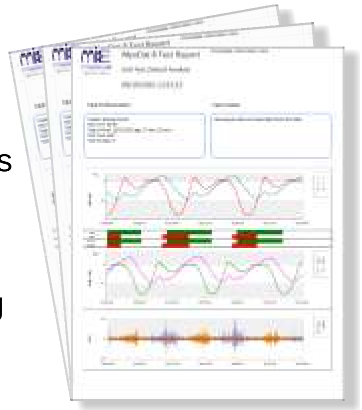

A wide range of reports can be customised with your organisation's details and logo. Reports can be printed, exported to PDF for sharing or exported to Word for editing.

## Additional features:

MyoDat is able to import video and to synchronize with it. There is a help function and a comprehensive encyclopedia of surface EMG. If you are not sure where EMG electrodes placement should be, you can click on the integrated Muscle Map and an anatomical image of the muscle is displayed, together with a video, indicating the muscle action and sensor placement. Raw and analysed data can also be easily exported to a variety of industry standard formats for subsequent analysis in third party packages.

## Software features:

- Real-time display of raw EMG data and other signals for setting up purposes or monitoring
- Raw EMG and RMS EMG
- Logic display of muscle activity to show agonistic and antagonistic activity
- Automatic maxima and minima values displayed for each muscle contraction
- Integrated EMG (total and optional time base reset)
- Quantified EMG algorithm according to Spaepen
- Spectral frequency analysis for complete test and also for muscle activity only
- Power spectral density analysis with median frequency displayed for fatigue analysis
- Dedicated fatigue analysis with comparative chart facilities
- Correlation facilities in graphical and numerical format
- Numerical analysis of data can be displayed either on screen or as a print out
- Overlay facilities to combine EMG data with video camera images
- Powerful, fully searchable subject database
- Exports analyzed or raw data to a variety of formats (ASCII TXT/CSV, DIF, Excel®, XML)
- User defined settings to customise analysis parameters and hardware configurations

As with all our software products, MIE offers free updates for 3 years on MyoDat 8 for Windows.

## Data-Logger Specifications

| | |
|---|---|
| Input channels: | 8 |
| Storage Capacity: | 2GB MIE MicroSD card as standard |
| Resolution: | 24-bit,16-bit or 12-bit (user programmable) |
| Sampling Rate: | each channel user programmable up to 18kHz in total. |
| Power Requirements: | 1 x Standard AA battery or 1.1V to 5V AA sized battery |
| Physical Dimensions: | 72mm x 55mm x 18mm |
| Weight: | 90g including memory card and AA battery |

## Pre-Amp Specifications

| | |
|---|---|
| Gain: | x1000 |
| CMRR: | >120dB |
| Frequency Response: | 6Hz→6000Hz at -3dB |
| Weight: | 10g excluding cable and connector |
| Compatibility: | Surface, needle and wire electrodes |

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CE 0120

MIE medical research ltd 30 YEARS

Celebrating over 30 years of innovation in bioscience technology

The DL8+ is a 'CLASS I' medical device. CE 0120 Accuracy +/- 0.001% FSO



# DL8+ Data Logger

**STATE OF THE ART MINIATURE 8-CHANNEL MULTI-PURPOSE MEDICAL GRADE DATA LOGGER**

MIE Medical Research Limited

Measurement is evidence

## Embedded Triaxial Accelerometer

24-bit High Resolution

## 18kHz Total Sampling Rate


**Small**

**Light**

**Versatile**

**Real-time Clock**

**Live Data Preview**

**Extended Recording Time**

**Exercise and Sports Medicine**
**Sports Sciences**
**EMG and ECG Recording**
**Rehabilitation**
**Gait Analysis**

**Activity Monitoring**
**Evaluation of Tremor**
**Physiological Studies**
**Ergonomic Studies**
**Behavioral Studies**

# Portable Data Recorders

## Data Logger

EMG Sensors

The new MIE DL8+ is an 8 channel analogue data logger with an additional built-in triaxial accelerometer. It has been designed to accommodate a range of plug-in transducers including EMG pre-amplifiers, electrogoniometers and other devices including custom strain gauge transducers to measure loads and forces.

## User Definable Channel Settings

Each channel can be individually configured to collect data at different resolutions and sampling rates as required. For example, you may wish to use the embedded triaxial accelerometer to measure at 3kHz sampling rate at 24-bit resolution; channels 1,2,3 & 4 at 1kHz sampling rate for sEMG at 24-bit resolution; but only 500Hz for channels 5 & 6 at 16-bit resolution for measuring electrogoniometers; and 100Hz at 12-bit resolution for foot switches in channels 7 & 8.

## Real-Time Clock & Scheduling

A built-in real-time clock not only time stamps the data, but also allows you to set multiple start/stop recording periods. This is ideal for recording only certain parts of the day or night or for just taking high resolution data for short periods of time over extended periods (e.g. 1 minute of recording every hour for 1 month).

## Internal Triaxial Accelerometer

This useful embedded sensor records movement data in addition to the 8 analogue inputs, providing a total of 11 channels of data collection. Movement analysis is provided in MyoDat indicating total walking time, resting time, and other useful parameters.

## Extended Recording Time

By default, the DL8+ uses a single AA battery giving up to 24 hours continuous recording (depending upon the transducers being used). Even longer recording periods can be achieved using our external battery pack.

Robust enough to use for extreme activities

## Easy Video Synchronisation

Recorded data can be easily synchronised to digital video using our MyoDat software. The on-board LED emits a unique flashing pulse. This is detected within the video and used to accurately and seamlessly synchronise it with the recorded data.

## Options

We can tailor a package to suit your needs supplying the appropriate transducers, software and accessories. Our two most popular packages are:

Basic: Standalone DL8+ with our Procure software.

Standard: DL8+, EMG electrode kit including 8 sets of EMG pre-amplifiers and our complete Myo-Dat software suite.

Electrogoniometers and EMG preamps

## Accessories

MIE also produces customised accessories to suit particular applications. Including electrogoniometers to measure joint angles, foot switch encoders to measure heel and toe contact times and strain gauge amplifiers. We also design and manufacture custom transducers.

## Software

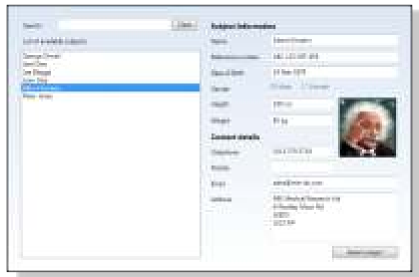
Procure is our basic software suite that comes free with the DL8+. It is used to programme the user definable functions of each channel (i.e. sampling rate, resolution, number of channels, RTC functions) and move the recorded data from the microSD card to the PC so that you can view/save the results or export them to third party software such as Excel, Mathcad, etc. Procure also allows you to view the raw data in real time by connecting the DL8+ to a PC via the opto-isolated USB interface. This useful feature ensures that the transducers connected to the logger are functioning properly.

Of course if you want more comprehensive features and analysis then our industry leading MyoDat software is fully compatible with the DL8+.

MyoDat

MyoDat is a powerful data acquisition & analysis software package. Although primarily designed for data capture and analysis of EMG, it can also display the results from any number of other analogue signals such as physiological, physical or industrial transducers, providing a wide range of applications.

MyoDat for Windows starts with a powerful database that is only limited by the size of your hard disk. This database is fully searchable and allows you to create your own subject groups or searchable parameters.

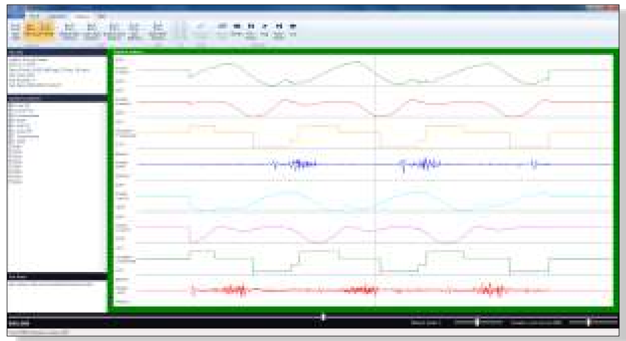


Patient Selection

MyoDat is very intuitive, from initial set-up through to analysis. You can start data collection by either selecting a predefined sensor protocol, or defining a new protocol for your transducer selection, sampling rates and number of channels to be used. Once the protocol has been selected, a live display is presented on screen.

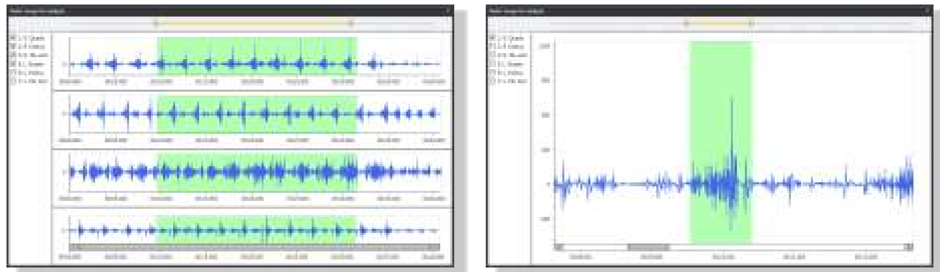
Live Preview

Capturing the data is a simple click away. The captured raw data can then be replayed in real time, in slow motion or even frame by frame.



Data Playback

Any signal can be displayed in full using our unique “rapid loading” technology. This allows vast amounts of data to be quickly viewed. The raw data can be zoomed and panned to an area of interest for more detailed analysis.



Zoom, Pan & Select Area of Interest

Detailed analyses of any EMG signal can be performed.

Raw and Analysed EMG

Analysis includes:
- Filtered or raw data
- RMS
- Enveloped
- Rectified
- Integrated
- Quantified
- FFT
- PSD
- Fatigue analysis

Raw and analysed data can be performed in separate windows or overlaid within the same window for comparison.

Medical Research Limited