

# BREAKSAFE SERIES 6000 AND 6000XP ELECTRIC BRAKE BREAK-AWAY SYSTEM

## INTRODUCTION

The Breaksafe Break-Away system is designed to apply the trailer brakes and brake lights if the trailer is accidentally separated from the tow vehicle. The system has a built in battery that can be charged from the tow vehicle's auxiliary line or by a battery charger. The easy to operate test button is used to indicate the level of charge in the battery. This should be checked before the trailer is towed. Please ensure that you select the correct model for your requirements.

Series 6000 to suit 2 and 4 wheel trailer brakes. Series 6000XP to suit 6 wheel trailer brakes.

## WARNING

The Breaksafe should be mounted internally but can be mounted externally if necessary although the Breaksafe is not waterproof and should have a rain and splash cover if it is mounted externally. The mounted position of the Breaksafe should be determined by the installer in conjunction with the vehicle owner's preference. When mounting inside the vehicle, choose a position where air can circulate around the box. Do not position the box where articles can be stored against it as they may activate the test button. Please allow room to access the battery for servicing.

## BATTERY TEST BUTTON

Use the test button to test the condition of the built-in battery. This should be checked each time the trailer is used.

Disconnect the trailer from the tow vehicle

Depress the button momentarily and check the battery level lights.

The test button will also energise the trailer brakes and brake lights.

**GREEN** - Battery normal.

**RED** - Battery low (charge before use).

**NO LIGHT** - Battery flat, charge before use, check internal fuse or replace battery.

**REPLACEMENT BATTERY:** 12volt 7 amp/hour for 2 & 4 wheel brake. 12 volt 9 amp/hour for 6 wheel brake.

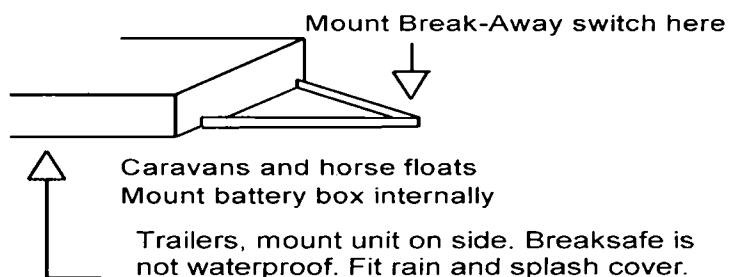
## READ INSTALLATION INSTRUCTIONS CAREFULLY

**ALL BREAKSAFE WIRES MUST BE CONNECTED FOR CORRECT OPERATION OF BREAKSAFE**

## WIRING

- BLACK** 12 volt tow vehicle auxiliary line
- RED** Stop light circuit.
- WHITE** Earth return from trailer brakes.
- BLUE** Positive supply to trailer brakes.
- ORANGE** Both wires to Break-Away switch
- PURPLE** Breaksafe Remote Monitor

**A RM6000 REMOTE BATTERY MONITOR  
IS REQUIRED FOR REGISTRATION IN NSW**



## CHARGING

Charging of the Breaksafe battery can be done via the tow vehicle auxiliary line (Breaksafe black wire). The orange charge light next to the red terminal will illuminate when the Breaksafe battery is connected to 12 volts for charging.

For external charging, you can connect a small battery charger (4 amps maximum) to the red and black terminals on the front of the Breaksafe box. If the charger is working the orange charge light next to the red terminal should illuminate. Some so called "smart chargers" with a charge and float stage may not work when connected to the Breaksafe charge terminals as they require **direct connection** to the battery terminals. Open the breaksafe box and connect the charger directly to the battery terminals.

A basic battery charger will work fine and should illuminate the orange charge light when connected..

The charging system in the Breaksafe unit is a trickle charge circuit only and it may take several hours for the battery to fully recharge.

## TESTING

**Disconnect the trailer plug from the tow vehicle.** Pull the Breakaway pin from the breakaway switch attached to the A frame. The **electric brakes** and **brake lights** of the trailer should immediately activate and the battery level light should illuminate. The brakes will release when the pin is replaced in the switch.

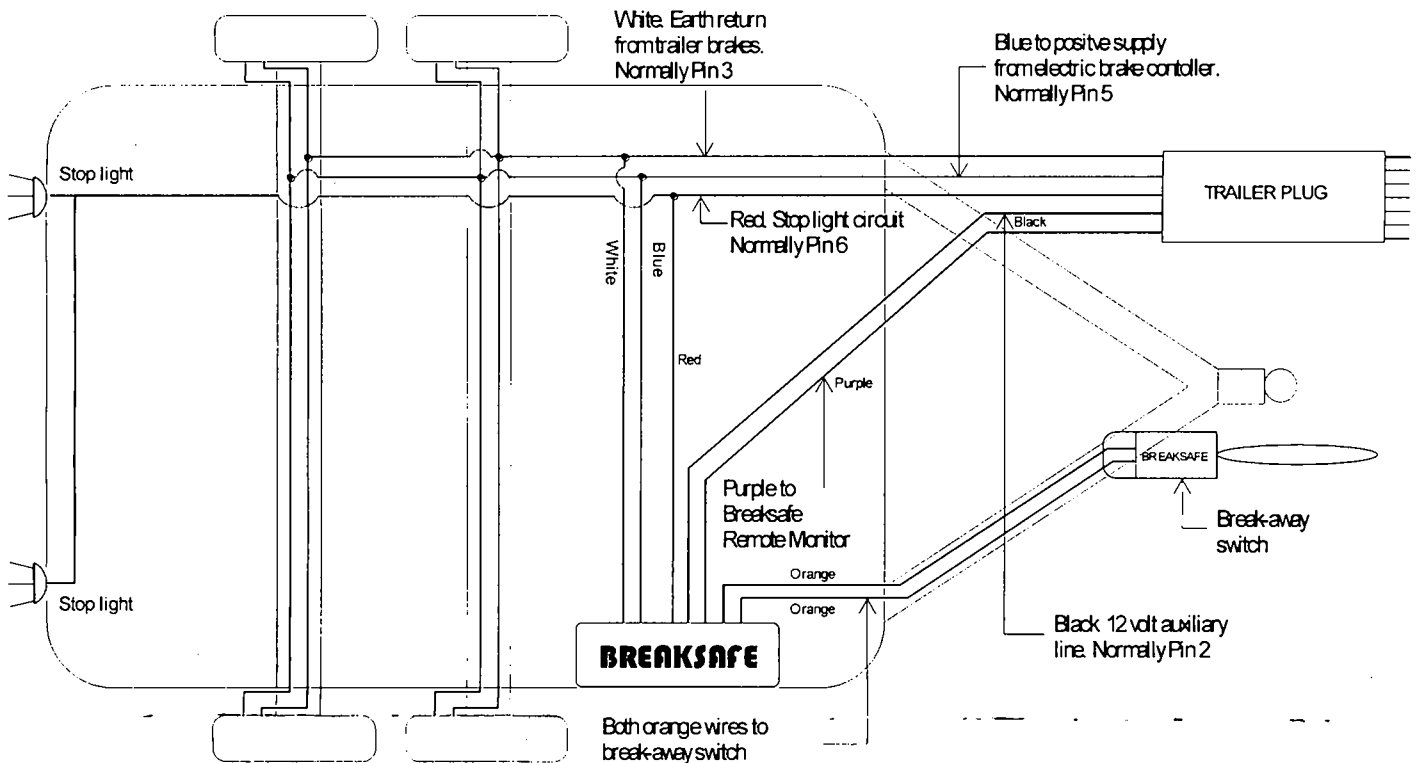
**BREAK SAFE SERIES 6000 AND 6000XP IS FOR BREAK-AWAY BRAKES ONLY. AN ELECTRIC BRAKE CONTROLLER IS REQUIRED FOR NORMAL BRAKE OPERATION. BREAKSAFE IS COMPATIBLE WITH ALL BRANDS OF ELECTRIC BRAKE CONTROLLERS.**

**NOTE\* ATTACH THE BREAKAWAY CABLE TO THE REAR OF THE TOW VEHICLE USING A SECURE ANCHOR POINT. DO NOT HOOK CABLE TO TOW BALL OR SAFETY CHAIN ANCHOR.**

**THE BREAKSAFE UNIT IS PROTECTED BY AN INTERNAL FUSE. IF THE UNIT FAILS TO OPERATE, PLEASE CHECK THE FUSE FIRST.**

**MAIN FUSE - 30 AMP  
RED WIRE STOP LIGHT FUSE 10 AMP**

**WIRING DIAGRAM**



**TROUBLE SHOOTING**

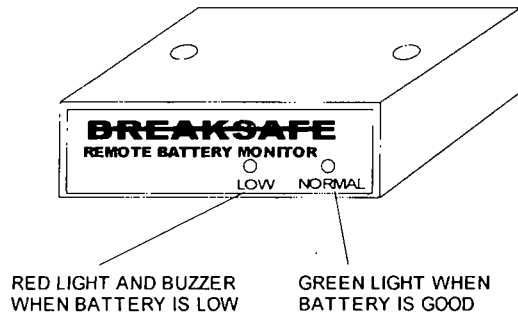
Charge light NOT ON when the trailer is connected with the tow vehicle.	Check tow vehicle's auxiliary line.
BUZZING NOISE from Break-Safe when the test button is pressed or the Break-Away pin is pulled.	Battery is dead flat <u>or</u> there is a short circuit in the trailer's electric brakes which has blown the Breaksafe internal fuse. <b>Charge battery and check internal fuse and replace as necessary.</b>
Brake lights do not activate when the test button is pressed or the breakaway pin is pulled.	Check fuse on red wire. (10 amp)
Electric brakes and brake lights do not activate when test button is pressed or breakaway pin is pulled.	Check battery level and check internal fuse. (30 amp)
Battery level test lights remain ON.	Break-away pin not fully inserted back into the break-away switch.

**PLEASE PASS THESE INSTRUCTIONS ON TO OWNER**

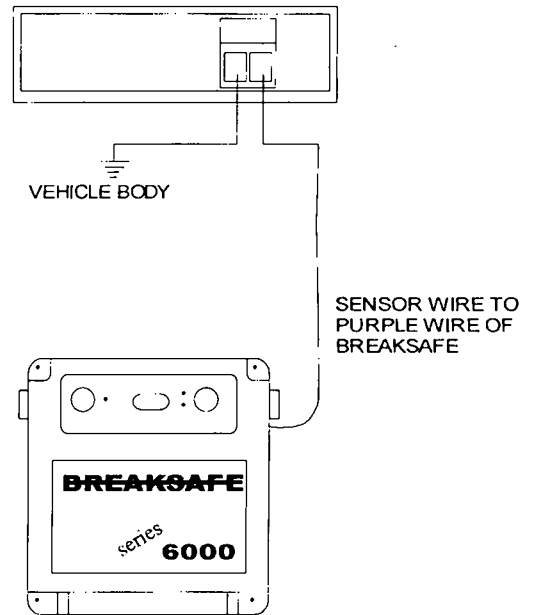
# BREAKSAFE ACCESSORIES

## BREAKSAFE REMOTE MONITOR PART NO: RM6000

THE BREAKSAFE **RM6000** REMOTE MONITOR OPERATES EACH TIME THE BRAKE PEDAL IN THE TOW VEHICLE IS PRESSED. THE ADDITIONAL CIRCUITRY IN THE **BREAKSAFE 5000 & 6000** DISCONNECTS THE BREAKSAFE BATTERY FROM THE CHARGE WIRE AND THEN CONNECTS IT TO A SMALL ELECTRONIC LOAD. SHOULD THE BREAKSAFE BATTERY BE GOOD, A GREEN LIGHT WILL ILLUMINATE ON THE FRONT PANEL OF THE **RM6000**. IF THE BATTERY IS BELOW THE SAFE LEVEL, A RED LIGHT WILL FLASH AND A BUZZER WILL SOUND FOR ABOUT 10 SECONDS.

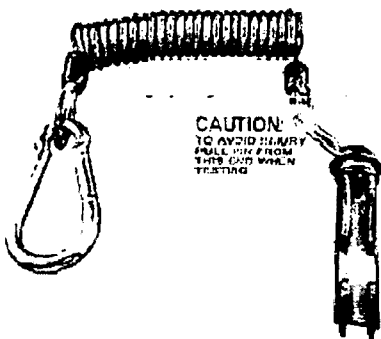


## WIRING FOR BREAKSAFE 6000



## BREAKAWAY SWITCH COIL CABLE

PART NO: BS0165



BREAKAWAY COIL CABLE AND STAINLESS STEEL QUICK RELEASE CLIP FOR EASY CONNECTION TO THE TOW VEHICLE. THIS ALSO MAKES THE CONNECTION TO THE TOW VEHICLE MUCH TIDIER. NO MORE WRAPPING THE WIRE UP TO STOP IT DRAGGING ON THE GROUND. THE NEW COIL CABLE STRETCHES TO 1.2 METRES FOR CONNECTION TO THE TOW VEHICLE AND THEN COMPRESSES BACK TO ONLY 100MM LONG WHEN DISCONNECTED.

THE COIL CABLE COMES WITH A STAINLESS STEEL QUICK RELEASE CLIP AND PIN TO SUIT BREAKSAFE BREAKAWAY SWITCH.

FOR BREAKSAFE BREAKAWAY SWITCHES ONLY

R.V. ELECTRONICS PTY LTD  
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# **BREAKSAFE SERIES 6000 AND 6000XP**

## **OWNER OPERATING INSTRUCTIONS**

**IMPORTANT: PLEASE HAND THIS LEAFLET TO OWNER**

**THE BREAKSAFE IS WATER RESISTANT NOT WATERPROOF. DO NOT SUBMERGE THE UNIT IN WATER**

THE BREAKSAFE BREAKAWAY SYSTEM IS DESIGNED TO APPLY THE TRAILER BRAKES & BRAKE LIGHTS IF THE TRAILER IS ACCIDENTALLY SEPARATED (BREAK AWAY) FROM THE TOW VEHICLE.  
**\*NOTE\* PLEASE MAKE CERTAIN THAT THE CABLE FROM THE BREAKAWAY SWITCH IS ATTACHED TO THE REAR OF THE TOW VEHICLE USING A SECURE ANCHOR POINT. DO NOT HOOK CABLE TO TOW BALL OR SAFETY CHAIN ANCHOR.**

### **TO TEST THE BREAKSAFE BATTERY**

TO TEST THE CONDITION OF THE BREAKSAFE BATTERY USE THE TEST BUTTON ON THE FRONT OF THE UNIT. DEPRESS THE BUTTON MOMENTARILY AND CHECK THE BATTERY LEVEL LIGHTS. THE TEST BUTTON WILL ALSO ENERGIZE THE TRAILER BRAKES AND BRAKE LIGHTS.

**GREEN - BATTERY NORMAL      RED - BATTERY LOW (CHARGE BEFORE USE)**

**NO LIGHT OR BUZZING SOUND. BATTERY DEAD FLAT (CHARGE BEFORE USE, CHECK INTERNAL FUSE OR REPLACE BATTERY)**

SHOULD YOUR TOW VEHICLE BE FITTED WITH A BREAKSAFE **RM6000** REMOTE BATTERY MONITOR, THE LEVEL OF CHARGE OF THE BREAKSAFE BATTERY IS CHECKED AUTOMATICALLY, EACH TIME THE BRAKE PEDAL IS PRESSED WHEN THE TRAILER IS CONNECTED. A **GREEN LIGHT** INDICATES THE BATTERY IS CHARGED. A **RED LIGHT** AND BUZZER INDICATES THE BREAKSAFE BATTERY IS BELOW THE SAFE LEVEL AND SHOULD BE RECHARGED OR REPLACED.

### **TO TEST THE BREAKAWAY SYSTEM.**

**\*NOTE\* THIS TEST SHOULD BE DONE REGULARLY TO ENSURE THE BREAK-AWAY SYSTEM IS WORKING CORRECTLY.**

**DISCONNECT THE TRAILER PLUG FROM THE TOW VEHICLE.** PULL THE BREAK-AWAY PIN FROM THE BREAKAWAY SWITCH ATTACHED TO THE A FRAME. THE **ELECTRIC BRAKES AND BRAKE LIGHTS** OF THE TRAILER SHOULD IMMEDIATELY ACTIVATE AND THE BATTERY LEVEL LIGHT SHOULD ILLUMINATE. THE BRAKES WILL RELEASE WHEN THE PIN IS REPLACED IN THE SWITCH.

THIS BREAKAWAY SYSTEM MUST **NOT** UNDER ANY CIRCUMSTANCES BE USED AS A PARKING BRAKE OR SECURITY DEVICE. IF BREAKSAFE IS USED FOR THESE PURPOSES THE BATTERY WILL BE COMPLETELY FLATTENED WITHIN APPROX. ONE HOUR. **THIS WILL RELEASE THE TRAILERS BRAKES.**

USING THE BREAKSAFE FOR ANY PURPOSE OTHER THAN FOR WHICH BREAKSAFE WAS DESIGNED WILL  
**VOID ALL WARRANTY.**

**CHARGING** OF THE BREAKSAFE BATTERY CAN BE DONE VIA THE TOW VEHICLE AUXILIARY LINE (**BREAKSAFE BLACK WIRE**). THE ORANGE CHARGE LIGHT NEXT TO THE RED TERMINAL WILL ILLUMINATE WHEN THE BREAKSAFE BATTERY IS CONNECTED TO 12 VOLTS FOR CHARGING.

FOR EXTERNAL CHARGING, YOU CAN CONNECT A SMALL BATTERY CHARGER (**4 AMPS MAXIMUM**) TO THE RED AND BLACK TERMINALS ON THE FRONT OF THE BREAKSAFE BOX. IF THE CHARGER IS WORKING THE ORANGE CHARGE LIGHT NEXT TO THE RED TERMINAL WILL ILLUMINATE.

SOME SO CALLED "SMART CHARGERS" WITH A CHARGE AND FLOAT STAGE MAY NOT WORK WHEN CONNECTED TO THE BREAKSAFE CHARGE TERMINALS AS THESE CHARGERS REQUIRE DIRECT CONNECTION TO THE BATTERY TERMINALS. OPEN THE BREAKSAFE BOX BY RELEASING THE PLASTIC CLIPS ON EITHER SIDE OF THE BREAKSAFE AND CONNECT THE CHARGER TO THE BATTERY TERMINALS. A BASIC BATTERY CHARGER WILL WORK FINE AND SHOULD ILLUMINATE THE ORANGE CHARGE LIGHT WHEN CONNECTED. THE CHARGING SYSTEM IN THE BREAKSAFE UNIT IS A **TRICKLE CHARGE CIRCUIT** ONLY AND IT MAY TAKE SEVERAL HOURS FOR THE BATTERY TO FULLY RECHARGE.

**\*NOTE:** THE BREAKSAFE BATTERY SHOULD BE REPLACED EVERY **2 YEARS** REGARDLESS OF ITS TEST CONDITION. USE BREAKSAFE **12 VOLT 7.0 AMP HOUR** BATTERY FOR **SERIES 6000** (2 AND 4 WHEEL ELECTRIC BRAKE) UNITS AND BREAKSAFE **12 VOLT 9.0 AMP HOUR** FOR **SERIES 6000XP** (6 WHEEL ELECTRIC BRAKE) UNITS.

FOR REPLACEMENT BATTERY OR INFORMATION REGARDING BREAKSAFE, SEE YOUR LOCAL DISTRIBUTOR OR CALL **R. V ELECTRONICS PTY. LTD. PHONE 08 8261 3500 FAX 08 8261 3400**

**EMAIL - [info@rvelectronics.com.au](mailto:info@rvelectronics.com.au)**

**MANUFACTURED BY [www.rvelectronics.com.au](http://www.rvelectronics.com.au)**