

That Cross Generational Sound

A TrakSYS™-Powered Success Story of Production
and Quality Management at Gibson Brands, Inc.

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About Gibson Brands, Inc.

Gibson Brands, Inc., the world's most iconic guitar brand, has shaped the sounds of generations of musicians and music lovers across genres for more than 100 years. Founded in 1894 and headquartered in Nashville, TN, Gibson Brands has a legacy of world-class craftsmanship, legendary music partnerships, and progressive product evolution that is unrivaled among musical instrument companies. The Gibson Brands portfolio includes Gibson, the number one guitar brand, as well as many of the most beloved and recognizable music brands, including Epiphone, Kramer, Steinberger, MESA/Boogie, and the Gibson Pro Audio division, KRK Systems. Gibson Brands is dedicated to quality, innovation, and sound excellence so that music lovers for generations to come will continue to experience music shaped by Gibson Brands.

Overview

Elvis. The Beatles. Led Zeppelin. All icons, each a trailblazer with deity-like status in their respective genres. Though their sounds were different, when it came to breaking hearts, ushering in an era of psychedelically-prolific music, and flowing through mind-bending solos, each of these musical greats trusted one brand of guitar to convey their signature sound. One brand became the instrumental voice behind cross-generational hits like All Shook Up, Come Together, and Whole Lotta Love.

Founded in 1894 by Orville Gibson, Gibson Brands, Inc. (Gibson) has long been a formidable presence in the world of music. Boasting over 127 years of experience and a world-famous eclectic user-base, their guitars are beloved by musical titans from all genres and have amassed a vast, loyal following. As such, the Gibson guitar portfolio has grown to include something for everyone, from highly coveted small-batch releases to custom works and entry-level guitars. So, whether you are a seasoned instrumentalist looking for a new axe, or are just setting out on your journey to stardom, you can't go wrong with a Gibson guitar.



With a steadily growing customer base and an eye towards continually refining their production processes, the team at Gibson's Nashville USA manufacturing facility (where the brand's electric guitars are made) was in the market for a software solution to help them reinvent their operations. Endeavoring to meet their increasing customer demand while not sacrificing the quality they are known for, the Gibson team began working alongside Parsec Certified Partner, EOSYS, to implement TrakSYS. With their goals and implementation strategies mapped out, Gibson and EOSYS were ready to rock 'n roll.

“A platform like TrakSYS is an absolute necessity for running a 21st century operation. The solution EOSYS delivered has shown us endless possibilities for our business!”

Howard Fitzcharles, Industrial Engineer – Gibson Brands, Inc.



Challenges

- Tribal knowledge superseded SOPs and documentation
- Minimal insight into item and production tracking
- KPI calculations were time-consuming and manually performed
- No efficient way to track or quantify items sent to rework
- Lack of historical data and trends



Goals

- Help increase production by 100%
- Enable real-time production monitoring
- Provide insight into WIP
- Give teams the ability to track an individual guitar as it moves through production
- Generate an electronic history of guitar transactions
- Establish a correlation between production areas and product volume/output
- Enable quality defect tracking and reporting
- Enable spec visibility
- Facilitate the creation of optimized SOPs
- Reduce manual ERP confirmations

Solution Overview

Before implementing TrakSYS, the team at Gibson was utilizing a homegrown database with a few custom app pages.

Unfortunately, the functionality provided by this system did not meet the long-term production goals that Gibson needed. Based on Gibson's initial goals and their eagerness to run the facility as efficiently and effectively as possible, the team at EOSYS collaborated with Gibson to design a TrakSYS solution that would harmonize perfectly with the musical giant.

With an initial objective of establishing a foundation around product quality, EOSYS implemented their TrakSYS-enabled DART® (Defect Analysis and Reporting Tool) solution to track defects through the use of visuals like heat maps and other graphical tools. To enable detailed production/part tracking, TrakSYS was configured for RFID-based tracking of individual guitars and used to create detailed e-records for each guitar. User-friendly dashboards were designed to show real-time WIP and ERP confirmations.



“TrakSYS offers real time data reporting, allowing for a genuine status on production. Knowing the whereabouts and attention each instrument needs empowers Gibson to progress with the desired future in mind.”

Grant Camara, MES Technician – Gibson Brands, Inc.

Furthering the quality management capabilities of their TrakSYS deployment, EOSYS designed Gibson's solution to provide real-time visibility into defect tracking. A material review board (MRB) process was formally established with this data, enabling them to rapidly determine the root causes of defects and thereby implement the changes necessary to optimize quality and elevate production. With a formalized MRB process in place, the quality team is now better able to calibrate operations to avoid over-inspecting, and can efficiently track the history of each guitar to prevent excessive rework on individual instruments.

Fueled by their early success with TrakSYS, the Gibson team has already begun discussing future projects. In addition to deploying the platform at other facilities that create custom electric guitars, acoustic guitars, and mandolins, the Nashville USA facility wants to also incorporate TrakSYS solutions to help with:

- ▶ Planning and scheduling
- ▶ Tooling and component selections
- ▶ Reserved material tracking
- ▶ Quality inspections
- ▶ Maintenance reporting
- ▶ Interfacing other equipment



Key TrakSYS Features



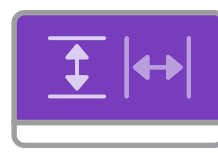
Production Management



Traceability

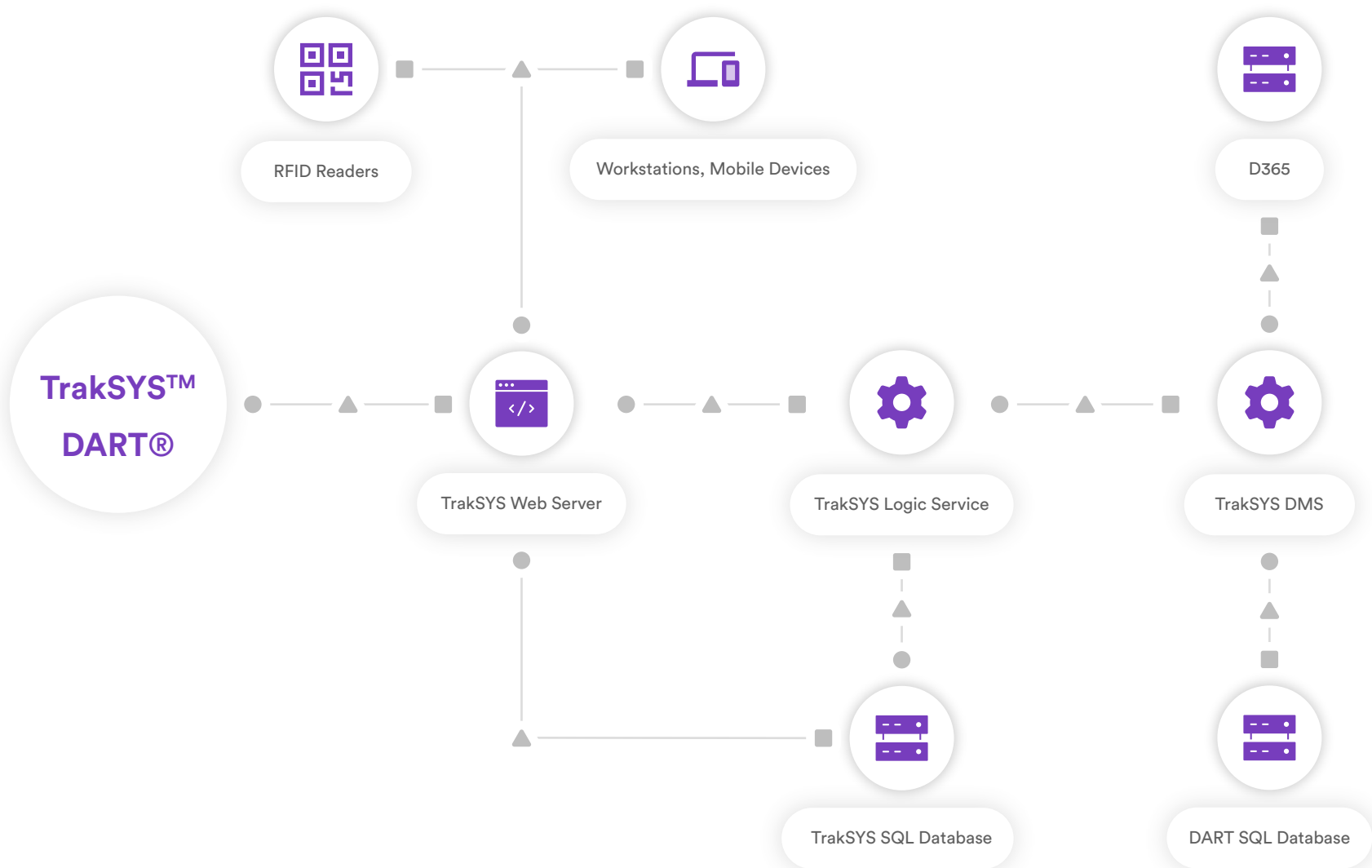


Quality Management



Specification Management

Solution Architecture



Results

- Optimize engineering specifications management
- Effectively communicate critical information (with specs) to operators
- Optimize the printing of labels and storing of pictures taken of each finished guitar before the packaging process
- Optimize the Material Review Board (MRB) process
- Implement an effective, visually-insightful system to help teams optimize quality
- Repurpose 1 Full-time Equivalent (FTE) from manual reporting of KPI's
- Provide operators with real-time, detailed guitar histories

Example Screens

Operator Cockpit

Serial Number
223110271

SKU
SGTR005NNH1

Target: 405
Actual: 266

Open Defects: 0
Time In Station: 00:00:23

Select Process Area

○ General

○ RM Body

○ ES Body

○ RM Neck

○ Fingerboard

○ Neck

○ Body

○ Warehouse

○ Electronics

○ Plastics

○ Setup

○ Bridge

● White Wood

○ Color Prep

○ Finishing

○ Neck Prep

○ Buffing

○ FA-Kitting

Complete

Cancel

Guitar History

Defects

Part Numbers

Neck Assembly
123456 / NECK Assy, Maple, SG, .818-.963 Blank HV, RSWD Dot Unbound FB
Sanded Body Wings
None
Body Assembly
789012 / Body Assy, SGF17, African Mahogany, 22 Fret, No WR
Tailpiece Anchors
None
Eyehooock Anchor
None
White Wood Guitar
345678 / Guitar W, SG Tribute 00 - SGTR00
Notes
None

Attributes

Serial # Stamp Location
Stamp Ink
Made in USA
Model Year Stamp
Neck Joint Angle
Zero Action-Window
WW DMS Prog. #
Face Off Fixture
Made in USA Stamp Fixture
Serial Number Stamp Fixture
Neck Fit Fixture

Images



Guitar History

Filters

Guitar SN:
649782364

Serial Number
649782364

RFID
0000000000000000123657

SKU-Description
LPS5SW20ITNH3 - Les Paul

Reopen Guitar

Process Status Summary

Area	Status
White Wood	Completed
Color Prep	Completed
Finishing Color Line	Completed
Finishing Top Coat	Completed
Neck Prep	Completed
Buffing	Completed
Final Assembly	Completed

Process Area Summary

Area	Actual Hours
White Wood	2.05
Color Prep	0.53
Finishing Color Line	0.76
Finishing Top Coat	1.05
Neck Prep	0.83
Buffing	1.46
Final Assembly	0.05

Recent History

Process Area	Technician	Started
White Wood	David Lynton	Jul 30 2021 12:59PM
White Wood	Gervasius Vega	Jul 30 2021 12:59PM
Color Prep	Gautvin Bergman	Aug 2 2021 6:15PM
Finishing Color Line	Jonas MacClelland	Aug 5 2021 8:05PM
Finishing Top Coat	Diodorus Van Houtum	Aug 9 2021 3:10AM
Neck Prep	Pompey MacKenna	Aug 12 2021 6:15AM
Buffing	Gervasius Vega	Aug 18 2021 6:15AM
Final Assembly	David Lynton	Aug 18 2021 7:12AM



MRB Disposition

MRB Disposition

SN: 649782364

Select Action

☒ Cancel MRB

☐ Repair Level 1

☐ Repair Level 2

☐ Repair Level 3

☐ ZIP

☐ Scrap

Defects

Order By

Date Ascending

Defect

Pitch High

Date Entered: 6/2/2021 04:49:12PM

SKU: LPCS00EBNH1 Les Paul

Reason

Submit

Notes

Cancel

Serial Number: 649782364

Color: WS

SKU: LPCS00EBNH1

Model: Les Paul

Entry Finished

Cancel

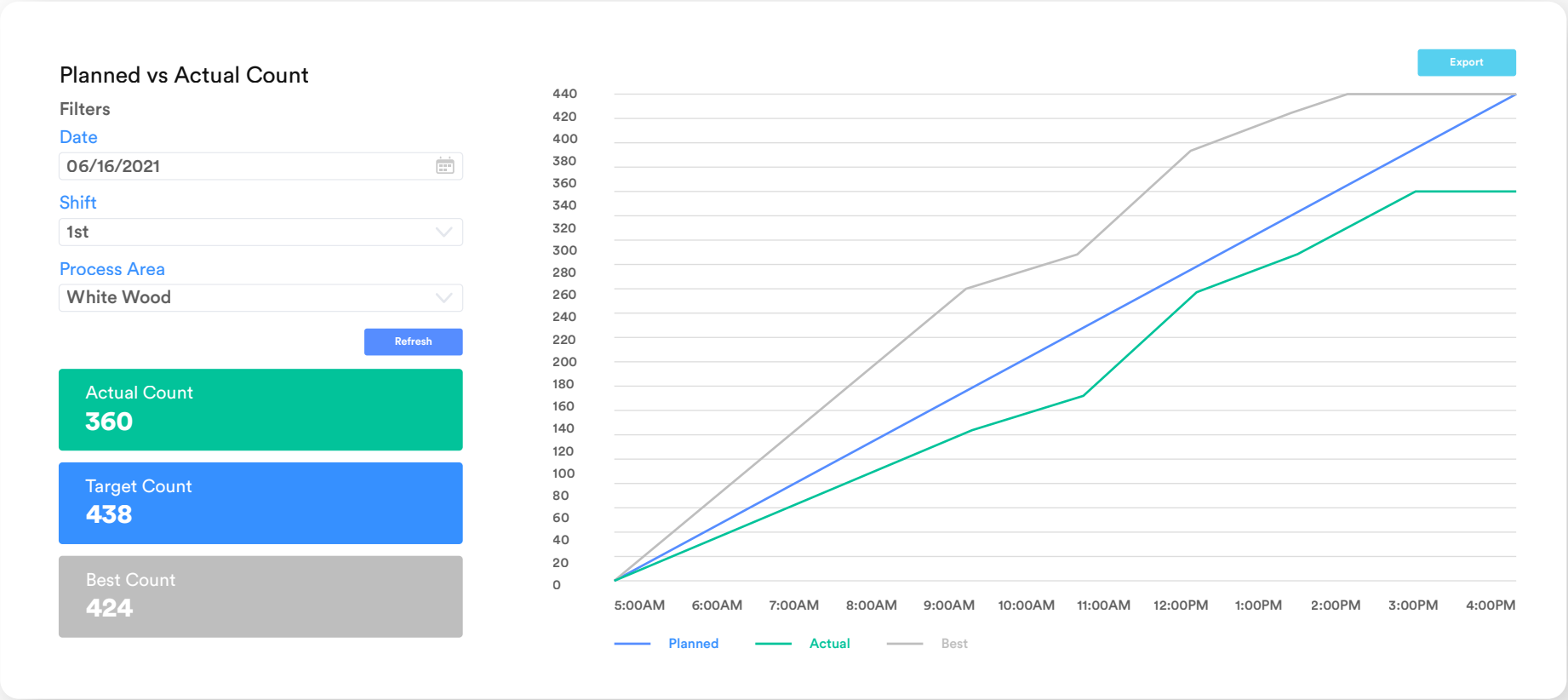
Submit

Cancel

Images



Planned vs Actual Count



WIP Tracking

WIP Tracking

Select Process Area

[All]

Select Model Family

[All]

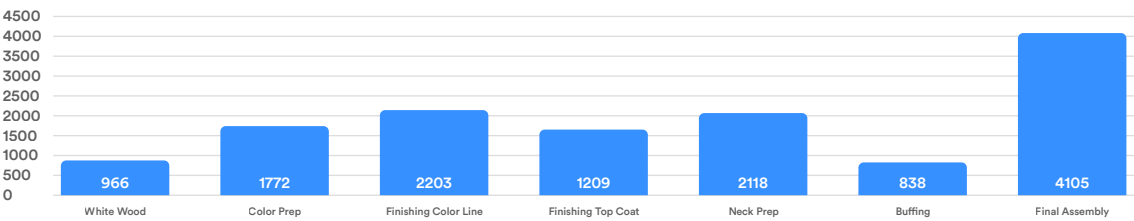
Select SKU

[All]

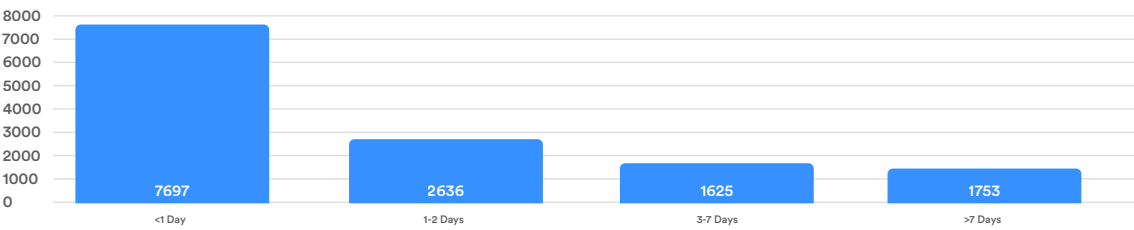
Refresh

Export

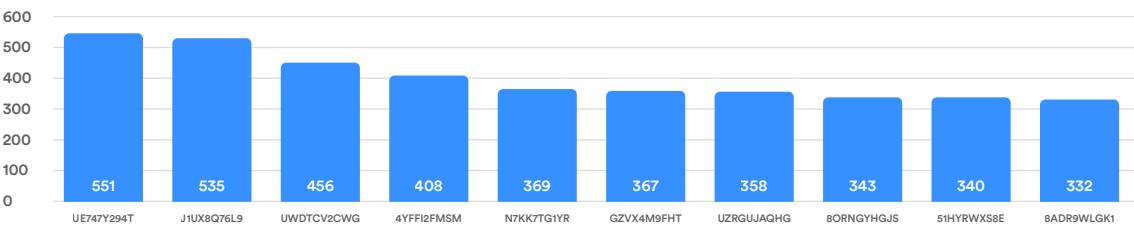
Guitar Count by Area



[All] Guitar Count by Age



[All] Guitar Count by SKU



About EOSYS

Founded in 1991 to provide turnkey system integration services for manufacturing facilities, EOSYS has grown to be a multifaceted organization providing a wide range of services to manufacturers across the US. From their four offices including their headquarters in Smyrna, TN, about 20 miles southeast of Music City, USA, EOSYS offers manufacturing information systems integration and industrial control solutions. Visit the website at www.eosysgroup.com to learn more about how EOSYS can help with your industrial digital transformation and TrakSYS integration.

About Parsec

Parsec is the developer of TrakSYS™, a real-time manufacturing operations management software platform deployed at thousands of factories in over 100 countries. TrakSYS aggregates data from multiple sources to deliver real-time, actionable intelligence that helps manufacturers to reduce production costs, decrease lead time, and improve profitability. To learn more about Parsec and TrakSYS, please visit www.parsec-corp.com.