

# trackit™ **zzz** sleepwalker

Home polysomnography recorder.  
Small robust and powerful.



High quality recordings in the patient's home The Trackit™ Screener has been designed from the outset to allow lab quality recordings in the patient's home.

The Trackit™ Sleepwalker combines 10 high frequency recording channels (EEG, EOG, EMG, and ECG) with the usual airflow, respiratory effort, SaO2, body position, pulse wave, heart rate, and Periodic Leg Movement to give unparalleled flexibility for your recording needs.



# TRACKIT™ SLEEPWALKER EEG/SLEEP RECORDER

An Ambulatory Sleep Recorder for home use that makes no compromises on signal quality or recording flexibility



## Key features and benefits:

- A wide range of recording inputs including: 4 EEG, 6 EXG (ECG, EEG, EOG, EMG), Built in Pulse Oximeter with SaO2, heart rate and pulse wave, built in body position sensor, 2 effort inputs, PLM/Thermocouple input, high level DC input, and airflow pressure transducer.
- Metal construction with recording inputs built into the device – no cables to break, very robust, and low susceptibility to Radio Frequency Interference (RFI).
- Small and compact design for acceptance by the patient
- A very quick and simple user interface for setup and operation using the Trackit™ Wizard or Polysmith \* Trackit™ setup program
- Native European Data Format (EDF) file format for review and analysis in Polysmith\*
- Optional internal Bluetooth transmitter for a “no cables” solution when bedside monitoring or setup.
- A range of battery options for single or multiple night recordings
- Special recording modes including a timed start and stop, periodic timed mode for recording more than one night and record when the pulse Oximeter probe is attached all reduce unwanted data.
- Headbox mode for use with the Trackit™ software and Polysmith\* allows data to be recorded directly to the host PC. Sleepwalker is also supported by the portable recorder interface in the NK Polysmith Software for home Sleep recordings.
- Optional Mini Aux input box that provides 3 extra EEG/bipolar polygraphy inputs and 1 Hi level DC input

## Sleepwalker systems:

Description	Kit number
Sleepwalker basic	2500
Sleepwalker wireless	2500/BT
Sleepwalker – SaO2	2500N
Sleepwalker with SaO2 & BT	2500N/BT

All Kits include a single battery box, USB cable, Trackit tool, and Pouch



## Sensors and sensor kits:

The Sensor kit provided with the unit includes the following Sleepsense sensors:

- 9102-AMB Inductive Interface Cable – Chest / 2 pin safety connector. 1.5ft
- 9101-AMB Inductive Interface Cable – Abdomen / 2 pin safety connector. 1.5ft
- 9002-L120 Multiple use Inductive Plethysmography Band – X Large (2/pack)
- 1771-2-Kit Limb Movement sensor kit (two sensors + two bands) – 2 pin safety connector
- 1726 Y adapter - 2 x type 551 male skts. to 1 x type 249 female plug – 600mm length
- 14805-2-FT 2 ft Adult Nasal Pressure Monitoring Cannula with Filter (5/pack i.e. 5 x cannula + 5 x filter)

The 2 Effort Belt inputs and the PLM input use the standard 2-pin Type 249 Key-hole connectors. The Y Adapter allows 2 Movement sensors to be connected to a single PLM input. The Airflow input uses the standard Luer connector for the cannula.

*The contents of the accessory kit may change as a consequence of new guidelines and availability of sensors.*



# Specifications



## Built in Sensors

- Built in Airlflow sensor: Pressure type, 0.03Hz – 130Hz,  $\pm 4.6\text{cm H}_2\text{O}$  gauge ( $\pm 4.4\text{mb}$  or  $\pm 0.066\text{psi}$ )  $\pm 25\%$
- Built in Body Position sensor: prone = 0.6V, left = 0.2V, right = 0.8V, supine = 0.4V, sit-up = 0V
- Optional built in Pulse Oximeter with SaO<sub>2</sub>, Pulse Wave and Heart rate Optional built in Wireless Bluetooth module – Trackit™ Blue (class 1) for wireless monitoring and recording from the Host PC

## Sensor Inputs

- Thoracic Respiratory Effort Belt input: type 249 Keyhole bi-pin socket Abdominal Respiratory Effort belt input: type 249 Keyhole bi-pin socket Periodic Limb movement input: type 249 Keyhole bi-pin socket

## EEG inputs

- 4 monopolar EEG inputs (AC): 1.5mm Touchproof

## Polygraphy Inputs

- 6 Bipolar Polygraphy Inputs (AC/DC): 1.5mm Touchproof
- 1 Hi level DC input with 3.5mm phono socket

## Electrical Characteristics

- Max differential AC input before clipping: 10 mV pk-pk
- Max operational DC input voltage (electrode offset):  $\pm 500\text{mV}$
- Bandwidth: 0.16 - 70 Hz (-3dB)
- Equivalent input noise:  $< 3.5\mu\text{V}$  pk-pk @ 0.16-70Hz

- Max common mode input voltage: 2V pk-pk
- Common mode rejection ratio:  $> 100\text{dB}$  (driven ground)
- Input bias current:  $< \pm 25\text{nA}$
- 1 - 512Hz 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

## Physical characteristics

- Front panel push button for on/off and patient event.
- 1 type PP3/MN1604 battery – standard configuration (13 hours of continuous operation), optional 3 PP3 or BP511 Li for extended recordings
- Compact flash cards for data storage: Windows file structure
- Native European Data Format (EDF)
- Small size at only 14cm x 9cm x 3.5cm (L x W x D)
- Weight:  $< 400\text{g}$  (including disk and batteries)

## Conformance/Quality

- CE mark – certified against Medical Device Directive 93/42/EEC, Annexe II
- Class II device, Type BF

## 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™ 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™ 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.

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**lifelines**  
Ltd

## The current Lifelines product line:

### Trackit™ Ambulatory EEG/Polygraphy Recorder

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

### Trackit™ Sleepwalker™

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™ range. Capitalises on the new reimbursement for home sleep diagnostics in the US market.

### Trackit™ Video

Trackit™ 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.

### Lifelines iEEG

Lifelines iEEG is the first fully functional clinical EEG solution to use service-oriented architecture. The server accesses and processes the data while the client takes care of the presentation. The client can reach the server from anywhere on the internet using a secure, password-protected communication channel.