

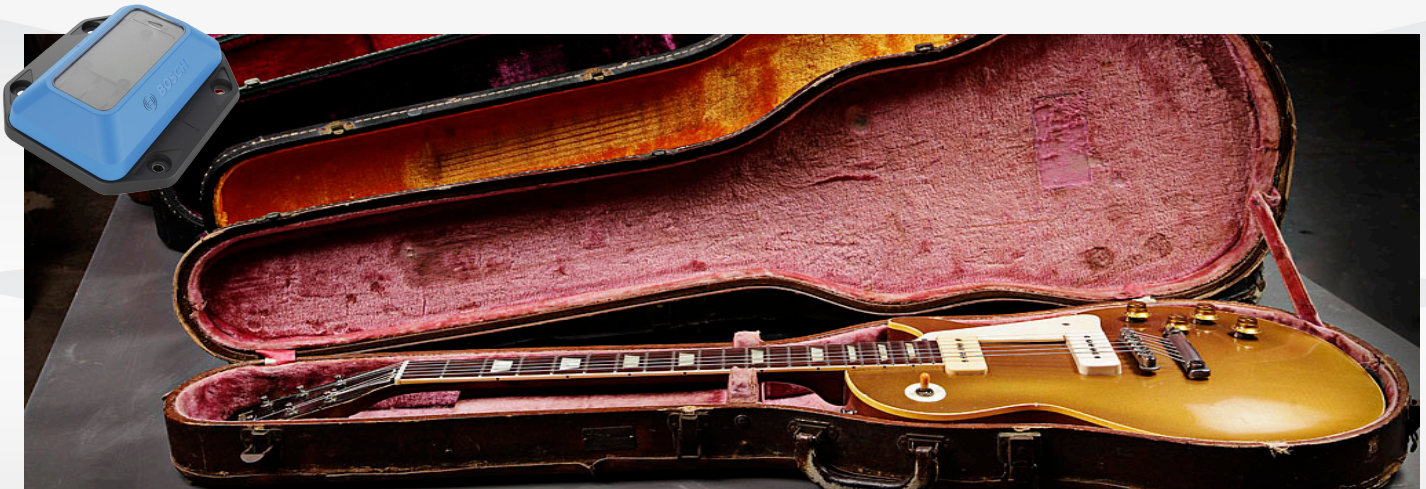


**BOSCH**

Invented for life

## Data Logging for Consumer Goods

### *Transporting High Class Guitars Safely*



#### **Introduction and Challenge**

*Imagine you're an American rockstar and you are regularly filling large concert halls. Of course you have your favorite guitar: your personal Stratocaster. It goes without saying that you would do anything to protect it from damages. Consequently, you need a guitar case that protects your guitar from environmental influences such as heat, cold, and humidity. Therefore, you keep it safe in a guitar case by Guitar Nanny. But what is different about their guitar cases? They manufacture guitar cases equipped with sensor devices to protect your baby.*

*Guitar Nanny got in touch with us, the Bosch Connected Devices and Solutions GmbH, at Hanover Fair 2016 and discovered the Transport Data Logger (TDL) in our booth. When shipping exclusive guitars with a value of approximately 10,000€, you want to ensure a safe transport. But as guitars are very sensitive towards humidity or temperature for example, Guitar Nanny was looking for a reasonably priced solution. They wanted to track the transport process, measure environmental conditions, improve current processes and have proof of the security and quality of their cases.*

#### **Use Case**

Guitar Nanny is a company that understands the heartbeat of musicians. Therefore, they started their business to manufacture high-end guitar cases to protect exclusive guitars as much as possible. As guitars are very sensitive towards humidity and temperature, these variables have to be kept constant during transportation and storage. The company is led by Dr. Wehmeyer who also initiated the contact to Bosch Connected Devices and Solutions. His wish was to find a cost-efficient alternative to their current sensor device without losing functionality and quality. Their goal is to provide the best quality for their customers - for you. As a result, the TDL was be a promising solution.

The TDL is a fully integrated hardware and software product, which measures shock, humidity, temperature and tilt. The data logger includes Bluetooth Low Energy to transmit data.

Furthermore the TDL comes in combination with a mobile application for iOS and Android. Its unique feature is the long lifetime of the battery which lasts for 2 years. But how does it work? The TDL is attached inside the guitar case to measure and record all relevant parameters. These measurements are then documented and visualized through a simple-to-use mobile app. As the limits of each parameter can be individually configured, any transgression of these limits is traceable and clearly assignable to the stations throughout the entire supply chain.

## The Role of Bosch Connected Devices and Solutions

Being an innovative company, BCDS can draw on extensive software solutions, experience and a comprehensive range of sensors from Bosch Sensortec. By combining our expertise with partners from different business entities, we enable new value propositions and new ways of value creation.

The TDL enables Guitar Nanny and any other company to trace, control, and optimize their supply chain.

We empower companies to interpret and analyze the collected data to improve their current processes, save money and increase efficiency.



## Solutions and Benefits

Is your guitar safe now? Guitar Nanny decided to use the Transport Data. They integrated the TDL in each guitar case. By using the TDL as the new solution, they were able to decrease the costs by about 66% compared to the previously used sensor device. Additionally they are now able to prove that their guitar cases are protecting guitars safely from shock, tilt and most importantly from temperature and humidity. In that way the TDL is able to support the proper maintenance and conservation of value of the guitar. Customers can trace their guitars, get notifications of any parameter threshold, and detect when the event took place.

## Conclusion

To answer the previous question: Your guitar is not safer now than before but you can keep track of it – for less money. Guitar Nanny configures the TDL according to the characteristics of your guitar. It's not leaving your hands into others' who might not be able to estimate the value of your guitar. You will know if it might arrive with damages. You will know who is responsible for damages. You will always know if your guitar is safe. Thanks to new technology. Thanks to connected sensor devices. And this use case can be transmitted to any other business entity. If you want to track shipped goods the TDL is a cost-efficient and functional solution to bring transparency to the whole supply chain.

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## About Bosch Connected Devices and Solutions

*Bosch Connected Devices and Solutions GmbH is based in Reutlingen, Germany and is a 100% owned subsidiary of Robert Bosch GmbH. As an innovative company, it serves the new market for the Internet of Things. We offer compact electronic devices, comprehensive software and end-to-end solutions in many fields of application. Our main businesses are in the areas of Connected Mobility and Industry 4.0 & Logistics! We improve everyday life, increase comfort, security and productivity.*

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