

# IDX I200

## 2-CHANNEL SEQUENTIAL CHARGER/DISCHARGER

*IDX wants to thank you for purchasing the **i200**, our 2-Channel sequential quick charger/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 last page.*

### FEATURES

- Sequential quick Charger / Discharger for Nickel Cadmium (NiCD) batteries and IDX NP 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 Field operation.
- 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 green 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 to channel 2, and then back to 1 again (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, 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. Similarly to charging, the unit has sequential discharging. Once the discharge button is pressed the LED will flash green. The LED for other channel will turn orange, waiting for discharge.

*Note: - Charge Priority for BP and NP batteries connected to the same channel  
The unit gives priority to the BP Battery connector.*

With 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
NP-H50/NP-H50dx	125 minutes
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
NP-H50/NP-H50dx	120 minutes
BP-95dx	160 minutes

## SPECIAL FEATURES

- **Independent Charge/Discharge.** Although the *i200* is a sequential charger/discharger, it is designed to quick charge one channel while independently discharging the other. 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 quick 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, prior to or during charging, the unit will automatically sequence on to the next 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 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 faulty battery (low capacity). This is usually when it is time to replace your battery(s).

\*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)

## LED COLOR STATUS LIST

**Full Red**..... fast charge in progress

**No LED**..... charge waiting (*when battery inserted*)

**Full Green**..... charge complete, trickle charge in progress

**Blinking Green**..... discharge in progress

**Full Orange**.....discharge waiting

**Blinking Orange**.....defective battery (*check battery specifications*)

**Blinking Red**.....defective charger (*return for service*)

## OPERATIONAL PRECAUTIONS

1. During charging the unit will get a little warm, this is normal.
2. Do not rest any object on the unit, or block the ventilation holes during operation.
3. Only use approved Nickel Cadmium and Nickel Metal Hydride batteries; do not use faulty batteries or those with incorrect specifications.
4. Other batteries besides 12V/13.2V NP/BP (1Ah~7Ah) may be charged with the appropriate adapter, contact IDX for details.
5. Do not expose the unit to direct sunlight, use in well-ventilated place.
6. For longer battery life it is recommended to fully discharge once for every 8 charge cycles for NiCd. (30 for NiMH)
7. If the unit's power fails to come on, check the fuse. If necessary, replace with spare fuse provided.
8. For repair or service: do not open the unit, please contact the factory offices or authorized distributors.

## SPECIFICATIONS

Applicable batteries      NP-23dx, NP-1dx, NP-H50, NP-H50dx  
   BP-95dx or equivalent  
*(Batteries in the range: 12~13.2v 1~7Ahr)*

Weight:..... 2.5lbs.(1.2kg)  
Dimensions.....3.12”(W) x 6.24”(H) x 2.0”(D)  
   150mm(W) x 75mm(H) x 190mm(D)  
Conditioning Charge current.....250mA  
Quick Charge Current.....1.85A  
Discharge Current.....2.5A (@ 12.5V)  
Discharge Cutoff.....10.8V  
Trickle Charge Current.....30mA  
Input Voltage.....AC100~240V (50/60Hz) Automatic  
Charge Control System.....Full Digital Microprocessor  
   Negative Delta Voltage (-ΔV)

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