

ORDER NO.:  
**45200****PARALLEL PRECISION  
LIPO BALANCER****MICROPROCESSOR CONTROLLED  
EQUALIZING + BALANCING  
2S - 5S LiPo + LiFePo****USER MANUAL**LRP electronic GmbH  
Wilhelm-Enssle-Str. 132-134, 73630 Remshalden  
info@LRP.cc - www.LRP.cc**1. WARNING NOTES**

- Do not connect two Balancers to one battery pack.
- Do not connect the battery pack with false polarity.
- Do not use under direct sunlight.
- Do not use at very high ambient temperatures.
- Use/store only in dry areas.
- Disconnect the battery pack from the balancer when not in use..

**2. SPECIFICATIONS**

Size	[mm]	75 x 50 x 14mm	Balancing Precision	[V]	0.02
Weight	[g]	43	Balancing Current	[mA]	300
Number of cells		2S - 5S	Compatible Balancing Connectors		EHR + XHRx
Cell types		LiPo + LiFePo	LED's		6 (5x red / 1x blue)
Automatic cell number detection		yes	Reverse Polarity protection		yes
Parallel Balancing		yes	Equalizing		yes

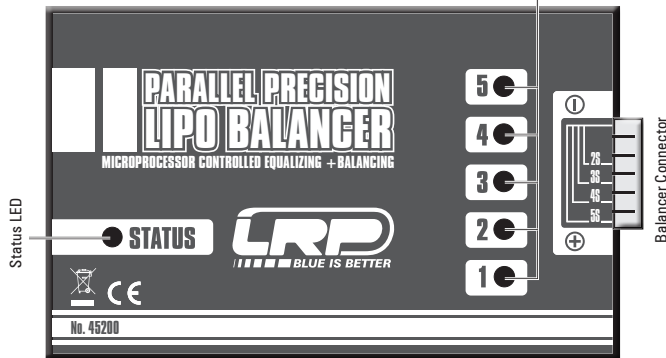
Specifications subject to change without notice.

**3. CONNECTION AND LED'S**

On the right side you find a 6-pin connector at which you can connect your 2S to 5S LiPo/LiFePo battery pack, it works for both „XH“ and „EHR“ balancing connector systems.

**Caution:** Please be careful with correct polarity! It must conform with the imprinted sequence on the balancer as otherwise your battery pack will not be balanced or in the worst case it may damage the balancer.

When looking from above onto the connector, the top pin is always the combined minus for all cell numbers. So you'll always have to connect your batteries balancing connector from that pin as illustrated on the printing on the balancer.

5 red LEDs, as Display  
for each single cell.**6. TROUBLESHOOTING GUIDE**

To eliminate all other possibilities or improper handling, first check all other components in your model and the trouble shooting guide before you send in this product for repair. If products are sent in for repair, which do operate perfectly, we have to charge a service fee according to our pricelist.

SYMPTOM	CAUSE	REMEDY
No LED is flashing/on	battery pack defective	try with another battery pack
	battery connected with wrong polarity	connect battery pack according to drawing
	wrong adapter wire for this balancer	ensure correct wiring
	Balancer defective	send in for repair



The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of-life. Do not dispose of these products as unsorted municipal waste.

Dear Customer,

thank you for your trust in this LRP product. By purchasing a **LRP PARALLEL PRECISION LIPO BALANCER**, you have chosen one of the most advanced balancers of today which can be used for Lithium-Polymer (LiPo) and Lithium-Ferrite Polymer (LiFePo) batteries.

- automatic parallel balancing
- for 2S - 5S packs
- for packs with EHR and XH connector
- reverse polarity protected
- automatic equalizing
- for LiPo + LiFePo packs
- microprocessor controlled
- high precision circuitry

Please read the following instructions carefully before you start using your speed control. This user guide contains important notes for the safety, the use and the maintenance of this product. Thus protecting yourself and avoid damages of the product.

Proceed according to the user guide in order to understand your speed control better. Please take your time as you will have much more joy with your product if you know it exactly.

This user manual shall be kept in a safe place. If another customer is using this product, this manual has to be handed out together with it.

**4. EQUALIZING (BALANCING WITHOUT CHARGING)**

You can also equalize your packs, which means you connect the pack without charging it at the same time! The balancer measures the difference inbetween all the cells and adjusts its function accordingly. Please proceed as following:

- Connect LiPo/LiFePo pack to balancer (check correct polarity!).
- Wait 2-3 seconds, then the LED's indicate the state of imbalance and the balancers function.

STATUS	Cells are already equalized	Cells are not equalized
Balancer is...	inactive	active
Status LED (blue)	flashes in 0.5s pulses	off
Red LED's	off	flashes in 7-3sec pulse for the cells which are not n balance
Voltage Difference	lower then 20mV	higher then 20mV
Operating Mode	Equalizing inactive, you can disconnect the balancer as all cells within your pack are equal	Equalizing active, leave balancer connected until blue LED starts flashing in 0.5s pulses and red LED's are off which means your packs cells are equalised

**5. BALANCING (DURING CHARGING)**

You can balance 2S to 5S LiPo/LiFePo packs in parallel mode during charging. Connect the balancing connector of your battery pack to the balancer and connect the power connector from your battery pack with a charger suitable for your pack. Select the charge current and the cut-off voltage according to the manual of your battery pack.

During the charge process the balancer continuously measures the voltage difference of all cells and becomes active if the difference is higher then 20mV. When the charge process is completed the voltage difference of your entire pack is therefore less then 20mV!

Cell status	Cells are not balanced
Balancer is...	active
Status LED (blue)	off
Red LED's	flashes in 7-3sec pulse for the cells which are not n balance
Operating Mode	The cells in your pack are not equal, the balancer is active and balances the cells during charging. Once all cells are on 100% identical level (which will not necessarily be the case all the time since the balancer re-starts automatically in case the cells get out of balance again!) the balancer will indicate that by a blinking blue STATUS LED.

**REPAIR PROCEDURES / LIMITED WARRANTY**

All products from LRP electronic GmbH (hereinafter called "LRP") are manufactured according to the highest quality standards. LRP guarantees this product to be free from defects in materials or workmanship for 90 days (non-european countris only) from the original date of purchase verified by sales receipt. This limited warranty doesn't cover defects, which are a result of misuse, improper maintenance, outside interference or mechanical damage.

„This applies among other things on:

- Cut off/changed original input- and/or output-wires
- Mechanical damage of the case
- Humidity/Water inside the case
- Mechanical damage of electrical components/PCB
- Soldered on the PCB"

To eliminate all other possibilities or improper handling, first check all other components in your model and the trouble shooting guide, if available, before you send in this product for repair. If products are sent in for repair, which do operate perfectly, we have to charge a service fee according to our pricelist.

With sending in this product, the customer has to advise LRP if the product should be repaired in either case. If there is neither a warranty nor guarantee claim, the inspection of the product and the repairs, if necessary, in either case will be charged with a fee at the customers expense according to our price list. A proof of purchase including date of purchase needs to be included. Otherwise, no warranty can be granted. For quick repair- and return service, add your address and detailed description of the malfunction.

If LRP no longer manufactures a returned defective product and we are unable to service it, we shall provide you with a product that has at least the same value from one of the successor series.

The specifications like weight, size and others should be seen as guide values. Due to ongoing technical improvements, which are done in the interest of the product, LRP does not take any responsibility for the accuracy of these specs.

With LRP 25-Years Warranty products, the warranty terms on the LRP 25-Years Warranty card do also apply. The legal warranty claims, which arose originally when the product was purchased, shall remain unaffected.

**LRP-Distributor-Service:**

- Package your product carefully and include sales receipt and detailed description of malfunction.
- Send parcel to your national LRP distributor.
- Distributor repairs or exchanges the product.
- Shipment back to you usually by COD (cash on delivery), but this is subject to your national LRP distributor's general policy.