





Congratulations to your decision of purchasing or renting your Panther Product. We are pleased that you made your decision in favor of equipment, which combines state-of-the-art technology and many years of experience in manufacturing camera support equipment.

Your new Panther Product is designed to power the equipment that you love working with. To ensure that you will love working with your Panther Product and that all requirements during shooting can be fulfilled considering utmost safety and reliability, please carefully read this user manual.

With our best wishes

Andreas Fitz

CEO | Executive President Panther GmbH



With proper use and charging at 20-30° C the battery lifetime is about 2-3 years. Batteries are wear products and therefore not covered by the guarantee or warranty.

Absorbent Glass Mat (AGM) batteries for cyclic use can easily withstand more than 600 cycles at at least 50% discharge before max.capacity falls below 80%.



107758 Snap-On Battery

24V, 12 Ah



302577 Slide-In Battery

24V, 9 Ah

#### AGM Battery: 24V

- Charging time: approx. 5-7 hours

80-90% = full 27-28,5V = full

- Charge only with suitable 24V charger. We recommend the Panther Charging Station (313165).

#### Important:

24V = empty

50% = empty

Recharge after use! Do not short Circuit!

Charge this battery during storage at least once a month in order to guarantee a long lifetime!

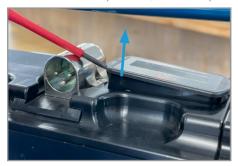
# CAPACITY TESTER OVERVIEW



This battery capacity tester can test the voltage and capacity of battery, and display them with intuitive battery symbol and percentage. Users can know the state of battery in time.

#### Remove / Install

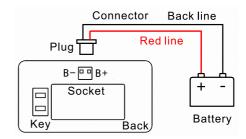
The Tester is fixed by buckles, so it is easy to remove / install. Use a flat screw driver to do so.





## **Connecting Cables**

This is how you have to connect the cables:





#### **Functions**

The Tester has two functions: F0 and F2. Use the "K+" key on the back to select F0 and F2. Then press the "OK" key on the front, the selected function will run. The default function is F2.



#### FO: Backlight on

Tester run all the time, LCD and backlight always on.

#### F2: Dormancy

Tester enter a dormancy state (<15uA) after display 10s, LCD and backlight turn off. Press the "OK" key, LCD and backlight turn on 10s.

#### **Display Mode**

The Tester has three kinds of display mode. Press the "K-"key on the back to enter display setting. Use the "K-"key on the back to change the display mode. Then press the "OK"key on the front, the selected mode will run.



#### V + % = Voltage and percentage display

The Tester can display the current voltage or the current percentage of capacity. Press the "OK" key on the front can change the display content.

#### V = Voltage display

The Tester only displays the current voltage.

#### % = Percentage display

Tester only displays the current percentage of capacity.



The Tester cannot be exposed in the sun for a long time or in the environment with large amounts of ultraviolet radiation when using or storing, particular in winter ( $-20^{\circ}$ C) and summer ( $>60^{\circ}$ C), otherwise it will shorten the life of the LCD display.



Charge smart: with the Charging Station (313165) you can charge up to 2 "Slide-In" Batteries or 2 "Snap-On" Batteries simultaneously.







**Charging: Snap-On Battery** 

Plug in the 1-Way Charge Cable (134643) into the Snap-On battery and into the Charging Station.





## **Charging: Slide-In Battery**

Slide in the Slide-In Battery on the top side of the Charging Station.



Charger for AGM batteries
Built-in 3 stage programmable charging curve
Fanless design, cooling by free air convection
Protection: Short circuit / Over voltage / Over temperature
/ Battery under voltage / Battery over voltage / Battery
reverse polarity protection



	Boost Charge Voltage (Vboost) (default)	28.8V
	Float Charge Voltage (Vfloat) (default)	27.6V
Output	Charge voltage range	18 ~ 30V
	Output current (default)	4A
	Rated Power	115.2W

Innut	Voltage Range	90 ~ 264VAC
Input	Frequency Range	47 ~ 63Hz

Enviroment Work	ing Temp.	-30 ~ +70°C
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## **Front Panel LED Indicators**

Green	Float
Orange	Charging
None	Abnormal status



### **Safety Guidelines**

- Do not use in wet or humid conditions
- The cables between charger and battery should be kept as short as possible to prevent excessive voltage drop (suggested cable length: 50cm - 100cm). Too much voltage drop will lead to longer charging period.
- Temperature raising on case during charging is a normal behavior.
- Dismantling or changing components of the charger is forbidden.
- Charger should be in the OFF mode before making battery connection or disconnection.

The charger provides a DIP switch behind the panel used to switch different factory charging parameters. Please refer to the table below for corresponding curves on different positions of the DIP switch.

DIP SW position		position	24V model		
	1	2	Description	Vboost	Vfloat
	Off	Off	Program mode, AGM battery	29.0	27.0

## **General Operation**

At the beginning stage of operation, the charger provides the largest current with 28.8V dc of output voltage to charge batteries, the LED indicator will flash in orange. After a period of time (probably a couple of hours) the charging current will decrease gradually.

After reducing to 10% of its maximum value, the charger will go into "float charge" stage. Output voltage will drop to 27.6V and the LED indicator can flash in green.

## **Troubleshooting**

Failure state	Possible Cause	Suggested Solutions
Unable to charge	Power switch is in the OFF position	Switch to the ON position
the battery	Input AC voltage is too low	Make sure the input source is between 90~264VAC
LED indicator does not turn	Battery is old or damaged	Replace with a new battery
Green after a long charging period	Output cables are to thin	Replace with an appropriate wire gauge



# **FURTHER ASSISTANCE**

If you need any further assistance with this instructions (or also other questions) please contact our service department.



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