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# **IntelliControl**

## **Battery manager**

**Ref. no. 010 100 1**

We assume no liability for injury to persons, damage to property and the consequences thereof, which arise from our equipment or workmanship, as we are not in a position to control the way the equipment is operated or the use to which it is put.

Technical content subject to change  
Harsewinkel, January 2000

# ***IntelliControl* Battery Manager**

**1 to 25 cells**

**Up to 5A charging current**

**Up to 3A discharging current**

**Also for NiMH batteries**

**Automatic charging/discharging**

**Can measure capacity**

**Can learn up to 10 charging programmes**

**Auto-recognition of batteries**

**For NiCd, NiMH and lead acid batteries**

**Optimum charging supervision with large display and a buzzer**

**Eliminates memory and lazy battery effects**

**Sturdy aluminium casing**

## **Technical Data**

<b>Supply voltage</b>	<b>11 – 15 V DC car battery or 13.8V/&lt;15A mains adapter</b>
<b>Output</b>	<b>1 to 25 cells NiCd/NiMH cells 1 to 6 lead-acid cells</b>
<b>Charging current</b>	<b>0.1 to 5A</b>
<b>Discharging current</b>	<b>0.5 to 3A</b>
<b>Dimensions</b>	<b>145 x 92 x 40 mm</b>

The battery charger IntelliControl is a compact and intelligent fast charger with numerous functions. It is driven by a 12V source (car battery or mains adapter) and can charge 1 to 25 NiCd/NiMH cells from 2-12V. Charging current up to 5A and discharging current up to 3A can be set. Operating the device is done using three keys. Ten individual programmes as well as one fully automatic programme for NiCd cells are provided. Automatic switch-off at the end of charging is carried out by the reliable delta-peak method and is indicated by a loud buzzer (can be deactivated). During the charging or discharging processes, the battery condition can be continuously read off the display.

MODE

SET / STOP



DISCHARGE / DOWN



CHARGE / UP

[ Set ] Key : Enter & Exit program mode / Stop charging and discharging procedure.

[ CHARGE/UP ] : Starts charging procedure / Increase figure / Moving the cursor to the right.  
The display will show as follows;

START BATTERY

0] C: 1.0A D: 1.0A

⇒

BATTERY AUTO

0] C: 1.0A D: 1.0A

⇒

AUTO SOUND

0] C: 1.0A D: 1.0A

⇒

SOUND START

0] C: 1.0A D: 1.0A

⇒

START BATTERY

0] C: 1.0A D: 1.0A

== Basic Menu Display ==

[ DISCHARGE/DOWN ] : Starts discharging procedure / Decrease figure / Moving the cursor to the left. The display will show in contrary order versus the right circle

Connection to power supply

Please connect the charger with the 12V Pb battery or 10V-15V power supply.

Connect red wire to + terminal.

Connect black wire to - terminal.

When connected correctly, the initial display will appear as follows:

= Simprop elect. =  
= Intelli Control =



START BATTERY

0] C: 1.0A D: 1.0A

START BATTERY

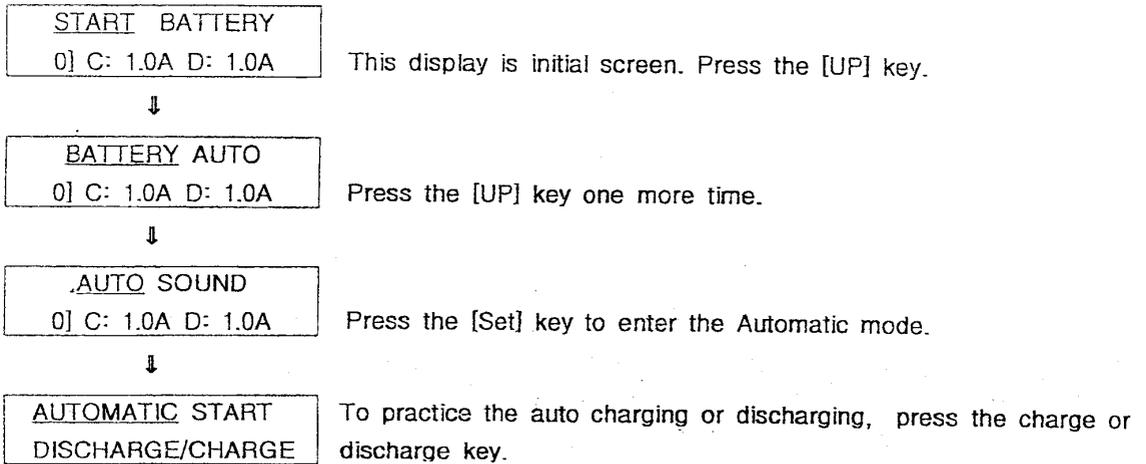
0] Nicd 1CL 1000

The above second lines will appear by turns.

## AUTOMATIC MODE

This charger has an Automatic charging and discharging function.

The Automatic charging/discharging procedure is as follows;

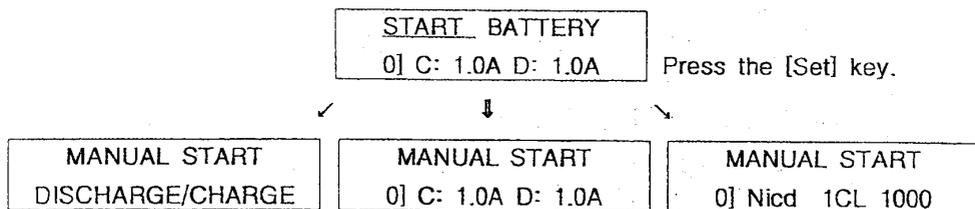


## RCLine Auto current setting method

RCLine has created this innovate auto setting method. The charger will automatically find out and select the most reasonable current by checking the battery status every 1 minute during auto charging/discharging.

Please do not attempt to charge Pb battery by this automatic mode.

## MANUAL MODE



- These 3 displays will be shown by turns.
- Starts charging/ discharging by pressing [Discharge] or [Charge] key.
- The charger won't discharge the Pb battery.

① Chging/dischging in10 Memory Battery Parameter Selection.

START BATTERY  
0] C: 1.0A D: 1.0A

Initial screen. Press the [Up] key.



BATTERY AUTO  
0] C: 1.0A D: 1.0A

Press the [Set] key.



SELECT SET  
0] C: 1.0A D: 1.0A

Press the [Set] key to enter 10 Memory Selection.



0] Nicd 1CL 1000  
C: 1.0A D: 1.0A

In this mode, you can choose each 10 Memory Selection simply by pressing the [Up] or [Down] key, depending on your battery packs.

In order to charge/discharge at a Memory Selection that you have chosen, please refer to the following display order.

0] Nicd 1CL 1000  
C: 1.0A D: 1.0A

Press the [Set] key.



EXIT CLR.ALL  
0] C: 1.0A D: 1.0A

Make " EXIT " locate the right of the cursor by [Up] or [Down] key. Then, press the [Set] key.



START BATTERY  
0] C: 1.0A D: 1.0A

Make " START " locate the right of the cursor by [Up] or [Down] key. Then, press the [Set] key.

- Starts charging/ discharging by pressing [Discharge] or [Charge] key.
- The charger won't discharge the Pb battery.

② Setting up your own memory paramaters

First, choose a memory selection that you want to set. The order is as follows;

START BATTERY  
0] C: 1.0A D: 1.0A

Initial screen. Press the [Up] key.



BATTERY AUTO  
0] C: 1.0A D: 1.0A

Press the [Set] key.



SELECT SET  
0] C: 1.0A D: 1.0A

Press the [Set] key to enter 10 Memory Selection.



0] Nicd 1CL 1000  
C: 1.0A D: 1.0A

In this mode, you choose a memory selection that you want to set by [Up] or [Down] key.

For example; if you choose 4] memory selection, the display will be shown as follows:

4] Nicd 8CL 1700  
C: 3.4A D: 1.2A

Press the [Set] key.



EXIT CLR.ALL  
4] C: 3.4A D: 1.2A

By the [Up] or [Down] key.



BATTERY AUTO  
4] C: 3.4A D: 1.2A

Press the [Set] key.



SET EXIT  
4] C: 3.4A D: 1.2A

By the [Up] or [Down] key, then press the [Set] key.



BATTERY TYPE :  
↔ Nicd

BATTERY TYPE :  
↔ Pb

By the [Up] or [Down] key.



By the [Set] key

BATTERY CELLS :  
↔ XXXXCELL

BATTERY voltage :  
↔ XXV

By the [Up] or [Down] key.



By the [Set] key

BATTERY CAPACITY:  
↔ XXXXmAh

BATTERY CAPACITY:  
↔ XX.XXAh

By the [Up] or [Down] key.



By the [Set] key

CHARGE CURRENT:  
↔ X.XA

CHARGE CURRENT:  
↔ X.XA

By the [Up] or [Down] key.



By the [Set] key

DISCHARGE CUR:  
↔ X.XA

By the [Up] or [Down] key.

• After you have set up your own memory parameters, return to the initial screen and start charging or discharging.

## MEMORY ALL CLEAR MODE

The SuperNova is supplied with 10 standard factory pre-set parameters. Even if you have set up your own standard parameter values, you can always use the factory pre-set parameters by "MEMORY ALL CLEAR"

BATTERY AUTO  
0] C: 1.0A D: 1.0A

By pressing the [Set] key



CLR.ALL SELECT  
C: 1.0A D: 1.0A

Make " CLR.ALL " locate the right of the cursor by [Up] or [Down] key. Then, press the [Set] key.

✓  
MEMORY ALL CLEAR  
↔ YES

↘  
MEMORY ALL CLEAR  
↔ NO

- Choose " Yes " or " No " by pressing the [Up] or [Down] key.
- If you choose the " Yes " by pressing the [Set] key, all of the selected values that you have set will be erased, then returns to the 10 standard factory pre-set parameters.
- If you choose the " No " by pressing the [Set] key., nothing will change.

## SOUND MODE

SOUND START  
0] C: 1.0A D: 1.0A

Press the [Set] key to enter this sound mode.

✓  
SOUND VOLUME  
↔ MAX MIN

↘  
SOUND VOLUME  
↔ MAX MIN

- By pressing the [Up] or [Down] key, choose " Max " or " Min "
- If you choose " Max " on the right of the cursor by the [Set] key, the charger will sound everytime the keys are pressed.
- If you choose " Min " on the right of the cursor by the [Set] key, the charger won't sound everytime the keys are pressed.

## Data Reference during Charging / Discharging

↔ IN/OUT VOLTAGE

##.###Vi ##.###Vo

In order to refer to all data of input voltage, output voltage, and charge/discharge time, etc during charging/discharging, press the

↔ CHARGE VOLTAGE

##.###Vp ##.###Va

[Up] and [Down] keys simultaneously. Then, by pressing [Up] or [Down] key, you can see all of the displays step-by-step.

↔ DISCH. VOLTAGE

##.###Vs ##.###Vc

↔ CHAR.: 2010mAh

DISC.: 1950mAh

Vi : Input Voltage      Vo : Output Voltage

Vp : Peak Voltage      Va : Average Voltage

↔ CHAR. 00:00:00

DISC. 00:00:00

Vs : Discharge start voltage

Vc : Discharge cut-off voltage

↔ Nicd 8CL 1300

C:5.0A D:5.0A

## DISPLAY during Charging

### 1) Nicd battery manual charging

C#### mAh.00:00:00

##.##V #.##A ##%

You can reset the charge current during charging by pressing the [Up] or [Down] key.

↓

Charge current

↔ X.XA

After resetting the charge current, press the [Set] key. Then, charging procedure will be practiced with the selected Ampere.

### 2) Pb(lead) battery manual charging

C#### Ah 00:00:00

##.##V #.##A Pb

You can reset the charge current during charging by pressing the [Up] or [Down] key.

↓

Charge current

↔ X.XA

After resetting the charge current, press the [Set] key. Then, charging procedure will be practiced with the selected Ampere.

### 3) Nicd battery Automatic charging

C#### mAh 00:00:00

##.##V #.## Auto

You can't reset the charge current during charging.

## DISPLAY during Discharging

D#### mAh 00:00:00

##.##V #.##A ##%

You can reset the discharge current during discharging by pressing the [Up] or [Down] key.

↓

DISCHARGE CUR.

↔ X.XA

After resetting the discharge current, press the [Set] key. Then, discharging procedure will be practiced with the selected Ampere.

## 12. Ladestromempfehlungen

Die Akkuhersteller geben in der Regel nur sehr vorsichtige Angaben zum Ladestrom und Entladestrom. Werden diese Empfehlungen eingehalten, erreicht man zwar eine sehr hohe Lebensdauer, hat aber den Nachteil der relativ langen Ladezeit von ca. einer Stunde. Mit der folgenden Tabelle möchten wir einige Empfehlungen abgeben, die einen guten Kompromiss zwischen Lebensdauer und Ladezeit bringen.

Zellentyp	Schnellladestrom	Ladezeit ca.	Entladestrom	Entladezeit ca.
Sanyo N-270 AA	0,8A	22min.	0,5A	32min.
Sanyo N-500 AR	1,5A	24min.	2A	15min.
Sanyo N-600 AA	0,6A	66min.	0,6A	60min.
Sanyo N-700 AR	2A	25min.	2A	21min.
Sanyo N-1250 SCR	5A	18min.	3A	25min.
Sanyo N-1300 SC	1,5A	59min.	2A	39min.
Sanyo N-1700 SCR	5A	24min.	3A	34min.
Sanyo RC2000	5A	28min.	3A	40min.
Sanyo RC2400	5A	34min.	3A	48min.
12V 6Ah Bleiakku	2A	Ca. 4 Std.	-	-

## 13. Fremdwörter

Wort oder Abkürzung	Bedeutung
NiCd	Nickel Cadmium
NiMH	Nickel Metall Hydrid
Pb	Plumbum = Blei Akku
Delta Peak	Abschaltverfahren für NiCd / MiMH Zellen durch Spannungsmessung
A / V / W	Ampere / Volt / Watt
mAh	Milliamperestunden => Kapazität des Akkus
Discharge	Entladen
Charge	Laden
Exit	Ausgang
Select	Auswahl
Current	Strom
Voltage	Volt

## 14. Intelli-Control Ladestromtabelle

Zellen	Maximaler Ladestrom	Maximaler Entladestrom
1	1,6A	2,6A
2	1,8A	3,0A
4	2,6A	3,0A
6	5A	3,0A
7	5A	3,0A
8	5A	2,5A
10	5A	2,0A
12	5A	1,7A
14	5A	1,6A
16	5A	1,5A
18	4,4A	1,2A
20	3,6A	1,0A
24	3,5A	0,8A
25	3,3A	0,8A