



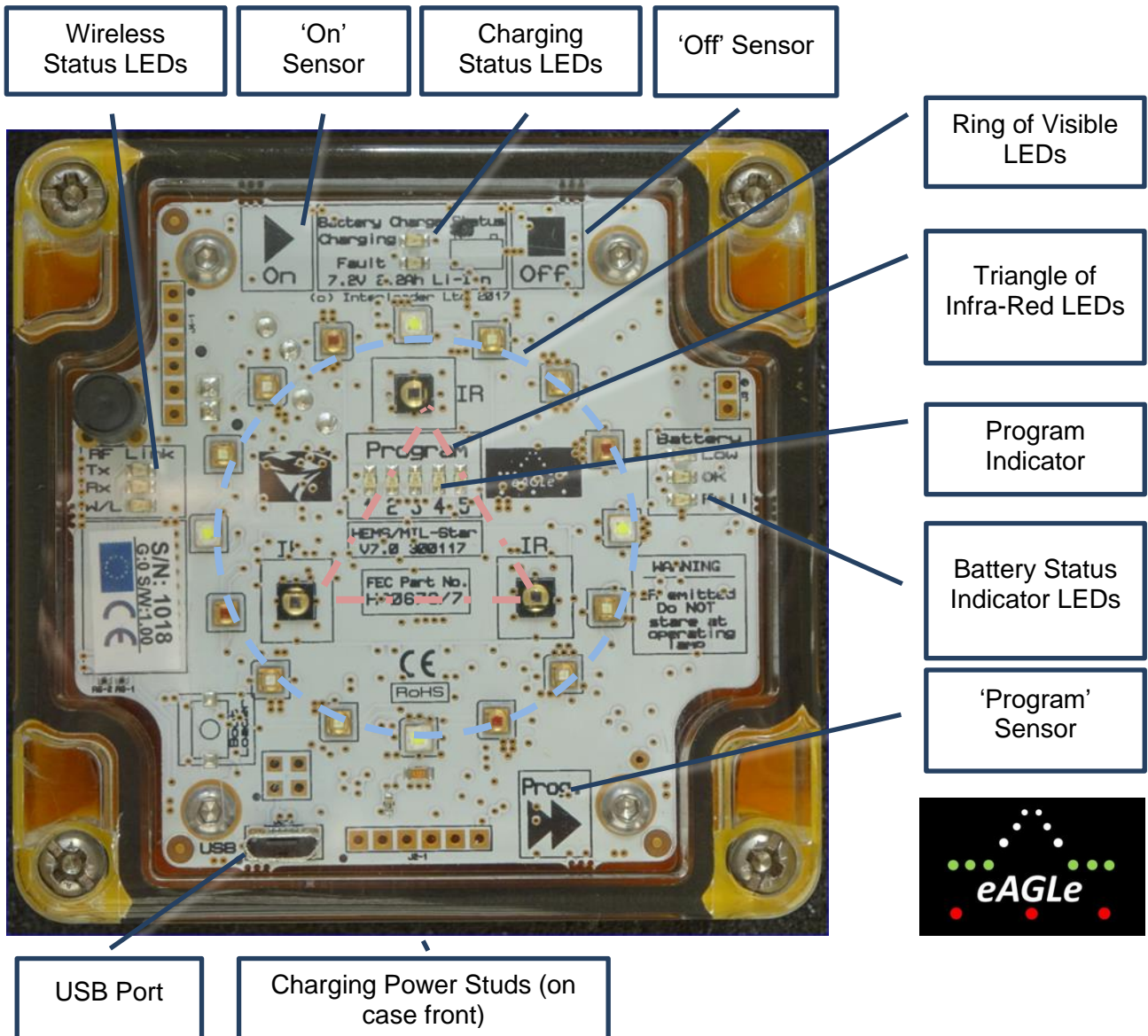
FEC Heliports Equipment

HEMS-Station® & HEMS-Star®

HEMS-Station® & HEMS-Stars® comprise the enclosure with integrated charger and the lights respectively.

HEMS-Station® is available in two variants: HP0723 - the basic charger system (from mains, solar or wind turbine) and HP0725 as above plus fitted with a HEMS-Station® Lighting Controller (HLC).

The lights are completely self-contained, advanced portable lighting solutions, incorporating; microprocessor main controller, magnetic control switches, advanced LED driver units, visible and infra-red LEDs, Li-Ion battery, advanced battery charging control and monitoring system, charging studs, USB port for field upgrade of the software and a UHF wireless interface for programming, monitoring and controlling the light from either: a HEMS-Station®, Remote Lighting Controller, a PC with the provided wireless 'dongle', a Mobile Lighting Controller (MLC) or an optional Key Fob Controller (KFC).



To get the most from your Light please read the manuals thoroughly 



1. Basic Operation

Basic On/Off/Program selection of the lights is achieved by activating magnetic sensors inside the unit using a small magnet (supplied).

Turn Lights On

To turn a light on, momentarily bring the Magnetic Key Controller (MKC) in line with the 'On' sensor on the unit's top panel (picture top right).



Turn Lights Off

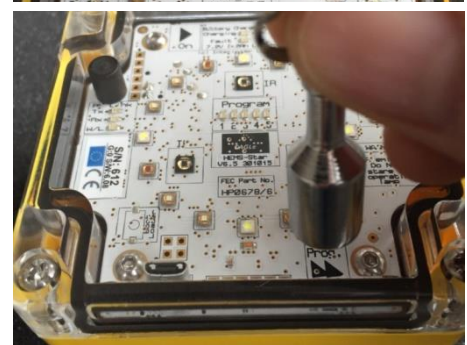
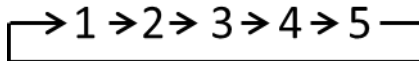
To turn a light off, momentarily bring the Magnetic Key Controller (MKC) in line with the 'Off' sensor on the unit's top panel (picture middle right).



If the unit is off, bringing the MKC in line with the 'Off' sensor, displays the current Program and battery status (useful for a quick check without having to turn the unit on)

Advance Light Program

To advance the light to the next Program, momentarily bring the Magnetic Key Controller (MKC) in line with the 'Program' sensor on the unit's top panel (picture lower right). Program advance is:



The Program can also be advanced with the unit off in which case the current Program is briefly shown and then the Program advances by one.

2. Default Program Settings

The default program settings are:

Program	1	2	3	4	5
Colour	Green	Green	Green	Red	White
Visible Level	50%	50%	50%	75%	100%
Single/Dual	Single	Single	Dual	Single	Single
IR Level	30%	30%	50%	30%	30%
Mode	Steady	Steady	Steady	Flash	Flash
Flash Pattern	1:3	ID Single	ID Dual	ID Dual	Morse 'H'
Normal/Sunset Switching	Normal	Sunset	Normal	Normal	Normal
Stealth	Normal	Normal	Normal	Normal	Normal
Comment	Shipping setting		Warning IR Emitted		

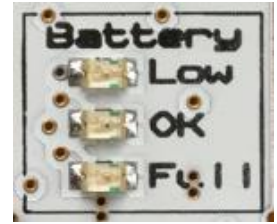
Both visible and IR LED levels can be set to 1%, 3, 10%, 20%, 30%, 50%, 75% & 100% of the maximum output.

Note that greyed-out figures above mean that these are set in the program memory but ignored because of the other settings. e.g. in program 1 Dual Mode is set at 30% but is ignored because program 1 is set to Single Mode.



3. Battery Capacity 'Traffic Light' LED indicators

LED Status	Battery Voltage	Meaning
Red flash every 10s	<6.00V	Battery exhausted – Switch off & Recharge
Flashing Red every 1s	6.00V - 6.25V	Battery nearing exhaustion. Switch off & Recharge
Solid Red	6.25V – 6.80V	Battery low (<20% remaining).
Solid Orange	6.80V – 7.50V	Battery OK (between 20% and 80% capacity)
Solid Green	>7.50V	Battery Full (>80% capacity)



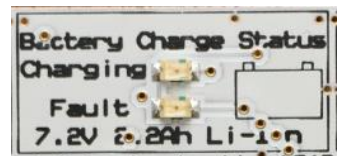
4. Charging

The lights are charged in the HEMS-Station[®] using the integrated mains Power Supply Unit or from a nominal 12V or 24V DC supply (e.g. car or truck) or directly from a 12V (nominal) PV Solar Panel.

Battery Charge Status LEDs (visible when in the HEMS-Station[®]) indicate:

Charging: Green LED lit while charging – Goes out when fully charged

Fault: Red LED lit if there is a battery fault – stop charging and investigate cause (see manual)



5. HEMS-Station[®] Systems

The two variants of HEMS-Station[®] are shown below. Both share the same charging system (mains, Solar PV and Wind Turbine), 10 way charging racks, enclosure light, mains cabinet heater and door mounted spike rack.

HEMS-Station[®] HP0725 additionally has a VHF receiver for pilot activation, a UHF transceiver for wirelessly controlling HEMS-Stars[®] and a GSM (Cellular) radio for remote monitoring and control.

With additional equipment packs, HEMS-Station[®] can also control additional circuits such as windsocks and, with the MetPak weather station, enable local weather to be determined at the helipad.



Up to 10 HEMS-Stars[®] can be accommodated and charged in the two charging bays from any of the available power sources (automatically selected). HEMS-Stars[®] are simply slotted into the bays and pick up on the charging points. They are removed quickly and easily by raising above the retaining lip and pulling back out – no wires are involved.

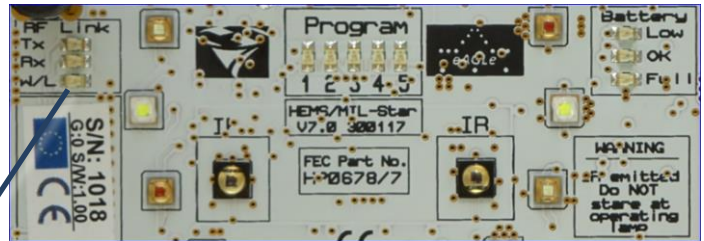


6. Wireless Controller

All lights are shipped in manual mode and will operate at the colour and intensity selected by default Program 1 (Green, 60% of max) when first turned on.

All lights will come on in manual mode and the blue Wireless LED will be off.

Wireless LED
(Blue)



The wireless (blue LED) will light when the unit is in 'Standby' wireless mode.

Wireless Groups

To enable control of a specific group of lights in a situation where multiple groups are deployed (for example, multiple adjacent pads), all lights belong to a 'Group'.

Groups of lights will then respond to Wireless PC Controller or Remote Lighting Controllers (RLC) set to that group number. Lights are shipped set at Group 0 (as is the RLC default settings).

If multiple groups of lights are to be controlled then each set needs to have their Group set using the wireless PC Controller software.

HEMS-Station® HP0725 (with HLC) is shipped with the UHF transceiver and command auto-repeat switched off as many installations use manual only activation. Read the HEMS-Station® manual to confirm how the UHF radio is set for full wireless operation.

7. Support Documentation

Documentation, including this manual, is contained on the CD in the case.

Also on the CD are short video clips that demonstrate various aspects of setting up and using the lights and charger. Updates may also be posted on the FEC website.

Material on the USB Stick:

There are a number of folders and files on the CD containing (typically):

Application Files	Systems Management Software
Battery Data	Manufacturers declaration about the battery
HEMS-Stars® Manuals, Software & Videos	Materials relating to the HEMS-Stars® lights
HEMS-Station® Manuals & Software	Materials relating to the HEMS-Station®
KFC Software	Software for the optional Key Fob Controller
Labels	Battery shipping labels
Systems Management Software	PC Controller software
Setup	Setup file for Systems Management Software running on operator's PC

