



Control Systems

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A photograph of three people on a roller coaster. In the foreground, a young woman with dark hair is screaming with her mouth wide open, her hair blowing in the wind. To her right, a young woman with blonde hair is laughing and looking upwards. In the background, a young man is also laughing and pointing upwards. The scene is set against a bright blue sky with some clouds. The text is overlaid on the lower half of the image.

With our control systems, we
delight attraction visitors while
keeping rides safe and reliable

A niche specialist, Amusement Technical has designed and supplied safe ride control systems to the theme park industry for over ten years. We provide control systems to some of the US's most popular rides for clients, including Hershey Park, Canobie Lake Park, and Kentucky Kingdom.

With safety and reliability at the core, we work closely with Safety Inspectors to obtain authorisation and approval at the earliest possible opportunity. We also frequently work with certification bodies such as TÜV SÜD, ADIPS (UK) plus US state inspectorates.

We design our ride control systems to meet customer specifications and applicable sections of international standards such as:

- [ASTM F2291 – 2017](#): Standard Practice for Design of Amusement Rides and Devices
- [ASTM F1193 – 2017](#): Standard Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices
- [ISO 13814](#): Fairground and Amusement Park Machinery and Structures – Safety
- [ISO 13849-1 – 2015](#): which provides safety requirements and guidance on the principles for the design and integration of safety-related parts of control systems.



Types of control systems for amusement park rides

Whatever your ride, your automation challenges are similar: increase safety, improve reliability, and bolster profitability. Previous control system projects include:



Launch & chain-lift
roller coasters



Tower rides



Pirate boats



Ferris wheels



Track based
dark rides



People movers



Bumper cars



Water rides



As a worldwide leader in theme park ride control systems' design and manufacture, we are fully conversant with all PLCs (Programmable Logic Controller) and both AC and DC drive systems by all the leading manufacturers. These include Schneider Electric, Rockwell Automation (including Allen Bradley), Mitsubishi, Siemens, and Pilz.



Our cost-effective ride-automation solutions include ride safety systems, ride supervisory systems, and sub-system controller interfaces for all types and sizes of theme park rides.

Retrofit

We don't just work on new attractions. If an existing control system needs replacement, refreshing, or fine-tuning, we can provide a retrofit solution to migrate you to the latest technology and protect your investment long term. We regularly provide independent assessments of existing ride control systems and, if required, perform upgrades.

“ We were impressed at how quickly the new system was installed and it has effectively given us a new ride at a fraction of the cost.”

Brooke Farr - Director, Canobie Lake Park

These enhancements can include replacement of obsolete, unsupported equipment, ensuring rides are in line with the latest safety standards, or adding more functionality to the ride control system. Also, we offer preventative maintenance services for ride control systems and access to our on-call engineers on a 24/7 basis to minimise ride down-times.



Solutions

Our bespoke solutions often incorporate one or several of the following:

- Drives and motion control (AC/DC)
- PLC systems (standard/redundant/safety)
- Supervisory systems (SCADA/HMI/MIS)
- Industrial networks
- Control panels (MCCs/Desks)
- Database solutions
- Instrumentation
- Air panels
- System cabinets
- Operator control panels
- Software and documentation
- Operators' manuals
- Panel layout
- Panel schematics
- Field wiring diagrams



Services

From system design through to implementation and commissioning, we provide the skills and experience for your project requirements. Our services include:

Design

Safety is our chief priority. Our systems are designed to comply with the latest safety standards.

Build

We design, configure and build our control panels with a focus on ease of installation and commissioning. We thoroughly test all factory wiring and devices before shipping your system.

Commissioning

The on-site setup of your control system includes thorough testing of devices, PLC programming, and training for park personnel.

Software Programming

Our programming expertise spans from first-generation PLCs to the latest Allen Bradley Studio 5000 and Siemens TIA Portal and Mitsubishi FX software.

Support & Troubleshooting

We support all our ride control solutions. As a matter of course, all our systems are monitored to ensure remote diagnostics, minimal downtime, and swift resolution.

Documentation

We produce a comprehensive operator's manual, as well as complete sets of electrical layout and schematics for all our control systems.

Training

We frequently train maintenance staff and ride operatives to ensure they have the necessary knowledge and skills to manage the ride control systems and deal promptly with any system issues.

Spare Parts

We offer machining production and supply of replacement parts. Also, we have a team of engineers, on hand, to install replacement parts and component assemblies.



Let's talk about your rides

Whether you want to upgrade your current control, add further functionality or need a control system for a new ride then we can help, so get in touch.

t: +44 1253 868678

e: info@amusementtechnical.com



1-2 Brookside
Red Marsh Industrial Estate
Thornton
Lancs FY5 4HR

t: +44 1253 868678
e: info@amusementtechnical.com
amusementtechnical.com