



The MEON LiFe (internal Lithium-Iron-Phosphate [LiFePO₄] battery), is a self-contained power system that provides up to 18 Amps* of 12 Volt DC and 20 Amp-hours of internal Lithium-Iron-Phosphate battery backup to ten standard 4-pin outlets all in a single, silent, 1-rackspace module weighing less than 14 pounds. The chassis is constructed of durable and lightweight powdercoated aluminum, and the removable mounting ears can be adjusted and reversed to allow mounting in a variety of configurations. An illuminated voltmeter is included, and the MEON LiFe can connect to Remote Audio's RM or RS accessories which enable remote ON/OFF capability and battery monitoring. Two USB output jacks are available at the front panel for charging or powering standard 5VDC USB devices.

Description

The MEON LiFe employs an illuminated single-button ON/OFF system which requires the user to hold the button for approximately 2 seconds. This helps prevent accidental power cycling of the system. When the unit is receiving 90VAC-264VAC power, the power button glows GREEN, and current is provided by a low-noise AC-DC power supply able (up to 18A). When AC power is present, the internal battery is bypassed from the outputs and charged via its own dedicated, internal, 5A charger. When AC power is unavailable or interrupted, the battery seamlessly takes over. The power button then glows RED. When AC power is restored, the AC-DC supply takes over again, the battery resumes charging, and the power button glows GREEN --conveying the origin of your power at all times.

Internal LiFePO₄ Battery

The MEON LiFe's Lithium-Iron-Phosphate (LiFePO₄) batteries share a common property with all Li-Ion technologies in that they are lower weight and smaller size than equivalent capacities in other chemistries, such as Lead Acid and NiMH. However, a key advantage of LiFePO₄, when compared to other Li-Ion types, is its superior thermal and chemical stability. LiFePO₄ cells are virtually non-combustible (even if mishandled during charge/discharge) and can handle much higher temperatures without degrading in performance. LiFePO₄ also offers a longer calendar life and higher peak-power rating than other Li-Ion designs, and it contains no toxic heavy metals.

The MEON LiFe's internal battery is polyfuse-protected for a maximum output of 14A, and is protected from over-charge and over-discharge conditions.

Mounting the MEON LiFe

The MEON LiFe can be mounted in a number of ways:

In a standard 19-inch single rack space. The mounting ears can be positioned so that connectors face inward or outward. An ON/OFF button and "Charge Status" LED are on both sides of the MEON LiFe, to facilitate front or back mounting. The mounting tabs are also adjustable so that the connectors can be recessed safely out of the way.



The mounting ears can be removed so that the MEON can be placed on a horizontal surface such as a cart shelf.



Output Connectors

There are ten DC power outlets on the back of the MEON LiFe, wired in the standard 4-pin XLR configuration of PIN 4+, PIN 1-. Each outlet has auto-resetting breakers to protect against overload. Three of the outlets are heavy-duty connectors, capable of supplying 9A each.



The remaining seven output connectors are rated for 5A each. A master 18A breaker protects against combined overload when multiple outlets are used. A typical sound cart (drawing 9A or less) can be powered through a single XLR outlet if desired. For example, if power distribution to the devices on a cart is done through the Remote Audio BDS, HOT BOXv2, or HOT STRIP, a single 9A XLR outlet on the MEON LiFe may be used to power multiple devices. Alternatively, each device being powered can be cabled directly to the MEON LiFe's ten outlets.



USB Connectors

Two USB connectors are on the front of the MEON LiFe to charge or power 5VDC USB devices, such as smartphones, digital transcription recorders, etc. The two ports have a total combined capacity of 2A @ 5V (10W) and are regulated and protected from short circuits. These USB jacks are configured in such a way to charge Apple devices at the fastest rate (highest current) available. For example, an Apple iPad will draw approximately 2A peak from one USB port. Smaller Apple devices, such as iPhones will draw approximately 1A. Therefore, though an iPhone and iPad may be plugged into the USB ports simultaneously, they may need more time to charge in this configuration due to the 2A current limit from the MEON LiFe's USB ports.

Voltage Meter

The MEON LiFe includes an illuminated voltmeter on the front panel which indicates the voltage of the output connectors when the MEON LiFe is turned ON. The meter is calibrated at the factory for accuracy. However, there may be some temporary drift in readings based on ambient and internal temperature, typically less than 5%. Additionally, if an RM is connected for remote metering, there may be slight differences (less than 10mV) between the meter voltage readings due to the high resolution of the meters.

"TEST" Button

When the MEON LiFe is turned OFF, the TEST button on the front panel can be pressed to show the voltage of the battery.

If AC is present, TEST will show the voltage of the internal battery and charger combination. If AC is not present, TEST shows the actual voltage of the battery, including any connected supplemental batteries. This is a handy way to check the status of your batteries without having to turn on the MEON LiFe, and without having to turn on connected equipment.



Supplemental Batteries and Charging

An input connector (4-pin XLR Male) is provided on the back panel for connecting an external Lead Acid battery or Remote Audio's supplemental, single rackspace, "Extra LiFe" LiFePO₄ battery modules (available in 20 Ah and 40 Ah versions). The XLR is wired in the configuration of PIN 1&2 -, PIN 3&4 +. (To improve reliability and reduce voltage drop, the contacts are doubled.) Therefore, if the user wires their own input cables, it is recommended to connect pins 1-2 and 3-4. The supplemental battery can be used to extend runtime when AC is unavailable. When an external battery is connected to this input XLR connector, it will charge when AC is present just like the internal battery. The internal charger is a "smart charger" and will not over-charge a Lead Acid battery or LiFePO₄ battery. It is important to remember that adding a supplemental battery in this fashion will increase the overall charge time of the system.

The MEON LiFe is programmed to shut down when the output voltage reaches approximately 10V as indicated on the front display. This is to prevent over-discharge of external supplemental Lead Acid batteries that may not have their own built-in protection.

The indicator labeled "Charge Status" verifies that charging is taking place at either the full rate (red) or topping rate (green). When the MEON LiFe is fully discharged, it will recharge fully in approximately 3 hours. Due to the charge / discharge controller circuitry, the MEON LiFe can remain connected to AC power indefinitely without fear of overcharging or damaging the battery.



Connecting the RM/RS

The MEON LiFe can be used in conjunction with Remote Audio's RM (Remote Meter) or RS (Remote Switch). The RM allows remote monitoring of voltage and current (Amps) as well as remote ON/OFF control of the MEON LiFe. The RS provides remote ON/OFF control and a low voltage indicator. Connect either device's 6-pin connector via the "Remote" port on the connector panel of the MEON LiFe. See the RM and RS user guides for more details.

Does the MEON LiFe use fans?

No. The MEON LiFe was designed to employ convection cooling specifically because cooling fans cannot be tolerated on a very quiet sound stage. It is best to mount the MEON LiFe with some free space above the chassis to allow proper cooling when using AC power. The MEON LiFe has vent slots in the sides of the chassis that should remain unrestricted during operation to facilitate cooling while supplying maximum rated current.

Noise and Shared Power Systems

It is possible to have unwanted audible noise through a common (shared) power source typically due to "ground loops" from the various internal power supplies of the devices being powered. To optimize your system, it is recommended to use line level signals instead of mic level signals whenever practical. Also, turn phantom voltage off of all preamp inputs that are connected to non-microphone devices. If noise is still heard, unplug one device at a time from the MEON noticing any change in noise associated with the removal of each device. If the noise goes away after unplugging a particular device, try powering that device with a separate battery. If using a separate battery causes the noise to go away, then the problem is a ground loop associated with the combination of a common power source and audio grounding schemes. Be aware that this noise will not be removed with "LC" filters found in some cart power supplies. To remove the noise, here are four options for interrupting the ground loop:

- 1) Use a separate battery for the offending device.
- 2) Try different grounding/floating schemes with the audio cables.
- 3) In devices that use a single 9V battery, use an isolating 9V battery eliminator such as the one made by Lectrosonics.
- 4) Use a power isolator cable such as the Remote Audio Juicer cable.

Important Information about Internal Battery Protection

In addition to the resettable circuit breakers on each output, the MEON LiFe's battery is internally protected from overload and short circuits. In some cases, a sudden dead short at an output may activate the protection circuit of the internal battery. In this condition, the MEON LiFe will not come back on until external power is applied, either by plugging into AC or, if AC is not available, by applying a charged 12V battery to the external battery input.

Specifications

Dimensions:	19.00" x 13.00" x 1.75" (1 Rack Space)
Weight:	12.6 lbs
AC Input Voltage:	100-120 or 200-240VAC, 50-60Hz
DC Input Voltage:	12V Nominal Lead Acid or LiFePO ₄
DC Output Voltage:	12V Nominal, shutdown below 10V
Output Current:	18A Max Total (AC), 14A Max Total (Internal Batt.)*
Output Connectors:	3x Neutrik 4-Pin XLR Female, rated at 9A each 7x Neutrik 4-Pin XLR Female, rated at 5A each
Battery Capacity:	20 Ah (40Ah and 60Ah with optional Satellite battery modules)
Battery Charge Time:	Approximately 3 hours without a supplemental battery connected
Power Switch:	Front and Rear mounted Green = AC connected, Red = AC disconnected 2 sec. Delay ON/OFF
USB Ports:	x2, Max Combined Total of 2A @ 5V (10W)

* 14A with Meon LiFe alone; 18A with optional "Extra LiFe" battery module.



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| <p>1) Removable rack ears for recessed or reverse mounting</p> <p>2) LED volt meter. Displays voltage at output jacks</p> <p>3) TEST button. Shows battery voltage when MEON LiFe is powered off.</p> | <p>4) USB ports for charging/powering standard USB devices. 5V @ 2A (total for both ports)</p> <p>5) Charge Status LED.
Red = Charging
Flashing Green = Switching to topping mode
Green = Topping / Full</p> <p>6) Power ON/OFF. Hold for approx 2 seconds.
Red = Battery powering outputs
Green = AC powering outputs</p> |
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| <p>7) AC input. 90 - 264VAC nominal, 50 / 60 Hz
5A Fast-Blo fuse, GMA or S500
(2.5A for 240VAC locations)</p> <p>8) Power ON/OFF. Mirrored from front for reverse-mount applications</p> <p>9) Charge Status LED. Mirrored from front for reverse-mount applications</p> <p>10) Remote port. 6-pin LEMO-type. Connects to RM Remote Meter or RS Remote Switch (sold separately)</p> | <p>11) DC input. pin 1 & 2: -, pin 3 & 4: +
Connects to external Lead Acid battery or Remote Audio "Extra LiFe" supplemental LiFeP0₄ rack mountable satellite battery</p> <p>12) High-Capacity DC outputs, 9A each
Pin 1: -
Pin 4: +</p> <p>13) Standard DC outputs, 5A each
Pin 1: -
Pin 4: +</p> |
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Limited Warranty

Remote Audio warrants the MEON LiFe against defects in materials and workmanship for a period of one (1) year from the date of original retail purchase. The internal battery pack is warranted for six (6) months. Remote Audio will repair or replace qualifying products at its