

# RCC-100 BALANCE CHARGER INSTRUCTION MANUAL 使用說明書

# ALIGN



Built-in AC Adapter

## RCC-100

**AC/DC**

Dual-Input



← **大功率100瓦**  
**Max 100W Output**

Thank you for purchasing of Align products. Please read the manual carefully before installing and be sure to retain the manual for future reference. Specifications, contents of parts and availability are subject to change, ALIGN RC is not responsible for inadvertent errors in this publications.

承蒙閣下選用亞拓遙控世界系列產品，謹表謝意。使用前，請務必詳閱本說明書，相信一定能夠給您帶來相當大的幫助，也請您妥善保管這本說明書，以做為日後參考。本公司將不對此印刷物之異動負責，也無法主動通知消費者任何更新或異動。本說明書內記載的材質、規格或零件包裝之內容物如有異動，請依亞拓官網公告為主。

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We appreciate your patronage of Align professional aerial photography products. To ensure your success with this product, we would like to present the following information and important reminders.

In order for you to thoroughly enjoy the product, please read through this manual prior to assembly and setting up. Keep this manual handy for future reference.




The content of specification and information in manual is for reference only and subject to change without notice.

承蒙閣下選用亞拓遙控世界系列產品，謹表謝意。進入遙控世界之前必須告訴您許多相關的知識與注意事項，以確保您能夠在學習的過程中較得心應手。

為了讓您容易方便使用，在開始操作之前，請您詳細的閱讀完這本說明書之後再進行安裝與設定及安全操作方面的資訊，或者請在專業人士的陪同下使用本產品。同時請您妥善保存這本說明書，作為爾後調整的參考。

本使用說明書所提到的產品規格和資訊僅供參考，如有內容更新，恕不另行通知。

## WARNING LABEL LEGEND 標誌代表涵義

 <p><b>WARNING</b> 警告</p>	<p>Mishandling due to failure to follow these instructions may result in damage or injury. 因為疏忽這些操作說明，而使用錯誤可能造成財產損失或嚴重傷害。</p>
 <p><b>CAUTION</b> 注意</p>	<p>Mishandling due to failure to follow these instructions may result in danger. 因為疏忽這些操作說明，而使用錯誤可能造成危險。</p>
 <p><b>FORBIDDEN</b> 禁止</p>	<p>Do not attempt under any circumstances. 在任何禁止的環境下，請勿嘗試操作。</p>

## SAFETY PRECAUTIONS 使用注意事項

RCC-100 Balance Charger utilize various high-tech products and technologies to provide superior performance. Improper use of this product can result in failure, overheat, fire and serious injury or even death. Please read this manual carefully before using. Do not use unqualified battery and leave the charger is operating unsupervised. Manufacturer and seller assume no liability for the operation or the use of this product. After the sale of this product we cannot maintain any control over its operation or usage.

**As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the property of others.**

RCC-100平衡型充電器是結合了許多高科技商品所設計出來的休閒用品，不當的操作或不熟悉都可能導致產品故障、過熱、引發火災，甚至造成人員傷害及財產損失。使用之前請務必詳讀本說明書，禁止使用不合格電池，並嚴禁在無人看管的狀況下進行充電。製造商和經銷商是無法對於使用者不當的操作所發生的意外負任何責任。

做為本產品的使用者，您，是唯一對於您自己操作的環境及行為負全部的責任之人。

**⚠ WARNING**  
警告

- Do not use the charger at place near heater or expose of sunshine.
- Keep the vent unimpeded.
- While using, put the charger at a stable place and avoid falling down or colliding.
- 避免靠近熱源或電器產品或在陽光直射環境下使用。
- 散熱口須保持暢通不可堵塞，引免影響散熱效果。
- 使用時請放置於平穩的場所並避免摔落或受到外力撞擊。

**⚠ CAUTION**  
注意

- The battery being used may be a little hot. Please do not charge the battery right away. It might cause the battery broken, even an accident.
- Prevent liquid and anything into the device. If so, please unplug the charger and take out the battery and send it to our distributors or headquarter to repair.
- If there is an unusual temperature increase, swell, or other unusual occurrences, please unplug the battery and plug immediately.
- 當電池剛使用過且表面溫度尚未冷卻時，請勿立即進行充電，否則將造成電池損壞，甚至引發意外。
- 不要讓異物或任何液體進入機體，如有尖細異物或任何液體進入機體時，請儘快將電源及電池拔除，並送至經銷商或本公司處理。
- 當充電過程中發生電池溫度升高、電池膨脹或其他異常情形時，請立即拔除電池與充電器電源插頭。

**⊘ FORBIDDEN**  
禁止

- If there is any unusual deformation of the surface of battery, please do not charge it anymore. If battery becomes hot while charging, stop charging and check if the battery is broken.
- For short-circuits battery, the indicating light of the charger will be off, so please stop charging.
- Do not let this machine drench to the rain / water or uses under the heavy moisture, in order to avoid the interior short-circuits and accidents.
- Charging error could result in battery explosion, fire, and other unexpected danger or property loss. Please always charge batteries with equipment in sight. Do not leave charger unattended. Should you need to leave the charging area, please remove the battery and abort charging process.
- 外觀已膨脹的電池不可做充電使用，損壞的電池於充電過程中會有發熱的情形，應停止對該電池進行充電。
- 內部短路的電池，當接上充電器時指示燈會熄滅予以警示，應停止對該電池進行充電。
- 勿讓本機淋到雨水或在濕氣重的環境下使用，以免內部發生短路等不可預期的故障及意外。
- 充電時務必在視線範圍內進行，不可在無人看管的情形下充電，以避免因充電異常造成電池爆裂、燃燒甚至引發火災等不可預期的危險及損失。必須離開看管範圍時應將電池取出，停止對電池充電。

RCC-100 Balance Charger provides max. 100W charge, greatly reducing charging time. It combines advanced charging management technology with LCD display, and is equipped with 4 function buttons and simple button operation design. It can flexibly display the charging status and changes on the LCD display screen through the operation buttons. When charging, the charging process can monitor the battery charging status at any time. The RCC-100 Balance Charger has a built-in high-performance switching power supply that can be used with either 100~240V AC or 12V automotive batteries.

RCC-100平衡式充電器，提供最大功率100瓦充電，大幅縮短充電時間。具備先進的充電管理技術與LCD液晶顯示螢幕進行結合，同時搭配4個功能按鍵、簡易按鈕操作設計，透過操作按鍵可直接將充電狀態呈現至LCD液晶顯示螢幕上。充電時，充電過程可隨時監控電池充電狀態。RCC-100平衡型充電器內置高性能開關電源，可使用100-240V交流電，更可用於12V的車用電瓶供電。



LiHV Battery  
LiHV模式



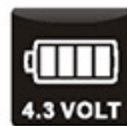
Discharge  
放電功能



Program Data Save / Load  
程式資料儲存/讀取



Delta Peak Sensitive  
三角壓降感應



End Voltage Controlled  
截止電壓控制



Nixx Battery Cycles  
鎳系電池循環充電



Storage Charge  
鋰電池貯藏



Battery Meter  
電壓量測功能



Maximum Safety  
最大安全性



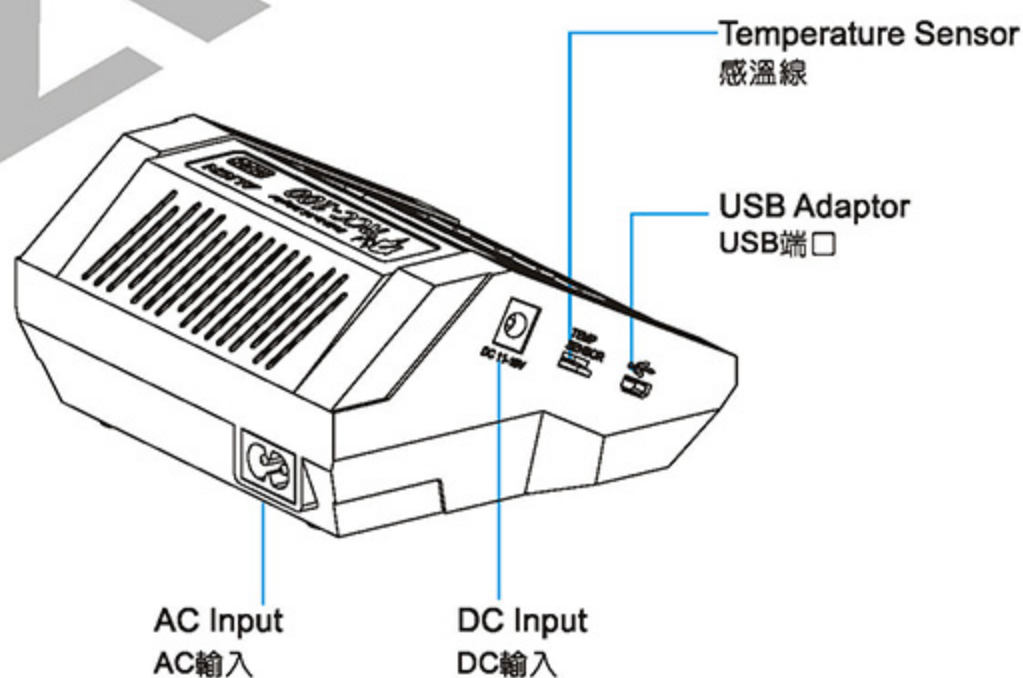
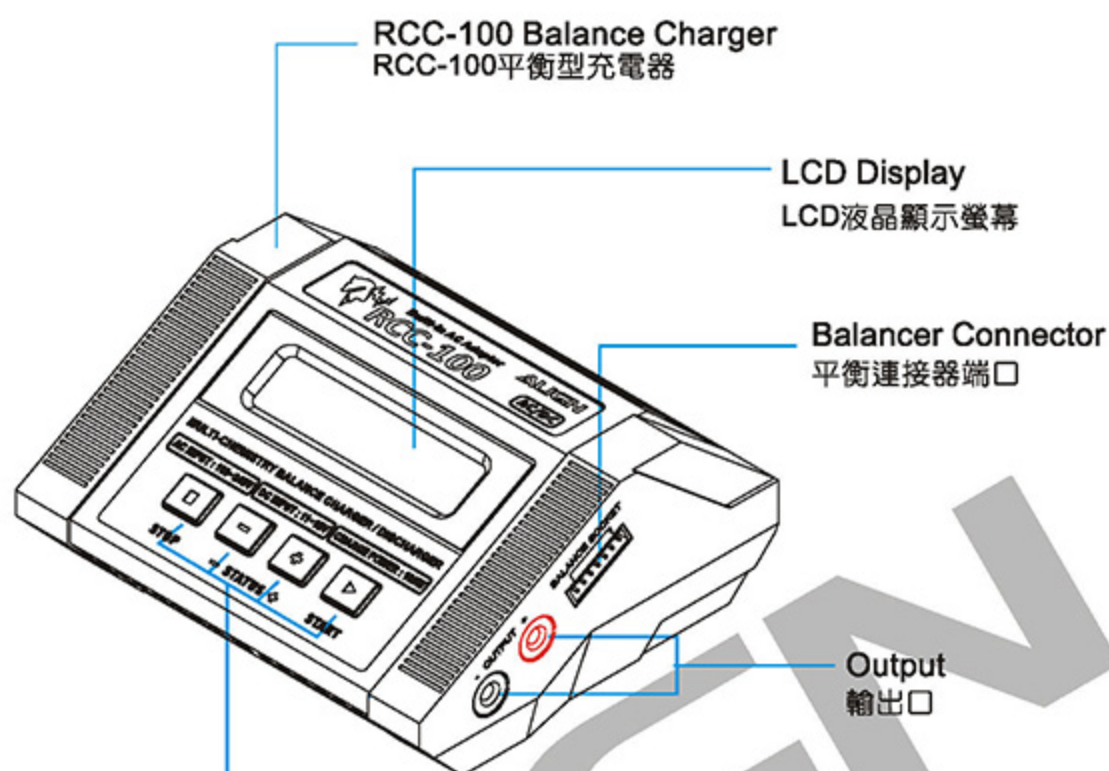
Safety Timer  
安全定時器

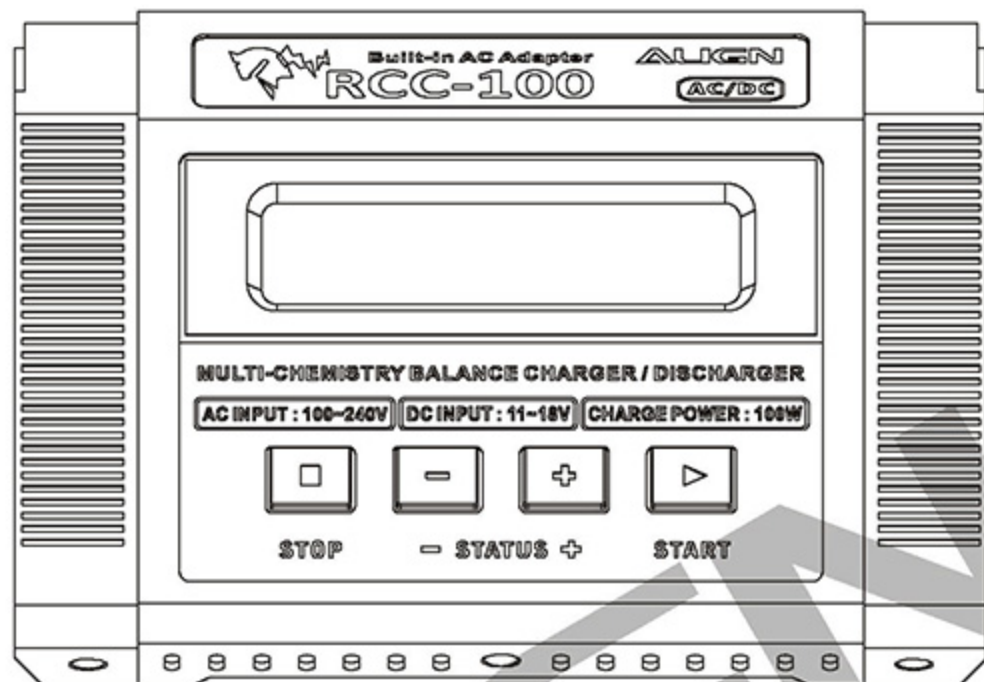






Capacity Statistic  
容量統計



Temperature Sensor  
溫度感測器





BUTTON NAME 按鈕名稱	ICON 圖示	FUNCTION INTRODUCTION 功能說明
STOP		Mode selection/away button for browsing the main menu, stopping the operation or returning to the previous step. 模式選擇/離開鍵，瀏覽主功能表，停止操作或返回上一步。
- STATUS +		Used to browse the sub-function table and reduce the set parameter values. 瀏覽子功能表及減少所設定的參數值。
		Used to browse the sub-function table and increase the set parameter values. 瀏覽子功能表及增加所設定的參數值。
START		Start/Enter button, select enter/start. 開始/確認鍵，選擇進入/開始。

**Step 1. CONNECT THE POWER SUPPLY**

The RCC-100 Balance Charger has a built-in switching power supply. You can connect the AC power cord directly to an AC socket (100~240V AC power) or directly to a DC power supply with an input voltage range of 11~18V.

**Step 2. CONNECT THE BATTERY**

Before connecting the battery, please check again and confirm that the battery specifications and charging parameters of the charger are completely correct. If the settings are incorrect, the battery may be damaged or even cause a fire or explosion. To avoid short circuit, please connect the adapter cable first. After the charger, connect the battery; when closing, please turn off the battery, then turn off the adapter cable and charger.

**Step 3. CONNECT THE BALANCE PORT**

The black line of the battery balance port should be connected to the interface of the charger balance port with the negative indicator mark. Please pay attention to the positive and negative poles.

**步驟1. 連接電源**

RCC-100平衡型充電器有內置開關電源，您可以直接將交流電源線連接到交流電插座（100~240V交流電源）或直接連接至輸入電壓範圍為11~18V的直流電源上。

**步驟2. 連接電池**

連接電池前請務必再次檢查並確認充電器的電池規格及充電參數設定是否完全正確，若設定錯誤，可能造成電池損壞，甚至引起火災或爆炸，為避免接頭短路，請先將轉接線連接到充電器後，再連接電池；關閉時，請先關閉電池，再關閉轉接線及充電器。

**步驟3. 連接平衡口**

電池平衡口接排線的黑線必須對應充電器平衡口有負極指示標誌的介面，請注意正負極



**ALWAYS TURN CHARGER ON FIRST.** Failure to turn on the charge prior to connecting a battery may result in damage to the charger and/or battery.

電池連接到充電器前，請保持充電器為開機狀態，避免造成充電器及電池的損毀。

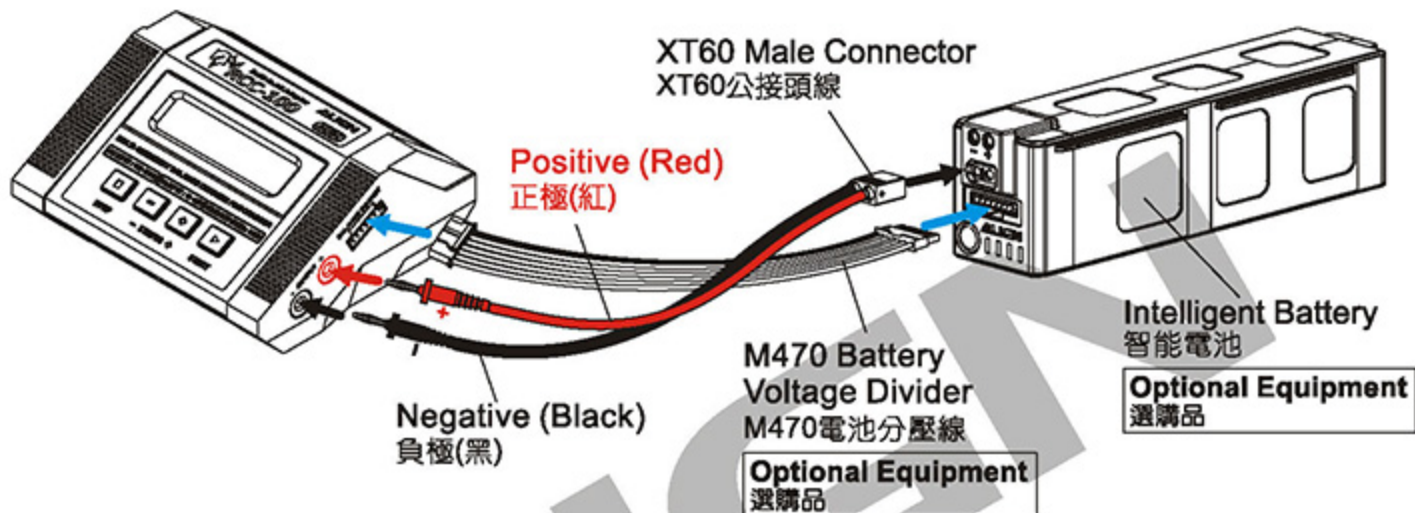


The charging cable with RCC-100 balance charger would be different due to different version of product. Please refer to below RCC-100 balance charger connect instruction according to the product version you purchased.

RCC-100平衡式充電器會因購買商品版本不同，而隨附不同的充電接線，請依您選購的商品版本，參考下圖RCC-100平衡式充電器的接線方式。

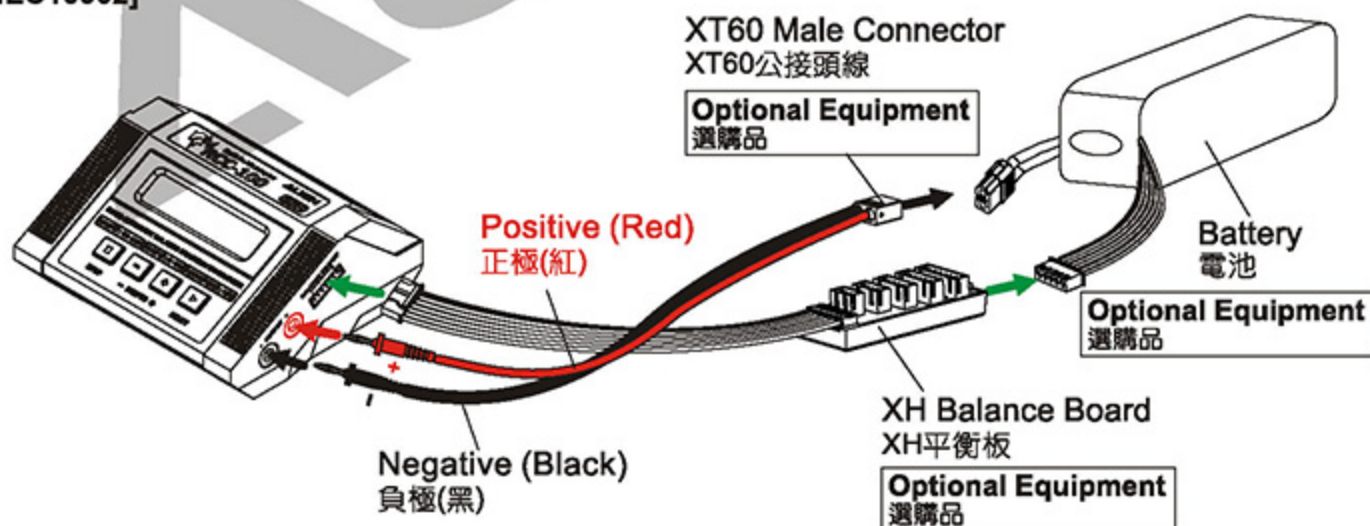
For RCC-100 balance charger attached with multi-drone, using M470 battery voltage divider to charge for intelligent battery.

選購多軸機內附RCC-100充電器之版本，使用M470電池分壓線進行智能電池充電之接線方式



For single purchase RCC-100 balance charger, using XH balance board to charge lithium battery.

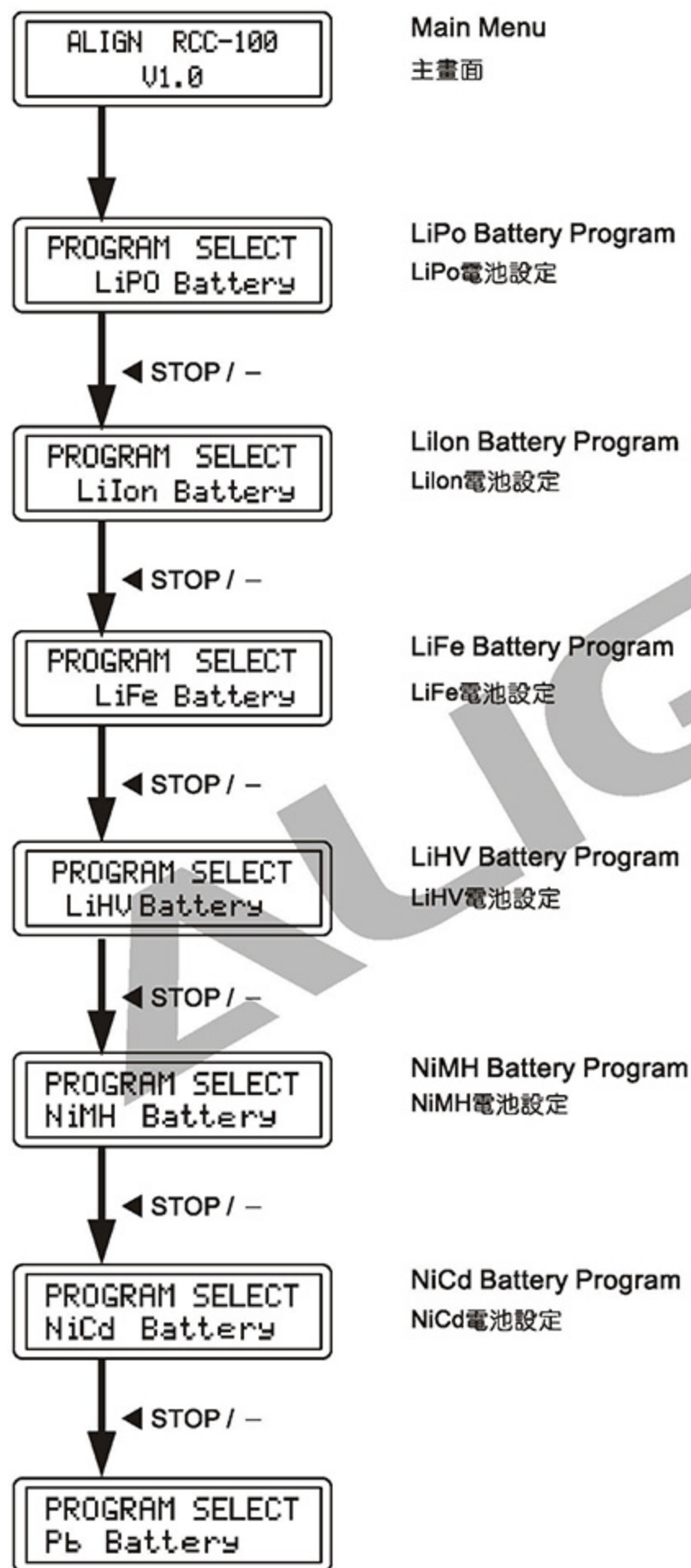
單購RCC-100充電器，使用XH平衡板進行鋰系電池充電之接線方式  
[HEC10002]



**WARNING**  
警告

Please follow the battery charging instruction for battery terminal cable connection : Black cable to " - " port ; Red cable to " + " port. Make sure to be aware and careful to prevent damage to the charger.

XT60公接頭線的黑線必須對應輸出口有負極指示標誌的介面；紅線必須對應輸出口有正極指示標誌，請參考圖示充電方式來進行電池充電。請注意正負極孔位避免誤插造成充電器燒毀。



PROGRAM SELECT  
Pb Battery

**Pb Battery Program**  
鉛電池設定

◀ STOP / -

PROGRAM SELECT  
Digital power

**Tunable digital power mode, you can set the input power to a output power of 3.0V~24.0V**

可調數字電源模式，可以將輸入功率設定為3.0V~24.0V的輸出功率

◀ STOP / -

PROGRAM SELECT  
Memory Save

**Save Battery Memory Setting**  
儲存電池記憶設定

◀ STOP / -

PROGRAM SELECT  
Memory Load

**Load Battery Memory Setting**  
載入電池記憶設定

◀ STOP / -

PROGRAM SELECT  
Battery Meter

**Meter Battery Voltage**  
儀表電池電壓

◀ STOP / -

PROGRAM SELECT  
Battery IR

**Meter Battery Internal Resistance**  
儀表電池內阻

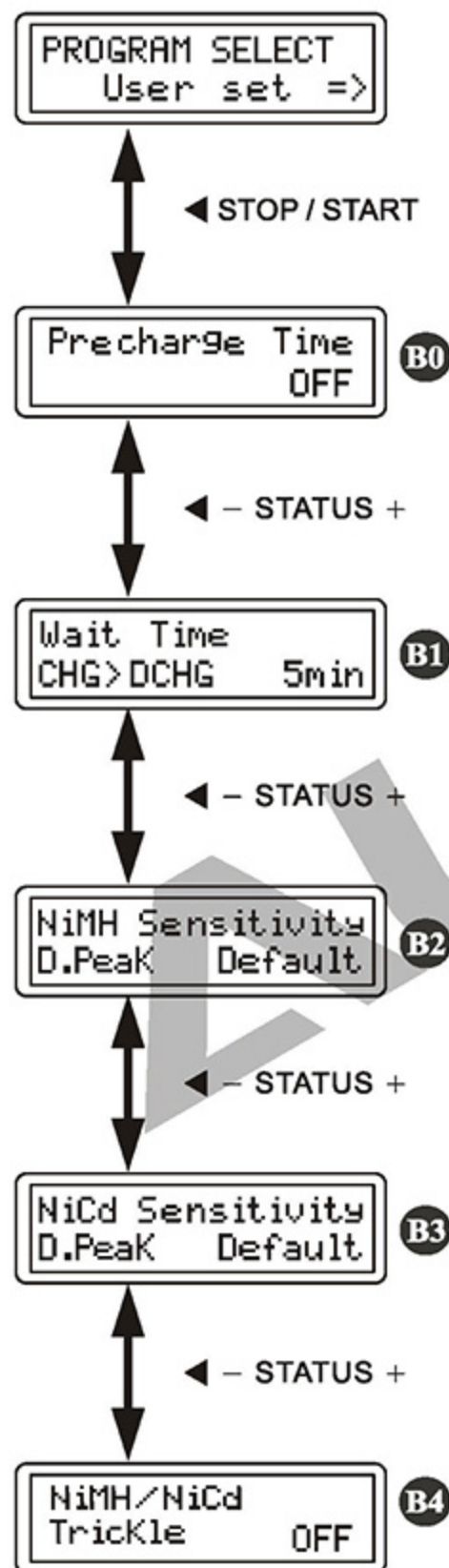
◀ STOP / -

PROGRAM SELECT  
User set =>

**User Set**  
用戶設定介面

When using the charger for the first time, make sure to press "STOP" and enter the "User Set", and press "START" to select the correct settings, then start the charge/discharge process.

初次使用本充電器時，請務必按壓 "STOP" 鍵先進入 "用戶設定介面"，再按壓 "START" 鍵進入參數設定頁面，正確設定後才可開始充放電。



This program restores the battery program for pre-charging function, sets the time to be charged (usually 2 minutes) through the menu, and then pre-charges. The bigger the battery capacity, the longer it takes. Please refer to the pic. B0 on the left.

此程式為預充電功能還原電池程式，透過選單設定欲充電時間(通常為2分鐘)，然後預充電，請參考左圖B0。電池容量越大所需的時間則越長。

**WARNING**  
警告

DO NOT use the "Normal Charge Mode" unless you are familiar with the battery and charging process. IMMEDIATELY STOP the charging process if the battery fails to charge or there is a minimal increase in voltage. Failure to stop the charging process may result in excessive heat, fire, or even serious injury and damaged.

在正常的充電模式下，需關閉預充程序，除非很熟悉電池狀態，否則請不要使用此功能。如果電池電壓增加得少，必需立即結束預充程序，以免發生危險。

When NiMH or NiCd battery is in a charge/discharge cycle this may cause overheating. Set the "Wait Time" to allow sufficient time for the battery to cool during the charge/discharge cycle. The value range is 1 to 60 minutes. if you are unsure, set the value to more than 10 minutes. Please refer to the pic. B1 on the left.

當鎳氫鎳鎘電池在循環充/放電時，可能會引起過熱，在這個程序裡可以設定 "Wait Time" 允許電池在循環過程中有足夠的時間冷卻。值的範圍是1~60分鐘，如果不確定可設定在10分鐘以上。請參考左圖B1。

Pic. B2 and Pic. B3 are only available for Ni-MH/Ni-Cd batteries. When the charger detects that the peak voltage is higher than the set value, the charger will indicate that the charging has been completed.

B2、B3僅適用於Ni-MH / Ni-Cd電池，當充電器檢測峰值電壓高於設定值時，充電器會提示充電已經完成

$\Delta V$  means the auto charging end voltage value for NiMH/NiCd battery. The effective value range is 5 to 20 mV/cell. Setting the  $\Delta V$  to high is dangerous when charging a HV battery. Setting the  $\Delta V$  to low can cause a possibility of charging termination. Please refer to the pic. B4 on the left.

$\Delta V$  是指鎳氫/鎳鎘電池自動充電截止時的觸發電壓，每節的有效值範圍是5~20mV。如果 $\Delta V$ 設定過高，電池會有過充危險；如果設定過低，會有提前終止充電的可能。請參考左圖B4。

Temp Cut-off  
ON 80C (176F) **B5**

← - STATUS +

Safety timer  
OFF 120min **B6**

← - STATUS +

Capacity Cut-off  
5000mAh **B7**

← - STATUS +

Key Beep ON  
Buzzer ON **B8**

← - STATUS +

Back-light  
100% **B9**

← - STATUS +

Battery end volt  
LiPO 4.20V/C **B10**

← - STATUS +

FACTORY RESET  
PRFSS ENTER >25 **B11**

**B5** set the temperature protection. When the temperature reaches a certain value, the charger will alarm and stop charging. (Need to purchase a separate temperature line)

**B5**程式可以設定溫度保護，當溫度達到一定值，充電器將會警示，並且停止充電。（需要另購溫感線）

**B6** shows that this program can be turned on or off. When you start a charge process, the integral safety automatically starts running at the same time. This is programmed to prevent overcharge the battery if it proves to be faulty, or if the termination circuit can not detect the battery full and you can set the maximum safety time, the value ranges from 10 to 720 min.

**B6**顯示此程序可以開啓或關閉。充電器開始充電時，內置的安全充電計時器也開始工作。如果充電器顯示錯誤或者終端電路無法檢測電池充滿，此程式可以防止電池過充。安全計時器可以設定最大限度以便電池可以充滿，並且您可以設置最大安全時間，值範圍從10~720分鐘。

**B7** set the maximum charging capacity. If the voltage top peak sensing and safety timing method loses battery protection for some reason, the program can automatically terminate the charging process when the battery reaches the set maximum charging capacity. See B7, the value ranges from 100 to 99900mAh.

**B7**程式可以設定最大充電容量。如果電壓頂峰值感應及安全計時方法因某種原因，失去電池保護功能，當電池達到設定的最大充電容量時，此程式可以自動終止充電過程，範圍為100~99900mAh。

You can set alarm sound and adjust the brightness of LCD screen through **B8**、**B9**

透過**B8**、**B9**程序可設定警示聲開關及調整LCD液晶螢幕的亮度。

**B10** Set battery end voltage value, when battery reach the setting value, charge will stop automaticly.

透過**B10**程式設定電池結束電壓值，當電池達到設定值時，充電將自動停止。

**B11** Press "START" button over 2 seconds into FACTORY RESET program, you could reset all parameter.

**B11**程式為恢復出廠設定，按"START"二秒即恢復出廠預設值。

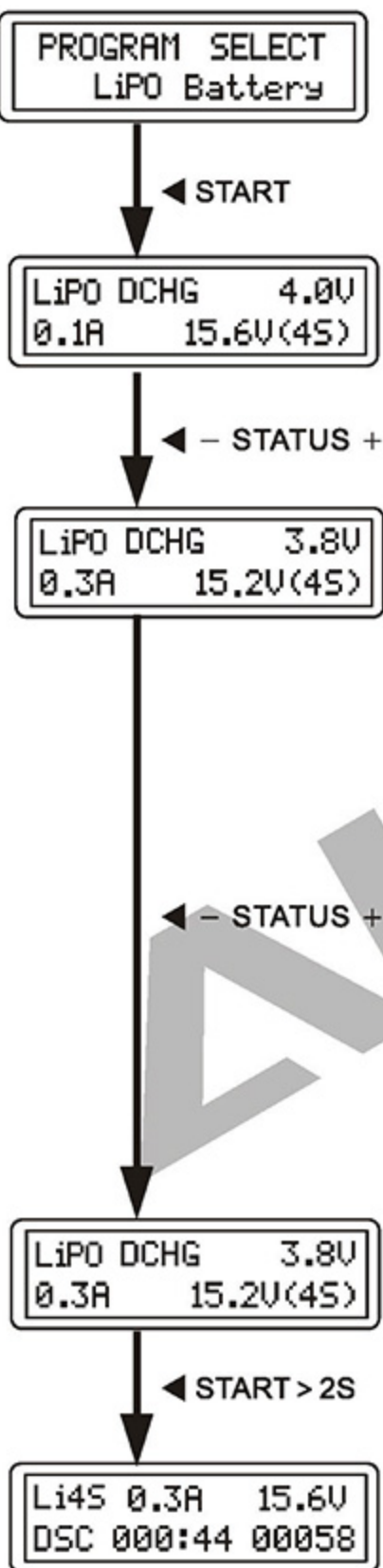
**WARNING**  
警告

When using the reset to default setting function, all settings will be reset to factory default. Please, confirm before using the reset function.

選擇恢復出廠預設值，所有設定的內容將全部清除。點選前請再次確認您要使用此設定。

When the battery is charged, the system will go directly to the LiPo battery balance charging mode. You can select different charging modes depending on the battery you are using.

RCC-100平衡式充電器開始進行電池充電時，會依據電池容量設定及電池節數自動出現建議充電電流數值。您可依使用的電池選擇不同的充電模式設定參數，然後開始進行充/放電。



**CAUTION**  
注意

When using the charger for the first time, make sure to enter the "User Set" and select the correct settings. The cutoff voltage of the discharge must be set correctly, otherwise it will cause overcharge/over discharge.

初次使用時，請務必先進入"用戶設定介面"，正確設定後才可開始充放電。放電的截止電壓必須設定正確，否則會引起過充/過放。

**START THE PROGRAM**

Press and hold the "START" button for 2 seconds to start the program.

**開始程序**

長按"START"鍵2秒來開始程式操作。預設參數會進入LiPo電池程式介面。

**MODE SELECTION**

Press "STOP" and "- STATUS +" buttons to view all mode. Press "STOP" to show main menu and click the button to select the menu of the same layer. Press "START" to enter menu, the selected value will start to flash, and press "- STATUS +" to view the list of menu or decrease/increase setting value. In the last, press "START" after finish to save the value.

**模式選擇**

在選單中按下"STOP"鍵和"- STATUS +"鍵瀏覽所有程式，按"STOP"鍵會出現主畫面，點按鍵可選擇同一層的選單。請按"START"鍵進入選單，選取到的數值會閃爍，"- STATUS +"鍵瀏覽選單或增減設定之數值；完成後點按"START"鍵，選擇的數值將會保存。

**BATTERY SETTINGS**

RCC-100 Balance Charger can recognize the number of cell automatically and provide recommended charging current, press "START" directly. If user has higher request, press "- STATUS +" to set the value of the current, and press "START" to confirm the set value.

**電池設定**

RCC-100平衡式充電器可自動識別鋰電池節數，出現建議充電電流，直接按"START"鍵確認。如果使用者有更高的需求，可按"- STATUS +"鍵設定電流的數值。然後再"START"鍵確認已設定的數值。

**FINISH / END OF THE PROGRAM**

During the charging process, press the "STOP" to end the program operation or go back to previous step. When the program operation is completed, an alarm sounds.

**設定完成/終止設定**

在充電的過程中，按壓"STOP"鍵即停止程式或返回到上一步。當程式操作完成時，會發出警示聲。

## CHARGING STATUS MONITORING

RCC-100 Balance Charger can recognize the number of cell automatically to prevent battery voltage is lower than safe voltage. Press " - STATUS + ", the immediate situation will be displayed on the screen.

### 充放電狀態監控

RCC-100平衡式充電器可自動識別電池節數以預防電池電壓低於最低安全電壓，降低充電器運作異常。點按"- STATUS +"鍵，透過LCD液晶螢幕上顯示充放電過程中的各種資訊、即時情況。

Li4S 2.0A 12.59V  
BAL 022:43 00682

Immediate situation: battery type, number of battery cells, charging current, battery voltage charging time, charging capacity.

即時情況：電池類型、電池節數、充電電流、電池電壓已充電時間、充電容量。

◀ Dec./-

End Voltage  
16.80V

The final voltage at the end of the program.

當程式結束時的最終電壓

◀ Dec./-

Capacity Cut-OFF  
5000mAh

Charge capacity protection.

充電容量保護

◀ Dec./-

SaFety Time  
ON 240min

Charging protection time.

充電保護時間

◀ Dec./-

TeMP Cut-oFF  
ON 60c(140F)

Charging protection temperature.

充電保護溫度

◀ Dec./-

EXT. TeMP 0c  
Int. TeMP 43F

Display charger internal temperature and battery external temperature.

顯示充電器內部溫度和電池外部溫度

◀ Dec./-

INPower Voltage  
14.74V

IN Power Voltage  
14.74V

Input voltage

輸入電壓

◀ Inc./+

C1: 4.15 C2: 4.16  
C3: 4.16 C4: 4.15

Detect single Cell voltage

檢測單節電池電壓

◀ Inc./+

C5: 0.00 C6: 0.00

Detect single Cell voltage

檢測單節電池電壓

RCC-100 Balance Charger is compatible with: LiPo / LiFe / LiHV / Li-Ion / NiMH / NiCd / Pb. Over charging may cause the battery to explode or catch on fire. Make sure to confirm the battery type and ensure battery voltage levels are within safe limits. Failure to follow this procedure may cause serious and unexpected damaged. Please refer to the standard battery parameter as below.

RCC-100平衡型充電器支援LiPo / LiFe / LiHV / Li-Ion / NiMH / NiCd / Pb七種類型電池充電，鋰電池過充可能引發爆炸，請務必確定您所使用的電池種類，並且仔細檢查所使用的電池及設定適當的電壓，否則可能引發嚴重災害造成不可預期的損傷。請參考下圖標準電池參數：

Item 項目	Types 類型	Li-Po	LiHV	Li-Lo	Li-Fe	NiMH	NiCd	Pb
Nominal Voltage 額定電壓(V / Cell)		3.70	3.80	3.60	3.30	1.20	1.20	2.00
Max Charge Voltage 最大充電電壓(V / Cell)		4.20	4.35	4.10	3.60	1.60	1.60	2.45
Allowable Fast Charge 允許快速充電(V / Cell)		< 1C	< 1C	< 1C	< 4C	< 2C	< 2C	< 0.4C
Min. Discharge Voltage 最小放電電壓(V / Cell)		> 3.00	> 3.00	> 3.00	> 2.00	> 1.00	> 0.85	> 1.75

**WARNING**  
警告

Failure to select the correct battery type and set correct values may result in excessive heat, fire, or even serious injury and damaged.

務必仔細檢查電池型號及設定，否則可能引發嚴重災害造成不可預期的損傷。



The RCC-100 Balance Charger has built-in memory, and the user can freely edit and store the battery parameters. Once you have edited the battery parameters, the charger will help you remember the settings and make your operation more convenient. The charger can store up to 10 sets of charge/discharge settings. Users can call at any time without having to reset.

RCC-100平衡型充電器內建記憶體，使用者可以自由編輯存儲10組充電/放電設定參數隨時調用，編輯好電池參數後，充電器將幫您記憶設定而不需再重新設定，讓您的操作變得更加便捷。

## BATTERY PARAMETER STORAGE SETTINGS

## 電池參數存儲設定

PROGRAM SELECT  
Memory Save

◀ START

MEMORY L01J  
NULL

◀ START

BATT MEMORY SAVE  
LiPo Battery

◀ START

LiPO BAL-CHG 4S  
C= 5000mAh 5.0A

◀ START > 2S

LiPO BAL-CHG 4S  
C= 5000mAh 5.0A

This interface enters the battery memory program settings  
此介面進入電池記憶程式設定

Press " - STATUS + " to set the battery storage serial number (1-10 groups)  
按 " - STATUS + " 鍵 設定電池存儲序號(1-10組)

Press " - STATUS + " to set the battery type (LiPo/LiFe/Lilon/LiHV/NiMH/NiCd/Pb)  
按 " - STATUS + " 鍵 設定電池類型 (LiPo/LiFe/Lilon/LiHV/NiMH/NiCd/Pb)

Press " - STATUS + " to set the balance charging mode, storage mode, discharge mode, and auto charging mode. Press "START" to confirm, then press " - STATUS + " to set the battery section number, battery capacity and charging current, and press "START" for 2 seconds to save the data.

按 " - STATUS + " 鍵設定平衡充電模式、儲存模式、放電模式、和自動充電模式，按START鍵確定，再按 " - STATUS + " 鍵設定電池節數、電池容量、充電電流，按 "START" 鍵2秒保存資料

The interface indicates the battery type, charging mode, battery section, capacity, and current data have been saved.  
介面指示電池類型、充電模式、電池節數、容量、電流數據已經保存。

## BATTERY PARAMETER RECALL SETTING 電池參數調出設定

PROGRAM SELECT  
Memory Load

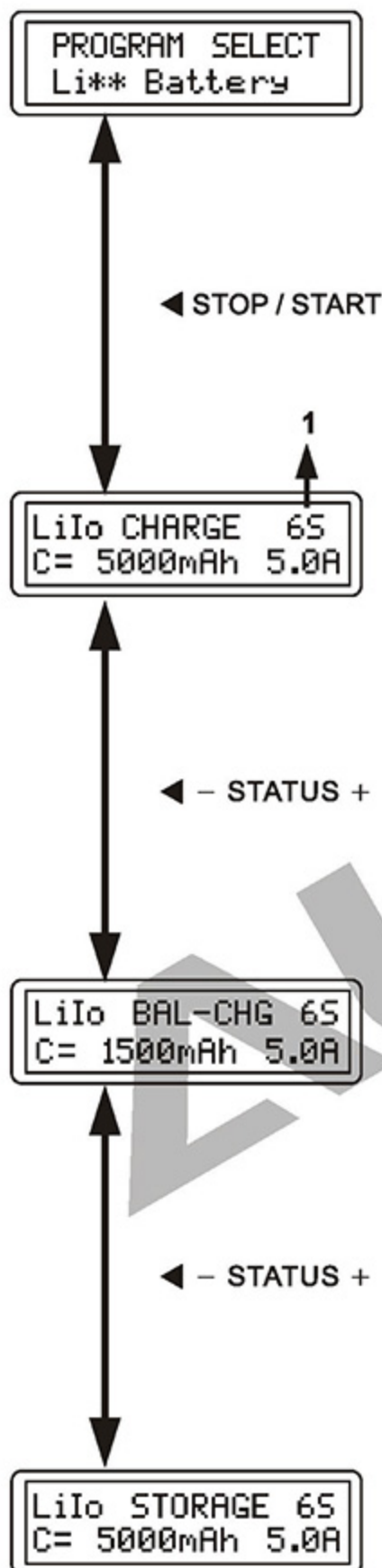
Load memory settings  
載入記憶設定

← START

LiPO BAL-CHG 4S  
C= 5000mAh 5.0A

Long press "START" for 2 seconds to start the program  
長按 "START" 鍵達2秒開始程式

ALIGN

**CAUTION**  
注意

When setting battery capacity the charger will default to a 1C charge rate. You can adjust the default value yourself.

當設定電池容量時，充電器會自動以1C比率來設定充電電流。你可以自行調整預設值。

This mode is for individual battery or some special battery pack without balance port or cell count. "1" shows you the cell count number, and shows you the capacity of the battery pack.

此模式適用於單個電池或某些沒有平衡端口或電池計數的特殊電池組。"1" 顯示電池計數，顯示電池組的電容。

**CHARGE MODE**

In charge mode set the battery voltage, battery capacity, charge current, cutoff voltage, and charge mode. Press the "START" button for 2 seconds to start charging.

**充電模式**

在此模式裡可設定電池組電壓、電池容量、充電電流、充電截止電壓、充電模式設定完成後，長按 "START" 鍵2秒開始充電。

**BALANCE CHARGING**

This is for 2~6 cells of Lithium battery with balance port, the battery pack being charged should have the individual cell connect, and connect it to the individual port at the right side of charger with suitable connection cable that fits with your battery pack.

The internal processor of the charger monitor and control the voltage of each cell the battery pack. This can improve the discharging performance of the battery the charger use the optimised calculation to control the tolerance in the range of  $\pm 0.01V$ !

**平衡充電**

這是用於帶有平衡端口的2~6節鋰電池，充電的電池組應該連接單個電池，並通過合適的連接電纜將其連接到充電器右側的獨立端口電池組。在此模式下，充電過程將與普通充電模式不同。

充電器的內部處理器監視並控制電池組的每個電池的電壓。這可以提高電池的放電性能充電器使用優化的計算來控制在 $\pm 0.01V$ 範圍內的容差！

LiIo STORAGE 6S  
C= 5000mAh 5.0A

← - STATUS +

LiIo DCHG 3.0V  
1.0A 18.0V(6S)

## STORAGE MODE

Select "Storage Mode" to reduce internal losses and preserve battery life. The charger will discharge or charge the battery until 40% of the power remains in each cell. Storage charge should be utilized when the battery will not be used for an extended period of time. The cutoff voltage level is different for each battery type: Lilo : 3.75V ; LiPo / LiHV : 3.85V ; LiFe : 3.3V. This is an intelligent program that will automatically charge when the voltage is too low and will discharge when voltage is too high. The battery balance connector must be connected to the charger balance port during the store charge process.

### 儲存模式

用戶較長時間不使用電池時，為降低內部損耗可以選擇此模式將電量維持至40%左右以利於儲存，對應的終止電壓因電池類型不同而異，Lilo : 3.75V ; LiPo / LiHV : 3.85V ; LiFe : 3.3V。這是一個智能程序，電壓過低時會自動充電，過高時則自動放電，為了保證每節電池都滿足要求，執行此程序時必須連接平衡接口。

## DISCHARGE MODE

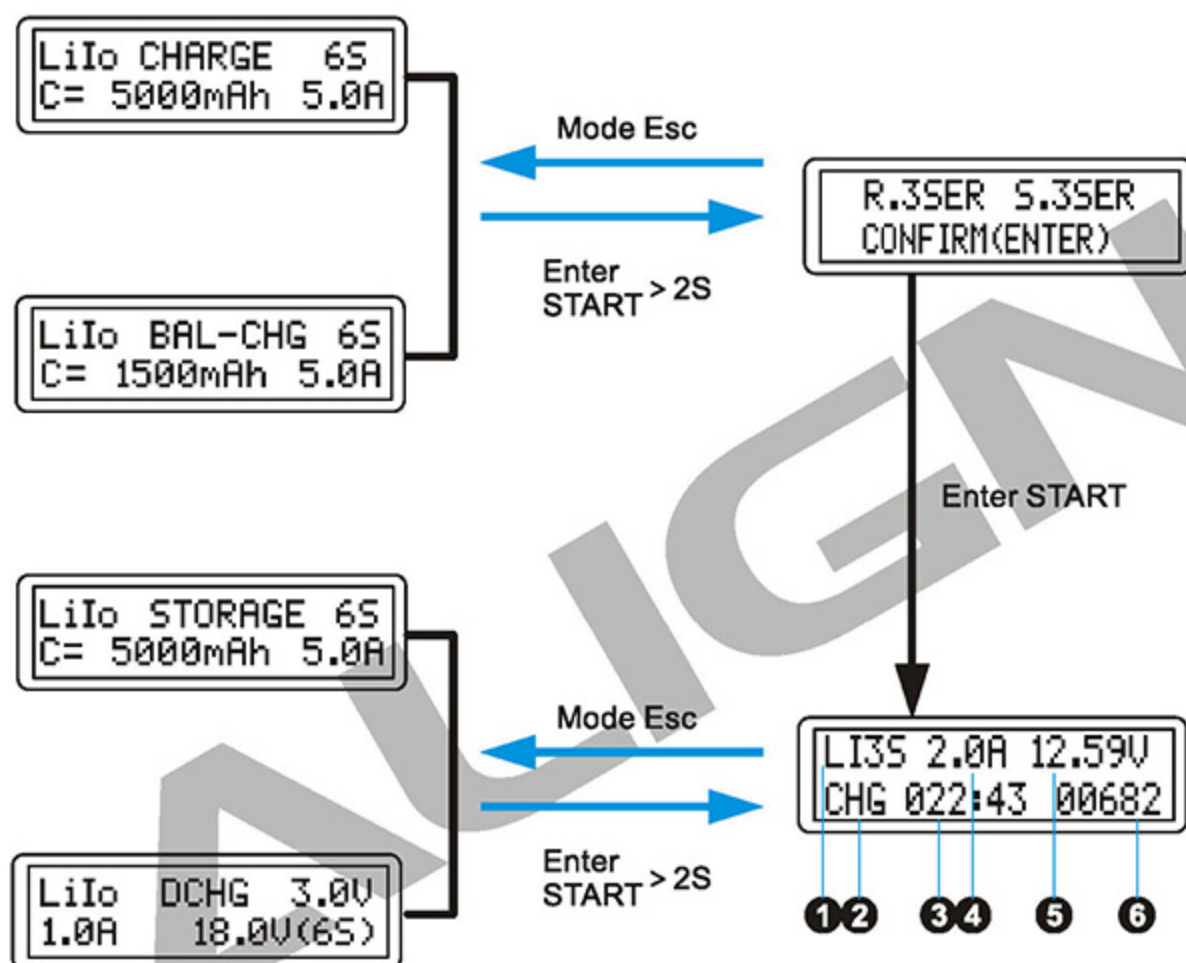
In discharge mode set the battery voltage, battery capacity, discharge current, and cutoff discharge voltage. Lithium battery should never be discharge below the storage lever. To prevent over discharging the battery, be sure to connect the battery balance connector to the chargers balance port and set the cutoff voltage to 3.0V~ 4.0V based on battery type.

### 放電模式

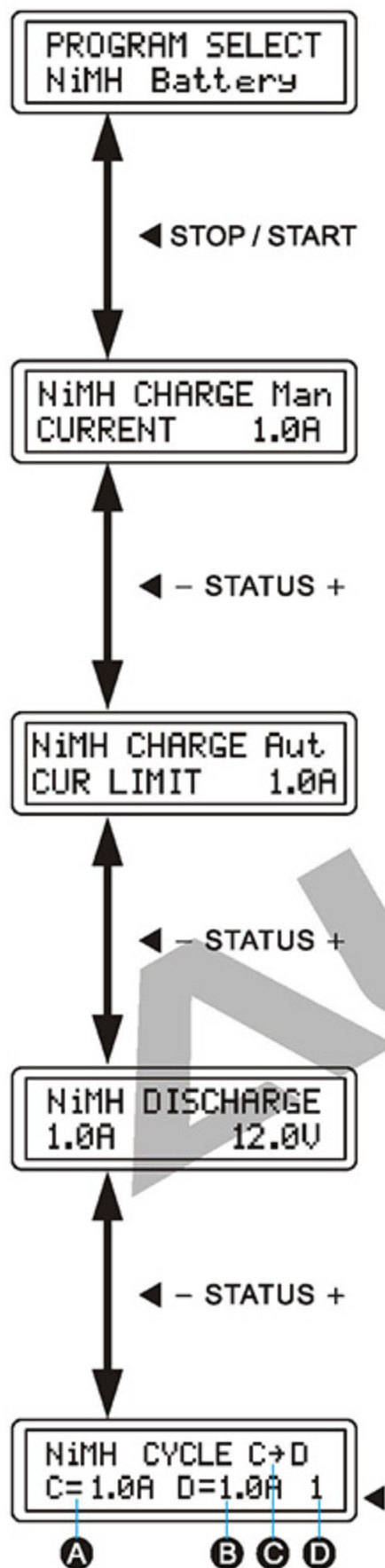
在此模式裡可設定電池組電壓、電池容量、放電電流、放電截止電壓。理論上鋰電池不需要放電，尤其是深度放電，為了保證電池不會被過放，執行此程序時必須連接平衡接口。連接至充電器，可設定放電截止電壓為3.0V~4.0V。

This screen shows the number of cells you set up and the processor detects. "R" shows the number of cells found by charger and "S" is the number of cells selected by you at the previous menu. If both number are identical you can start charging by press "START" button. If not, press "START" button to go back to previous menu, then carefully check the number of cells of the battery pack to charge again. If you selected the AUTO mode or discharge mode, you can pass over this screen directly.

LCD液晶螢幕顯示您設置的單元格數和處理器檢測到的數據。"R"表示充電器找到的單元格數，"S"表示您在上一個選單中選擇的單元格數。如果兩個數字相同，您可以按"START"鍵開始充電。若無則按"START"鍵返回上一層選單，請務必仔細檢查電池組的電池數量再次充電。如果您選擇了自動模式或放電模式，則可以直接略過此設定。



- ❶ The cells count  
電池計數。
- ❷ Perating mode:CHG-charging at auto mode /BAL balance charging mode / FAS fast charging / STO-storage mode / DSC-discharge mode  
操作模式在自動模式/ BAL平衡充電模式/ FAS快速充電/ STO存儲模式/ DSC-放電模式下的CHG充電。
- ❸ Elapsed time  
經過時間。
- ❹ Charge/discharge current  
電池充電/放電電流
- ❺ Chargedischarge voltage of battery  
電池充電放電電壓。
- ❻ Capacity of chargeldischarge  
充電放電容量。

**CHARGE MODE**

the default mode is "AUT". In AUT mode, you need to set the upper limit of charge current to avoid from higher feeding current that may damage the battery. Because some batteries of low impedance and small capacity can lead to the higher charge current by the processor at automatic charge mode. But in "MAN" mode, it will charge the battery with the charge current you set at the display. Each mode can be switched by pressing "START" button, when the current field is blinking, press "STATUS" for more than 1 second.

**充電模式：**

充電器預設為"AUT"模式優先，在"AUT"模式下您需要設定充電電流的上限，以避免可能損壞電池的較高饋電電流。因為一些低阻抗和小容量的電池可以在自動充電模式下由處理器導致更高的充電電流。但是在"MAN"模式下，充電器會在電池承受範圍內自動控制充電電流，並限制最大電流不超過用戶設定值，用於保護一些低電阻和小電容的電池非常必要。按"START"鍵可以切換每種模式，按壓"STATUS"鍵1秒鐘以上，當欲設置的文字閃爍時，即可設定。

**DISCHARGE MODE**

The discharge current value range is 0.1A to 2.0A and the end voltage range is 0.1V to 24.0V. The charging process is similar to the Lithium battery method. The end voltage of a NiMH battery is 1.0V/cell, while the NiCd is 0.85V/Cell. Please follow the battery manufacture's recommend values for charging.

**放電模式：**

充電器提供放電電流為0.1A~2.0A、截止電壓為0.1V~24.0V。操作方式與鋰電類似，鎳氫電池放電截止電壓為1.0V/節。鎳鎘放電截止電壓為0.85V/節，具體以電池生產商提供的資料為準。

**CIRCULATION MODE**

The charger can perform : DCHG>CHG or CHG>DCHG cycling up to six continual cycles. It allows to re-activate the new battery or Nixx battery which is not used for time being. Ensure this function is setup correctly to prevent damage to the battery. You can refer to previous charge/discharge parameter settings from the other menu.

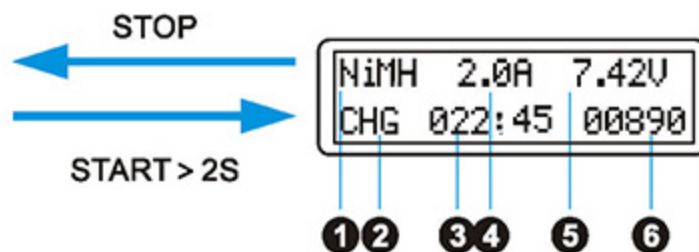
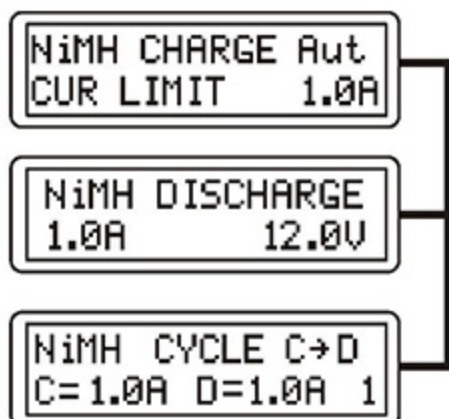
**循環模式：**

充電器支援1-6次循環DCHG>CHG或CHG>DCHG。使用於新電池或是長期放置的Nixx電池啟動，使用此項功能時，請用戶必須小心設定，以免損壞電池，充/放電的參數可分別引用前面電池充放電操作說明。

- A** Charge current in the cycle mode.  
循環模式下的充電電流。
- B** Discharge current in the cycle mode.  
循環模式下的放電電流。
- C** Sequence of cycle.  
循環順序。
- D** Cycle times.  
循環次數。

The LCD screen displays the state of charging process. Press "STOP" to stop program or go back to previous step.

LCD液晶螢幕顯示當下的過程狀態。按壓"STOP"鍵即停止程式或返回到上一步。



- 1 The type of battery  
電池類型。
- 2 Perating mode:CHG-charge/DSC  
discharge/DCHG>CHGorCHG> DCHG thecycle mode  
操作模式CHG充電/DSC放電/DCHG> CHG或CHG> DCHG循環  
模式。
- 3 Elapsed time  
經過時間。
- 4 Charge/discharge current of the battery  
電池充電/放電電流。
- 5 Voltage of the battery pack  
電池組電壓。
- 6 Insufficient charge, press "- STATUS +" to check  
temperature and  $\Delta V$  button.  
充電電量不足，按 "- STATUS +" 鍵即可查詢溫度和 $\Delta V$ 。

**CAUTION**  
注意

If the charging voltage is lower than 2.5V, then  $\Delta V$  can not be detected which may result in a danger during discharge process. However, it can be solved by temperature sensor or set 1C rate for charging current.

如果充電電池的電壓低於2.5V時， $\Delta V$ 無法被檢測到，將有可能引起放電危險，可藉由溫度傳感器或將充電電流設定超過1C來避免。容量時，充電器會自動以1C比率來設定充電電流。

RCC-100 Balance Charger supports 2V to 24V when charging a Pb battery. A Pb battery can only withstand a low capacity charge rate of 1C, DO NOT charge rapidly. The best charging current is 1/10 of the capacity. Please follow the battery manufacturer's recommend values for charging.

RCC-100平衡型充電器可支援電壓2~24V的鉛電池充電，鉛電池不能快充，僅能承受較低容量的充電電流，最佳充電電流將是容量的1/10，具體數據請參照電池廠商的使用說明。

Pb	CHARGE
4.0A	12.0V(6P)

◀ START > 2S

Pb-6	4.0A	12.59V
CHG	022:43	00682

### CHARGE PB BATTERY

Set the charge current on the Pb battery setting menu. The charge current range is 0.1A~10.0A. Set the battery voltage capacity, which should match the battery capacity size. Press the "START" button for 2 seconds to start charging the battery.

鉛電池充電：

在鉛電池充電選單中可設定充電電流(範圍:0.1~10.0A)，電池電壓和容量、電壓值必須與被充電的電池相匹配，長按"START"鍵2秒開始進行充電。

The LCD screen displays the state of charging process. Stop charging forcibly, press "STOP" one time. Set the battery voltage capacity, which should match the battery capacity size. Press the "START" button for 2 seconds to start charging the battery.

LCD顯示螢幕會出現充電狀態。要強制停止充電，請按"STOP"鍵一次。電池電壓和容量、電壓值必須與被充電的電池相匹配，長按"START"鍵2秒開始充電。

Pb	DISCHARGE
4.0A	12.0V(6P)

◀ START > 2S

Pb-6	0.4A	12.59V
DSC	022:43	00682

### DISCHARGE PB BATTERY

Set the charge current on the Pb battery setting menu. The charge current range is 0.1A~2.0A. Set the battery voltage capacity, which should match the battery capacity size. Press the "START" button for 2 seconds to start charging the battery.

鉛電池放電：

在鉛電池放電選單中可設定放電電流(範圍:0.1~2.0A)，電池電壓和容量、電壓值必須與被放電的電池相匹配，長按"START"鍵2秒開始放電。

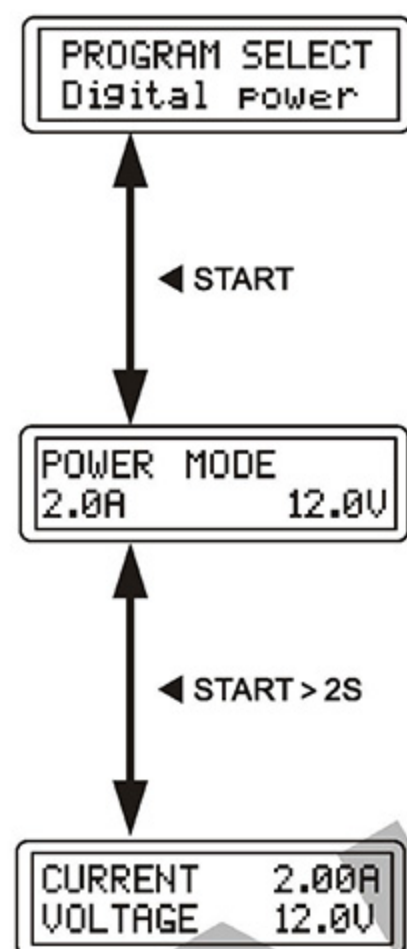
The screen displays the current state of discharge.

LCD液晶顯示螢幕會出現放電狀態及資訊。



In this mode the RCC-100 Balance Charger can provide power for other electronic devices 3.0V - 24V.

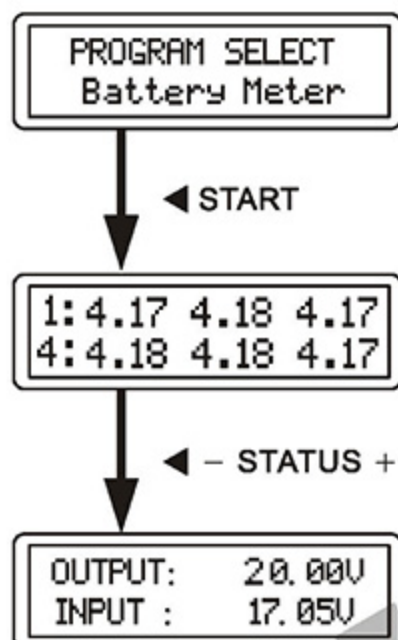
在此模式下，RCC-100 平衡式充電器可為其他電子設備提供直電壓：3.0V~24V。



The user can detect the voltage of a single battery, the charger input and output voltage, and the internal and external temperature of the charger. Connect the battery to the charger output and the balance cable to the balanced interface.

使用者可以檢測單節電池的電壓、充電器輸入和輸出電壓，充電器內部和外部溫度。請將電池連接至充電器輸出口，平衡線接至平衡介面。

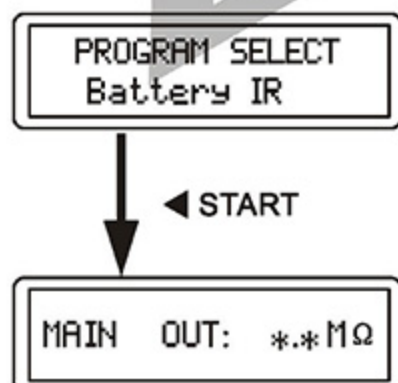
## BATTERY VOLTAGE MEASUREMENT 電池電壓測量



Measure a single voltage in the battery pack  
可測量電池包內的單節電壓。

Measure charger input and output voltage  
可測量充電器輸入和輸出電壓。

## BATTERY INTERNAL RESISTANCE MEASUREMENT 電池內阻測量



Measure the internal resistance of the battery to judge the quality of the battery  
可測量電池內阻，以此判斷電池的品質度。

RCC-100 Balance Charger is protected against faults and operation errors by the Multi-Protection Faults/Errors are displayed on the LCD screen and interrupted the active process to protect the unit and the battery.

RCC-100平衡型充電器具有故障保護功能，並且多重保護故障/錯誤的操作錯誤顯示在LCD液晶顯示螢幕上，RCC-100平衡型充電器會自動中斷充電過程以保護設備和電池。

REVERSE POLARITY

The output charge adaptor is connected to the battery with the reversed polarity.

輸入端口正負極接反。

CONNECTION BREAK

Battery not connected or connection interruption. Please check the charger or the connection of battery and charging cable is well.

輸入連接錯誤，請檢查充電器或電池與充電線的接線是否正確。

SHORT ERROR

Output short circuits.

輸入短路。

INPUT VOL ERR

Input Voltate Error

輸入電壓低於錯誤。

BATTERY CHECK  
LOW VOLTAGE

The total voltage is lower than the user setting. Please check the battery voltage.

總電壓低於用戶設定值，請檢查電池電壓。

BATTERY CHECK  
HIGH VOLTAGE

The total voltage is higher than the user setting. Please check the battery voltage.

總電壓高於用戶設定值，請檢查電池電壓。

BATTERY VOLTAGE  
CELL LOW VOL

Single cell voltage too low. Please check each cell voltage.

單節電壓過低，請逐一檢查各節電壓。

BATTERY VOLTAGE  
CELL HIGH VOL

Single cell voltate too high. Please check each cell voltage.

單節電壓過高，請逐一檢查各節電壓。

BATTERY VOL ERR  
CELL CONNECT

Balance port connection error. Please check if the connector and cable are wired correctly.

平衡端口連接錯誤，請檢查連接器與連接線的接線是否正確。

TEMP OVER ERR

Charging temperature too high. Please check if temperature sensor is abnormal and cool it down immediately.

充電溫度過高，請檢查溫度傳感器是否異常並立即採取降溫措施。

# ALIGN



Built-in AC Adapter

## RCC-100 SPECIFICATION 產品規格

AC Input Voltage AC 輸入電壓	100V-240V	Balance Current 平衡電流	400mA/Cell
DC Input Voltage DC 輸入電壓	11.0V-18.0V	LiPo/Li-Ion/ Life Battery Cell Count 離系輸出電壓	1-6S
Charge Power 充電功率	MAX.100W	NIMH/NiCd Battery Cell Count 鎳系電池輸出電壓	1-15 Cells
Charge Current 充電電流	10.0A	Pb Battery Voltage 鉛酸電池電壓	2-24V
Discharge Power 放電功率	MAX.5W	Dimension 尺寸	130x115x61mm
Discharge Current 放電電流	2.0A	Weight 重量	380g