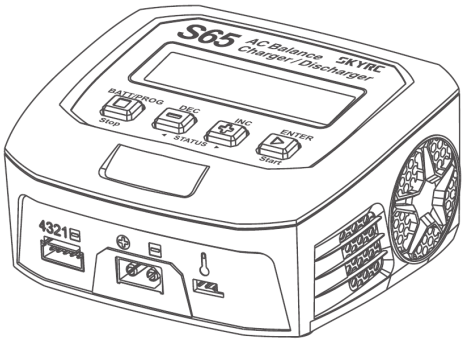
SkyRC S65

AC balance charger / discharger
Instruction manual



Read this entire manual carefully before first use, in particular the safety notes in chapter 2. Keep the manual for future reference.

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1. Introduction

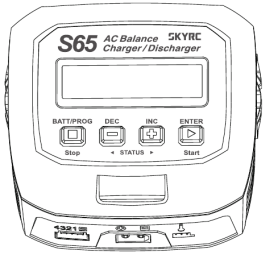
Congratulations on your choice of the **SkyRC S65** AC input professional balance charger/discharger. This unit is simple to use, but the operation of a sophisticated automatic charger such as the S65 does require some knowledge on the part of the user. These operating instructions are designed to ensure that you quickly become familiar with its functions. It is therefore important that you read right through the operating instructions, in particular the safety notes in chapter 2, before you use the charger for the first time.

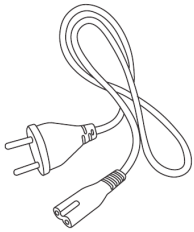
The SkyRC S65 is an AC input charger/discharger with a compact size. Like most SkyRC chargers, it supports TVC (Terminal Voltage Control) and a battery meter. For maximum safety there are an automatic charging current limit, a capacity limit, a temperature threshold and a processing time limit.

The maximum charging power of the S65 is **65 W**, with a maximum charging current of **6 A** and a discharging current of **2 A**. It is a high-performance, microprocessor-controlled charge/discharge station with battery management suitable for all current battery types: LiPo, LiIon, LiFe, NiCd, NiMH, Pb and also the new generation LiHV with an end voltage of 4.35 V/cell. For Pb batteries, the S65 adds AGM and cold charge modes – it can charge AGM batteries, and Pb batteries can be charged in cold charge mode on cold days.

It can be dangerous to mishandle batteries and battery chargers, as there is always a risk of batteries catching fire and exploding.

1.1 The set contains



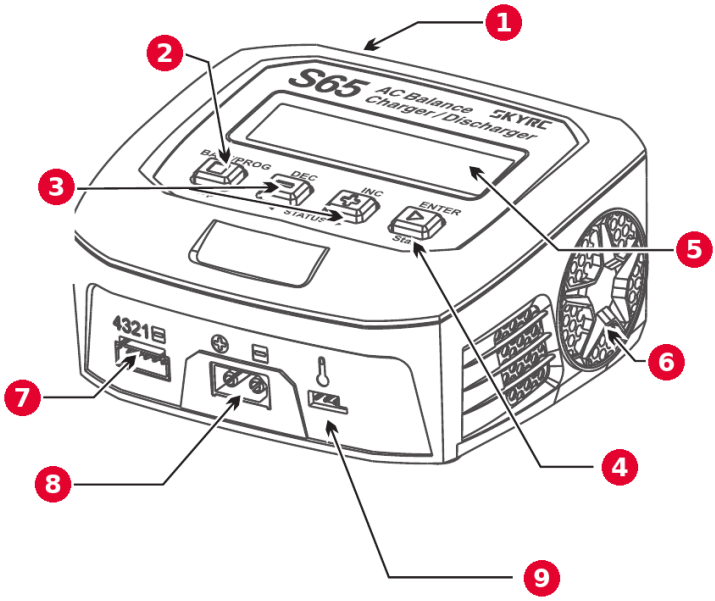


① SkyRC S65 charger

② Power cord

※ The temperature probe is not included in the package. It is an optional accessory required for measuring the battery temperature.

1.2 Device overview



Controls and connectors of the S65 charger

① AC input power port, AC 100–240 V (on the back)

② BATT/PROG button (Stop) – scroll through the main menu, stop any charge process

③ DEC and INC buttons – alter values; see the status of individual cells in balance charge mode

④ ENTER button (Start) – resume or start charge processes, confirm any action

⑤ LCD display

⑥ Smart ventilation fan

⑦ Balance lead socket JST-XH

⑧ Battery connector (XT60 female)

⑨ Temperature sensor port

2. Warning and safety notes

These warnings and safety notes are particularly important. Please follow the instructions for maximum safety; otherwise the charger and the battery can be damaged or, at worst, it can cause a fire.

- **Never leave the charger unattended** when it is connected to its power supply. If any malfunction is found, **TERMINATE THE PROCESS AT ONCE** and refer to this manual.
- Keep the charger well away from dust, damp, rain, heat, direct sunshine and vibration. Never drop it.
- The allowable AC input voltage is **100–240 V AC**.
- The charger and the battery should be put on a heat-resistant, non-flammable and non-conductive surface. Never place them on a car seat, carpet or similar. Keep all flammable volatile materials away from the operating area.
- Make sure you know the specifications of the battery to be charged or discharged to ensure it meets the requirements of this charger. If the program is set up incorrectly, the battery and charger may be damaged; overcharging can cause fire or explosion.

2.1 General safety of a mains-powered device

- The product is **not a toy** and is intended for persons over 14 years of age. Younger children must not handle the charger or the batteries.
- Use only the supplied power cord. Do not use the charger if the cord, a connector or the housing is damaged.
- Do not cover the fan or the ventilation openings. Do not disassemble the charger.
- After use, disconnect the charger from the mains – pull the plug out of the socket.
- Charge lead-acid (Pb) batteries in a well-ventilated area – they may release explosive gases during charging. Keep flames and sparks away.

2.2 Standard battery parameters

	LiPo	LiIon	LiFe	LiHV	NiCd	NiMH	Pb
Nominal voltage	3.7 V	3.6 V	3.3 V	3.7 V	1.2 V	1.2 V	2.0 V
Max. charge voltage	4.2 V	4.1 V	3.6 V	4.35 V	1.5 V	1.5 V	2.46 V
Storage voltage	3.8 V	3.7 V	3.3 V	3.85 V	n/a	n/a	n/a
Allowable fast charge	≤ 1C	≤ 1C	≤ 4C	≤ 1C	1C–2C	1C–2C	≤ 0.4C
Min. discharge voltage	3.0–3.3 V	2.9–3.2 V	2.6–2.9 V	3.1–3.4 V	0.1–1.1 V	0.1–1.1 V	1.8 V

All voltages are given per cell.

Be very careful to choose the correct voltage for different types of battery, otherwise you may cause damage to the batteries. Incorrect settings could cause the cells to catch fire or explode.

2.3 Never attempt to charge or discharge the following types of batteries

- A battery pack which consists of different types of cells (including different manufacturers).
- A battery that is already fully charged or just slightly discharged.
- Non-rechargeable batteries (explosion hazard).
- Batteries that require a different charge technique from NiCd, NiMH, LiPo or gel cell (Pb, lead acid).
- A faulty or damaged battery.
- A battery fitted with an integral charge circuit or a protection circuit.
- Batteries installed in a device or which are electrically linked to other components.
- Batteries that are not expressly stated by the manufacturer to be suitable for the currents the charger delivers during the charge process.

2.4 Please bear in mind the following points before commencing charging

- Did you select the appropriate program suitable for the type of battery you are charging?
- Did you set up an adequate current for charging or discharging?
- Have you checked the battery voltage? Lithium battery packs can be wired in parallel and in series, i.e. a 2-cell pack can be 3.7 V (in parallel) or 7.4 V (in series).
- Have you checked that all connections are firm and secure?

- Make sure there are no intermittent contacts at any point in the circuit.

2.5 Charging

During the charge process, a specific quantity of electrical energy is fed into the battery. The charge quantity is calculated by multiplying the charge current by the charge time. The maximum permissible charge current varies depending on the battery type and its performance, and can be found in the information provided by the battery manufacturer. Only batteries that are expressly stated to be capable of quick-charging are allowed to be charged at rates higher than the standard charge current.

Connect the battery to the terminal of the charger: red is positive (+) and black is negative (−). Due to the difference between the resistance of cable and connector, the charger cannot detect the resistance of the battery pack; the essential requirement for the charger to work properly is that the charge lead is of adequate conductor cross-section and that high-quality connectors, normally gold-plated, are fitted to both ends.

Always refer to the manual of the battery manufacturer about charging methods, recommended charging current and charging time. Lithium batteries in particular should be charged strictly according to the charging instructions provided by the manufacturer.

- Attention should be paid to the connection of lithium batteries especially.
- Do not attempt to disassemble the battery pack arbitrarily.
- Lithium battery packs can be wired in parallel and in series. In a parallel connection, the pack capacity is the single-cell capacity multiplied by the number of cells, at the same voltage. Voltage imbalance may cause fire or explosion. Lithium batteries are recommended to be charged in series.

2.6 Discharging

The main purpose of discharging is to clean the residual capacity of the battery, or to reduce the battery voltage to a defined level. The same attention should be paid to the discharging process as to charging. The final discharge voltage should be set up correctly to avoid deep discharging. Lithium batteries cannot be discharged to lower than the minimum voltage, or it will cause a rapid loss of capacity or a total failure. Generally, lithium batteries do not need to be discharged; please pay attention to the minimum voltage of a lithium battery to protect it.

Some rechargeable batteries have a memory effect. If they are partly used and recharged before the whole charge is used up, they remember this and will only use that part of their capacity next time. This is said to affect NiCd and NiMH batteries, with NiCd suffering more from the memory effect than NiMH.

3. Special features

▶ Optimized operating software

The S65 features the so-called AUTO function that sets the feeding current during the process of charging or discharging. Especially for lithium batteries, it can prevent overcharging which may lead to an explosion due to the user's fault. It can disconnect the circuit automatically and raise an alarm when detecting any malfunction. All programs are controlled through two-way linkage and communication to achieve maximum safety and minimize trouble. All settings can be configured by the user.

▶ Battery memory (data store/load)

The charger can store up to **10 different charge/discharge profiles** for your convenience. You can keep the data pertaining to the program setting for continuous charging or discharging and call it out at any time without any special program setting.

▶ AGM and cold charge for Pb batteries

For Pb batteries, the S65 adds AGM and cold charge modes. It can charge AGM batteries, and Pb batteries can be charged in cold charge mode on cold days.

▶ Terminal Voltage Control (TVC)

The charger allows the user to change the end voltage. For expert users only.

▶ Internal independent lithium battery balancer

The S65 employs an individual-cell-voltage balancer. It is not necessary to connect an external balancer for balance charging.

▶ Balancing individual cells while discharging

During discharging, the S65 can monitor and balance each cell of the battery individually. An error message will be indicated and the process will be ended automatically if the voltage of any single cell is abnormal.

▶ Adaptable to various types of lithium battery

The S65 is adaptable to various types of lithium batteries, such as LiPo, LiIon, LiFe and LiHV.

▶ Fast and storage mode for lithium batteries

The *FAST* charge mode reduces the duration of charging, whereas the *STORAGE* mode controls the final voltage of your battery so that it can be stored for a long time, protecting its useful life.

▶ Re-peak mode for NiMH/NiCd batteries

In re-peak charge mode, the charger can peak charge the battery once, twice or three times in a row automatically. This is good for making certain the battery is fully charged.

▶ Delta-peak sensitivity for NiMH/NiCd

The automatic charge termination program is based on the principle of delta-peak voltage detection. When the battery's voltage exceeds the threshold, the process is terminated automatically.

▶ Cyclic charging/discharging

1 to 5 cyclic and continuous processes of charge → discharge or discharge → charge can be performed for battery refreshing and balancing, to stimulate the battery's activity.

▶ Automatic charging current limit

You can set the upper limit of the charging current when charging a NiMH or NiCd battery in AUTO charging mode. It is useful for NiMH batteries of low impedance and capacity.

▶ Battery meter

The user can check the battery voltage and the battery internal resistance.

▶ Capacity limit

The charging capacity is always calculated as the charging current multiplied by time. If the charging capacity exceeds the limit, the process will be terminated automatically when you have set the maximum value.

▶ Temperature threshold*

The battery's internal chemical reaction will cause the temperature of the battery to rise. If the temperature limit is reached, the process will be terminated.

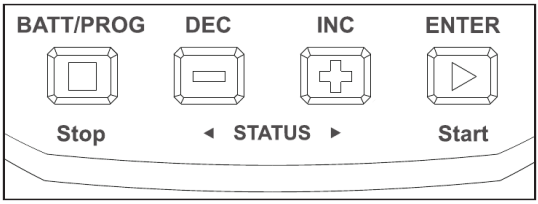
** This function is available only with the optional temperature probe, which is not included in the package.*

▶ Processing time limit

You can also limit the maximum process time to avoid any possible defect.

4. Operation

4.1 Control buttons



Control panel

Button	Function
BATT/PROG (Stop)	Stops the process or goes back to the previous step/screen.
DEC	Goes through the menus and decreases the parameter value.
INC	Goes through the menus and increases the parameter value.
ENTER (Start)	Enters a parameter or stores the parameter on the screen.

When you want to alter a parameter value, press START/ENTER to make it blink, then change the value with DEC and INC. The value is stored by pressing START/ENTER again. If there is another parameter on the same screen, once you confirm the first value, the next one starts to blink and is ready to be altered.

To start the process, **press and hold START/ENTER for 3 seconds**. To stop the process or go back to the previous step/screen, press BATT PROG/STOP once.

When you power on the charger, it enters the LiPo battery balance charge program directly. You can change the mode (balance, normal, fast, storage or discharge mode), enter the desired charging/discharging parameters and start the program. If you do not need the LiPo battery program, press BATT PROG/STOP to enter the BATT PROGRAM screen.

4.2 Procedure – LiPo balance charge example

Here is the detailed procedure to make the charger work. All screens and operations are shown using the LiPo BALANCE CHG program as an example.

▶ 1. Connecting to the power source

It is an AC charger only. Please insert the AC power cord directly into the wall socket (100–240 V) and power it on.

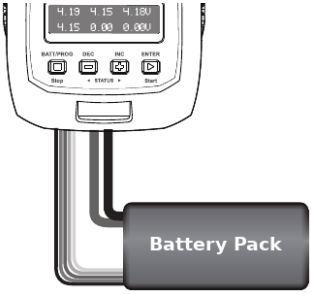
▶ 2. Connecting the battery

Before connecting a battery, it is absolutely essential to check one last time that you have set the parameters correctly. If the settings are incorrect, the battery may be damaged, or could even burst into flames or explode.

To avoid short circuits between the connector contacts, always connect the charge lead to the charger first, and only then to the battery. Reverse the sequence when disconnecting the pack.

▶ 3. Balance charge

In balance charge mode, the balance wire attached to the battery must be connected to the balance socket at the front of the charger, and the battery's XT60 male connector to the XT60 female connector of the charger (see the wiring diagram). In the other modes there is no need to connect the balance wire, but we suggest charging your battery in balance mode for better performance.



WARNING

Failure to connect as shown in this diagram will damage this charger.

To avoid a short circuit between the charge leads, always connect the charge cable to the charger first, then connect the battery. Reverse the sequence when disconnecting.

4.3 Setting up and starting a program

The flowchart in chapter 4.6 shows the entire programming menu. It is highly recommended to keep it handy while learning to operate this charger. There are two main ways to set up the charger:

(1) **Memory profile** – available for setting and storing pertinent information for up to 10 different batteries. Once a battery's information is stored in a memory, it will be retained until changed again manually. Recalling a battery's memory number makes the charger instantly ready to go (see chapter 5).

(2) **Manual setting** – if you do not wish to use the battery memories, the charger can be set manually before each use.

The following steps are based on manual setting.

▶ BATT/PROGRAM select

Press INC and DEC to go through all the programs and press START/ENTER to enter the LiPo BATT program.

▶ Mode select

Press INC and DEC to go through all the modes and press START/ENTER to enter the LiPo BALANCE CHG (balance charge) mode.

▶ Battery setting

Press START/ENTER and the current value will start to blink. Press INC and DEC to change the value and press START/ENTER to confirm your setting.

The number of battery cells then starts to blink. Press INC and DEC to change it and press START/ENTER to confirm.

▶ Program start

Press and hold START/ENTER for 3 seconds to start the program.

The charger is detecting the battery cells.

R shows the number of cells detected by the charger and **S** is the number of cells set by you on the previous screen. If the two numbers are not identical, press STOP to go back to the previous screen and recheck the number of cells of the battery pack before going ahead.

If both numbers are identical, press START/ENTER to start the charging process.

▶ Charging status monitor

During the charge process, the real-time status is displayed.

▶ Program stop: during the charging process, press STOP to stop the process.

▶ Program complete: when the charging process finishes, an audible sound will be heard.

4.4 Information during the process

Press INC or DEC during the charging or discharging process to view various information on the LCD screen.

▶ With the INC button

Real-time status: battery type, battery cells, charge current, battery voltage, elapsed time and charged capacity.

Voltage of each cell in the battery pack when the battery is connected with the balance lead.

Charged capacity percentage and average cell voltage of the battery pack.

Resistance of each cell in the battery pack when the battery is connected with the balance lead.

▶ With the DEC button

Final voltage at which the program ends.

Internal temperature. The temperature probe is needed to show the external temperature (Ext. Temp).

Cut-off temperature (Temp Cut-Off).

Safety timer ON and the duration of time in minutes.

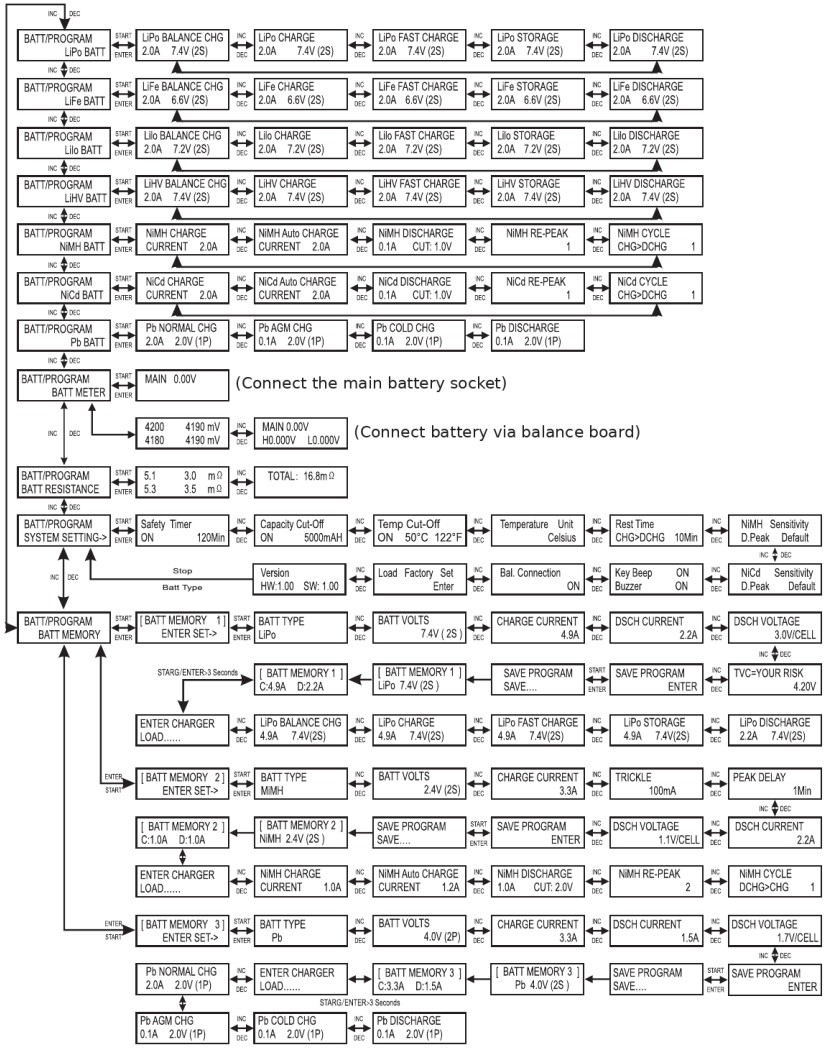
Capacity cut-off ON and the set capacity value.

4.5 Charging programs

The operation programs differ depending on the battery type.

Type	Program	Description
LiPo LiHV LiIon LiFe	CHARGE	Charging LiPo/LiHV/LiFe/LiIon batteries in normal mode.
	DISCHARGE	Discharging LiPo/LiHV/LiFe/LiIon batteries.
	STORAGE	Charging or discharging a lithium battery which will not be used for a long time.
	FAST CHG	The charged capacity may be a bit smaller than with normal charging, but the process time is reduced.
	BAL CHARGE	Balancing the voltage of the lithium battery cells while charging.
NiMH NiCd	CHARGE	Charging NiMH and NiCd batteries with the charge current set by the user.
	AUTO CHG	The charger detects the condition of the connected battery and charges it automatically. **You should set the upper limit of the charge current to avoid damage by excessive feeding current. Some batteries of low resistance and capacity can lead to a higher current.**
	DISCHARGE	Discharging NiMH/NiCd batteries.
	RE-PEAK	The charger peak charges the battery once, twice or three times in a row. Good for confirming the battery is fully charged and for checking how well the battery receives fast charges.
	CYCLE	1 to 5 cyclic and continuous processes of charge → discharge or discharge → charge for battery refreshing and balancing, to stimulate the battery's activity.
Pb	NORMAL CHG	Charging Pb batteries.
	AGM CHG	Charging AGM batteries.
	COLD CHG	Charging Pb batteries on cold days, at temperatures from 5 °C to −20 °C.
	DISCHARGE	Discharging Pb batteries.

4.6 Program flowchart



Menu structure of the S65 charger (texts as shown on the display)

5. Battery memory and system setting

The charger can store up to 10 different charge/discharge profiles for your convenience, and the stored profiles can be recalled quickly without going through the set-up process. To alter a parameter value, press START/ENTER to make it blink, change the value with INC or DEC and store it by pressing START/ENTER once. All the following screens use a 2S (7.4 V) LiPo battery as an example.

5.1 Battery memory set

Enter the battery memory program (10 different charge/discharge profiles can be stored).

Set the battery type: LiPo, LiHV, LiFe, LiIon, NiMH, NiCd or Pb.

Set the voltage and number of cells (2S–4S).

Set the charge current (0.1–6.0 A).

Set the discharge current (0.1–2.0 A).

Set the discharge voltage (3.0–3.3 V/cell).

Set the terminal voltage – TVC (4.18–4.25 V).

Press ENTER to save the program.

Saving the profile.

Shows the battery type and battery cells of the saved profile.

Shows the charge and discharge current of the saved profile. Press START/ENTER for 3 seconds to call out the memory.

5.2 Battery memory call out

Load the memory set.

Press START/ENTER for 3 seconds to start the process.

5.3 System setting

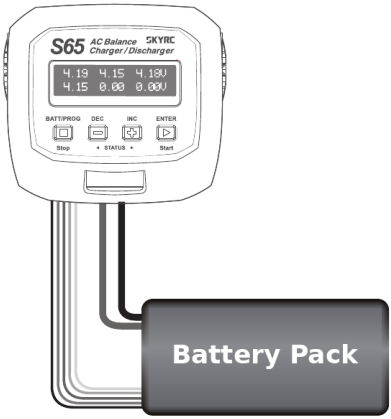
The charger operates with the default values of the essential user settings when it is powered on for the first time. The screens display the following information in sequence and the user can change the parameter value on each screen (START/ENTER → INC/DEC → START/ENTER).

Item	Selection	Description
Safety Timer	OFF / ON (1–720 min)	When you start a charge process, the integral safety timer automatically starts running at the same time. It is programmed to prevent overcharging the battery if it proves to be faulty, or if the termination circuit cannot detect the battery full. The value for the safety timer should be generous enough to allow a full charge of the battery.
Capacity Cut-Off	OFF / ON (100–50,000 mAh)	Sets the maximum charge capacity that will be supplied to the battery during charge. If the delta-peak voltage is not detected nor the safety timer expired for any reason, this feature will automatically stop the process at the selected capacity value.
Temp Cut-Off	OFF / ON (20 °C / 68 °F – 80 °C / 176 °F)	The battery's internal chemical reaction will cause the temperature of the battery to rise. If the temperature limit is reached, the process will be terminated.
Temperature Unit	Celsius Fahrenheit	You can choose to display the temperature in Celsius or Fahrenheit.
Rest Time	1–60 min	A rest time allowing the battery to cool down between charging and discharging in a cycle.
NiMH Sensitivity **NiCd Sensitivity**	default: 4 mV/cell 3–15 mV/cell	For NiMH/NiCd batteries only. When the charger detects that the delta-peak value reaches the value you set, the charger will consider the battery fully charged.
Key Beep / Buzzer	OFF / ON	The beep sounds every time a button is pressed to confirm your action. A beep or melody sounds at various times during operation to alert you to mode changes.
Load Factory Set	–	Press ENTER to load the factory default settings.
Version	–	Shows the hardware and firmware version.

6. Battery meter and error messages

6.1 Battery meter (BATT METER)

The user can check the battery's total voltage, the highest voltage, the lowest voltage and each cell's voltage. Please connect the balance wire attached to the battery to the balance socket and the XT60 male connector to the XT60 female connector at the front of the charger.



The correct way to connect your battery to check the voltage

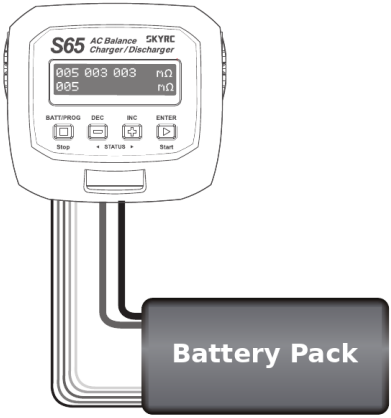
Press START/ENTER to enter the lithium battery meter program.

The screen indicates each cell's voltage.

After pressing INC, the screen indicates the total voltage, the highest (H) and the lowest (L) cell voltage.

6.2 Battery resistance meter (BATT RESISTANCE)

The user can check the battery's total resistance, the highest resistance, the lowest resistance and each cell's resistance. Please connect the balance wire attached to the battery to the balance socket and the XT60 male connector to the XT60 female connector at the front of the charger.



The correct way to connect your battery to check the resistance

Press START/ENTER to enter the lithium battery resistance program.

The screen indicates each cell's resistance.

After pressing INC, the screen indicates the total resistance, the highest (H) and the lowest (L) resistance.

6.3 Warning and error messages

In case of an error, the screen displays the cause of the error and the charger emits an audible sound.

Message on the display	Meaning
REVERSE POLARITY	Incorrect polarity connected.
CONNECTION BREAK	The battery connection is interrupted.
CONNECT ERROR CHECK MAIN PORT	The battery connection is wrong.
BALANCE CONNECT ERROR	The balance connection is wrong.
CELL ERROR LOW VOLTAGE	The voltage of one cell in the battery pack is too low.
CELL ERROR HIGH VOLTAGE	The voltage of one cell in the battery pack is too high.
CELL ERROR VOLTAGE-INVALID	The voltage of one cell in the battery pack is invalid.
CELL NUMBER INCORRECT	The cell number is wrong.
INT.TEMP.TOO HI	The internal temperature of the unit is too high.
EXT.TEMP.TOO HI	The external temperature of the battery is too high.
OVER CHARGE CAPACITY LIMIT	The battery capacity is more than the maximum capacity set by the user.
OVER TIME LIMIT	The charging time is longer than the maximum charging time set by the user.
BATTERY WAS FULL	The battery voltage is higher than the maximum voltage set by the user when charging in balance mode.
CONTROL FAIL	The voltage of the battery pack is lower than 5 V. The charger cannot charge a battery whose voltage is under 5 V.

7. Specification

Parameter	Value
AC input voltage	100–240 V AC
Charge / discharge wattage	65 W / 10 W
Charge / discharge current	0.1–6.0 A / 0.1–2.0 A
Balancing	2–4 cells, 300 mA/cell
Battery types / cells	LiPo/LiHV/LiFe/LiIon: 2–4 cells NiMH/NiCd: 6–8 cells Pb: 3–6 cells
Battery capacity range	100–50,000 mAh (all types)
Charge voltage	NiMH/NiCd: delta-peak detection LiPo: 4.18–4.25 V/cell LiHV: 4.25–4.35 V/cell LiFe: 3.58–3.7 V/cell LiIon: 4.08–4.2 V/cell Pb Normal: 2.4 V/cell Pb AGM: 2.45 V/cell Pb Cold: 2.45 V/cell
Discharge cut-off voltage	NiMH/NiCd: 0.1–1.1 V/cell LiPo: 3.0–3.3 V/cell LiHV: 3.1–3.4 V/cell LiFe: 2.6–2.9 V/cell LiIon: 2.9–3.2 V/cell Pb: 1.8–2.0 V/cell
Delta-peak detection NiMH/NiCd	3–15 mV/cell (default 4 mV/cell)
Charge method	CC/CV for lithium types and lead (Pb) batteries; delta-peak sensitivity for NiMH/NiCd
Reading voltage range	0.1–26.1 V/cell
Battery cut-off temperature	20 °C / 68 °F – 80 °C / 176 °F (adjustable)
Safety timer	1–720 min or off
Memory	10 charge/discharge profiles
Ports	2–4S balance socket JST-XH, temperature probe socket, XT60 female connector
Display and controls	2×16 LCD, blue backlight; four buttons
Case material	plastic
Case size	118 × 115 × 45 mm
Weight	315 g

7.1 Standards declared by the manufacturer

The manufacturer states that the S65 satisfies all relevant and mandatory EC directives and FCC Part 15 Subpart B (ANSI C63.4:2014). Test results according to the standards:

Standard	Scope	Result
EN 60335-1:2012+A11:2014	Household and similar electrical appliances – Safety – Part 1: General requirements	pass
EN 60335-2-29:2004+A2:2010	Part 2-29: Particular requirements for battery chargers	pass
EN 55014-1:2006+A2:2011	Emission – conducted (main port), disturbance power	pass
EN 61000-3-2:2014	Harmonic current emissions	pass
EN 61000-3-3:2013	Voltage fluctuations and flicker	pass
EN 55014-2:2015	Immunity: IEC 61000-4-2:2008 (ESD), 61000-4-3:2006+A1:2007+A2:2010 (RS), 61000-4-4:2012 (EFT), 61000-4-5:2014 (surge), 61000-4-6:2008 (CS), 61000-4-11:2004 (voltage dips and voltage variations)	pass
FCC 47 CFR Part 15 Subpart B, ANSI C63.4:2014	Conducted (mains port) and radiated emission	meets Class B limit

7.2 Commonly used terms

Final charge voltage: the voltage at which the battery's charge limit (capacity limit) is reached. The charge process switches from a high current to a low maintenance rate (trickle charge) at this point. From this point on, further high-current charging would cause overheating and eventual terminal damage to the pack.

Final discharge voltage: the voltage at which the battery's discharge limit is reached. The chemical composition of the battery determines the level of this voltage. Below this voltage the battery enters the deep discharge zone. Individual cells within the pack may become reverse polarized in this condition, and this can cause permanent damage.

A, mA: unit of measurement relating to charge or discharge current; 1000 mA = 1 A (A = ampere, mA = milliampere).

Ah, mAh: unit of measurement for the capacity of a battery (amperes × time unit; h = hour). If a pack is charged for one hour at a current of 2 A, it has been fed 2 Ah of energy. It receives the same quantity of charge (2 Ah) if it is charged for 4 hours at 0.5 A, or 15 minutes (¼ h) at 8 A.

C-rating: capacity is also referred to as the 'C' rating. Some battery suppliers recommend charge and discharge currents based on the battery 'C' rating. A battery's '1C' current is the same number as the battery's rated capacity number, but noted in mA or amps. A 600 mAh battery has a 1C current value of 600 mA, and a 3C current value of 3 × 600 mA = 1800 mA, or 1.8 A. The 1C current value for a 3200 mAh battery would be 3200 mA (3.2 A).

Nominal voltage (V): the nominal voltage of the battery pack can be determined as follows:

- NiCd or NiMH: multiply the total number of cells in the pack by 1.2 V. An 8-cell pack will have a nominal voltage of 9.6 V (8 × 1.2).
- LiPo: multiply the total number of cells in series by 3.7 V. A 3-cell LiPo pack has 11.1 V (3 × 3.7).
- LiIon: multiply the total number of cells in series by 3.6 V. A 2-cell pack has 7.2 V (2 × 3.6).
- LiFe: multiply the total number of cells in series by 3.3 V. A 4-cell pack has 13.2 V (4 × 3.3).

If the nominal voltage of the battery is not printed on the battery's label, consult your battery manufacturer or supplier. Do not guess the rated voltage of a battery.

Manufacturer: SKYRC TECHNOLOGY CO., LTD., www.skyrc.com

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.cz

8.2 Product conformity

CE

- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorama.cz.
- **Product identification:** the type designation (S65) is given on the product and its packaging; the hardware and firmware version is shown on the *Version* screen in the system setting (chapter 5.3).

8.3 Disposal of electrical equipment

- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

9. Warranty and rights arising from defective performance

9.1 Rights of the buyer under Czech law

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection. The manufacturer's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.

9.2 Manufacturer's warranty terms

❊ The following text reproduces the manufacturer's warranty terms.

This warranty is only valid in the country of purchase and through a formal distributor.

The manufacturer guarantees this product to be free of manufacturing and assembly defects for a period of **one year from the time of purchase**. The warranty only applies to material or operational defects which are present at the time of purchase. During that period, the manufacturer will repair or replace free of service charge products deemed defective due to those causes.

For any repair or replacement service, please contact your dealer in the first instance, who is responsible for processing guarantee claims. This warranty is not valid for any damage or subsequent damage arising as a result of misuse, modification or as a result of failure to observe the procedures outlined in this manual.

Liability exclusion

This charger is designed and approved exclusively for use with the types of battery stated in this manual. SkyRC accepts no liability of any kind if the charger is used for any purpose other than that stated. The manufacturer is unable to ensure that you follow the instructions supplied with the charger, and has no control over the methods you employ for using, operating and maintaining the device. For this reason, it is obliged to deny all liability for loss, damage or costs which are incurred due to the incompetent or incorrect use and operation of its products, or which are connected with such operation in any way. Unless otherwise prescribed by law, the obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of those SkyRC products which were immediately and directly involved in the event in which the damage occurred.

※ The manufacturer's limitation of liability does not affect the consumer rights under Czech law stated in chapter 9.1.