



## BatteryProgBrain

What is the "Battery Prog Brain" (BPB)

Battery Prog Brain is an innovative accessory that easily installs to any battery. Using unique micro-electronic technology it continually monitors the battery power. When Battery Prog Brain detects power falling below the threshold level required to start your engine, it automatically isolates the battery from the electrical system. This will ensure the battery always have enough power to start your engine and will prolong the battery life. There are a few ways to reset the power according to the type of BPB you have purchased.

\*T3 & T4 have the ability to disconnect the battery from the electrical system intentionally and to act as an anti-theft device.

\*T4RV (Utility) is designed to extend battery life by protecting utility/house/coach batteries rather than the vehicle starting battery and can disconnect the battery from the electrical system intentionally to preserve battery power when not in use.

Updates to installation instructions will be posted on [www.batteryprogbrain.com](http://www.batteryprogbrain.com)



## Technical Specifications

### **This unit has the ERD feature (Engine Running Detection).**

When detecting electronic noises the BPB will be in a standby mode, it will not disconnect the power even when the battery energy is lower than the disconnecting threshold.

**IMPORTANT NOTE:** After the installation is completed test the ERD function to make sure your vehicle electronic noises are detected, if not then you need to connect the : Engine On wire to the ACC connector (see Engine On wire instructions)

### **DIMENSIONS**

Base 1 5/8" (4cm) x 2 1/4" (5.5cm), Height 2" (5.1cm), Brackets 1 1/4" (3.5cm) x 5/8" (1.5cm) x 1/8" (3mm).

### **WEIGHT**

Battery Prog Brain 220 gm, Accessories 210 gm, Packaging 145 gm;  
Total weight 575gm (1.3lb).

### **CURRENT SPECIFICATIONS**

Operational Voltage: **9V to 30V 3 Milliamps**

Operational Current Consumption for T1 & T4

After disconnect: **200 Micro amps**

For T2 & T3 after disconnect: 3 Milliamps

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

Continuous Amperage Capacity: **250 Amps.**

Battery Prog Brain Preset:

1. Disconnect power at 11.8V (T4RV at 10.5V)

2. Delay time(from detecting 11.8V/10.5V for T4RV):30 seconds

3.Reconnect automatically at 13V

4.ERD ON "OFF"

Each of those can be changed by using the STRS Energy Programmer which has to be purchased separately

### **OPERATIONAL TEMPERATURE RANGE**

-40°F (-40°C) to 257°F (125°C).

Battery Prog Brain is made of non-combustible and none flammable materials.

**Water proof:** IP 68

**The Battery Prog brain is designed for 25,000 cycles.**

## Battery Prog Brain

**GENERAL:** The Battery Prog 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 or to the grounded Chassis.

**HELPFUL HINT:** The positive (+) side of the Battery Prog Brain is the side printed (+).

**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.

**IMPORTANT NOTE:** Before beginning installation, be sure your battery is holding the proper charge. If your battery does not hold a minimum charge (over 12V) it may be at the end of its lifecycle. The Battery Prog Brain is designed to protect a properly functioning 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 Prog Brain.

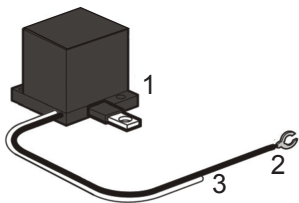
**IMPORTANT NOTE:** Unless you are fully familiar with your vehicles electrical system it is recommended that installation of this product is performed by a certified technician.

**IMPORTANT NOTE:** This product is waterproof but should not be submerged in water.

## Battery Prog Brain Kit includes

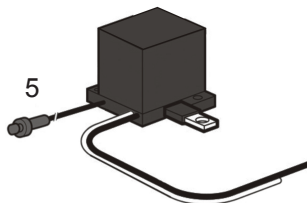
### BATTERY PROG BRAIN UNIT:

1. Positive (+) side of Battery Prog Brain (the printed side) with Butterfly Connector
2. Black Ground Wire, attached to unit
3. White Antenna Wire, attached to unit (for Type T2 & T3)



**T4** Uses a push button(5) instead of a remote control, to change the position of the Battery Prog Brain (power connected/disconnected) press the push button. The button can be mounted/concealed anywhere in the vehicle and is connected to the Battery Prog Brain unit via a wire with a connector.

**T4RV** looks like the T4 model but is designed to be connected to the utility/house/coach batteries in order to avoid deep discharge which can prematurely end a batteries life.



**Mount the push button in the desired location by tightening the nut provided on the push button.**

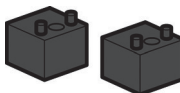
Aluminum Female Positive Post with Butterfly Connector with Bolt and Lock Washer



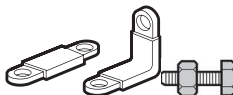
Aluminum Male Positive Post with Bolt and Lock Washer



Chassis Mounting Blocks  
To distance the connection from the Chassis



L-Bracket & Straight Mounting Brackets  
To help fit the BPB on the battery



Bypass Wire  
To be used to bypass all the BPB functions



Remote Control to connect/disconnect the power remotely

(T2 & T3 Models Only)

Remote Control Frequency: TX433.92 Mhz

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



Red wire is to be used as the Accessory bypass wire or the Engine ON wire (Required if ERD function is not "ON").

If used as accessory bypass you can bypass a particular circuit and allow power to it.

If used as ENGINE ON wire this will ensure the BPB will not disconnect the power when the main vehicle ignition switch is "ON" (Engine running)

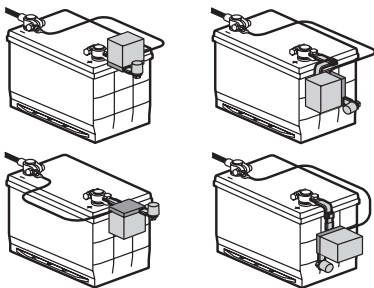


## Installation Instructions

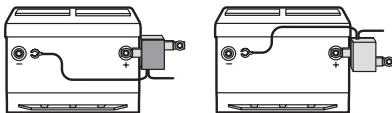
**NOTE:** Battery location and position differ in vehicles. With the supplied accessories you can mount the Battery Prog Brain on the vehicle using the Top Mount, Side Mount or Chassis Mount positions.

### Sample Configuration Options

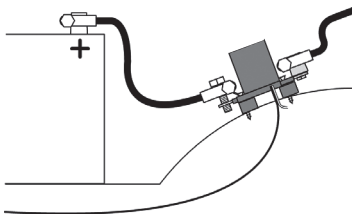
#### Top Mounting Options



#### 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 Prog Brain:

A) For top mount battery: Connect the positive (+) female clamp with the butterfly connector to the positive (+) side of the battery. Connect the Battery Prog Brain to the female clamp.

B) Connect the male post to the other side of the Battery Prog Brain (with no print on it). Connect the red positive battery cable to the male post.

C) Side mount only:

Connect the positive side of the Battery Prog Brain (with the side printed +) to the positive post on the battery using the provided side mount screw. Then screw in the red positive battery cable to the other side of the Battery Prog Brain.

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

### STEP 3:

Connecting Battery Prog Brain to Ground:

Connect the clip end of the black ground wire to the clamp bolt on the negative (–) battery post/nut or to grounded bolt.

### CHASSIS MOUNTING

A) Connect the positive (+) side of the Battery Prog 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 Prog Brain.

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

#### STEP 4:

Install Red Engine On Wire. (Not required if ERD tested OK)

Installation of the Engine On wire will prevent the Battery Prog Brain from disconnecting the battery while the engine is running. This will also prevent the Battery Prog 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 Prog Brain will not disconnect the power while the engine is running. (Not required if ERD tested OK)

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.

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.

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

C) Attach the other end of the supplied red 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:

Optional: Red Accessory Bypass Wire Installation

Installation of the red accessory bypass wire will provide you with continuous 12V power to an accessory or accessories bypassing the Battery Prog Brain, designed to allow you to save presets or memory settings or any electrical device that is required to stay active at all times.

#### NOTE:

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

#### NOTE:

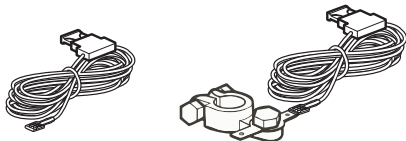
Amperage for the bypassed accessory must not exceed 7.5Amps.

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 Prog 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 Prog Brain.



## MULTI BATTERY INSTALLATION

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

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

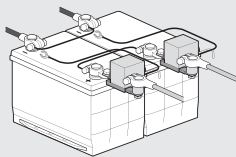
If two or more batteries are connected in parallel, two primary red positive cables, then you will require two Battery Prog Brains, to ensure that the batteries are effectively isolated from the electrical system once the disconnection threshold is reached. Mount both Battery Prog Brains at the primary 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 Prog Brain in a remote location due to space limitations, or if desired, use proper battery cable. (Additional cable not supplied)

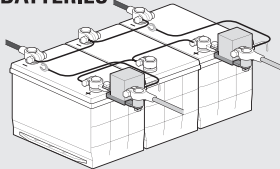
Series configuration options shown for example purposes only.

### SAMPLE CONFIGURATION OPTIONS

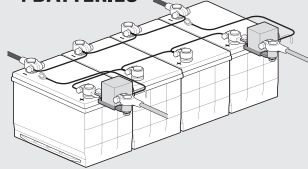
**2 BATTERIES**



**3 BATTERIES**



**4 BATTERIES**



## Testing the Installation

### A) TO TEST FOR SUCCESSFUL INSTALLATION:

Press the button of the RC or the push button to establish connection. 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 PROG BRAIN OPERATION:

Turn the engine off and turn on as many electrical accessories (i.e. lights, radio, and wind shield wipers) as possible and leave them on. The Battery Prog Brain will cut power from the battery automatically – confirming the Battery Prog Brain is working. This may take some time, depending on the battery's age and state of charge.

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

The remote control unit supplied with Battery Prog Brain T3 and the wired remote button supplied with the Battery Prog Brain T4 can be used to disconnect and reconnect power by choice (as an anti-theft device), as well as reestablishing power after the BPB has disconnected the power. Press and hold for 4 consecutive seconds either the remote control button or mounted switch to disconnect, To reconnect or reestablish power to electrical accessories and to start the engine press the button once.

### D) TO TEST THE ERD FUNCTION.

Start the engine, press the remote control/push button and hold for 10 seconds  
If the power has not disconnected the ERD works OK, if the power has disconnected  
The ERD does not detect the electronic noise  
You need to connect the "engine on" wire.

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

## Trouble Shooting

**AFTER INSTALLATION, THE BATTERY PROG 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 Prog Brain (the printed side) is attached to the positive (+) post of the battery.
3. Check that the black ground wire is securely attached to the negative (-) post on the battery.

**AFTER THE BATTERY PROG 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 disconnect the power and one press to activate the power
3. Check that the black ground wire is securely attached to the negative (-) post on the battery.

**BATTERY PROG 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 PROG BRAIN INSTALLATION CONFIGURATION FOR YOUR VEHICLE OR LOCATE BATTERY CONNECTIONS.**

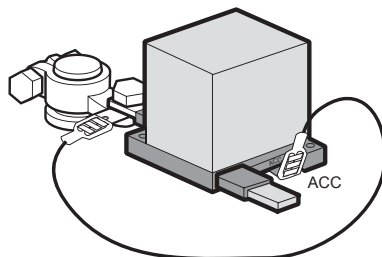
### WHAT TO DO

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 disconnect the Engine-On wire from the ACC connector and connect the bypass wire from the butterfly connector to the ACC

With the power left in your battery approach a technician to take care of the no charge problem, otherwise you will get stranded with a completely dead battery and the vehicle might shut off while you are on the road.



Bypass Wire

The Bypass wire when connected as shown in the picture will reconnect the power and will keep the power connected as long as the wire is connected from the plus side to the ACC.

Note: This wire connection can be used to reconnect the power in case the remote control (T3) is lost or if there is a problem with the push button (T4).

After the BPB has reconnected the power disconnect the wire to ensure full function of the unit.

## Limited Warranty

Your Battery Prog 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 STRSEnergy 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 Prog 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 Prog 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 STRSEnergy, Inc. nor retailers selling Battery Prog Brain are responsible for indirect, incidental, special, punitive or consequential damages arising from improper installation, the use of or inability to use Battery Prog Brain. Except for this limited warranty, STRSEnergy, 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.

Made in China

Made in Israel

Made in U.S.A

### **BATTERY SAFETY WARNING!**

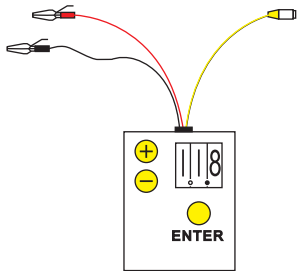
When working with lead acid batteries and accessories, caution must be employed:

- 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.

# BPB Programmer Users Manual



## The BPB Programmer has the following parts:

The BPB Programmer has the following parts:  
The box and on it the three digits display, a plus and minus and the ENTER buttons.  
The three wires, Black, Red and Yellow.

## What does the Programmer do?

1 When connecting the Black wire to the negative side of a battery and the Red to the positive, the Programmer is a Volt meter that will display the actual voltage of the battery, when it is connected to the battery and you start the engine it will display how low the battery voltage went at the starting point by pressing the "+" button or it will display the rate of charge by pressing "-" button.

That gives the user a very important diagnostic tool to test the battery condition and alternator condition.

A battery of 12V suppose to have at list 12.6V in normal condition, when starting the engine battery voltage should not drop under 8.5V

A good state of charge (alternator) should be at 13V.

Barrery condition	Voltage at engine start
Very good	9V and higher
Good	8.5V to 9V
Fair	8V to 8.5V
Poor	7.5V to 8V
Bad	7V to 7.5V

2. When connecting the yellow wire to the ACC connector on the BPB (Battery Programmable Brain) and pressing the remote control or the push button 5 times

The display will start blinking, that means the programmer is communicating with the BPB unit, the blinking display will show the disconnecting point the BPB is programmed to disconnect at, by pressing the ("+") button this number will change upward, by pressing the ("-") button it will change the numbers downward, when you got to the desired point press the ENTER button and this number will be implemented into the BPB and the next screen of Delay time will appear blinking, repeat the same steps as for the voltage until you riches the desire delay time and press ENTER.

The next display will show the ERD (Engine running detection) AS ER0 or ER1 while blinking if you want the ERD to be "ON" then you chose the ER1 by pressing the ("+") button if you want it off then press the minus button, when the display shows the ERD as you want it then press ENTER.

This time you will have the reconnect function blinking scroll up or down until you get the reconnect point that you want OR if you want it on OFF then press the ("+") button until it will show OFF then press the ENTER button and disconnect the wires Black Red and Yellow, the order dose not matter.





**BatteryProgBrain**

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For more information and other products go to  
[www.batteryprogbraint.com](http://www.batteryprogbraint.com)

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