNITION, a wire that is hot in both the RUN and START positions.
2)	Red	+12VDC	Main Power: Connect this wire to the POSITIVE terminal of the vehicle's battery, with the supplied fuse installed at the BATTERY END of this wire.
3)	Brown	Starter Interrupt (-)	Negative output to the Starter Interrupt relay. See Wiring diagram for connections.
4)	Black	Ground	Connect this wire to a clean, solid GROUND. Do Not confuse this wire with the short, black antenna wire. Do Not Ground The Antenna Wire!
5)	Orange	Channel 2	Negative output when Button #2 of the transmitter is pressed for 3 seconds. See the diagram on Page 5.

2-PIN VALET/OVERRIDE PLUG-IN CONNECTORS:

#	PLUG COLOR	FUNCTION	
1)	Blue	Valet Override Switch	Plug-in the Blue 2- pin connector for the VALET switch to the Blue receptacle on the circuit board.

2-PIN LED PLUG-IN CONNECTORS:

#	PLUG COLOR	FUNCTION	
1)	Red	LED	Plug-in the Red 2- pin connector for the LED to the Red receptacle on the circuit board.

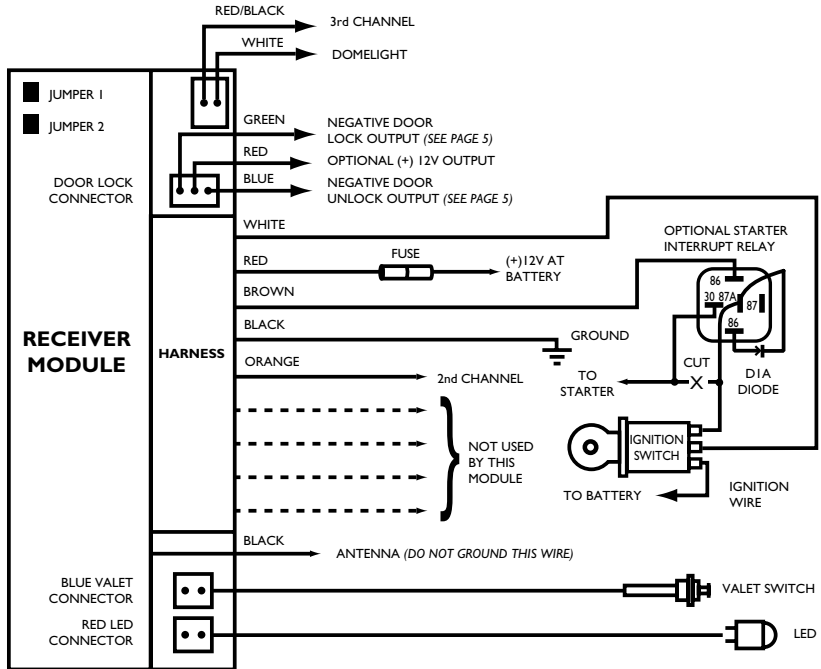
3-PIN DOOR LOCK PLUG-IN CONNECTOR:

#	WIRE COLORS	FUNCTION	
1)	Green	Door Lock (-)	Negative output pulse to door LOCK circuit. See door lock wiring diagrams on Page 5 for connections.
2)	Red	(+)	Optional 12V Output.
3)	Blue	Door Unlock (-)	Negative output pulse to door UNLOCK circuit. See door lock wiring diagrams on Page 5 for connections.

2-PIN ACCESSORIES PLUG-IN CONNECTOR :

#		FUNCTION	
1)	Red	3rd Channel	See diagram on page 5.
2)	White/Yellow	Dome light output	See diagram on page 5.

WIRING DIAGRAM



JUMPER SETTINGS:
 Jumper #1) OFF = 3 Second pulse.
 Jumper #1) OFF = No auto lock with ignition

Ignition +12V MUST NOT DROP OUT during starting of vehicle.

SYMPTOM	PROBABLE CAUSE	SUGGESTED CORRECTION
Alarm will not go into Code Learning Mode	RED or YELLOW wire not connected to the correct power source. Code Learning sequence done to slow.	RED wire should connect directly to the battery. Connect YELLOW wire to true ignition wire (Not at Fuse Block). Redo Code Learning sequence faster.
Unit is triggered any time it is armed.	BW296P sensor not adjusted correctly, BLUE or GREEN wire shorted to ground.	Readjust BW-296P sensor. Disconnect the BLUE or GREEN wire to see if symptom stops if so check wires for short.
Alarm will not rearm or will not passively arm.	VIOLET wire is connected to positive voltage, GREEN wire is connected to ground, YELLOW wire is connected to permanent positive voltage, or pinswitch is bad.	Check VIOLET and GREEN wires with doors closed and open, and YELLOW wire with ignition switch off and on, for correct voltage changes. Repair and/or rewire as needed.
Alarm will arm from transmitter but will not passively arm.	Dipswitch #4 is off.	Set dipswitch #4 to ON.
Remote Control does not arm or disarm alarm.	Defective Remote Control. Bad battery. Antenna wire is grounded.	Replace Remote Control or its battery. Un-ground antenna.
Valet does not work.	Bad switch or wrong activation sequence when using the transmitter	Repair or replace switch or check user instructions for proper activation sequence
Flashing output does not work.	Bad connection on WHITE wire or the drive polarity is wrong for the circuit being driven.	Check WHITE wire. Connect a SPDT Relay to this wire and apply the opposite polarity to the circuit being driven.
Door locks do not lock/unlock correctly, or action is reversed.	Defective GREEN or BLUE wire from door lock connector plug, GREEN and BLUE wires on door lock connector plug reversed, or wrong door lock wiring diagram used.	Check GREEN and BLUE wires on door lock connector plug. Check vehicle's door lock system for method of operation. Reverse wiring to door relays.



LIMITED LIFETIME WARRANTY

The Black Widow Division of DLC, Inc. warrants to the original purchaser that the vehicle alarm system purchased will be free from defects in workmanship.

If it is determined that a defect exists, at our option, we will repair defective parts or replace the system. If product is defective within one (1) year from date of purchase, item will be repaired or replaced at no cost to original purchaser. If product is defective after one (1) year from date of purchase, ship defective unit prepaid to Black Widow Division, DLC, Inc. along with \$20.00 U.S. (\$30.00 Canadian) cashier's check or money order to cover cost of handling.

Proof of purchase by the original owner must accompany warranty request before service is rendered.

This warranty covers normal use. It does not cover damage from alteration, misuse, abuse, accident, improper installation or maintenance. Warranty does not cover transmitter batteries or cases. This warranty gives you specific legal rights and you may have rights which vary from state to state. If you have any questions, contact your authorized Black Widow dealer.



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