

E-HL10DS

Li-ion V-Mount Battery



Instruction Manual

Lithium Ion

Thank you for purchasing the E-HL10DS Li-ion V-Mount Battery. Prior to using the E-HL10DS, we strongly recommend reading this Instruction Manual on how to best use the E-HL10DS and recommend keeping this manual for your reference. If you have any additional questions, please contact your local IDX office listed at the end of this manual.

Caution for safety use

Improper handling of this Li-ion battery may result in smoke, heat, fire, explosion or leakage as well as cause performance degradation or failure. Please be sure to observe the following precautions.

⚠ DANGER

May cause sudden serious injury and death.

- Charge with IDX battery charger only.
- Use with professional video cameras or other video equipment. Please contact IDX for more information.
- Do not short the contact pins with any metal object. Do not carry or store with metal equipment.
- Do not expose to heat and never throw the battery in a fire.
- Do not immerse in water. Keep the battery dry and away from excessively dry or humid environments.
- Do not leave the battery exposed to excessive heat such as in a car or directly under the sun light. Do not use outside of specified temperature ranges.
- Do not solder on the contact pins directly.
- Do not attempt to open the outer casing or break apart the battery.
- Do not subject the unit to extreme physical impact or pressure, or place any object across the terminals that could cause it to short.
- Do not pierce or drill into the outer casing of the unit.
- Do not attempt to use the battery if damaged.
- Do not use the battery in a corrosive environment. Damages occur from salt water, seawater, acid, alkali, corrosive gas, etc.
- Risk of explosion if battery cells are replaced by an incorrect type.

⚠ WARNING

May cause serious injury and death.

- Please note that the outside casing becomes hot when the battery is discharged in high temperatures or with high loads.
- Stop charging immediately if the battery fails to charge within the designated time. Refer to charger manuals for charge times.
- Do not use if the battery displays unusual characteristics (odd odor, discoloration, etc.) when in use, during charge or in storage.
- Keep away from fire if the battery leaks fluid or has an unusual smell.
- In case of leakage immediately wash your hands and face thoroughly with clean water and contact your IDX representative for further instructions.
- Immediately seek medical attention if battery fluid gets into contact with your eyes.

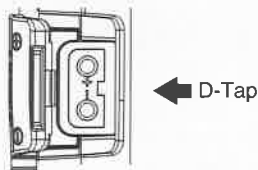
⚠ CAUTION

May cause injury or damage other equipment.

- Follow instructions on charging and discharging.
- Store in cool and dry conditions.
- During long periods of inactivity, please remove the battery from the equipment.
- Do not use, store or place the battery in an electrostatic area.
- Always keep the connectors clean.

Features

- Light weight, high load Li-ion battery.
- Four-step LED power indicator accurately displays remaining power capacity.
- D-Tap (battery through voltage) DC output connector for peripheral equipments. [Refer to D-Tap]



Discharging

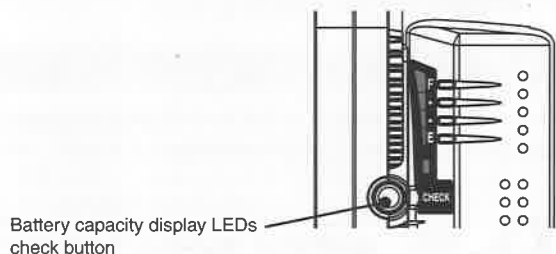
- When using the battery, the total power consumption should not exceed 120W. Please carefully calculate the total power consumption of the equipments connected to the battery prior to use. If power loads exceed 120W, an internal protection circuit will activate and stop discharging to protect the battery cells. Excessive power loads may generate an excessive heat which can cause the melt down of fuse to protect from severe damage of the battery.
- The battery life may be reduced if high load has been repeated frequently.
- Battery operation hour may reduce when used in extreme high and low temperatures. IDX highly recommends to use the battery in ambient temperatures of 50~104°F (10°C~40°C).
- Characteristic of discharge curve of Lithium Ion battery is very steady however it is sharply drops when it's reached 13V or low. For optimum use, IDX recommends that the battery alarm setting in the camera should be 13~13.5V. Refer to battery manual setting of camera.
- Battery will automatically stop loading the power when the voltage reached at 12V. To extend battery life, IDX recommends stop using before battery reaches 12V.
- Microwave transmitters with 5W outputs and more output should be kept as far away from the battery as possible as it may disrupt or stop supplying power.

Charging

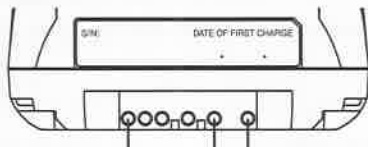
- IDX's Lithium-ion battery should be used IDX chargers only. Refer to the instruction manual for more details.
- Estimated charging times may vary depending on the charger and condition of the battery. Refer to the website or brochure for more details.
- The battery should be charged within the ambient temperature range. Otherwise this could be a cause of cell deterioration.
- An ambient temperature range of charging is 32~104°F (0~40°C) however 50~86°F (10~30°C) is recommended for optimizing the charging performance. When battery charged in the 32°F (0°C) or below, it may not be fully charged even designated time has been passed.
- The battery incur small amount of self discharge therefore IDX recommends to charge prior to use.
- Can not be charged using with C-NP2E, C-VAL2E.

Capacity display LEDs

- Remaining capacity is shown by a built-in Four LEDs, which is displayed F as 'fully charged' and E as 'need to charge'.
- To check the remaining capacity, press the check button. The LED lights will then indicate once the check button has been depressed.



Main connector



⊕ : Charging / Discharging ⊖ : Negative
ID : Battery ID

Protection circuitry

There are three types of protection circuits to ensure the battery is protected from Over-charge, Over-discharge, and Over-current protection. If the fuse is blown, the battery is no longer operable.

D-Tap

- D-Tap power output terminals available.
- A maximum power output is 50W.
- The output voltage is a battery through. (12~16.8V)
- Do not load the power from D-tap while charging otherwise it may cause of incomplete charging, occurrence of charge error or damage to the charger.
- D-Tap output can be used for IDX portable lights and monitors.

Storing

- Store in cool and dry conditions.
- Do not store or leave in temperatures of 122°F(50°C) or above.
- For long-term storage, please store with about 20~30% of capacity and recommend for re-charging every five months.
- Deterioration of battery performance will be accelerated when the battery stored in a high ambient temperature and/or stored for long period without used.

Specifications

- Cell chemistry : Li-ion
- Nominal voltage : DC 14.4V
- Capacity : 6.6Ah/96Wh *1
- Charge voltage : DC 16.8V
- Charge current : Max 4.6A
- Maximum discharge rate : 120W / 7.1A (at 16.8V)~10A (at 12.0V) *2
- End voltage : 12V
- Battery protection circuit : Over-charge, Over-discharge, Over-current,
- Ambient temperature
 - Charge : 32~104°F (0~40°C)
(50~86°F (10~30°C) recommended)
 - Discharge : -4~113°F (-20~45°C)
(50~104°F (10~40°C) recommended)
 - Storage : 32~104°F (0~40°C) (Three months)
- Dimensions / Weight : 97(W) × 146(H) × 59(D)mm / approx, 860g
: 3.82(W) × 5.75(H) × 2.32(D) inches / approx, 1.89lbs
- D-Tap output voltage : Battery through voltage
maximum load : 50W *2

*1. Measured capacity of battery is a minimum rating at 20°C.

*2. Maximum load is the sum of D-Tap and Camera loads (Total must be less than 120W).

Life cycle

- Life may vary depending on frequency of use, storage and operational temperature environment.
- Life will be reduced if frequently used with high load applications.
- Life is also reduced if stored in fully charged and/or empty conditions for extended periods.

Battery recycle

This Li-ion battery can be recycled. Please follow the regulations in your country or contact your local IDX office for further details.

Li-ion Battery Air transport Compliance (as of Jan 1st, 2014)

International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) rules, regulations and requirements:

- Battery is proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3.
- Lithium ion battery is less than 100Wh.
- Lithium ion battery capacity Watt-hour rating is labeled on the outside of the battery case.

E-HL10DS ICAO and IATA

The E-HL10DS has met the requirements for United Nations Recommendations on the Transport of Dangerous Goods. The E-HL10DS capacity is less than 100Wh which is illustrated on a label located on the exterior of the battery housing.

E-HL10DS Classification

The E-HL10DS battery is classified as a "Class9 Dangerous Goods" product by the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA). This battery is required to follow certain procedures at times of shipping and transportation. Below are guidelines for properly preparing the shipment and transportation of the E-HL10DS.

For aircraft carry-on baggage

An unlimited number of carry-on batteries are permitted; IDX recommends isolating the battery terminals by taping or put the spare battery into plastic bag. IDX recommends checking with the airline company prior to traveling. Some airline companies may have additional rules and regulations for transporting lithium ion batteries.

For aircraft check-in baggage

If the battery is attached to a piece of equipment, such as a camera, monitor, recorder, etc, it can be checked-in baggage. If the battery is not attached to a piece of equipment, it must be carried-on.

For cargo

- Battery only (Packing Instruction 965 Section II)
Two batteries that are less than 100Wh in one packing box can be transported by cargo. This will exempt the package from being classified as hazardous material. To qualify for this exemption, the package used for transportation must pass a 1.2 meter drop test.*3 In addition, a lithium ion battery caution label is required on the shipping package. To finalize the exemption, a declaration of exemption for Dangerous Goods materials must be submitted to the cargo company.
 - Battery only (Packing Instruction 965 Section I.B)
When transporting three or more batteries with a total package weight of 22 lbs (10kg) or less, the package must be classified as "Class 9 Dangerous Goods". The package used for cargo must pass a 1.2 meter drop test. In addition, it is necessary to label the following on the package: lithium ion battery caution label, Class9 label, UN number "UN3480 Lithium ion Batteries", name and address of shipper and consignee. Lastly, a declaration of dangerous goods materials should be submitted to the cargo company.
 - Battery packed with equipment (Packing Instruction 966 Section II)
When the battery is packed with equipment and the net weight of a battery (battery weight only) in the package is 11 lbs (5kg) or less, this package may be transported as an exemption of the dangerous goods article. However, one package is limited to the minimum quantity of batteries required to operate the equipment and two spare batteries. To qualify for this exemption, the package used for cargo must pass a 1.2 meter drop test.*3 In addition, a lithium ion battery caution label is required on the shipping package. Lastly, a declaration of exemption for dangerous goods materials should be submitted to the cargo company.
 - Battery contained in equipment (Packing Instruction 967 Section II)
If the battery is installed in the equipment and the net weight of the battery (battery weight only) is 11 lbs (5kg) or less, this package may be transported as an exemption to the dangerous goods article. A caution label and declaration are not required if there are two or less batteries installed in the equipment and is packaged with firm packing material. If more than two batteries are installed in the equipment, the package must have a lithium ion battery caution label and a declaration of exemption for dangerous goods article should be submitted to the cargo company. A drop test for this package is not required.
- *3. IDX's standard shipping package has passed the drop test; however the individual battery package has not tested.
- If the above requirements are not met, all packages are subject to the classification of Dangerous Goods product (class9).
 - Refer to the latest version of IATA Dangerous Goods Regulations, and follow the compliance with the regulations upon transport.

Design and specification are subject to change without notice.

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