

# CUE-H90/CUE-H135/CUE-H180



## Li-ion V-Mount Battery

### Instruction Manual



Thank you for purchasing the CUE-H90 / CUE-H135 / CUE-H180 Li-ion V-Mount Battery. Prior to using them, we strongly recommend reading this Instruction Manual. Please keep 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.
- 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

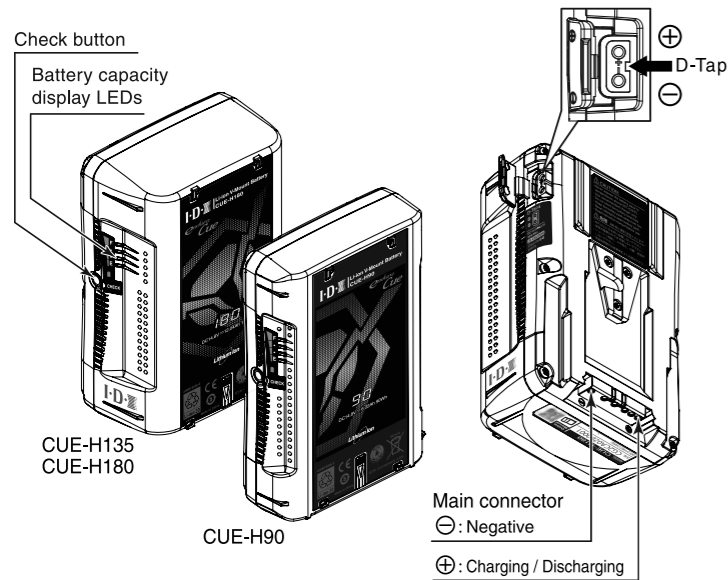
##### May cause injury or damage other equipment.

- 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

- High performance Li-ion battery with a durable design.
- Four power status LED indicators. ※ [ Capacity display LEDs ]
- D-Tap DC output connector (battery-through output). ※ [ D-Tap ]

※ Please refer to each section for more detailed information.



### Protection circuitry

- There are three types of protection circuits to ensure the battery is protected from Over-charge, Over-discharge, and Over-current. If the protection fuse is blown, the battery is no longer operable.
- Please charge the battery quickly, if the over-discharge protection is activated. The battery may become unusable, if leave it without charging.

### Discharging

- Please check that the total power consumption from the main and the D-Tap connector is less than the battery's maximum discharge power. If it exceeds the maximum discharge power, the safety protection function may be activated and it will stop discharging and may cause damage to the battery. If the fuse is blown off due to an over load, the battery won't recover.
- The battery life may diminish if high loads are applied frequently.
- Battery run-time may reduce when used in extreme high and low temperatures. IDX highly recommends to use the battery in ambient temperatures of 50~104°F (10~40°C)
- The discharge characteristics of lithium ion batteries illustrate a steady curve until 13V. At 13V, the discharge curve sharply drops. For this reason, IDX recommends setting the camera's "Low Voltage" alarm settings to 13~13.5V. Refer to battery settings on the camera's user manual.
- The battery will automatically stop discharging when the voltage reaches 11.2V. To extend battery life, IDX recommends to stop using before the battery reaches 12V.
- Microwave transmitters should be kept as far away from the battery as possible. High power transmitters may disrupt or stop supplying power.
- Please be sure to remove the battery from the device after use. If a battery left mounted on the device that has large standby power, the battery's residual capacity will become lower and the over-discharge protection may be activated.
- Please do not use the batteries connected in series. This may cause damage.

### Charging

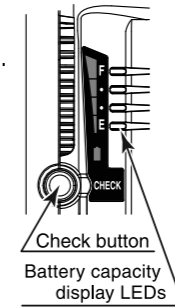
- Only charge with IDX lithium ion charger and refrain from charging with third party chargers. Please refer to the charger manual for charging method information.
- Estimated charging times may vary depending on the charger and condition of the battery. Refer to our website for more details.
- The ambient temperature range for charging is 32~104°F (0~40°C); however, 50~86°F (10~30°C) is recommended for optimizing the charging performance. When the battery is charged in temperatures 32°F (0°C) or below, it may not fully charge, even if the designated charge time has elapsed.
- Charging outside of the recommended temperature range can accelerate cell deterioration.
- Lithium ion batteries have a slight self discharge; therefore, IDX recommends to charge prior to use.
- Can not be charged using with C-NP2E, C-VAL2E.

### Capacity display LEDs

- The remaining capacity is shown with four built-in LEDs. F indicates 'fully charged' and E indicates 'empty' or 'need to charge'.
- To check the remaining capacity, press the check button. The LED lights will emit and reflect the battery charge level.

● : LED on

| Capacity | 100%<br>70% | 70%<br>40% | 40%<br>15% | 15%<br>0% |
|----------|-------------|------------|------------|-----------|
| F        | ●           |            |            |           |
| •        | ●           | ●          |            |           |
| •        | ●           | ●          | ●          |           |
| E        | ●           | ●          | ●          | ●         |



※ Please be aware that LED indicates approximate amount of capacity when not providing power, and this varies by age and condition of battery.

### Specifications

|                              | CUE-H90                                   | CUE-H135   | CUE-H180                             |                                      |
|------------------------------|---|--|--------------------------------------|--------------------------------------|
| Cell chemistry               | Li-ion                                    |  |                                      |                                      |
| Nominal voltage              | DC 14.8V                                  |  |                                      |                                      |
| Capacity *1                  | 6.02Ah / 90Wh                             | 9.03Ah / 134Wh                                       | 12.04Ah / 179Wh                      |                                      |
| Charge voltage               | DC 16.8V                                  |  |                                      |                                      |
| Charge current               | Max 3.1A                                  | Max 4.65A  | Max 6.2A                             |                                      |
| Maximum discharge rate *2    | ≤77°F (25°C)                              | 85W / 5.1A (16.8V)<br>7.5A (11.2V)                   | 135W / 8.0A (16.8V)<br>12.0A (11.2V) | 155W / 9.2A (16.8V)<br>13.8A (11.2V) |
|                              | ≤95°F (35°C)                              | 70W / 4.2A (16.8V)<br>6.2A (11.2V)                   | 100W / 6.0A (16.8V)<br>8.9A (11.2V)  | 120W / 7.1A (16.8V)<br>10.7A (11.2V) |
|                              | ≤113°F (45°C)                             | 45W / 2.7A (16.8V)<br>4.0A (11.2V)                   | 65W / 3.9A (16.8V)<br>5.8A (11.2V)   | 80W / 4.7A (16.8V)<br>7.1A (11.2V)   |
| Maximum discharge current *2 | ≤77°F (25°C)                              | 7.0A   | 10.5A                                | 12.0A                                |
|                              | ≤95°F (35°C)                              | 5.5A   | 8.5A                                 | 9.0A                                 |
|                              | ≤113°F (45°C)                             | 4.0A   | 6.0A                                 | 6.5A                                 |
| D-Tap                        | Output voltage                            | Battery through voltage                              |                                      |                                      |
|                              | Maximum load                              | 80W / 4.7A (16.8V) ~ 7.1A (11.2V) *3                 |                                      |                                      |
| End voltage                  | 11.2V                                     |  |                                      |                                      |
| 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                                   | -4~113°F (-20~45°C) (less than 1 month)              |                                      |                                      |
| Dimensions                   | mm  | 97(W)×146(H)×39(D)                                   | 97(W)×146(H)×59(D)                   |                                      |
|                              | Inches                                    | 3.82(W)×5.75(H)×1.54(D)                              | 3.82(W)×5.75(H)×2.32(D)              |                                      |
| Weight                       | g   | approx, 610  | approx, 870                          | approx, 1,050                        |
|                              | lbs                                       | approx, 1.34   | approx, 1.92                         | approx, 2.31                         |

\*1. Measured capacity of battery is a minimum rating at 68°F (20°C).

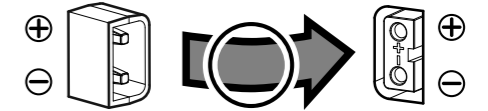
\*2. Maximum load is the sum of D-Tap and Camera loads.

\*3. Please note that the maximum discharge power of the CUE-H90 and CUE-H135 is 80W or less depending on the operating temperature.

### D-Tap

- D-Tap power output terminal available.
- The maximum power output is 80W.
- The output voltage is a battery through (11.2~16.8V).
- Do not draw power from D-Tap while charging as it may interrupt charging, cause a charger error, or damage the charger.
- Do not use significantly degraded D-Tap. It may cause failure or damage.
- D-Tap output can be used for IDX portable lights, wireless systems, and accessories.

⚠ CAUTION Please make sure to check the ⊕ ⊖ polarity of D-Tap connector prior to plug-in.



Please confirm the shape of connector and ⊕ ⊖ polarity of plug side prior to connect with receptacle. Please do not force it when felt it is difficult.

### 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 15~40% of capacity (with 2 LEDs) 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.

### Life cycle

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

### Compensation for recorded content

Recorded content cannot be compensated for if recording or playback is disabled due to a malfunction of the battery pack or other devices.

### 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

The Air transport regulations for the lithium-ion batteries will be revised regularly, so please check our website before transporting the battery. (<http://idxtek.com/lithium-ion-transportation/>)

Design and specifications are subject to change without notice.

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