

trackit™

The Ambulatory EEG/Polygraphy recorder



NEW

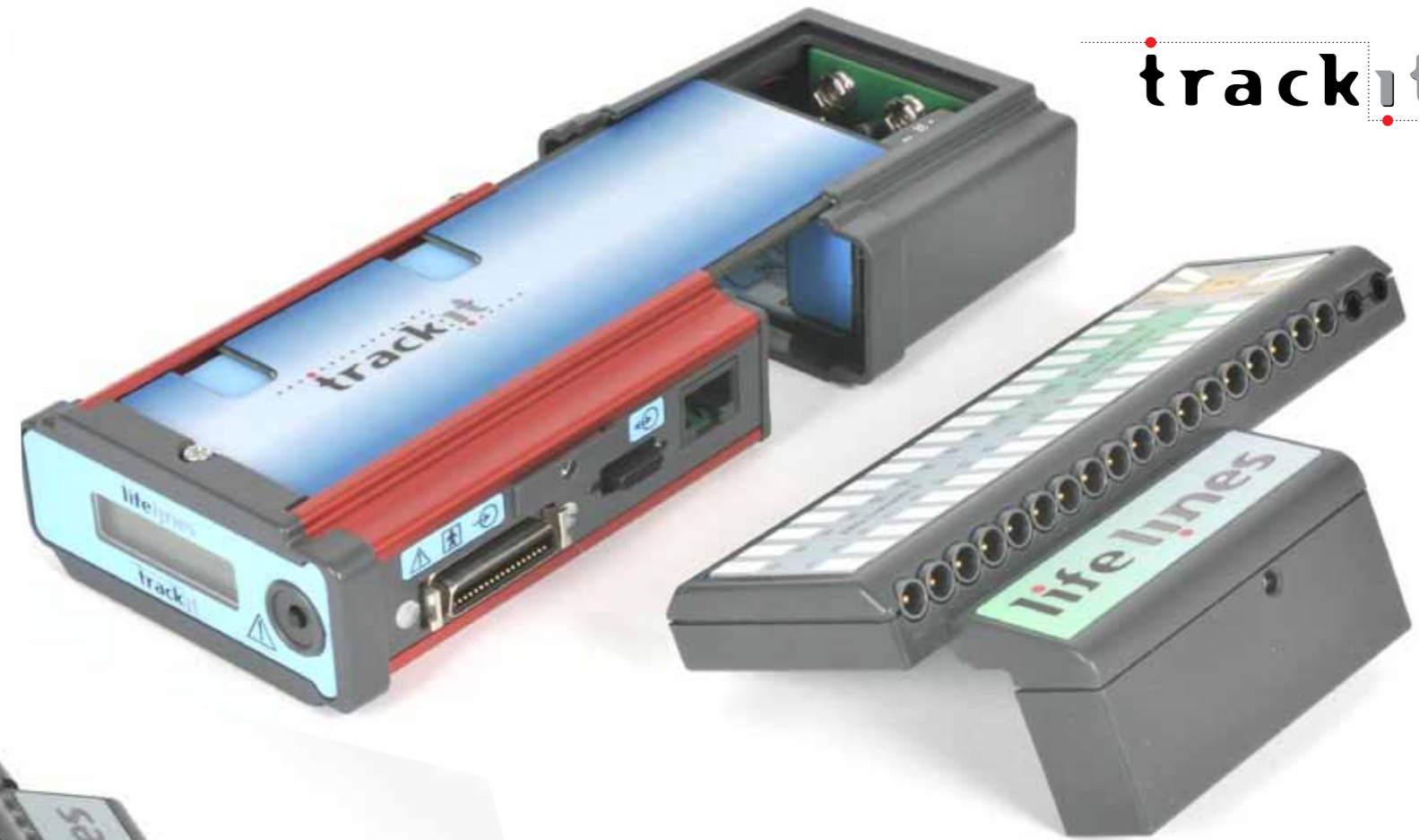
TRACKIT™ 3



Trackit™ has been designed from the outset with both Ambulatory EEG and Sleep applications in mind. Its small and compact footprint, when coupled with the paediatric backpack, makes the Trackit™ ideal for EEG recording applications in children and adults.

Trackit™ ambulatory recorders have a track record of consistently high performance in some of the world's leading hospitals and epilepsy centres. Customers have come to rely on Trackit™ to produce lab quality recordings in the harshest electrical environment imaginable – the patient's home!

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## NO COMPROMISE

Ambulatory EEG/Sleep recorders of the highest quality

Trackit™ is available in 4 major configurations

### Trackit™ 24

for applications in Ambulatory EEG  
(24 EEG + 4 AUX DC)

### Trackit™ 32

for applications in Ambulatory EEG  
(32 EEG + 4 AUX DC)

### Trackit™ 24P

for applications in Ambulatory EEG and sleep  
(20 EEG + 4 EEG/Poly + 4 AUX DC)

### Trackit™ 18/8

for applications in Ambulatory EEG and sleep  
(18 EEG + 8 EEG/Poly + 4 AUX DC)

All four Trackit™ models are available with an internal wireless module as an alternative to a cabled PC connection for setup and monitoring of waveforms.

Optional software is also available for Trackit™ recorders including the Trackit™ plus with video.







### Uninterrupted recordings for up to 4 days

With Trackit™ it is now possible to record continuously with 24 channels for up to 96 hours (using 3 disposable Li batteries), without the need to change batteries or flash cards. Clinical decisions can be made with more confidence without the need for repeat recordings.

A backup battery and a removable battery compartment allows extended recordings for longer than 4 days where the need arises. Trackit™ utilises the latest innovations in Lithium Ion battery technology for extended recordings; disposable Lithium PP3 or rechargeable Lithium Camcorder batteries (Canon BP511)

### Signal quality with no compromises

Finally an ambulatory recorder with data that you can rely on! A combination of the latest amplifier design, a and robust metal box gives a quality of recording at least as good as lab based EEG. The clinical utility of Ambulatory EEG is of paramount importance to you so we have only used the highest quality components in the construction of the Trackit™ recorder.



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# INTUITIVE

## set-up and operation

### Read and analyse the data on your platform of choice

#### Intuitive set-up and operation

The set-up of a recording could not be easier when using the Trackit™ Wizard, this intuitive software takes you step by step through the set-up process. Simple controls allow traces to be viewed and electrode impedances to be checked prior to recording start. For advanced applications the Trackit™ software also allows timed, periodic and start on power up recording modes.

#### Read and analyse the data on your platform of choice

One of the unique advantages of Trackit™ is the fact that all data is written in native European Data Format (EDF). This not only provides a standard for data interchange between different laboratories, but also allows data review on several of the markets leading EEG/Sleep review programs. This gives you the freedom to buy the best ambulatory product without being locked into proprietary review software – no compromises when it comes to ambulatory EEG.



# FEATURES and benefits

Trackit™ can be worn unobtrusively for ambulatory EEG recordings, ensuring complete patient acceptance. Size does matter!

## Flexible recording inputs

With 4 high level DC, 8 bipolar DC polygraphy, and 24 mono-polar EEG ensures that a wide range of monitoring requirements can be addressed. A choice of standard or Sleep Click-on patient connectors are available depending on the application.

## Data and recording flexibility

Trackit's unique architecture allows the system to be configured either as an ambulatory recorder with local storage, a headbox with cable or wireless communication to a host computer (Trackit™ Plus software). Trackit™ also allows a dual recording capability when doing host PC recordings – the EEG data will always be backed up on the Trackit's internal flash memory

## Trackit™ Blue wireless EEG

Monitor and acquire EEG on the Host PC using the unique Trackit™ Blue (Bluetooth class 1) internal wireless module. Automatically switches to Ambulatory mode when out of range. Dual PC and Trackit™ recording is also allowed.

## Robust and tamper proof

The use of a strong metal box, a lockable battery bay and the use of plug-in batteries means that long recordings can be made with more confidence.

## A wide range of sampling rates

Sampling rates from 1 – 256Hz with independent sampling on selected channels (Poly and AUX only) ensures application flexibility, especially when monitoring patients with sleep disorders.

## Signal integrity

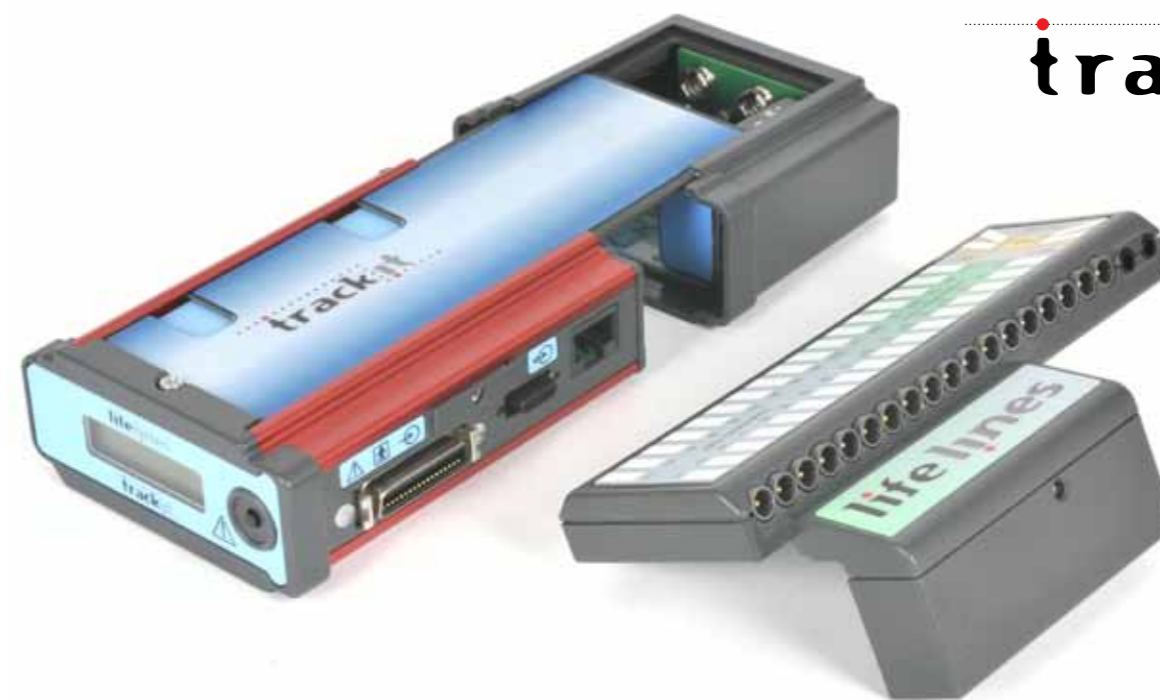
The use of a metal box and high quality amplifier components means that Trackit™ is perfectly at home in the harshest of recording environments.

## Suitable for Sleep recordings

In addition to the standard configuration that allows general purpose polygraphy recordings, a Sleep Click-on patient connector unit can be added. This adds an extra 2x respiration belt inputs, 2 airflow (Thermister and pressure) inputs, a built in Pulse oximeter, a body position sensor input and snore.



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## Removable battery compartment

A removable battery compartment ensures fast and simple removal and replacement of batteries. Select from either disposable or rechargeable batteries.

## 96-hour recordings

Trackit™ has been designed at the outset as a 24-hour recorder with the maximum number of EEG channels selected at EEG sampling rates <256Hz. 96 hour recordings are possible using 3 Li batteries and a 4GB compact flash card (21ch).

## A completely open data format

Trackit™ stores and transmits data in European Data Format (EDF). As a consequence, data generated by Trackit™ is compatible with any commercially available EDF file review program, including the most popular EEG and Sleep analysis software on the market today.

## Easy annotation of patient events

An event button is available for the patient to time stamp points of interest during the recording, allowing faster data reduction and review by the physician.

## Ease of operation and set-up

Trackit™ has been designed at the outset with ease of operation and set-up in mind. A simple user interface with LCD display allows parameters such as time, battery and disk life to be monitored by the technician or patient. A Microsoft Windows setup program and simple USB connectivity allows EEG and Sleep recordings to be easily programmed and monitored.

## Convenience

A built in impedance check and calibration means that no extra hardware is needed when setting up the device. It is also possible to interrogate impedance values from the device during a recording.



# TRACKIT<sup>®</sup> 3 Specifications

trackit<sup>™</sup>

- Up to 24 unipolar EEG channels (AC)
- Up to 8 Bipolar/unipolar EEG/Poly channels (AC/DC)
- 4 AUX Hi level DC channels
- Input for optional Nonin Pulse Oximeter
- Max differential AC input before clipping: 10 mV pk-pkv
- Max operational DC input voltage (electrode offset):  $\pm 250\text{mV}$  ( $\pm 2.5\text{V}$  using the Hi level AUX inputs)
- Bandwidth: 0.16 – 70 Hz (-6dB)
- Max common mode input voltage: 2V pk-pk
- Common mode rejection ration: >100dB (driven ground)
- Input bias current: <  $\pm 25\text{nA}$
- Noise: < 3.5uV pk to pk
- 1 – 256Hz sampling rate, independently selectable on poly channels: (1—256Hz or 25—200Hz)
- 16 bit A to D converter with sample and hold on every channel
- Up to 3 PP3 Lithium batteries giving 96 hours life with 21 channels recording, or a high capacity rechargeable battery giving 36 hours life with 21 channels recording
- Compact flash cards for data storage – up to 16 Gigabyte capacity (Sandisk)
- Up to 3 minutes of data buffer whilst changing disks
- Use Standard 1.5 mm touch proof electrodes
- Native European Data Format (EDF)
- Host PC connection via USB cable or internal wireless module
- Special recording modes including timed, periodic, or automatic record on switch on
- Dual PC and Trackit<sup>™</sup> recording capability when in host connection mode (wireless or cabled)
- Small size at only 14cm x 9.5cm x 3cm (5.5 x 4 x 1.25 inches) (L x W x D)
- Weight: < 500g (including disk and batteries)
- CE mark – (AMTAC – 0473 certificate number 597CE) certified against Directive 93/42/EEC, Annexe II

## What Lifelines does

Lifelines Ltd is a medical device company that designs, manufactures, and markets recording devices for use in the diagnosis of neurological and sleep disorders. Since it was established 10 years ago the company has developed a range of neurological recorders under the brand name of Trackit<sup>™</sup> and Sleepwalker. Business has grown significantly year on year from a few key hospitals in the UK to what is now a "Worldwide" business with customers in the USA, Europe, the Far East and China.

The Trackit<sup>™</sup> is a small patient worn device that records "brain waves" (EEG) and "vital signs" (such as respiration and ECG) for up to several days in the comfort of the patients own home, without the need for costly hospital based visits.

The company designs, develops and markets all its own products and subcontracts the manufacturing to a specialist medical manufacturer.

The products sold by Lifelines meet all the necessary regulatory requirements for sale into the EU, USA, China and Japan.

## The current Lifelines product line:

### Trackit<sup>™</sup> Ambulatory EEG/Polygraphy Recorder

Provides high-quality recordings in harsh electrical environments  
Only portable recorder that can record 96 hours of data

### Trackit<sup>™</sup> SleepWalker<sup>™</sup>

16 channel device with built in dedicated sleep inputs.  
Built in wireless capability, Pulse oximetry, nasal pressure and respiratory effort.  
Compatible with other recorders in the Trackit<sup>™</sup> range.  
Capitalises on the new reimbursement for home sleep diagnostics in the US market

### Trackit<sup>™</sup> Video

Trackit<sup>™</sup> add-on device: enables video recording of seizure in the patients home or outpatient clinic. Only video EEG product available that provides complete and accurate synchronization with ambulatory EEG using Bluetooth technology

### Lifelines Photic Stimulator

The Lifelines Photic Stimulator combines the brightness of a Xenon flash with the utility and ease of use of an LED device. The device has an equivalent lamp shape and brightness to the Grass PS33 whilst being smaller, lighter and more energy efficient by utilizing bright light LED technology.

[www.lifelines.com](http://www.lifelines.com)

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