

# VL-2S PLUS Instruction Manual

## Simultaneous Quick Charger with AC Adaptor



IDX Technology thanks you for choosing the VL-2SPLUS and is sure that you will benefit from its unique features. The VL-2SPLUS offers 2 channel simultaneous quick charging with a built in 100W AC Adaptor. Please utilize this instruction manual to best maximize and safely use your VL-2SPLUS. If you have any additional questions, please contact the appropriate IDX office or visit our website [www.idx.tv](http://www.idx.tv)

### Features

- Can charge IDX ENDURA System Li-Ion batteries. (All IDX NP-type Li-Ion/Ni-CD batteries via optional A-E2NP Charge Adaptor)
- Quick simultaneous charging on both channels.
- Built in 100W Camera Power Supply.
- Auto safety & protection features for damaged or misused batteries.
- Robust lightweight polycarbonate case. Recessed power switch, built-in AC line spare fuse, convenient carrying handle.
- Automatic Universal AC input for world-wide use.
- Can be operated in either horizontal or vertical position.
- AC Adaptor function makes it possible to use the VL-2SPLUS as camera and portable VTR DC Power Supply. (use at or below 60W as a lighting power supply or as lights of a suitable inrush protection to operate below 100W)
- Batteries are charged even when AC adaptor is used but at a reduced charge rate. (Li-Ion batteries only)
- If charged batteries are connected, Power Base Function prevents power interruption if AC supply fails.
- Power Base Function allows up to 392wh of mobile DC power when AC supply is not available. (4 ENDURA-10 in PowerLink)

### Operating Instructions

#### <When used as a charger>

- Connect AC power cord firmly.
- Turn the front panel power switch ON. (Power LED will light and show solid Amber)
- Basic Operation:
  - Connect a battery : "Battery Check Mode" starts, the charge channel LED will show solid Red while the charger is checking the battery.
  - Battery Check : After 5 seconds the LED will remain Red indicating that the VL-2SPLUS is operating in quick charge mode, if a battery has a fault the LED will flash Amber. If a battery cannot initially enter quick charge a recovery program will start, during which time the LED will also remain solid Red. When the battery has successfully recovered, the VL-2SPLUS will automatically change to a quick charge program. If a battery cannot be recovered or is detected as over-charged, the LED will flash Amber indicating a battery fault.
  - Charge Complete : When a battery has been fully charged the charge channel LED will automatically change to solid Green, indicating the battery is ready.
  - Remove the battery by pushing down either of the Release Levers located at each channel. For NP-type battery removal, hold the charger to secure it and pull the battery out straight.

#### <Power Share Charge Function>

The VL-2SPLUS has an automatic Power Share mode, when the AC Adaptor function is in operation and the maximum power output is not being drawn, the spare current can be used to charge connected Li-Ion batteries. Only Li-Ion batteries can be charged using this function and charge current will vary according to the load applied to the AC Adaptor.  
 ※Not applicable for Ni-CD·Ni-MH batteries.

- Charged battery condition is as follows when output is detected from DC-OUT during charging.  
 Li-Ion batteries : Power share charge operates depending on the DC-OUT load size.  
 Charging may stop if the DC output load is too high as the charge current is reduced.  
 Ni-CD batteries : Charging stops if any DC-OUT current is detected. (LED flashes Red)

#### <When used as AC Adaptor> ※Confirm the specification of connected equipment before use.

- Connect the power cord firmly.
- Turn the power ON. (POWER LED will light and show solid Amber)
- Power is supplied to the connected equipment by DC-OUT from the 4 pin XLR output connector. (output voltage is 14.5V)

#### 「Power Base Function」

IDX's new Power Base Function allows the use of the VL-2SPLUS as a totally portable and AC free regulated power source for use when AC feed is not available or fails. Up to four ENDURA batteries (PowerLink) can be connected at one time providing high capacity mobile power and DC back up.

#### <DC-OUT Priority>

※ Confirm the specification of connected equipment and capacity of the inserted batteries.

AC Input	Battery	Output
Yes	Not connected	AC Adaptor
Yes	connected	AC Adaptor
No	connected	Battery

#### 「Battery Output DC Cut Off」※ Connected Battery Termination Voltage Value (LED lights off)

- When using Power Base Function output from the XLR is cut off if the connected battery voltage drops to 12V for Li-Ion and 10V for Ni-CD.  
 ※ Battery capacity at each channel can be checked by its LED. Back up supply can be continuous if the discharged batteries are exchanged with a charged battery.

#### 「Load Time Detection」※When there is no load current detected after the battery back up function has been operating.

- Power Base Function automatically shuts down if power is not drawn from the XLR for 1 hour or more.  
 ※ To recover the battery back up function, remove the battery and reconnect.

### LED Colour Status List

#### 「During Charging and DC-OUT Operation」

- Light Off·····No Battery detected
- Solid Amber····· Charge Waiting
- Solid Red····· Battery Check / Quick Charge / Battery Conditioning in progress
- Solid Green····· Charge Complete
- Flashing Amber··· Battery Fault
- Flashing Red····· Charger Fault

#### 「During DC-OUT (Power Base Function)」

- Light Off·····No Battery detected, DC-OUT Current No Output
- Flashing Green··· Li-Ion Battery Voltage is at or above 14V  
 Ni-CD Battery detected DC-OUT at or above 12V
- Flashing Red / Green Alternating ··· Li-Ion Battery Voltage is below 14V  
 Ni-CD Battery DC-OUT detected below 12V

### Specification

- **Input Voltage** : AC100V~240V AC 50/60Hz Automatic
  - **Operating Temperature** : -5°C~40°C
  - **Power Consumption** : 162VA/100V 151VA/240V
  - **Compatible Batteries** : All IDX ENDURA System Li-Ion batteries  
 All IDX NP-type Li-Ion/Ni-CD batteries via A-E2NP Charge Adaptor
  - **Charge Method** : Li-Ion → Constant Current / Constant Voltage  
 Ni-CD → Constant Current  
 (All IDX NP-type Li-Ion/Ni-CD batteries via A-E2NP Charge Adaptor)
  - **Quick Charge Current** : IDX ENDURA-ELITE / E-10 & E-10S Li-Ion batteries :  
 1 Battery : 4A / 2 batteries : 3A  
 All other IDX ENDURA & NP-L type Li-Ion batteries : 3A  
 All IDX Ni-CD batteries : 2.5A
  - **Recovery Charge Current** : Approx. 430mA (Li-Ion : When the battery voltage is at or below 11.5V)  
 (Ni-CD : When the battery voltage is at or below 9V)
  - **DC Output** : Maximum output in DC operation → DC14.5V / 6.7A (Max 100W) ※ Included Battery rating 0 ~ 3.0A each  
 Battery Output → Battery Voltage through Output / Battery Maximum Discharge Current
  - **Charge Times Standard (When DC-out is not in operation)**
- | ENDURA-ELITE                                   | E-10/E-10S                                     | E-7/E-7S      | NP-L7/NP-L7S  | NP-23dx/NP-1dx |
|--|--|---------------|---------------|----------------|
| Approx.185min (at 4A)<br>Approx.225min (at 3A) | Approx.145min (at 4A)<br>Approx.165min (at 3A) | Approx.140min | Approx.140min | Approx.60min   |
- ※All times are approximate and per battery, times will differ according to a battery's remaining capacity at time of charging.
- **Dimension / Weight** : Approx.151(W)×79(H)×222(D)mm [5.9(W)×3.1(H)×8.7(D) inches] / Approx. 1.1kg [2.43 lbs]

	● Battery Protection Timer	
	Li-Ion	Ni-CD
During Recovery charge	120min (at or below 11.5V)	90min (at or below 9V)
During Quick charge	480min (If full charge not detected yet)	90min (If full charge not detected yet)

※Above Li-Ion figure are based on no DC-out current cases

### General Notes and Safety

- Do not attempt to open or modify this unit. All work should be carried out by IDX authorised service personnel only.
- Use only with compatible batteries listed in this manual. Charging non-compatible batteries may cause fire, electrical shock or other incidents.
- When connecting a battery be sure to connect the battery firmly.
- When in use do not place anything on the charger and do not block ventilation holes. Use in a well ventilated area.
- Do not expose to, use or place the unit in direct sunlight, extreme dust, water or other hazardous environments.
- During charging the temperature of the charger will rise, this is normal and not a malfunction.
- A short between the plus (+) and minus (-) charge pins may cause fire, electrical shock or other incidents.  
 Make sure that the charge connector does not touch any metal parts when a battery is not connected.
- Only use the AC Cable included with the charger or ones specified. If fused confirm the fuse rating capacity before use.
- For continued protection replace any fuses with specified type and rating.
- This unit contains no user serviceable parts.
- In case of fault or service, please contact your IDX dealer or appropriate IDX office.
- Confirm the connecting equipment specification before use if the VL-2SPLUS is used as AC Adaptor. Use back up batteries which meet connecting equipment specification (capacity etc).

※ A Class A ITE shall have the following warning statement in a conspicuous location on each product. If direct marking on the product is difficult, a tag for warning can be used. 20070419



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