

Trackit T4A Battery Management



The Trackit T4A is the lightest, smallest and most energy-efficient ambulatory EEG amplifier from Lifelines Neuro. It can be used with Trackit V and Trackit F EEG Systems.

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trackit **V**
EEG SYSTEM



trackit **F**
EEG SYSTEM

Introduction

The T4A is supplied with two rechargeable lithium-ion Battery Packs, enabling users to save thousands of dollars per year compared with the lithium or alkaline batteries in the Trackit Mk3 and other ambulatory EEG devices on the market. However, battery charging management and using multi-bay chargers is ideal to ensure the highest performance, as well as performing the maximum number of studies for workflow efficiency.



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Battery Facts

The T4A uses two rechargeable, lithium-ion Battery Packs, supplied from Lifelines Neuro. It can use one or two Battery Packs at a time.



Both T4A Battery Packs must be fully charged in the battery chargers provided by Lifelines prior to any study recording.

The Battery Packs can be charged in a single-bay, or four-bay charger.

A four-bay charger enables the user to always have fully charged Battery Packs available for the next patient to increase efficiency. The only way to charge them is to use the battery chargers provided by Lifelines.

Important - The Battery Packs will not charge when in the T4A



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Battery Facts (contd)

Recharging the lithium-ion Battery Packs in the single-bay charger

Recharging one of the lithium-ion Battery Packs using the supplied single-bay charger, will take approximately 3 hours.

Understanding the LED indicators on the charger

CHARGING PHASE	LED INDICATOR		
	Green	Orange	Red
No Charge			ON
Pre-Charge			FLASHES
Fast charge & Top-off charge		ON	
Battery Full/Standby	ON		
Fault			ON



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Battery Facts (contd)

Recharging the lithium-ion Battery Packs in the multi-bay charger (optional, available for purchase)

The 4-bay battery charger is capable of charging up to four battery packs simultaneously.

Understanding the LED indicators on the multi-bay charger

Description	LED Indicator
The battery is charging	Slow Flash (once per 1.5 seconds)
Battery is too hot or too cold or there is a fault with the battery.	Fast Flash (5 per second)
Battery is fully charged	On (Solid)



Approximate charging times

Number of Battery Packs being charged	Approximate charging time
One	220 minutes (3hrs 40mins)
Two	315 minutes (5hrs 15mins)
Four	360 minutes (6hrs)

When all four compartments of the charger are being used, charging times per battery will increase.

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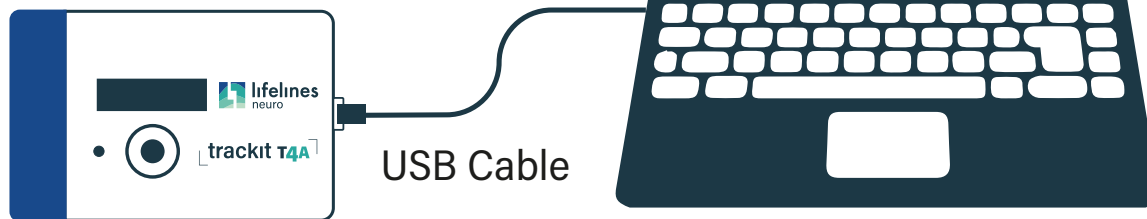
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Battery Facts (contd)

Plugging the T4A in via the USB cable will not charge the Battery Packs. However, it will extend the battery life, as the T4A is powered via the USB cable while it is connected.



The T4A has an inaccessible internal battery that charges via the rechargeable Battery Packs or when connected via the USB cable. This internal battery is intended only to provide power during battery changes.



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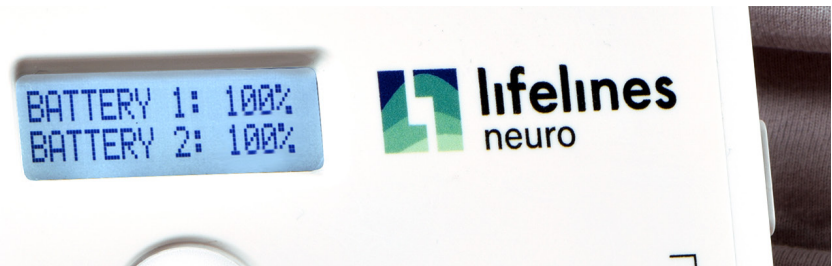
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Using the T4A Battery packs

Important - Battery Packs must be at full charge when inserted into the T4A; if using two, both must be fully charged.

- Open the battery compartment by depressing the battery release button using the provided tool or pen tip. Ensure the battery door is facing up so the Battery Packs do not fall out.
- Insert the rechargeable T4A lithium-ion Battery Packs.
- Once the door is closed the display will show the capacity of each battery pack.



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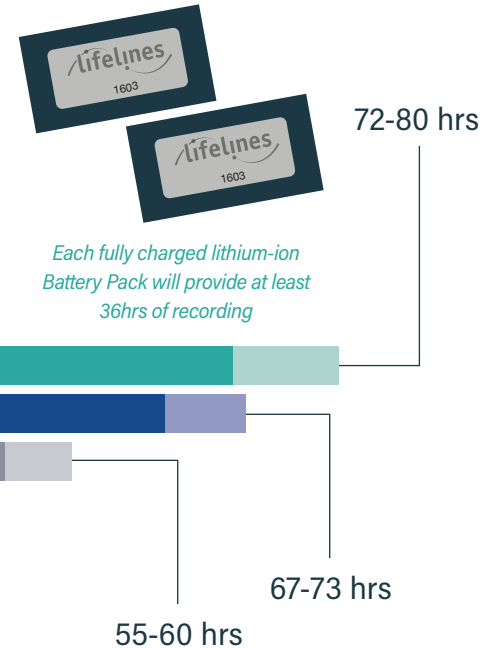
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Battery Life: Rechargeable Lithium-ion Battery Packs

- Each battery will typically provide 36hrs of recording per battery. Dual and PC recordings will shorten battery life.
- Ambulatory EEG battery life is at least 72 hours using just the two rechargeable Battery Packs.
- For dual recording mode, if you're running the latest firmware (Version 14.05.22 or later) the dual recording time will be 67-73 hours. Previous version of the firmware will achieve between 55 and 60 hours in dual recording.



Dual recording is essential for intermittent monitoring to comply with new CPT coding.

Both ambulatory and dual recordings can be more than doubled in length by using the rechargeable External Power Bank

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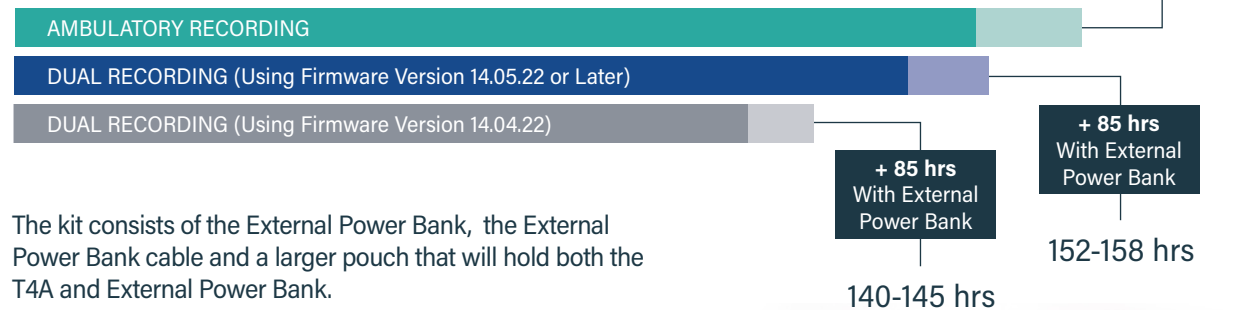
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Battery Life: External Power Bank

For studies lasting 72 hours or longer in dual recording mode, it is recommended to use the T4A External Power Bank (available for purchase).



The kit consists of the External Power Bank, the External Power Bank cable and a larger pouch that will hold both the T4A and External Power Bank.

The External Power Bank will provide an additional 100 hrs of recording for an ambulatory recording and 85 hrs for a dual recording.

When connected, the T4A will utilize the power first from the External Power Bank, then use the power from the inserted T4A Battery Packs.



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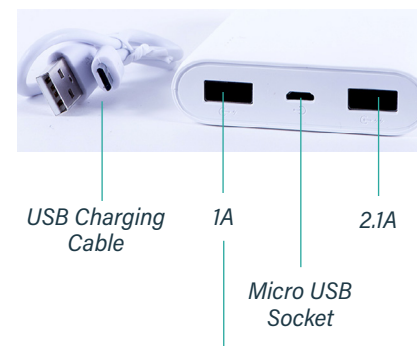
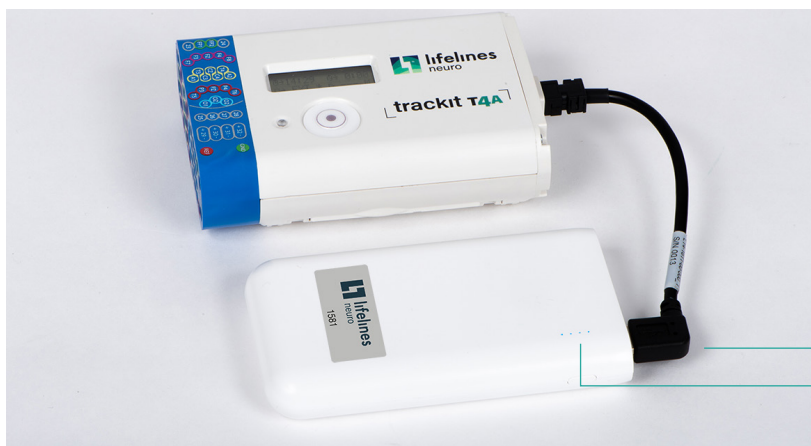
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Using the External Power Bank

Ensure the External Power Bank is fully charged using the USB cable supplied with the Power Bank. To charge the battery connect the micro-USB plug to the Power Bank and the USB plug to the USB socket of a computer or suitable USB charger.

The External Power Bank is fully charged when all four LEDs are illuminated. Recharging the External Power Bank will take approximately 5 hours on a standard USB charger.

Connect the External Power Bank to the T4A using the External Power Bank cable. Use the USB connection marked 1 Amp.



When connected to the T4A the External Power Bank LEDs light up showing remaining battery power:

4 LEDs = 75% - 100%
 3 LEDs = 50% - 75%
 2 LEDs = 25% - 50%
 1 LED = 1% - 25%

- a. The External Power Bank will turn on automatically when the T4A is on. If it does not turn on automatically, press the button on the side of the External Power Bank.

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Using the External Power Bank (contd)

- b. Tuck the External Power Bank behind the T4A



- c. Place the External Power Bank and T4A inside the pouch. Electrodes can be plugged in before or after placing the T4A in the pouch. Most find it easier to plug them in before.



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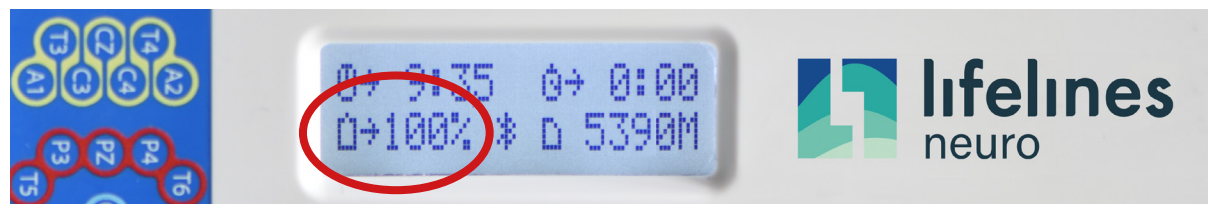
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The combined battery life of the two inserted Battery Packs is displayed in the T4A window.

If the Battery Packs are below 5%, you must either plug in the TrackitT4A USB to amplifier cable to provide power or replace the T4A Battery Packs.



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Q What if the T4A battery depletes and the study stops recording?

A The T4A is engineered to correctly shut down if the Battery Packs totally deplete prior to the study being stopped.

If the study did not cover the required amount of recording time, a new study will be required. In this case, remove the card and save the card data before starting another study.

Q What if the two Battery Packs do not have the same charge when starting the study?

A The Battery Packs are designed to deplete at the same rate. If one battery has more charge than the other, then the T4A will use the battery with the higher charge until the Battery Packs are the same charge. At that point the two Battery Packs will deplete at the same rate.

Q How is battery capacity value determined when using two Battery Packs?

A If two Battery Packs are inserted, the displayed battery capacity shown on the T4A is the average capacity of the two Battery Packs.

If one Battery Pack is inserted, the T4A display shows the capacity of the fitted Battery Pack.

Q Can I buy other brands of Battery Packs to work with the T4A?

A No. The T4A Battery Packs meet strict safety requirements. There is a risk of buying inferior quality Battery Packs which will put patient safety at risk.

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