POWERTECH

QP2265

Bluetooth 12V Battery Monitor
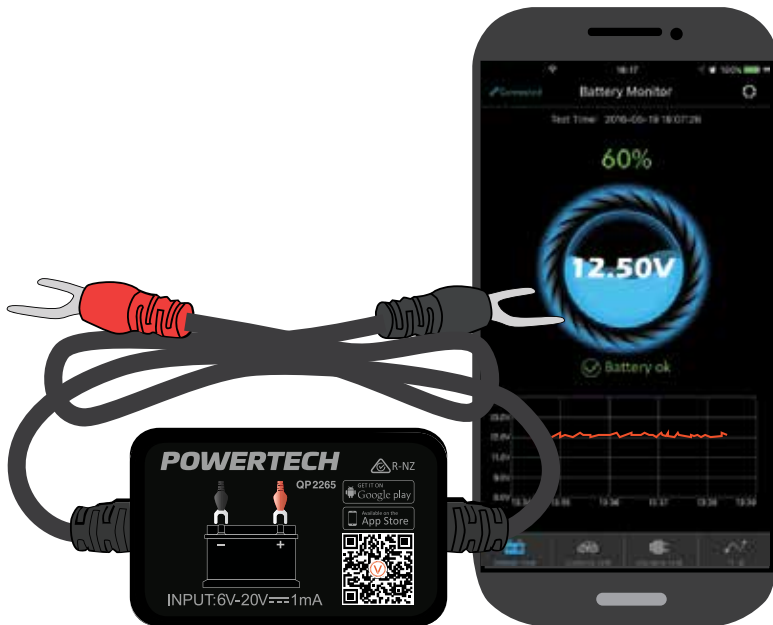
Instruction Manual

CONTENTS

BEFORE FIRST USE

Prior to using your product, please read all the safety and operating instructions thoroughly. Please ensure you follow the steps below before using the product. We recommend you keep the original packaging for storing the product when not in use.

Please pay close attention to the section entitled Warnings & Safety Information. Find a safe and convenient place to keep this instruction manual for future reference.

Unpack the product but keep all packaging materials until you have made sure your new product is undamaged and in good working order. Ensure you have all accessories listed in this manual.

WARNINGS & SAFETY INFORMATION

WARNING: The manufacturer is not responsible for any potential injury from misuse

- Product should not be exposed to over 20V else the monitor can get damaged.
- App requires smart devices. Earliest compatible versions are Android 4.3 and iPhone 4S.
- Smart device/ phone will only receive notification when in Bluetooth range of
- 10m.
- During initial set up, if the user does not allow the mobile device to access location data, mobile device will not receive notifications.
- This can be changed by entering mobile device settings menu and allowing access to location data for the app.
- If the 'daily test alert' or 'daily exception alert' functions are not enabled in the app, the mobile device will not receive these notifications. They can be enabled in the app at any time.
- Firmware updates will clear all data in the device if not allowed to sync to the app first. To avoid this, make sure the mobile device is in range of the battery monitor and allow the sync to complete before starting the firmware update.
- If app is updated or upgraded, all historic data will be retained. If app is deleted from mobile device, all historic data will be lost.
- The device can monitor and store up to 35 days of data without syncing to mobile device. If the mobile device does not come in the vicinity of the monitor within 35 days all previous data will be erased making space for new data.
- On set up, when mobile device is searching for monitor make sure that phones Bluetooth is switched ON and is in close proximity to the monitor.

BOX CONTENTS

1 x Bluetooth 12V Battery Monitor
1 x Manual
1 x Pair Hook & Loop Velcro

PRODUCT INSTALLATION

NOTE: Be careful not to disconnect car battery leads from battery while installation, you chance to lose vehicle memory settings.

1. Connect red connector to Positive (+) battery terminal and black to Negative (-) battery terminal.
2. Mount monitor on battery with supplied hook and loop tape. Clean surface of battery and unit prior to installing. We recommend to install the unit on top of battery for better line of sight for wireless connectivity.
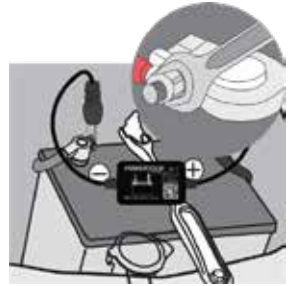
APP INSTALLATION

(Fig 2)

(Fig 3)

1. Scan the QR code on the product, this would direct you to App Store or Google Play, download and install App. (Fig.2).
2. Search BM2 on App Store or Google Play. Download and install App. (Fig.3).

10m   10m   (Fig 4)

APP OPERATION

1. Stand in close proximity of battery monitor and open all on mobile device.

2. Allow app to access location even when not in use. if disallowed, device will not be able to send notification to mobile device (Fig.6).
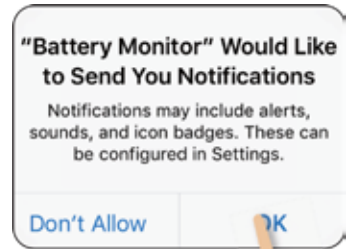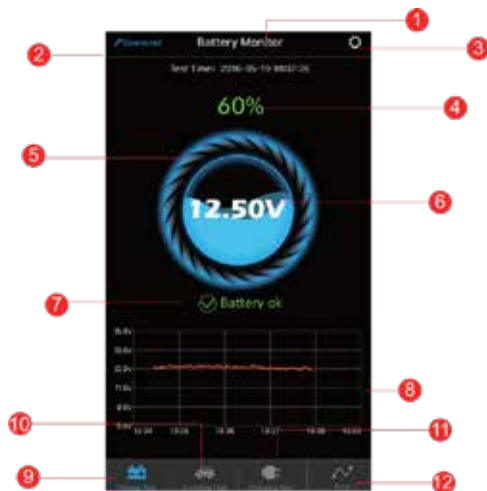

(Fig 5)

3. Allow app to receive notifications. Notifications include alerts on car battery, cranking system and problem alerts. Once turned ON mobile device will receive notifications once in Bluetooth range irrespective of app running or not (Fig.5).
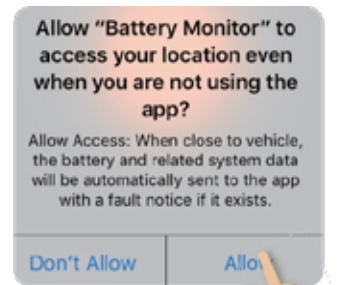

(Fig 6)

(Fig 7)

Main Menu

1. This is the device name, can be changed to your preference under Device Management in system set up menu.

2. Displays connection status, BLUE indicated connected, RED indicates disconnected.

3. System Setup icon, touch to enter System Setup.

4. Shows state of charge of battery as percentage, 100% is fully charged.

5. Is the charge status ring, this is a graphical representation of battery state of charge, will change as state changes.

6. Actual voltage of the battery, for reference battery is considered full over 12.7v, ok between 12.7v and 12.4v and need to change below 12.4v.

7. Quick status indicator, Blue (OK), Orange (Charging), Red (LOW).

8. Battery voltage graph. Touch this graph to access Voltage History graph for last 24 hours and previous days.

9. Battery voltage test icon. This is the default screen and will be first displayed when app is opened.

10. Cranking system test icon. Starting the vehicle with this selected will perform a starting system test and report results.

11. Charging system test icon. Selecting this while the vehicle is running will test the vehicle charging system (alternator).

12. Trip record icon. The unit records the duration of engine run time to keep a record of trip duration. Selecting this button will display recent trip activity.

Voltage History Graph

(Fig 8)

(Fig 9)
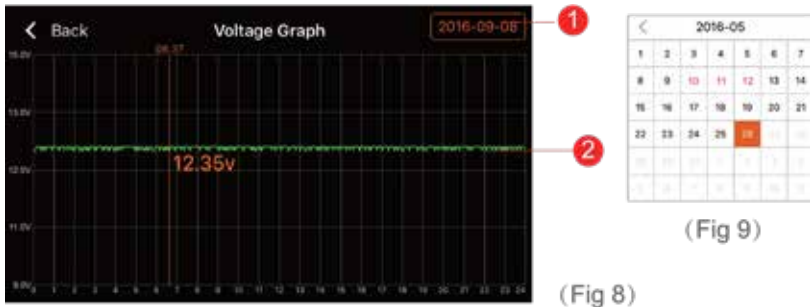
1. Date Select: Press this to display calendar. Select a particular date to see voltage recorded over that 24 hour period. Dates displayed in Red have voltage abnormalities (under 12.4V) or problems to report.
2. After selecting a date, a graph will be displayed. Touching the screen will display the exact voltage and time at that point. Slide your finger across the graph to find precise points.

System Setup

1. Change slider on to receive notification of battery condition (when in range). Default is 1 notification each 6 hours (when in range). Can change to user requirements.
2. Change slider on to receive notification of cranking system (when in range). Default is 1 notification each 6 hours (when in range). Can change to user requirements.
3. Power Alarm: Change slider on to receive notification. Option of selecting a couple of trigger points. When battery reaches those points user will receive notification (when in range).
4. Bluetooth Device Setup: Displays current connection status. Press this to enter system setup. This is where nearby devices can be found, review other connected devices, switch between multiple devices connected to different batteries. Battery monitor can be renamed as well.
5. Hardware Installation: Instructions for device installation are present here.
6. Firmware Upgrade: Software of Battery monitor will be upgraded at times for better user experience and additional features. Stay up to date with firmware upgrades.
7. Version: Displays the current app version number.
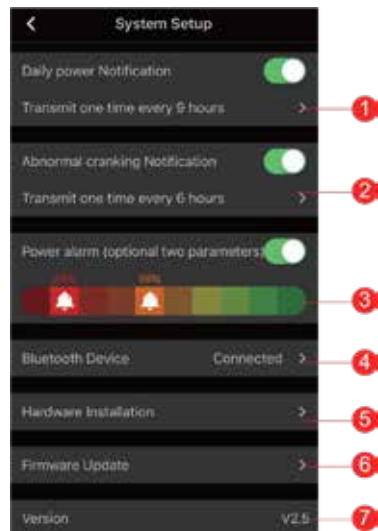
Cranking Test

1. Test time and date.

2. Cranking test: when engine starts, the device will test the cranking system automatically and store the test result. Usually, if the cranking voltage is higher than 9.6V, it means normal. But if the cranking voltage is less than 9.6V, it means abnormal. If the cranking voltage is too low, possibly aging of battery, low power, or starter fault etc. Seek further advice from an auto electrician or mechanic.

3. Display the cranking voltage values, green bar indicates good voltage, red bar indicates problem.

4. Cranking voltage graph. Displays cranking voltage over time taken to start engine.

5. Historic results. Swipe sideways to view previous test results (max. 2 tests). Orange dot indicates page you are viewing.
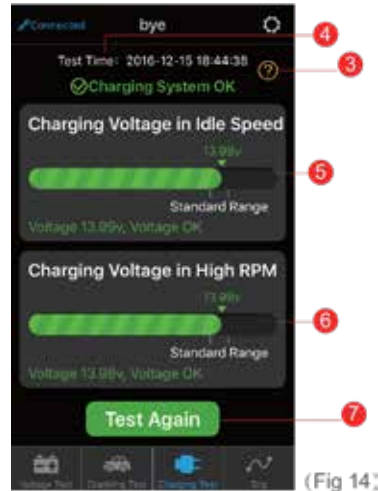
Charging Test`

(Fig 12)　　(Fig 13)
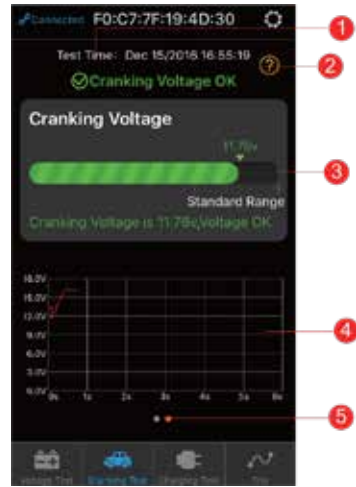
1. Select to start test, will display idle state voltage. Display will switch to next step Fig. 13

2. High RPM Voltage Test, increase RPM as suggested below and hold reading for 3~5 seconds. Test is complete.
   - 4cyl - 2500/min
   - 6cyl - 2000/min
   - 8cyl - 1600/min

Charging Voltage Test

3. Charging Voltage Test

    - Charging Voltage normal
      Charging system shows the alternator
      output normal, no problem detected.

    - Charging Voltage Low
      Charging voltage is low. Check if
      engine transmission belt has slipped or
      disconnected, check whether the line
      connection between alternator and
      battery is normal or not. If transmis-
      sion belt and line connection is good,
      please follow the car manufacturer's
      recommendations to rule out alternator
      failure.

    - Charging Voltage: High
      The alternator output voltage is too
      high. Since most automotive engines use built-in regulator, need to
      replace alternator assembly (Old vehicles use external regulator, please re-
      place regulator directly). Common voltage limits for automotive regulator
      is 14.7÷0.5V. High charging voltage will overcharge the battery and shorten
      its life, also can make it malfunction.

    - No Voltage Output: No engine voltage output is detected. Check whether the
      alternator cable and the alternator belt are working properly. (See Fig 14).

4. Charging test finished time.
5. Voltage under idle test, green is ok, red is abnormal.
6. High RPM voltage test, green is ok, red is abnormal.
7. Click button to re-test.

Trip Record

1. Click search icon to review driving
    records via selecting date.
2. Date bar, separates dates between trips.
3. Start time, trip duration and finish time.

TROUBLESHOOTING

PROBLEM	SOLUTION
Unable to connect to Bluetooth	• Please ensure that permissions have been enabled, including Bluetooth and location service permissions. • Keep the distance between the mobile phone and the device within 5 meters. • Ensure the device is correctly installed & is powered up • Try restarting the phone's Bluetooth or the phone • Power cycle the device
On Bluetooth connection the device requests a password	The device **doesn't** need to enter a PIN code to connect to Bluetooth. If your mobile device requests a password, please just ignore the PIN code pop-up window to continue
Inaccurate battery readings	The system is configured with an automated algorithm which is accurate for most vehicles. If the power level does not accurately reflect your system, it can be changed via the "battery parameters" menu in the App. Simply change the battery type to "Custom Battery" & adjust the settings as required.
Not receiving notifications	Check phone settings to confirm notifications are enabled. Please check with your device manual for instructions on how this is set.
How to set a custom device name	On the Bluetooth device page, click on the "Battery parameters" of each device to view the details and modify the device name and battery type etc. Note: The parameters can only be modified when Bluetooth is connected.

PROBLEM	SOLUTION
Not displaying vehicle start-up data	Ensure the device is installed on the vehicles primary battery. After starting the vehicle, the App will automatically receive the test data.
Unable to perform a charging system test	The device must be installed onto the vehicles main starter battery. Some vehicles will not work with this mode, particularly if they use a smart alternator. You will need to consult the vehicle manufacturer for further information.
Loss of historical data	The device only stores data for 35 days. If the device is not connected to a mobile device within that period, the data will be lost.
How to delete device information in the app?	Deleting the app or clearing app data via your device's settings will clear all data.
Can more than one device connect to the app?	The app can connect to only one device one time. If more than one device, although the app can't connect at the same time, but user can switch the device to connect.

SPECIFICATIONS

Average Current	1mA
Input Voltage	6~20V
Operating Temp.	-40ºC ~ 90ºC
Dimensions	55 x 35 x 16mm
Voltage Accuracy (9-16V)	+/- 0.03V
Short Circuit Protection	Built-in
Reverse Connection Protection	Built-in
Bluetooth Name	Battery Monitor
Bluetooth Range	Up to 10m (without inteference)
App Name	BM2

WARRANTY INFORMATION

Our product is guaranteed to be free from manufacturing defects for a period of 12 Months.

If your product becomes defective during this period, Electus Distribution will repair, replace, or refund where a product is faulty; or not fit for intended purpose.

This warranty will not cover modified product; misuse or abuse of the product contrary to user instructions or packaging label; change of mind and normal wear and tear.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

To claim warranty, please contact the place of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim.

Any expenses relating to the return of your product to the store will normally have to be paid by you.

The benefits to the customer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods or services to which this warranty relates.

This warranty is provided by:

Electus Distribution
Address 46 Eastern Creek Drive, Eastern Creek NSW 2766
Ph. 1300 738 555