

IDX TECHNOLOGY

i200

SEQUENTIAL CHARGER/DISCHARGER

IDX Technology wants to thank you for purchasing the i200, our sequential fast charger and simultaneous discharger, and hopes that its compact and careful design will satisfy all your battery charging needs. Please utilize this Operation Manual for help on how to best use the i200. If you have any additional questions, please contact the appropriate IDX office listed on the third page.

FEATURES

- Sequential fast Charger and simultaneous Discharger for Nickel Cadmium (NiCD) batteries and Nickel Metal Hydride (NiMH) batteries.
- Can be used for NP and BP style batteries
- Auto detection features for damaged or misused batteries and charger protection.
- Lightweight, compact, easy to carry for ENG, DNG and EFP.
- Robust metal case, recessed power switch, built-in spare fuse
- Universal A/C power input 100~240vAC for worldwide use.

OPERATING INSTRUCTIONS

- Connect AC power cord firmly.
 - Set the power switch ON at the rear of the unit (the front panel orange led will light).
 - For use as a charger:-**
The i200 is a sequential charger. The sequence for battery charging is called the charging sequence loop. The charging sequence loop starts at channel 1 then progresses through to channel 2, and then back to 1 again (1,2,1,2,1,2,1,2....). 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 red LED will be displayed, signifying a charge in progress. Upon completion of charging the red LED will turn green and the sequence loop will resume from that point. Once fully charged all batteries are trickle charged.
 - For use as charger/discharger:-**
The red button on the front of the unit is used to activate discharge. Unless depressed the unit will automatically charge only. Unlike charging, the unit has simultaneous discharging. Once the discharge button is pressed the LED will flash green.
- Note: - Charge Priority for BP and NP batteries when connected to the same channel the unit gives priority to the BP Battery connector.
With both BP & NP batteries connected the NP-type will not be charged. When a BP battery is connected after an NP is already connected the charging (or discharging) of the NP stops and the BP charging starts.

Typical Charge Times

This depends on battery condition and frequency of the battery usage. The following are approximate figures,

NP-23/NP-23dx/NP-1dx ----- 85 minutes

BP-95S/BP-95dx----- 175 minutes

Typical Discharge Times

This depends on condition and frequency of the battery usage. The following are approximate figures (From Full charge)

NP-23/NP-23dx/NP-1dx ----- 75 minutes

BP-95S/BP-95dx ----- 160 minutes

SPECIAL FEATURES

- **Independent Charge/Discharge.** Although the i200 is a sequential charger and simultaneous discharger, it is designed to fast charge one channel while independently discharging another. This saves the operator valuable time when conditioning batteries.
- **Low Voltage Batteries.** Batteries with low voltage will not be recognized as chargeable until the unit's initial conditioning sequence has brought them up to a valid voltage level for fast charging.
- **Two Battery Types.** The unit will charge either BP or NP type batteries, however it always gives priority to BP batteries. Inserting a BP battery in the same channel as an NP will disable charging of the NP.
- **Safety.** The unit will automatically detect abnormally high or low voltage batteries or defective batteries and will not permit charging. The channel in question will be skipped and the LED will not come on.
- **Uninterrupted Operation.** If a battery is removed during or prior to or during charging, the unit will automatically sequence on to the next available battery channel.
- **Digital Negative Delta V charging.** Using fully digital microprocessor controlled negative delta V charging method; the unit will handle most manufacturers' NP-1 or BP-90/95 style batteries. From 12V~13.2V and 1Ah~7Ah.

Battery Protection Features

Following are a list of basic charger protection features for User recognition

*** Low voltage battery**

- a. If the battery voltage is below or equal to 5.0V
the battery will not be charged, (no charger LED)
- b. If the battery voltage is 5.0~10.5V,
The unit starts conditioning charging (red LED lights) and automatically starts quick charging when the battery voltage recovers to reach 10.5v. If the battery voltage does not reach 10.5V after 30 minutes of conditioning, charging will be stopped (orange LED blinks).

***Over charge protection**

If charging does stop due to faulty battery or some other reason, a circuit protection timer is automatically activated and stops charging.

If the battery is not charged after 260minutes (4 1/2Hrs) of charging, the unit stops charging. If battery voltage is 13.0V, Green LED lights indicating usable battery. If the battery voltage does not reach 13.0V, orange LED lights indicating fault.

***Over voltage protection**

Over voltage protection circuit stops charging if the battery voltage does not reach specific figure within specific time.

If the battery voltage reaches or exceeds 21.5V during quick charge is in progress, charging will be stopped. Orange LED blinks)

D COLOR STATUS LIST

Full Red	fast charge in progress
No LED	charge waiting (<i>when battery inserted</i>)
Full Green	charge complete, trickle charge in progress
Blinking Green	discharge in progress
Blinking Amber	defective battery (<i>check battery specifications</i>)
Blinking Red	defective charger (<i>return for service</i>)

