OK STUV

2003

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BMW Car Alarm and Keyless Entry

Installation Manual

2003

Installation Instructions

For BMW e30's/e28's with central locking

NOTE: THIS IS AN AFTERMARKET PART AND YOU ARE RESPONSIBLE FOR ANY DAMAGE CAUSED TO YOUR CAR DIRECTLY OR INDIRECTLY BY INSTALLATION. CAREFULLY FOLLOW DIRECTIONS, PLEASE.

TOOLS

1. 6mm wrench/socket
2. 10mm wrench/socket
3. Pliers
4. Electrical tape
5. Wire nuts - for 12-22 gauge wire
6. Wire strippers/cutters
7. Drill 3/32" (for external siren mounting)
8. Phillips screwdriver (for external siren mounting)
9. Soldering iron (optional)
10. Solder (optional)

KIT CONTENTS

- Main **(R)**eceiving unit
- Two 4-button remote **(C)**ontrols
- **(V)**ibration sensor
- **(L)**ED flasher – indicates security status
- **(W)**ire harnesses – both keyless control (6 wire) and power (10 wire) harnesses
- **(S)**iren
- **(I)**gnition disable relay
- **(F)**actory manual – poorly written and of minimal help in installing. (Only helpful if installing ignition disable relay – a feature not documented in this manual)
- Wire tap-in squeeze conectors and wire nuts (not shown)

PREPARATION OF THE WIRE HARNESSES

The wire harness contains wires for all possible options. The unneeded wires should be removed, to keep the harness tidy. Be sure to fully clip unneeded wires from harness and insulate loose ends with electrical tape.

Power Harness Wire Colors

- Yellow – only needed for ignition disable option, clip off
- Black – this connects to car's ground
- Brown (2) – these two wires connect to the car's side flashers
- Pink – this connects to alarm siren
- Red – this connects to car's positive supply
- Brown – these two wires connect to the car's side flashers
- Green – not needed, clip off and save for later
- Orange – not needed, clip off and save for later
- White – this connects to car's switched positive supply
- Blue - not needed, clip off and save for later

Keyless Control Harness Wire Colors

- Orange – not needed, clip off
- White – lock signal
- Yellow – this connects to car's ground
- Orange w/black – not needed, clip off and save for later
- White w/black – unlock signal
- Yellow w/black – this connects to car's ground

INSTALLATION

KEYLESS HARNESS INSTALLATION

A. Disconnect negative battery terminal (this protects you from frying your car's electronics.) Look on the battery for the "-" symbol as some BMW's have a red wire leading to the negative terminal.

B. Gain access to trunk lock actuator by opening the trunk
   1. Locate where lock bracket begins (inside trunk, lower on frame than key hole).
   2. Remove plastic battery cover and taillight bulb arrays. Pull carpet back and away from trunk lock actuator bracket.

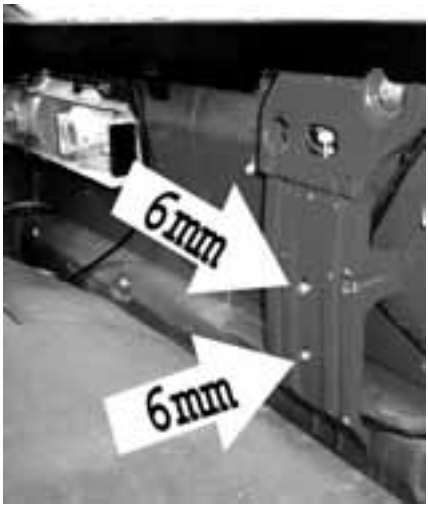


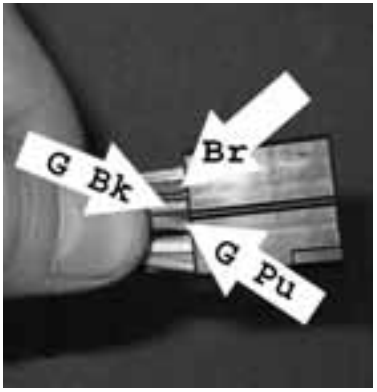
Fig 1

Fig 2

C. To unplug wires from trunk lock actuator:
   1. Use a 6mm wrench to remove the two screws holding the lock actuator in place. Fig 1
   2. Once screws are removed, shift actuator to the side allowing you to unplug wires from the actuator. Fig 2 Going into actuator plug you will see a:

   a. **Brown** wire – ground wire - 4 wires will connect to this
   b. **Blue** wire – not of importance
   c. **White** wire – not of importance

d. **Green** w/**black** stripe –this is the car's **lock** signal wire
e. **Green** w/**purple** stripe – this is the car's **unlock** signal wire



NOTE: The wire colors in your car may be different. Brown should be ground in all models. Identifying the lock and unlock signal wires is quite simple – they will be the same base color with different color stripes.

Fig 3

D. Installing keyless entry feature:
   1. Locate the brown wire and the two lock/unlock signal wires leading into the lock actuator's plug. You may need to remove some electrical tape to gain access to the wires entering the actuator's plug.

NOTE: Insulate all soldered, wire nutted and wire tap-in connections with electrical tape. If soldering, it can be helpful to <u>not cut the car's wires</u> but to carefully remove 1/8 of an inch of insulation and solder the unit's wires to this bare patch. – Or if using a wire nut <u>cut the wires</u> and strip the insulation off the ends of all wires ¼" back twist together, then twist on wire nut. This ensures a good electrical connection.

   2. Splice unit's lock (white) wire to the car's lock (green w/black) signal wire. Use included wire tap-ins or solder if you're feeling ambitious. See Appendix A
   3. Splice unit's unlock wire (white w/black) to the car's unlock (green w/purple) signal wire.

4. Create Ground Bundle - Splice the unit's previoulsy clipped orange w/black wire to the car's brown wire using wire tap-in
    i. Use orange w/black wire for all ground connections to come. Use a wire nut to connect all upcoming ground connections to the orange w/black wire
    ii. Connect unit's yellow and yellow w/black wires to ground bundle

E. Reconnect lock actuator plug and screw actuator to bracket.

POWER HARNESS INSTALLATION

F. Connect unit's red wire (with in-line fuse) to wire bundle under rear seat - this will be the unit's positive voltage supply.
    1. Remove rear seat cushion and backing
        i. Pull up seat cushion. Fig 4
        ii. Remove 10mm bolts hidden under upholstery: push up to release backing. Fig 5
    2. Locate small three wire (large gray, white and red wires) bundle under felt on driver's side. Fig 6 Remove electrical tape from bundle to expose red wire.
    3. Splice orange wire (clipped from power harness) into car's red wire using wire tap-in. Fig 7 Insulate connecting site thoroughly with electrical tape

Fig. 4

Fig 5

Fig 6

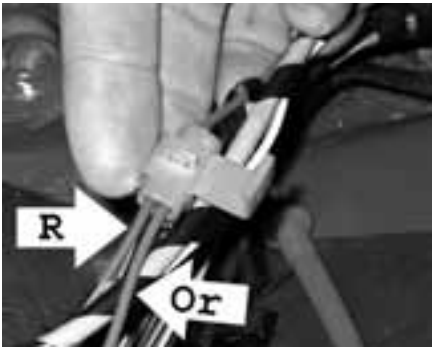
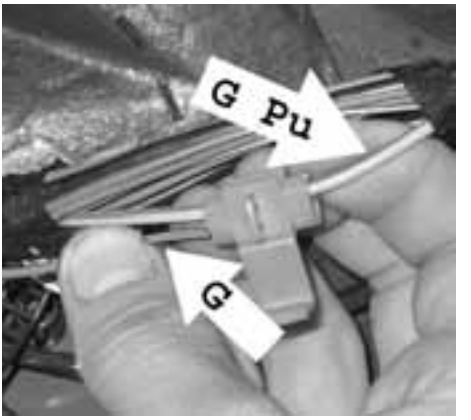


Fig 7

G. Connect unit's white wire to large wire bundle under rear seat - this will be the unit's switched voltage supply.
    1. Locate large wire bundle under felt on driver's side. Fig 8 Remove electrical tape from bundle to expose large green w/purple wire.
    2. Splice green wire (clipped from power harness) into car's green w/purple wire using wire tap-in. Fig 9 Insulate connecting site thoroughly with electrical tape

Fig 8

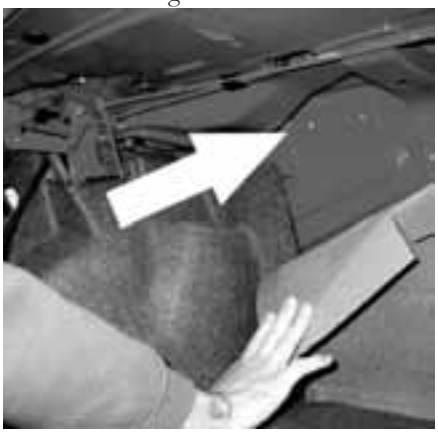
Fig 9



H. Run orange wire and green wire through seat bracket holes Fig 10
    1. Pull down fiber backing in trunk to access orange and green wires Fig 11

Fig 10

Fig 11



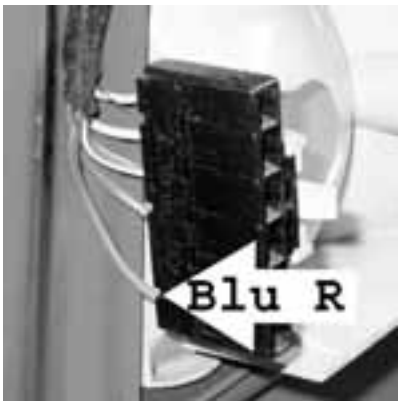
I. Replace rear seats

J. Splice green and orange wires to unit's power wire harness
    1. Run unit's red and white wires along underside of trunk lip Fig 12
    2. Connect unit's extended red wire to orange wire with wire nut and insulate with electrical tape
    3. Connect unit's extended white wire to green wire with wire nut and insulate with electrical tape

Fig 12

K. Connect unit's black wire to ground
    1. Add unit's black wire to wire nut at ground bundle previously created at step D-4

L. Splice unit's brown wires to car's side flashers



1. On driver's side, connect one of unit's brown wires to blue w/red wire on flasher connector using wire tap-in. Left- Fig. 13

Fig. 13

2. On passenger's side connect unit's other brown wire to blue w/black wire on flasher connector using wire tap-in. Right - Fig 14

Fig. 14

M. (Optional) Connect LED flasher (L) to unit and install where ever conveniently seen. (We recommend the rear speaker deck - a hole must be drilled)

O. Connect siren (S) under car (or install under hood for most sheltered location)

    1. Remove spare tire from trunk

NOTE: Siren may be mounted within trunk but it will be greatly reduced in volume. We suggest mounting outside the vehicle, most likely on the spare tire well. Caulking around holes is also suggested. See Fig 15

2. Connect siren (facing down) to outside of spare tire well Fig 15
    i. Hold siren up to desired location under car
    ii. Mark screw holes and pre-drill with 3/32" drill
    iii. Drill extra hole above screw holes for wires
    iv. Screw siren to outside of spare tire well
    v. Run wires into well
3. Connect unit's pink wire to siren's red wire using a wire nut
4. Add siren's black wire to ground bundle previously created in step D-4 (extend siren's black wire by wire nutting previously clipped blue wire to it)
5. Replace spare

Fig 15

P. Connect wire harnesses to unit, and tape main unit (R) to car body next to trunk lock actuator.
Q. Attach vibration sensor (V) to car body near trunk lock actuator, connect sensor's wires to main unit
R. Reconnect Negative (-) battery terminal and adjust the vibration sensor's sensitivity to desired setting by arming alarm and jostling car
S. Straighten the unit's antenna and run along trunk lip
T. Replace carpet, hiding unit, wires and antenna

APPENDIX

CAUTION: Turn power off before installing or removing a connector. All electrical work should be done according to appropriate electrical codes. Use only with insulated wire and make all connections with slip joint pliers. Do not strip insulation.

1. Place unstripped run-wire inside run channel. Insert unstripped tap-wire completely up to stop.

2. Use pliers to push the contact down flush with the connector.

3. Close the hinged cover until it snaps in place.

A. Tap-in instructions from Radio Shack.

If you need any more help, feel free to email us at:
okstuv@bendcable.com

NOTE: There are other functions that this unit can perform. Consult the factory instructions for help installing these features such as ignition disable and brake signal features, however I do not have experience with these advanced features - some additional technical knowledge will be needed to install any other functions.