

BK PRECISION

Sefram

a B&K Precision company

MEASUREMENT SOLUTIONS

ACQUIRE
RECORD
ANALYZE
CRITICAL DATA
RAILWAY



bkprecision.com

ACQUIRE & RECORD

MEASURE ELECTRICAL PARAMETERS ON TRAIN, SUBWAY AND TRAMWAY NETWORKS

DAS 30/50/60

Our customer, [RATP Infrastructures](#), manages railway network infrastructure in a major metropolitan region. Maximizing uptime and ensuring safe operation requires continuous monitoring and maintenance.

RATP uses **DAS 60** (6-channel data acquisition system) to measure electrical networks that support train, subway, and tram systems.

DAS 60 allows the recording of :

- **DC currents** (via additional current clamps)
- **DC voltages**
- The state of the protection relays
- PLC outputs using built-in logic channels

The DAS 60 is also used to perform **quality analysis** of electrical networks via the **power analysis** mode.



PRODUCT BENEFITS

Portability saves time when switching between locations. The **color touch screen**, **saved channel configurations**, and **built-in analysis tools** make it easy to diagnose problems quickly.

RECORD PARAMETERS FOR RAIL AGING ANALYSIS

8460 | UP TO 36 CHANNELS

Our customer in **railway maintenance**, uses our **8460** Data Acquisition System to record critical parameters and detect head check defects in curved sections as specialized maintenance vehicles travel over specified sections of track.

Using the unit change function, square wave signals from a rotary encoder are converted to distance in order to determine the exact location of the cracks. This is one of many advanced math functions available on the 8460.



PRODUCT BENEFITS

The **thermal printer** and **15.4 inch touch screen** allows a quick analysis of the data and makes it an **autonomous** Data Acquisition System for both **recording** and **analysis**.

Crack detection is performed by connecting specific sensors equipped with analog outputs **to our 8460** data acquisition system.

The versatile **8460** allows instant recording of all these parameters with a **sampling rate** of up to **1MHz**. The **thermal printer** allows **real-time printing** of the recorded signals and a quick visual analysis of rail defects. A recording saved in the **internal memory (500 GB)** can also be printed.

The distance information with the diagnostic curve of the rail aging, allows for accurate pinpointing of locations that require intervention.

CHECKING THE TRACTION RETURN CIRCUIT AND DETECTING ANY FAULTS

DAS 1700 | UP TO 72 CHANNELS

Another **leading company in the monitoring and maintenance of railway installations**, uses the DAS 1700 when the installations are in operation. This portable solution allows them to verify the functionality of the **traction return circuit** and locate defects on a line. The DAS 1700 equipped with one or more measuring boards, including a **high voltage board**, can fulfill this task and will allow, with current clamps and its **isolated inputs**, to:

- **Measure currents and voltages flowing in the rails** - to characterize the traction current return circuit (1500 V DC / 25000 V AC, 50 Hz) using current clamps and voltage probes.
- **Measure the line voltage and the absorbed current** - to characterize the influence of the traffic on the line voltage using current and voltage probes.
- **Measure the relative temperature** of the electrical elements of the catenary at constant load via the Pt100 / Pt1000 inputs available on the multiplexed card.

The **double recording** function allows for recording data at a low sampling rate (main recording), and a faster rate when a user defined condition (trigger) is met. It allows the user **to analyze the data faster** and change between the two recordings (fast & slow).

Saving the configuration and exporting it to a USB stick or other device reduces setup time for commonly performed tests.

PRODUCT BENEFITS

With its **fast sampling rates**, flexibility to choose from **different acquisition boards**, and ability to **perform analysis directly on the device**, the DAS1700 is a **powerful all-in-one solution**.

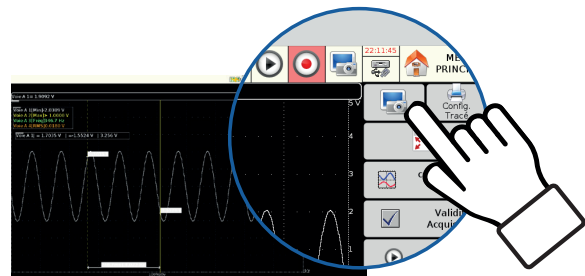




ANALYZE

ANALYSIS AND PROCESSING OF RECORDINGS

- Work more efficiently with our **all-in-one devices** that allow direct analysis of the recorded data on the color touch screen:
 - Position **cursor**s
 - **Easily zoom in/out** on your signals to precisely locate a feature
 - Display **calculated values** (RMS, Max, Min, Average, ...)
 - **Take screenshots** for creating reports



- The **Viewer software**, delivered with all devices, allows **advanced data analysis**:
 - **Visualization** of recorded data
 - **Printing** of waveforms
 - **Merging recording files**
 - **Mathematical calculations** on a channel or between channels
 - **Annotations** on the curves
 - **Export data** to other applications (Excel, .csv file, .txt file,...)

About B&K Precision

For more than **70 years**, **B&K Precision** has provided reliable and value-priced test and measurement instruments worldwide.

Our headquarters in **Yorba Linda, California** houses our administrative and executive functions as well as sales and marketing, design, service, and repair. Our European customers are most familiar with **B&K** through our French subsidiary, **Sefram**. Engineers in **Asia** know us through our **B+K Precision Taiwan** operation. The independent service centers in **Singapore** and **Brasil** service customers in **Singapore, Malaysia, Vietnam, Indonesia** and **South America**, respectively.

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