



Battery fleet management

**Strategy
to keep your
productivity
to a maximum.**



Take control of your battery fleet...

Battery fleet management

One of the challenges facing many companies today is the effective management of their fleet of motive power batteries. Multi-shift manufacturing operations, longer retail trading hours and the demand for faster logistics solutions are part of everyday business life. Keeping your materials handling equipment running, often times 24 hours a day, to support your business creates the need for battery changing. Selecting the "best battery" is vital to keep your truck fleet up-time and productivity to a maximum. EnerSys have a solution that makes managing your battery fleet straight forward and affordable. Communication between the EnerSys HF chargers and the pc is automatic and requires no data input from your staff. Battery selection by your truck operators is simple, it just requires them to look at the screen.

Hardware

EnerSys can configure their HF Chargers (that are equipped with communication capability) to support Battery Fleet Management. An option board is added as a factory fitment or as a retro-fit in the field, all chargers are networked to a pc via cabling and multiplexors. The pc can be located in the battery room or in an office if preferred.

The system is fitted with a visual and audible alarm which is triggered if the incorrect battery is selected. An optional LED message board can be added to the system for increased visibility of data in the battery room.

Look at the benefits...

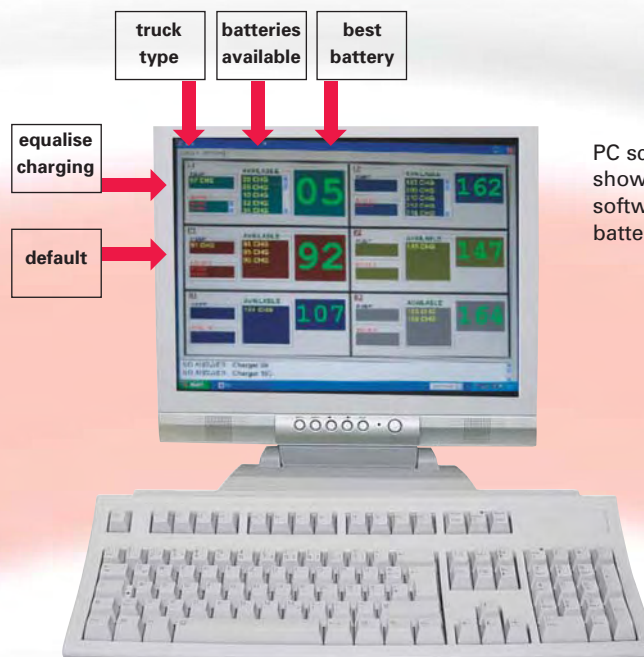
- maximises battery utilisation across your fleet
- avoids the need to dedicate batteries to specific trucks
- manages charging & battery rotation
- reduces battery changing time
- improves battery service life
- integrates pc controlled automatic
- equalisation charging

BFM Software Program

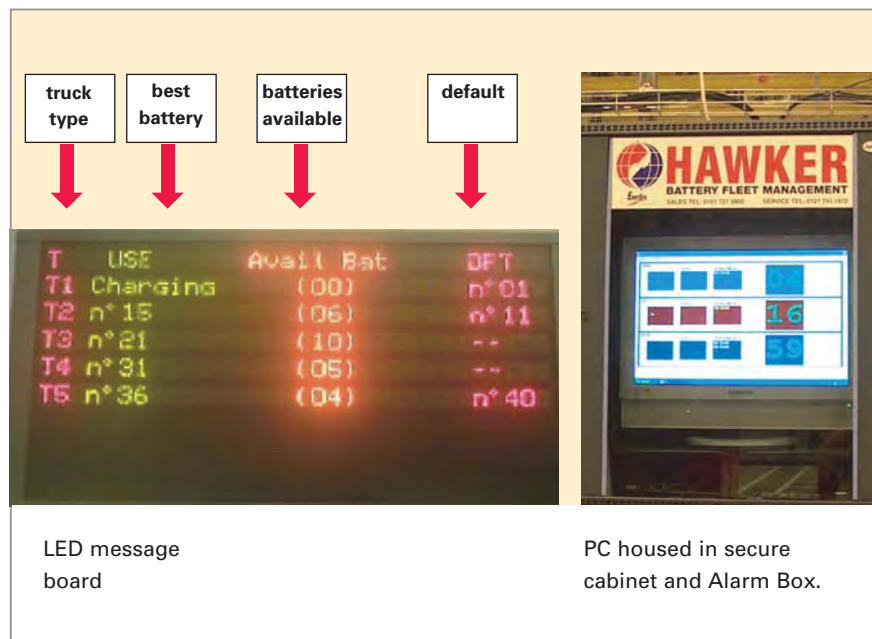
The BFM program, which is set up on a pc, is an extremely easy to use "first in, first out" system. The software can manage up to 12 battery families and 500+ chargers.

Each truck type or battery family is allocated a name and the pc screen displays the relevant data :

- "next battery"
- "batteries available"
- "batteries equalisation charging"
- "defaults"



PC screen showing BFM software with 6 battery families



LED message board

PC housed in secure cabinet and Alarm Box.

PowerNet

Building on the success of the BFM system, EnerSys has developed the PowerNet software program which adds some great new features for the effective management of your charging room. If you are dedicated to getting the optimum performance and service life from your battery fleet, having visibility and control of your battery charging operation and also controlling the amount of power you use in the battery room then PowerNet is what you have been waiting for!

Features

- "First in, first out" Battery Fleet Management
- Allocates "best battery" for each truck type
- Can manage 10 truck/battery families
- Can manage 500+ chargers
- Visibility of other fully charged batteries
- Check status of all chargers
- Visibility of all charge cycles - number, complete, incomplete & equalise
- Remote access to data via internet

Additional features

(When batteries are equipped with easyplus devices)

- Check status of all batteries
- Check for over-discharging
- Check for high operating temperatures
- Identify potential faults (before breakdowns occur)
- Identify which batteries require water topping

Battery data

The screenshot shows the 'Batteries status' page in the PowerNet software. It includes a search bar, several filter checkboxes (TFC, OverDisch., Low Level, Chrg. Stop, Balance, All None), and a data table. The table has columns for BATTERY, CHARGER, WARNING (TFC, OverDisch., Low Level, Chrg. Stop), Balance, Cycles (Total, Complete, Incomplete), and a 'Next' button.

BATTERY	CHARGER	WARNING	Balance	Cycles				
		TFC	OverDisch.	Low Level	Chrg. Stop	Total	Complete	Incomplete
						cycles	cycles	cycles
S115942006	09					2	2	0
S115942019	10				
S116103001	100			X		5	4	1
S116103004	101					4	4	0
S116897014	102					1	0	1
S116897010	103					2	2	0
S116103006	104			X		4	2	2
S116525011	12					3	2	1
S116525005	13					4	2	1
S115942020	14					6	5	1
S115942005	15				
S116525002	17					2	1	1
K116K9012	18					4	4	0

Charger data

The screenshot shows the 'Charger data' page in the PowerNet software. It displays 'REAL POWER 30445.68 W' and a table of charger and battery status. The table has columns for CHARGER Name, Address, Power, BATTERY Serial, Capacity, Voltage, and STATUS.

CHARGER	Name	Address	Power	BATTERY	Serial	Capacity	Voltage	STATUS
01	1	0	0					AVAIL
02	2	0	0					AVAIL
03	3	0	0					WAITING
04	4	0	0					AVAIL
05	5	0	0					AVAIL
06	6	0	0					CHARGE
07	7	0	0					AVAIL
08	8	0	0					WAITING
09	9	0	0	S115942006	625	24		AVAIL
10	10	0	0	S115942019	625	24		AVAIL
11	11	0	0					WAITING
12	12	0	0	S116525011	625	24		AVAIL
13	13	0	0	S116525005	625	24		AVAIL
14	14	0	0	S115942020	625	24		AVAIL
15	15	0	0	S115942005	625	24		AVAIL
16	16	0	0					AVAIL
17	17	0	0	S116525002	625	24		AVAIL
18	18	0	0	S116525014	625	24		AVAIL



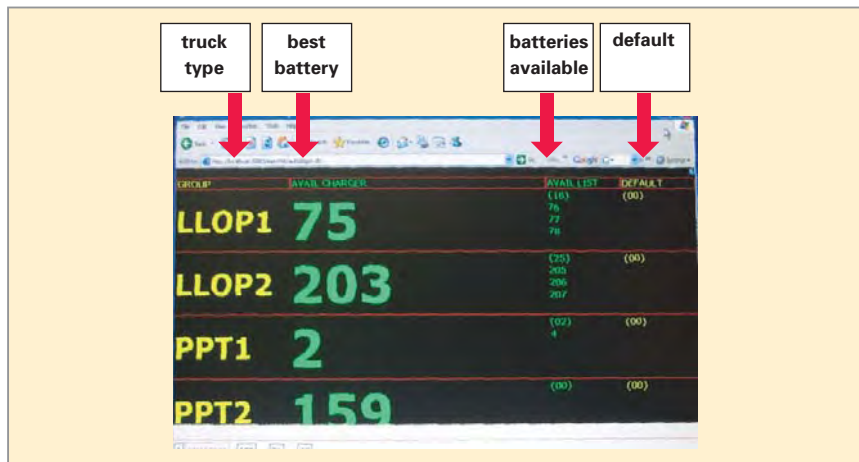
Battery room display

PowerNet operating data is displayed on a pc monitor with the option of a LED message board.

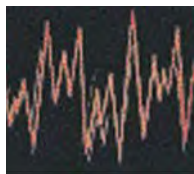
Data access

In addition to the main display for "first in, first out" battery management, PowerNet can provide detailed information about your complete battery room operation. Access to this data can be controlled by adding security levels. The pc in the battery room can be connected to your company network if you wish. This means you can access data from anywhere on site.

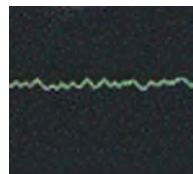
Remote access is also part of the package. Connect the battery room pc to your telephone system and PowerNet will upload the data to the EnerSys central server. You can then access the data for your site via the internet. So even if you are on the move, or have multi-site responsibility, you can stay in control.



Electricity power demand



Fluctuating electricity consumption without power management



Balanced electricity consumption using PowerNet

Controlling the rate at which you use electricity can have a dramatic impact on how much you pay. Peaks in demand above agreed thresholds generally mean large premiums.

PowerNet can be programmed to manage the total power used in your battery room by switching chargers on/off automatically to maintain electricity consumption within desired parameters.