OWNER'S MANUAL





POWERING YOUR ADVENTURES

Born by the innovative spirit of our parent company Setec, with over 50 years' experience in power solutions, and design and manufacturing facilities in Melbourne, we are the leading experts in RV power management.

Inspired by the great Australian outdoors, we have created a range of rugged, smart and reliable products to power your adventures.

Our range of battery chargers, monitors and power management systems for caravans gives you peace of mind when you are on the road, so that you can relax in even the most far-flung destinations, knowing that you have control over your vehicle power.

To learn more about the BMPRO range of products, please visit our website **teambmpro.com**



SAFETY PRECAUTIONS

Please read the Safety Precautions before installing or using the **Trek**. Be sure to observe all precautions without fail. Failure to observe these instructions properly may result in personal damage, or personal injury which depending on the circumstances may be serious and cause loss of life.



Correct installation is the most critical factor in ensuring the safe use of the **Trek**. If every consideration of these instructions has been satisfied, the Trek will be safe to operate.



Keep the Trek away from water or other liquids.



Clean the housing of this product lightly with a dry or moist cotton cloth. Do not use alcohol, thinners, benzene or any other chemical cleaner. Do not allow any liquids to enter the housing.



The **Trek** is a high precision electronic product. It contains no user-serviceable parts inside. Do not try to dismantle, modify or repair it yourself. Disassembly, service or repair by an unauthorised person will void the warranty.



Product specifications are subject to change and improve without notice.

MANUAL PART 033140 REV 7.0



Designed by BMPRO, one of Australia's leading power solution experts, the BMPRO product range is proudly designed and manufactured in Melbourne, Australia, and represent a high-quality product that will provide years of service.

DISCLAIMER BMPRO accepts no liability for any loss or damage which may occur from the improper or unsafe use of its products. Warranty is only valid if the unit has not been modified or misused by the customer.

ABOUT THE TREK

The Trek is designed specifically to operate with BMPRO's BatteryPlus35.

The **Trek** provides vital data at a glance including caravan battery voltage and charging/discharging current. The **Trek** also provides an indication of the battery's remaining charge capacity as well as the time remaining before the battery completely discharges - so you'll never be left on the road without battery power.

In addition to battery monitoring, the **Trek** enables monitoring of water levels of up to four water tanks and control of two water pumps, all from a sleek, wall mounted display.

WHAT'S INCLUDED

Included with this product are:

- Trek plus front fascia cover
- Trek Owner's Manual

OPTIONAL ADD-ONS

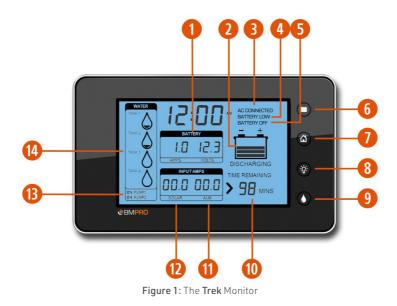
To get the most out of your **Trek**, it may be used with the following products from the BMPRO range:

Dipper water level indicator

CONTENTS

SAFETY PRECAUTIONS	4
ABOUT THE TREK	5
WHAT'S INCLUDED	5
OPTIONAL ADD-ONS	5
DESCRIPTION OF PARTS	7
USING YOUR TREK	9
TREK SET-UP MODE	10
Entering Set-Up Mode	10
Exiting Set-Up Mode	11
Set-Up Mode Menu Functions	11
CLOCK MENU FUNCTION	12
12-Hour Format	12
24-Hour Format	12
WATER TANK MENU FUNCTION	13
Enable and Disable Water Tank	13
Configure Water Tank Type	13
CONFIGURING BATTERY CAPACITY	14
CONFIGURING BATTERY ALARM	14
LCD BACKLIGHT	14
FACTORY RESET	15
SERVICING	15
FAQS AND TROUBLESHOOTING	15
APPENDICES	
ADVANCED MENU FUNCTIONS	16
Configure Battery Chemistry	16
Clear External Shunt	16
Adjusting Bulk Voltage	17
SPECIFICATIONS	17
WARRANTY TERMS AND CONDITIONS	

DESCRIPTION OF PARTS



1 BATTERY

Displays the charging/discharging current and voltage of the caravan battery connected to the **BatteryPlus35**.

The Battery display will flash if BMPRO's **BC300 External Shunt + CommLink** has been installed and communication with the **BC300** is lost.

2 BATTERY CAPACITY BAR GRAPH

Displays an estimate of the capacity of the connected battery, and underneath indicates if the battery is 'CHARGING' or 'DISCHARGING'.

3 AC CONNECTED

Appears when the **BatteryPlus35** is connected to AC mains.

4 BATTERY LOW

Appears when the battery voltage falls below the low voltage warning threshold and indicates that the battery requires charging.

By default, the low voltage warning threshold is 11V for lead acid batteries and 12.3V for LiFePO $_4$ batteries and can be configured by the user.

5 BATTERY OFF

Battery Off will appear when:

- 1. The user presses the battery button 6 to enter ECO mode
- 2. The **BatteryPlus35** has automatically entered ECO mode to preserve battery capacity until the battery can be charged.

To reduce current draw from the battery, all other display segments on the **Trek** will turn off as well.

6 BATTERY BUTTON

Enables ECO mode which powers off all caravan loads connected to the **BatteryPlus35** load terminal block, except for terminal 1. Battery charging is not affected by ECO mode.

As the caravan is no longer powered, ECO mode is a convenient way to save remaining battery power if you are on the road and have limited ability to charge the battery.

When charging, ECO mode ensures that all available charging current is dedicated to charging your battery.

In Set-Up mode, the Battery button acts as the EDIT function.

1 HOME BUTTON

To enter Set-Up mode on the **Trek** and configure user settings. In Set-Up mode, the Home button acts as the BACK function.

8 BACKLIGHT BUTTON

To turn the backlight/nightlight of the **Trek** screen on and off.

A single press of the Backlight button will turn the backlight on. Press again to turn the backlight off; otherwise the backlight will automatically turn off after 30 seconds.

To turn the nightlight on, press and hold the Backlight button for three seconds or until the backlight blinks. The nightlight will stay on for 10 hours. To turn nightlight off, press and hold the Backlight button until the nightlight turns off.

In Set-Up mode, the Backlight button acts as the UP-scroll arrow function.

9 WATER PUMP BUTTON

To turn the water pumps connected to the **BatteryPlus35** on and off. When the **BatteryPlus35** and **Trek** are first powered on, both pumps will be turned on as well.

To turn pump 1 on/off, press the Water Pump button once.

To turn pump 2 on/off, press and hold the Water Pump button until the desired change is seen.

In Set-Up mode, the Water Pump button acts as the DOWN-scroll arrow function.

1 TIME REMAINING

Indicates the estimate time remaining until the battery is completely discharged.

Time remaining less than 180 minutes will be displayed in MINS. Time remaining greater than 180 minutes will be displayed in HRS.

1 INPUT AMPS

Displays the current drawn by the **BatteryPlus35** from its auxiliary and solar inputs to power loads and charge the caravan battery.

If either of the inputs are unavailable to the **BatteryPlus35**, the **Trek** will display "--.-". If either of the inputs are available to the **BatteryPlus35** but not in use, the **Trek** will display "00.0".

1 WATER PUMP STATUS

Indicates if the pumps connected to the BatteryPlus35 are turned ON or OFF.

1 TANK LEVEL INDICATORS

Monitor water tank levels of up to 4 water tanks.

By default, tanks 1 and 2 are set-up to monitor clean water tanks and tanks 3 and 4 to monitor dirty water tanks. Tank properties are configurable in Set-Up mode.

The tank level indicator will flash when the monitored tank is empty (clean water) or full (dirty water). If a tank is not monitored, the indicator will be blank.

USING YOUR TREK

The **Trek** does not have an ON/OFF button. The **Trek** receives power directly from the **BatteryPlus35** through the connected data cable. The **Trek** will automatically turn off if it is not receiving power from the **BatteryPlus35**.

Upon start-up, the **Trek** will display *L***An '***L***A!** *L* **on its Home screen, until communication between the Trek** and **BatteryPlus35** is established.

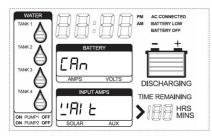


Figure 2: The Trek start-up screen

Once communication is established, the **Trek** will display the relevant battery and system information on its screen.

If the **Trek** cannot establish communication to the **BatteryPlus35**, the **Trek** will display EAn Err Eo.

Please check the data cable between the **Trek** and **BatteryPlus35**.

TREK SET-UP MODE

ENTERING SET-UP MODE

The **Trek** Set-Up mode allows you to access the functions to configure the **Trek** display, enter important battery information, set alarms and configure tanks.

To enter Set-Up mode, hold the HOME button down until **SEE UP** is seen on the Battery display.

The **Trek** Set-Up screen includes:

16 MENU FUNCTION DISPLAY

Displays the various Set-Up menu functions that can be accessed in Set-Up mode 1 and any associated information 6. If the function can be edited, the menu function will flash on screen.

2 EDIT

Use the Battery button on the Trek to select a menu function or sub-function to edit.

BACK

Use the Home button on the **Trek** to return to the previous 'Screen' or menu function. Repeatedly press the Home button to return to the **Trek** home screen.

45 SCROLL ARROWS

Use the Backlight and Water Pump buttons on the **Trek** to navigate the Set-Up menu and change values when configuring the **Trek**.

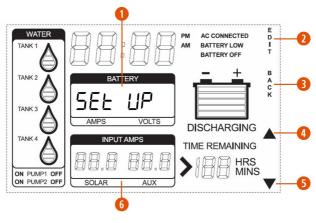


Figure 3: Trek Set-Up Mode

EXITING SET-UP MODE

To exit Set-Up mode or to exit from any menu function available in Set-Up mode, repeatedly press the BACK button until the **Trek** enters the Home screen.

Alternatively, wait and the **Trek** will automatically revert to the Home screen, saving any changes made when editing the menu functions.

SET-UP MODE MENU FUNCTIONS

Table 1 lists all the menu functions available to the user from Set-Up mode. When in Set-Up mode, use the up and down scroll arrows to navigate the Set-Up menu functions.

Table 1: Trek Set-Up menu functions

ELDEH	Set time on the Trek display
EAnHS	Configure the water tanks
ЪАЕСАР	Configure battery capacity of the battery connected to the BatteryPlus35
6AEAL.	Adjust low voltage warning thresholds for low battery alarm
БАН _С Т Е	Adjust the LCD backlight
AduAnE	Advanced menu settings. For technical personnel only. The functions available in the Advanced menu setting may vary with some versions of the BatteryPlus35 .
50L51	Displays the solar software version, available only when solar source is present
SOLHY	Displays the solar hardware version, available only when solar source is present
6P35 51	Displays the BatteryPlus35 software version
6P35 H <u>'</u>	Displays the BatteryPlus35 hardware version
Er251	Displays the Trek software version
Er2H1	Displays the Trek hardware version
FREEry	To perform a factory reset

CLOCK MENU FUNCTION

Time may be set in either 12- or 24-hour formats.

12-Hour Format

Enter Set-Up mode and navigate to the *ELDEH* menu function. Follow the directions in figure 4 to set the time in 12-hour format on the **Trek** display.

The AM and PM annunciators will automatically change as the hour changes from 11 to 12.

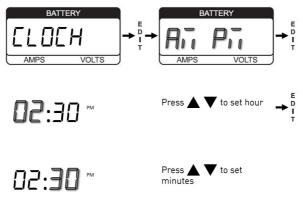


Figure 4: Setting 12-hour time format on the Trek display

24-Hour Format

Enter Set-Up mode and navigate to the *ELDEH* menu function. Follow the directions in Figure 5 to set the time in 24-hour format on the **Trek** display.

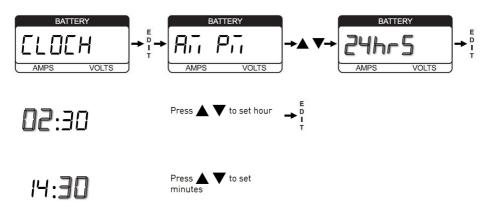


Figure 5: Setting 24-hour time format on the Trek display

WATER TANK MENU FUNCTION

Use the Water Tank menu function to choose to monitor and display (enable on/disable off) a water tank and configure the water tank type (clean/dirty).

Enable and Disable Water Tank Monitoring and Display

Enter Set-Up mode and navigate to the EAnH5 menu function. Follow the directions in figure 6 to enable or disable the monitoring and display of water tank with the **Trek**.

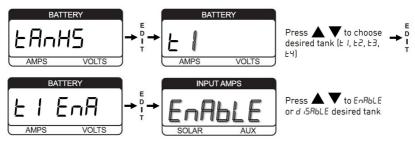


Figure 6: Enabling and disabling a water tank for monitoring and display with the Trek

Configure Water Tank Type

Enter Set-Up mode and navigate to the *ERnH5* menu function. Follow the directions in Figure 7 to configure the water tank type. The ability to configure water tank type is only available if monitoring of the tank is enabled.

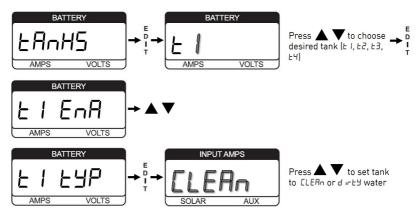


Figure 7: Configuring the water tank type

CONFIGURING BATTERY CAPACITY

The battery capacity needs to be set whenever a new battery is fitted to the **BatteryPlus35**. By default, the battery capacity is set to 100AH.

Correctly configuring the battery capacity ensures that the **BatteryPlus35** will select the best charging parameters for the caravan battery in use and the software accurately estimates battery usage including Battery Capacity and Time Remaining.

Enter Set-Up mode and navigate to the *BRECAP* menu function. Follow the directions in Figure 8 to configure the battery capacity. The battery capacity can be adjusted between 50 and 600AH in steps of 10AH.

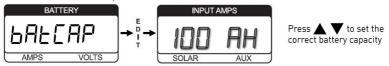


Figure 8: Configuring the battery capacity

CONFIGURING BATTERY ALARM

Configure the battery alarm and set the low battery voltage warning threshold to trigger the Battery Low warning on the **Trek** Home screen to indicate that the battery requires charging.

By default, the low voltage warning threshold is 11V for lead acid batteries and 12.3V for LiFePO $_{\!$ batteries.

Enter Set-Up mode and navigate to the *BRERLi* menu function. Follow the directions in Figure 9 to configure the battery alarm. The battery alarm can be adjusted between 10.0 and 14.0V in steps of 0.5V.

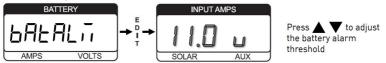


Figure 9: Configuring the battery alarm

LCD BACKLIGHT

Use the LCD Backlight function to change the brightness level of the **Trek**'s LCD backlight.

Enter Set-Up mode and navigate to the *bAHL1 L* menu function. Follow the directions in Figure 10 to configure the backlight brightness. The brightness can be adjusted between 0 and 100% in steps of 10%.

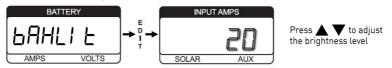


Figure 10: Configuring the LCD backlight brightness level

FACTORY RESET

Enter Set-Up mode and navigate to the FALLDry menu function. Follow the directions in Figure 11 to perform a factory reset and restore the **Trek** to the factory settings.

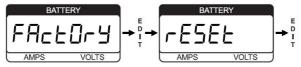


Figure 11: Factory reset

SERVICING

Do not attempt to service the **Trek** yourself, OR dismantle, modify or repair the **Trek** yourself; this will void your warranty. If your **Trek** requires servicing, please consult your BMPRO dealer or visit **teambmpro.com** for assistance.

FAQS AND TROUBLESHOOTING

Need more help troubleshooting your Trek?

Contact our customer service team online at **teambmpro.com/technical-support/** or give us a call on (03) 9763 0962.

Why has the Trek screen turned off?

The **Trek** receives power to run the monitor from the **BatteryPlus35**. If the **BatteryPlus35** shuts power to the monitor, the **Trek** screen will turn off. The **BatteryPlus35** will shut power to the **Trek** if:

- The user activated the load isolation switch connected to the BatteryPlus35. This turns off power to the data cable connecting the Trek and BatteryPlus35. Check that the switch has not been activated.
- The BatteryPlus35 has entered Storage Mode and to conserve remaining battery voltage will disable power to the Trek.
 To re-power the Trek, plug the BatteryPlus35 to a power source and begin battery charging. When the battery is sufficiently charged, the BatteryPlus35 will enable power to the Trek.

Why are the battery volts and amp flashing on the Trek?

Battery volts and amps will flash on the **Trek** if a **BC300 + CommLink** external shunt has been installed and communication with the shunt has been lost.

Use the advanced menu function <code>E5hUnE</code> to clear the external shunt from memory and re-establish communication with the **BC300 + CommLink**. See the **Appendices** for more details.

APPENDICES

ADVANCED MENU FUNCTIONS

Configure Battery Chemistry

The ability to configure battery chemistry is available only if the **Trek** is in use with the **BatteryPlus35-HA** which is capable of charging both lead acid and LiFePO₄ type batteries.

By default, the **BatteryPlus35-HA** is configured to charge lead acid batteries, and this can be changed with the **Trek** monitor.

To configure the **BatteryPlus35-HA** to charge LiFePO₄ batteries with the **Trek** monitor, enter Set-Up mode, select the *RduAnE* menu function and navigate to the *bREEH*, menu function. Then follow the directions in figure 12.



Figure 12: Configuring battery chemistry

Clear External Shunt

This function is only available if the **BC300 + CommLink** external shunt is installed on the caravan battery. This menu item should be used when communication with the external shunt is lost. See **FAQs and Troubleshooting** for more details.

To clear an external shunt, enter Set-Up mode, select the AduAnE menu function and navigate to the E5hUnE menu function. Follow the directions in Figure 13.



Figure 13: Clearing the external shunt

Adjusting Bulk Voltage

The bulk voltage is the maximum voltage at which the **BatteryPlus35** will charge the battery. The bulk voltage may be adjusted from 13.6 to 14.8V in steps of 0.1V.

<u>∧</u> WARNING

Changing the bulk voltage may result in the battery overcharging and cause damage to the battery and in extreme cases may also cause personal harm.

If unsure DO NOT change the default values.

To adjust bulk voltage, enter Set-Up mode, select the AduAnE menu function and navigate to the EHAn9E menu function. Follow the directions in Figure 14.

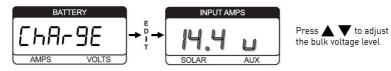


Figure 14: Adjusting bulk voltage

SPECIFICATIONS

Trek		
Input Voltage Range	8-15V	
Battery Drain	< 21mA with backlight off	
Ambient Temperature	0-50°C	
Dimensions (mm)	156W x 94Hx15D	

WARRANTY TERMS AND CONDITIONS

Registering your BMPRO product is an important step to ensure that you receive all the benefits you are entitled to. Please visit **teambmpro.com** to complete the online registration form for your new product today.

- BMPRO goods come with guarantees that cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for major failure and for compensation for any reasonably foreseeable loss or damage. You are entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under this Warranty are in addition to your other rights and remedies under a law in relation to the goods to which this Warranty relates (the Australian Consumer Law).
- 2. BMPRO warrants products against defects for a period of two years, commencing from the original date of purchase. Proof of purchase is required before you can make a claim under this warranty.

HOW TO PROTECT YOUR RIGHTS UNDER THIS WARRANTY

- 3. The **Trek** is designed to be installed by a suitably qualified installer. You or your installer should carefully inspect the products before installation for any visible manufacturing defects. We accept no responsibility in addition to our consumer guarantee obligations where a product has been installed incorrectly.
- 4. This warranty does not extend to product failures or defects caused by, or associated with, but not limited to: failure to install or maintain correctly, unsuitable physical or operating environment, accident, acts of God, hazard, misuse, unauthorised repair, modification or alteration, natural disaster, corrosive environment, insect or vermin infestation and failure to comply with any additional instructions supplied with the product.
- 5. BMPRO may seek reimbursement of any costs incurred by BMPRO when a product is found to be in proper working order or damaged as a result of any of the warranty exclusions mentioned in point 4 of this statement.
- 6. To enquire or make a claim under this warranty, please follow these steps:
 - a. Prior to returning a BMPRO product, please email **customerservice@teambmpro.com** to obtain a Return Material Authorisation (RMA) number
 - b. Package and send the product to: BMPRO Warranty Department
 19 Henderson Road Knoxfield, VIC 3180 Please mark RMA details on the outside of the packaging
 - c. Please ensure the package also includes: a copy of the proof of purchase, a detailed description of the fault and your contact details including phone number and return address.
- 7. BMPRO will not be liable for any costs, charges or expenses incurred in the process of returning a product in order to initiate a warranty claim.

POWERING YOUR ADVENTURES.



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