

I·D·X COMPANY LIMITED

...Xcellence in Power

INSTRUCTION MANUAL

Thank you very much for purchasing the LX-4a, Multi purpose charger for NP-L50 Lithium Ion and other Ni-Cd Battery Packs and hopes that its careful design will satisfy all your battery charging needs. Please utilize this Operation Manual for help on how to use this charger. If you have any additional questions, please contact the appropriate IDX office, listed below.

LX-4a



FOUR CHANNEL SEQUENTIAL
FAST CHARGER FOR NP-L50 Li-Ion AND OTHER
NP OR BP TYPE Ni-Cd BATTERY PACKS

FEATURES

- Fast charging on all 4 battery channels.
- Charging of different batteries on different channels.
- Automatic battery reading if it is Li-Ion, Ni-Cd.
- Auto safety features for damaged or misused batteries.
- Direct NP and BP compatible connections.
- Universal A/C inputs for world wide use.

MULTI PURPOSE OPERATION

LX-4a is a Multi purpose sequential quick Charger that will charge a completely discharged NP-L50 the NP type Lithium Ion Battery from IDX in approx. 2 and ½ hours. It can also charge NP type Ni-Cd batteries in approx. 90 minutes and BP type Ni-Cd batteries in approx. 2 and ½ hours. It can charge 4 batteries sequentially in any combination. You can charge NP-L50 on channel one, NP-23dx on channel two, BP-95dx on channel three, NP-1dx on channel four, etc. The sequence for battery charging is called the charging sequence loop. The charging sequence loop charging starts at channel 1 then progresses through to channel 4 and then back to channel 1 again(1, 2, 3, 4, 1, 2, 3, 4...).

The charger automatically searches each channel for a battery to charge, in a continuous loop. The charging sequence loop is interrupted only by the detection of a valid battery to be charged. The LX-4a Charger automatically checks a battery if it is a NP-L50 or a NP-23dx, NP-1dx, or a BP-95dx Ni-Cd batteries or any other Ni-Cd batteries and accordingly starts charging.

OPERATING INSTRUCTIONS

- A. Connect AC power cord firmly.
- B. Set the power switch ON (Green LED will light).
- C. **Basic Operation:-**

For NP-L50 Lithium Ion Batteries:-

- 1) Insert a battery - Standby mode, LX-4a Charge channel LED is orange, while the charger is checking the battery if it is Li-Ion, Ni-Cd.
- 2) Battery Check - Within 5 seconds the LED will turn to Red indicating that the LX-4 Charger is in quick charging mode. If a battery is low voltage the LX-4a Charger will be in slow charge mode, until the battery reaches fast charge capability, LED will remain Orange. If a battery can not pick up the Fast charge or if a battery becomes excessive over charge then the Orange LED will start flashing indicating Battery Fault.
- 3) Quick Charging - When a battery is at 12v LED will turn to Red indicating that the LX-4a Charger is in quick charge mode.
- 4) Charge End - When the battery is fully charged the LED will turn to Green, indicating that the battery is ready to use.

For Nickel Cadmium Batteries:-

- 1) Insert a battery - Standby mode, LX-4a Charger LED is orange, while the charger is checking the battery if it is Li-Ion, Ni-Cd.
- 2) Battery Check - Within 5 seconds the LED will turn Red for start charging indication. If a battery is low voltage then the LX-4a Charger will be in slow charge mode, LED will remain Orange until it charges up to fast charge capacity. If a battery can not pick up the Fast charge or if a battery becomes excessive over charge then the Orange LED will start flashing indicating Battery Fault.
- 3) Quick Charging - When a battery is at 11v LED will turn to Red indicating that the LX-4a Charger is in quick charge mode.
- 4) Charge End - When the battery is fully charged the LX-4a will turn to trickle charge for Ni-Cd batteries and the LED will turn to Green, indicating that the battery is ready to use.

PRODUCT DESCRIPTION

The LX-4a combines power with flexibility to provide the battery maintenance center with the tools necessary to charge various kind of batteries. The flexibility of the LX-4a allows the maintenance center to designate channels for various modes of operation such as; charging Li-Ion on some channels, Ni-Cd on some channels, BP type on some channels, NP types on some channels and so on. The LX-4a has four channels sequentially charges from channel 1 to channel 4. These channels can each be instructed to perform different charging processes on their specific batteries. The charging will be performed sequentially from channel 1 to channel 4 then back to channel 1 again. The LX-4a can process up to four IDX NP-L50 the NP type Lithium Ion batteries in about 2 and a ½ hours each, or the IDX NP-23dx, NP-1dx the NP type Ni-Cd battery in One hour or the IDX BP-95dx the BP type Ni-Cd battery in 2 and a ½ hour. This combination of power and flexibility makes the LX-4a an essential part of any battery maintenance center.

LED COLOUR STATUS LIST

- Solid RedQuick Charge in progress**
- Solid GreenCharge complete, battery ready**
- Solid OrangeStandby mode or slow charge mode**
- Flashing OrangeDefective battery**

SAFETY FEATURES

The LX-4a has built in safety features to protect the charger as well as the batteries from serious damage in the event an attempt is made to charge a faulty battery. Low voltage batteries are detected prior to applying fast charge current. If a battery is found to be low voltage it will not be fast charged until it reaches to the acceptable fast charge level. This prevents any damage to the unit or to the battery. Batteries reaching an over voltage condition during charging will also be controlled.

GENERAL NOTES

- a) While in use do not place anything on the charger, do not block ventilation holes.
- b) During charging the temperature of the charger will rise, this is normal and not a malfunction.
- c) When connecting a battery be sure to plug it into the socket or connector firmly.
- d) Do not attempt to use faulty batteries or batteries with incorrect specifications.
- e) Do not expose the charger to direct sunlight, use in a well ventilated place.
- f) Do not operate near equipment that might be influenced by noise such as TV, etc.
- g) Do not open unit or attempt to repair any malfunction by yourself, there are dangerous power supply circuits inside. There are no user serviceable parts
- h) The unit should be turned on prior to inserting batteries to be charged.

SPECIFICATION

Applicable batteries	NP-L50, IDX Lithium Ion Battery BP-95dx, NP-23dx, NP-1dx or equivalent Ni-Cd battery 12 - 13.2v, 1 – 5.3Ah.
Fast charge current	Li-Ion 2.1A, Ni-Cd 1.9A
Input voltage	100 ~ 240V AC 50/60 Hz Automatic.
Power consumption	400 VA max.
Weight	1.8 Kg approx.
Dimension	200 (w) x 65 (h) x 208 (d) mm