



Installation Instructions



BATTERYBRAIN



Battery Brain is an innovative accessory that easily installs to any battery. Using unique micro-electronic technology it continually monitors the battery power. When Battery Brain detects power falling below the level required to start your engine, it automatically isolates the battery from the electrical system. This will ensure you always have enough power to start your engine and keep moving!

*Type III & IV also have the ability to disconnect the battery from the electrical system to act as an anti-theft device.

*Type IV RV is designed to extend battery life by protecting utility/house/coach batteries rather than the vehicle battery.

Updates to installation instructions will be posted on www.smgy.net.



Technical Specifications

DIMENSIONS

Base 1 5/8" (4cm) x 2 1/4" (5.5cm), Height (including removable protective cap)

2 1/2" (6cm), Brackets 1 1/4" (3.5cm) x 5/8" (1.5cm) x 1/8" (3mm).

WEIGHT

Battery Brain 175gm, Accessories 280gm, Packaging 3gm;
Total weight 408gm (1lb).

CURRENT SPECIFICATIONS

Operational Current Consumption for type II & III After disconnect: 3.8 Milliamps.

Operational Current Consumption for type I & IV After disconnect: 0 Milliamps

Maximum Peak Amperage: 1100 Amps, for 15 consecutive seconds.

Continuous Amperage Capacity: 250 Amps.

Disconnect Voltage Threshold: 11.8V

Disconnect Voltage Threshold for type IV RV: 10.5V

OPERATIONAL TEMPERATURE RANGE

-60°F (-51°C) to 200°F (90°C).

Battery Brain is made of non-combustible materials.

BATTERY SAFETY WARNING!

When working with lead acid batteries and accessories, caution must be employed:

- Shield eyes. Do not open vent caps or puncture battery casing in any way.
- Sulfuric acid can cause blindness and severe burns.
- Rinse hands and flush eyes with water immediately.
- Avoid sparks, flames and smoking.

PROPOSITION 65 WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds. Chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Battery Brain

GENERAL

The Battery Brain is installed on the positive (+) battery post with the post clamp provided. The clip end of the black ground wire is fastened to the negative (-) post clamp bolt.

HELPFUL HINT

The positive (+) bracket on the Battery Brain for the positive (+) post clamp is on the same side of the Battery Brain unit with "12V+" printed on it.

TOOLS REQUIRED

Tools required may vary based on your vehicle. The most common tools are; Open-end 5/16", 9/16", 10mm, 12mm, 14mm, or adjustable wrench. Standard and Phillips screwdrivers.

REMOTE CONTROL USERS

Save a copy of the identification number on the back of your remote control. You will need it to order a replacement if lost.

IMPORTANT NOTE

Before beginning installation, be sure your battery is holding the proper charge. If your battery does not hold a minimum charge, it may be at the end of its lifecycle. The Battery Brain is designed to protect a properly functioning or new battery. It cannot restore or repair a damaged battery. If your vehicles battery shows any signs of physical damage such as swelling, leaking or cracking, replace the battery prior to installing Battery Brain.

IMPORTANT NOTE

Unless you are fully familiar with your vehicles electrical system it is recommended that installation of this product is performed by a certified technician.

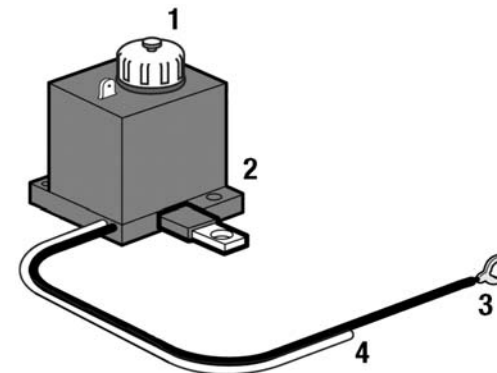
IMPORTANT NOTE

This product is not intended for Marine use and should not be submerged in water. Units specifically designed for Marine use are available, see www.smgynet.com/batterybrain for more information.

Battery Brain Kit includes

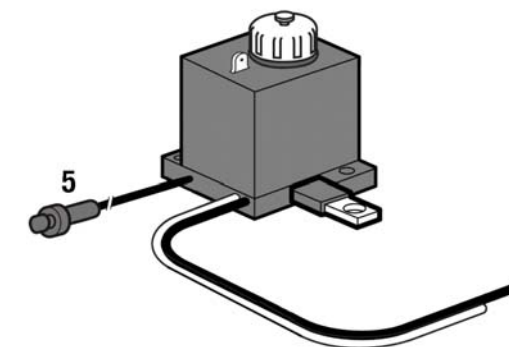
BATTERY BRAIN UNIT:

1. Manual "ON/OFF" Reset Control Knob under removable protective cap
2. Positive (+) side of Battery Brain (side with writing) with Butterfly Connector
3. Black Ground Wire, attached to unit
4. White Antenna Wire, attached to unit (type II & III only)



Type IV Only-This unit has the same remote capacities as the type III, but uses a push button (5) instead of a remote control to change the setting of the Battery Brain with the press of the button. The button can be mounted/concealed anywhere in the vehicle and is connected to the Battery Brain unit via a wire.

Type IV RV looks like the type IV model but is designed to be connected to the utility/house/coach batteries in order to avoid the deep cycling of full discharge and charging that can prematurely end a batteries life.

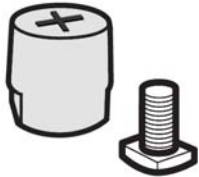


Do not press the button while the engine is running. Mount the push button in the desired location by tightening the nut provided.

Aluminum Positive Post with Butterfly Connector with Bolt and Lock Washer



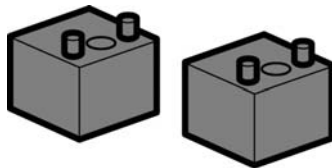
Aluminum Positive Post with Bolt and Lock Washer



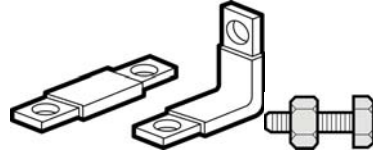
Side Mount Bolt



Chassis Mounting Blocks



L-Bracket & Straight Mounting Brackets



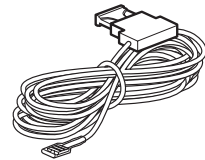
Remote Control (Type II & III Models Only)

Remote Control Frequency: TX433.92 Mhz

Battery Type: 12 V 27 A (The batteries are already installed)



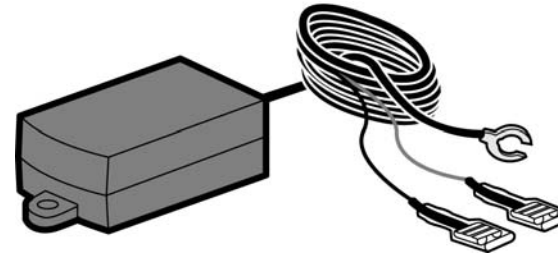
Red Accessory Bypass Wire with Fuse Holder



Black Engine On Wire



Optional:
Vibration Sensor - Available separately, can be used in place of the Engine On Wire
*(See your retailer for details)



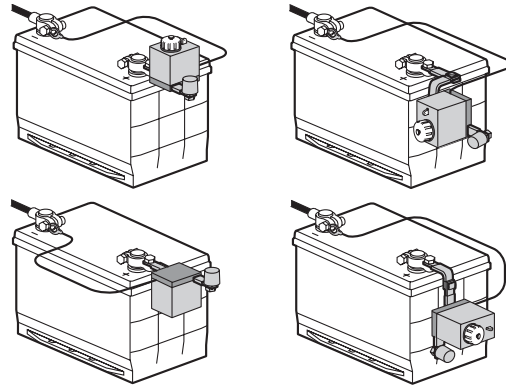
Installation Instructions

NOTE: Battery location and position differ in vehicles. With the supplied accessories you can mount the Battery Brain on the vehicle using the Top Mount, Side Mount or Chassis Mount positions.

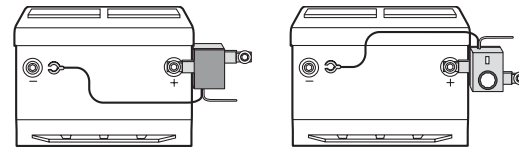
NOTE: After installation ensure all connections are tight. Ensure manual reset control knob under the protective cap is in the on position. Press down on the knob to establish connection.

Sample Configuration Options

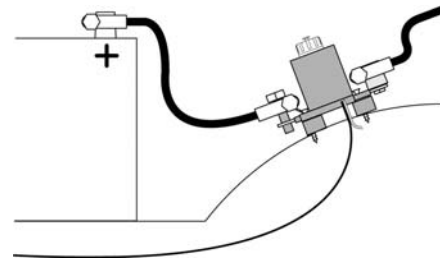
Top Mounting Options



Side Mounting Options



Chassis Mounting Option



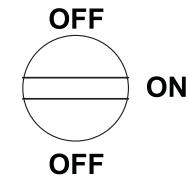
STEP 1: Disconnecting Battery Cables:

A) Disconnect the black/negative (-) cable from the negative (-) battery post/bolt on the battery.

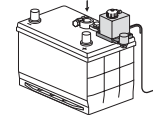
B) Disconnect the red/positive (+) cable from the positive (+) battery post/bolt on the battery

STEP 2: Connecting the Battery Brain:

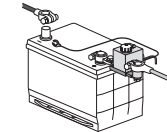
A) Unscrew removable protective cap on the top off the unit and turn the "ON/OFF" manual reset control knob to the "ON" position.



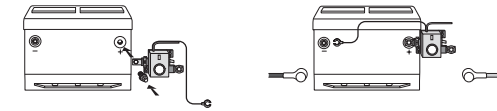
B) Connect the Aluminum Positive Clamp with butterfly connector to the Positive side (the side with 12V+ printed) of the battery brain. Then connect the Aluminum Positive Clamp to the positive terminal on the battery.



C) Connect the male post to the other side of the Battery Brain. Connect the red positive battery cable to the male post.



D) Side mount only: Connect the positive side of the Battery Brain (with the sign 12V +) to the positive post on the battery using the provided side mount screw. Then connect the red positive battery cable to the other side of the Battery Brain.



NOTE: The positive battery post is tapered. Verify that the cable is mounted correctly.

STEP 3: Connecting Battery Brain to Ground:

A) Connect the black/negative (-) battery cable to the negative (-) post/bolt on the battery.

B) Connect the clip end of the black ground wire to the clamp bolt on the negative (-) battery post/nut or ground to chassis with a metal screw.

CHASSIS MOUNTING

A) Connect the positive (+) side of the Battery Brain to the positive (+) side of the battery with a separate red positive battery cable (must be purchased).

B) Connect the original red positive (+) cable of the car to other side of the Battery Brain.

C) Connect the black ground wire of the Battery Brain to the chassis or directly to the negative post of the battery.

STEP 4: Install Black Engine On Wire.

Installation of the Engine On wire will prevent the Battery Brain from disconnecting the battery while the engine is running. This will also prevent the Battery Brain from disconnecting the battery if the voltage level drops below 11.8V as could be the case with accessories that briefly reduce the voltage below the threshold level or in the case of problems with the vehicle electrical components. i.e.: bad alternator.

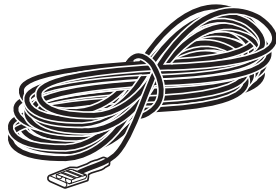
This wire must be installed to ensure the Battery Brain will not activate while the engine is running.

*Not required if optional Vibration Sensor is used. (Purchased separately).

A) Locate a wire or fuse that has 12V when the ignition switch is in the "ON" or "RUN" position and is 0V when the ignition switch is in the "OFF" position.

B) Slide the connector end of the black engine on wire onto the single connector on the Battery Brain that is labeled with "ACC".

C) Attach the other end of the supplied black engine on wire to the selected wire or fuse as located in step A above. This may require running a wire to the interior of the vehicle. A fuse-tap or wire-tap connection may be required.



STEP 5: Red Accessory Bypass Wire Installation [Optional]

Installation of the red accessory bypass wire will provide you with continuous 12V power to an accessory or accessories bypassing the Battery Brain designed to allow you to save presets or memory settings.

NOTE:

Use of this feature will bypass the Battery Brain and may allow the battery voltage to drop below the minimum charge needed to start your vehicle.

NOTE:

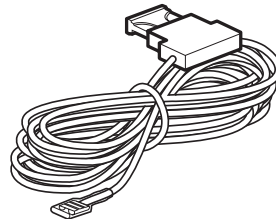
Exact location of the fuse & fuse panel will differ by manufacturer; consult your owner's manual or wiring schematic for the vehicle to locate fuses for the accessories. Amperage for the bypassed accessory must not exceed 7.5Amps.

A) Locate the fuse that provides power only to the accessory that you wish to have it active at all times.

B) Attach the exposed end of the red bypass wire to the fuse or device you wish to have active on the non active side of the fuse. A fuse tap connection may be required.

C) Carefully route the wire from the fuse to the Battery Brain. A fuse-tap or wire-tap connection may be required.

D) Attach the connector end of the red bypass wire onto the butterfly connector on the female positive post of the Battery Brain.



MULTI BATTERY INSTALLATION

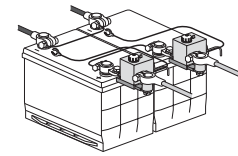
If your vehicle has a multi-battery configuration, Battery Brain can be mounted to any battery configuration. However, any primary live positive battery post must have its own Battery Brain. Consult a certified technician if you require assistance.

If the two or more batteries are connected in series, to one primary red positive cable, then only one Battery Brain is required. Follow the installation instructions as previously stated.

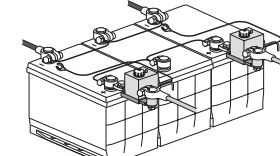
If two or more batteries are connected in parallel, two primary red positive cables, then you will require two Battery Brains, to ensure that the batteries are effectively isolated from the electrical system once the disconnection threshold is reached. Mount both Battery Brains at the primary positive posts connected to the Starter, Alternator, ECM or any accessory device that requires electrical power.

Installation Tip: Remote Location: If you wish to mount the Battery Brain in a remote location due to space limitations, or if desired, use proper battery cable. (Additional cable not supplied)

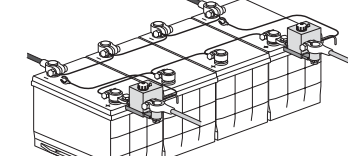
2 BATTERIES



3 BATTERIES



4 BATTERIES



Series configuration options shown for example purposes only.

INSTALLATION COMPLETE:

THE MANUAL RESET CONTROL KNOB ON THE BATTERY BRAIN UNIT SHOULD BE TURNED TO THE "ON" POSITION. THEN PRESS DOWN ON THE MANUAL RESET CONTROL KNOB TO ESTABLISH CONTACT.

Testing the Installation

A) TO TEST FOR SUCCESSFUL INSTALLATION:

Start the engine after installation is complete. If the engine starts properly proceed to the next step. If not, review the installation instruction or consult a certified technician.

B) TO TEST BATTERY BRAIN OPERATION:

With the Manual Reset Control Knob in the “ON” position turn the engine off and turn on as many electrical accessories (i.e. lights, radio,) as possible and leave them on. The Battery Brain will cut power from the battery automatically – confirming the Battery Brain is working. This may take some time, depending on the battery’s age and state of charge.

C) TO TEST THE MANUAL RESET CONTROL FUNCTION:

Ensure that the Manual Reset Control Knob is in the “ON” position and press it down after the Battery Brain has disconnected the power (to reset). The unit should reestablish power to the electrical accessories and enable you to start the engine.

D) TO TEST THE REMOTE CONTROL UNIT / WIRED REMOTE BUTTON UNIT (BATTERY BRAIN III & IV):

The remote control unit supplied with Battery Brain Type III and the wired remote button supplied with the Battery Brain IV can be used to disconnect and reconnect power by choice (as an anti-theft device), as well as reestablishing power after draining. Press and hold for 4 consecutive seconds either the remote control button or mounted switch to disconnect, reconnect or reestablish power to electrical accessories and to start the engine.

If problems occur with any of the test procedures, please refer to Trouble Shooting Instructions or consult Battery Brain technical support.

Trouble Shooting

AFTER INSTALLATION, THE BATTERY BRAIN DOESN'T SEEM TO BE WORKING.

WHAT TO DO:

1. Be sure your battery is holding the proper charge.
2. Make sure the positive side of the Battery Brain (the side with the writing) is attached to the positive (+) post of the battery.
3. Check that the Manual Reset Control Knob is pointing to the “ON” position.
4. Check that the black ground wire is securely attached to the negative (-) post on the battery.

AFTER THE BATTERY BRAIN HAS DISCONNECTED POWER, THE REMOTE CONTROL DOES NOT RESET THE POWER.

WHAT TO DO

1. Make sure that the light on the Remote Control is lit when you press the button down. If the light does not come on, open the Remote Control and replace the battery.
2. Hold the Remote Control button down for five seconds to activate Battery Brain.
3. Turn the Manual Reset Control Knob to “ON”.
4. Check that the black ground wire is securely attached to the negative (-) post on the battery.

BATTERY BRAIN IS FREQUENTLY DISCONNECTING POWER FOR NO APPARENT REASON.

WHAT TO DO

1. Your car battery may be low in power due to Alternator function. If it cannot hold a charge, it may be at the end of its life cycle.
2. The electrical system might have an unknown short. Consult a certified technician.
3. Make sure all lights are off.
4. Disconnect all accessory electronics (radio, phone charger, DVD player, etc.) and check again.

YOU CANNOT DETERMINE A BATTERY BRAIN INSTALLATION CONFIGURATION FOR YOUR VEHICLE OR LOCATE BATTERY CONNECTIONS.

WHAT TO DO

1. Consult a certified technician.

IMPORTANT NOTE:

If a warning light for NO CHARGE or BATTERY WARNING illuminates on your dashboard, stop your vehicle at a safe area and TURN THE MANUAL RESET CONTROL KNOB (located under the removable protective cover on the Battery Brain unit itself) TO THE “OFF” POSITION. Your vehicle will experience a complete loss of power unless the “No Charge” problem is repaired immediately! This problem is unrelated to the Battery Brain and requires assistance from a qualified technician.

Limited Warranty

Your Battery Brain™ is covered by a conditional, limited warranty to the original purchaser.

This unit is guaranteed to the original retail purchaser against defects in quality or workmanship for a period of two years from the date of original purchase. If this unit fails because of a manufacturing defect within 30 days of purchase, return the unit, with your receipt, to the retailer. After 30 days of purchase, but within the warranty period, if the unit was purchased within the continental United States, return it, freight prepaid, to Smart Energy Solutions, Inc. for repair or replacement. If the unit was purchased outside the continental United States, return the unit to the place of purchase.

This warranty does not cover damage due to operation other than the use of the correct Battery Brain model on the specified battery voltage. This warranty does not extend to any defect, malfunction, or failure caused by accidents, misuse, abuse, improper installation (including disassembly of Battery Brain, use of the product with equipment for which it was not intended, or unauthorized alterations or repairs.

All implied warranties are hereby limited in duration to the period of two years from the date of original retail purchase. Incidental or consequential damages arising from a breach of either express or implied warranties are hereby disclaimed and excluded. Some states do not allow the exclusion of limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you.

Neither Smart Energy Solutions, Inc. nor retailers selling Battery Brain are responsible for indirect, incidental, special, punitive or consequential damages arising from improper installation, the use of or inability to use Battery Brain. Except for this limited warranty, Smart Energy Solutions, Inc. has not made, and specifically disclaims any warranty or representation of any kind, express or implied, direct or indirect, of product fitness for a particular purpose.

Assembled in China for Smart Energy Solutions, Inc.

Battery Brain is an innovative accessory that easily installs to any battery. Using unique micro-electronic technology it continually monitors the battery power. When Battery Brain detects power falling below the level required to start your engine, it automatically isolates the battery from the electrical system. This will ensure you always have enough power to start your engine and keep moving!



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For more information and other products go to
www.smgy.net/batterybrain/

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