



# **LGB Quality Facts: Why is LGB the best?**

**English  
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# LGB Quality Fact

Compare us to other companies...

We stand behind our warranties.

LGB warranties are backed by our factory service centers, by our inventory of more than six million spare parts, by our 120-year history of service, and most of all, by our family promise to stand behind your LGB trains. You can count on us long after the paper has faded.



Your LGB trains are backed by LGB service around the world, including Ernst Paul Lehmann Patentwerk (above) and LGB of America (below).

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# LGB Quality Fact

Compare us to other companies...

We use environmentally friendly manufacturing processes.

We use environmentally friendly materials, like water-soluble paints, instead of toxic solvents, CFCs and polyethylenes. We don't hide behind third-world standards. Instead, we adhere to the strict environmental standards of the United States and European Community. That costs a bit more, but that's good for you, for our employees and for the planet.



Our "green" production processes help protect our blue world.

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# LGB Quality Fact

Compare us to other companies...

We have a worldwide distribution and service network.

It's a big world, but wherever you go in the world, you'll find LGB. We have representatives in more than 35 countries. You can buy LGB trains at more than 10,000 retailers around the world. And most importantly, you'll find LGB fans anywhere you go in the world.



You'll find LGB everywhere ... even in a donut shop in Cairo!

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# LGB Quality Fact

Compare us to other companies...

We have a clean, modern factory.

We are very proud of our modern factory in Nürnberg, Germany. We train our own employees and provide them with a safe, clean environment where they can build quality trains for you.



Welcome to our factory in Nürnberg, Germany.

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# LGB Quality Fact

Compare us to other companies...

Our products and packaging are recyclable.

Look for the environmental seals on LGB packages. They mean we use plastics, packaging and other materials that can be easily recycled or safely discarded. In our factory, we began recycling excess materials decades before it was required by law. Indeed, we even use a special biodegradable lubricant (Orapi CT300) in LGB gearboxes. It's a little thing, but it's something we can do together to make a better product ... and a better planet.



LGB products wear the "Grüne Punkt" and other environmental seals for supporting recycling campaigns and using recyclable materials.

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# LGB Quality Fact

Compare us to other companies...

Our innovations have earned patents.

Ernst Paul Lehmann was an inventor who believed in patenting his ideas. That's why our company is called "Ernst Paul Lehmann Patentwerk." In fact, we've earned more than 150 patents around the world for our innovative toys and trains. For example, the unique LGB ball-bearing wheelsets are patented. For you, that patent means trains can run smoother with less friction, and that means your LGB trains run better.



With patented innovations, like our ball-bearing wheelsets, your LGB trains run better.

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# LGB Quality Fact

Compare us to other companies...

We are a family-owned and family-operated company.

We are not a division of a toy conglomerate. We are not a storefront that outsources production to the lowest bidder. We are a family. In 1881, our company was founded by Ernst Paul Lehmann, and today, our company is still owned and operated by his family. LGB is part of the legacy we received from him. We owe that legacy to our children ... and to you.



LGB trains are made by the Richter family. Here, Wolfgang and Eberhard Richter proudly display the first LGB Mogul loco.

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# LGB Quality Fact

Compare us to other companies...

We have been a family business for 120 years.

Our family has been making innovative toys since 1881, and we've been making LGB trains for more than 30 years. When you buy an LGB train, you get the benefit of all our experience building high-quality, long-lasting trains. More importantly, you get our family's promise to stand behind your trains for years and years to come.



Members of the family pose with employees at the original Ernst Paul Lehmann Patentwerk factory in Brandenburg in 1931.

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# LGB Quality Fact

Compare us to other companies...

EPL operates test layouts – indoors and outdoors.

We operate four quality-assurance layouts for long-term testing of new LGB trains in extreme operating situations. Weaknesses in designs and materials are discovered before our trains reach you. So you don't lose time and patience troubleshooting our products.



LGB engineer Heinz Koopmann tests a prototype loco on one of the LGB test layouts.

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# LGB Quality Fact

Compare us to other companies...

We provide personal support.

When you buy an LGB train, you get more than a product, you get people who can help you. You can talk directly with our experts at LGB of America (Telephone: 858-535-9387) and Ernst Paul Lehmann Patentwerk (Telephone: 0911 83707 0). You can find LGB information at our website ([www.lgb.com](http://www.lgb.com)). You can read about LGB in our magazines (LGB Depesche and LGB Telegram) and our guide book (Explore the World of LGB). You can visit your local LGB retailer. (There are more than 10,000 worldwide.) Anywhere you go, we're there for you.



LGB guide books, LGB magazines and LGB experts are available to answer your LGB questions.

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# LGB Quality Fact

Compare us to other companies...

We listen to our customers.

Many of the products in the LGB program, like our big Rügen steamer and colorful American streamliners, are the direct result of suggestions from our customers. You can make suggestions directly to LGB of America (6444 Nancy Ridge Drive, San Diego, CA 92121, USA) or Ernst Paul Lehmann Patentwerk (Saganer Strasse 1-5, D-90475 Nürnberg, Germany). Or you can enter suggestions online in our "Idea Box" at [www.lgb.com](http://www.lgb.com).



Many LGB trains, like this big Rügen 0-8-0 steam loco, were suggested by LGB customers.

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# LGB Quality Fact

Compare us to other companies...

We make our own dies.

Many companies subcontract the making of molding dies, giving control of those critical components to others. We make the vast majority of our dies in our own precision machine shop to guarantee high quality and full compatibility. So roofs fit tightly. Couplers fit snugly. So your LGB trains run correctly ... for years and years.



Precision dies, made in our own shop, guarantee tight fitting, great looking models.

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# LGB Quality Fact

Compare us to other companies...

Our products are always improving.

We're always improving our products on the inside, even when they look the same on the outside. For example, our original 1968 "Stainz" loco has been improved over the years with new motors (twice), new gearboxes (three times), new electronics and more, like digital capability, stronger body moldings and more detailed markings. We always want to give you our best ... and the best.



This new LGB "Stainz" looks much like the original LGB Stainz, but it includes hundreds of improvements.

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# LGB Quality Fact

Compare LGB railroading to other hobbies...

LGB trains have educational value.

Children of all ages have fun with trains, but LGB offers you more than entertainment. When kids play with LGB trains — with working features like opening doors and lifting cranes — they learn physical skills. When they build LGB layouts, they learn to be creative. When they operate LGB layouts together, they learn to cooperate. With LGB, they learn a lot ... while having a lot of fun!



Turn off the TV, and turn your kids on to LGB!

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# LGB Quality Fact

Compare LGB railroading to other hobbies...

LGB is a family activity.

Today's busy lifestyles pull families apart. But LGB trains encourage families to play together by offering a variety of activities for a variety of ages and sexes. (In fact, women purchase most LGB starter sets.) A child can simply run the trains. An adult can cultivate plants around the garden railway. The technician can computerize the layout. The artist can create scenes from faraway places. With LGB, everyone can have fun together.



LGB trains encourage families to play together.

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# LGB Quality Fact

Compare LGB railroading to other hobbies...

LGB expands your skills and experiences.

The World of LGB can be as simple as a train around a tree. But it can also take you to new places where you can learn new skills, like gardening around your outdoor railway or carpentry for your shelf layout. Find out how to run your LGB layout with your computer. Explore the history of the real trains modeled by LGB trains. Why be a couch potato, watching TV, when you can experience new things with LGB?



Building a garden railway is a fun way to learn new skills.

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# LGB Quality Fact

Compare LGB railroading to other hobbies...

There are hundreds of LGB clubs and events.

Around the world, there are hundreds of LGB-related clubs. (Look for lists in Garden Railways magazine and other publications.) You can meet other LGB owners at LGB conventions, like the big LGB Model Railroad Club convention held each year in the U.S. (For more information, see the "Links" at [www.lgb.com](http://www.lgb.com).) In the World of LGB, you'll always find friends.



More than 40,000 LGB friends enjoyed the LGB 30th Birthday Party at the LGB factory in Nürnberg, Germany.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are collectible.

Computers and other gadgets quickly lose their value. Yet LGB trains are prized by enthusiasts and collectors alike. In fact, the first LGB starter set is now valued at seven times its original price, according to the Kalmbach "Guide to LGB Trains." When you buy LGB, you get something worth saving and worth handing down from one generation to the next.



Early LGB trains, like this original Stainz loco, are worth handing down from one generation to the next.

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# LGB Quality Fact

Compare LGB to other trains...

We research real trains.

LGB trains are real replicas of real trains. We don't just work from pictures or copy other models. Our experts travel around the world to research the world's great trains, capture their finest details and record their actual sounds. So you get a real model railroad ... not just a toy train.



Wolfgang Richter (right) meets Ward Kimball (left) in his "Chloe" locomotive, which is available as LGB 20130.

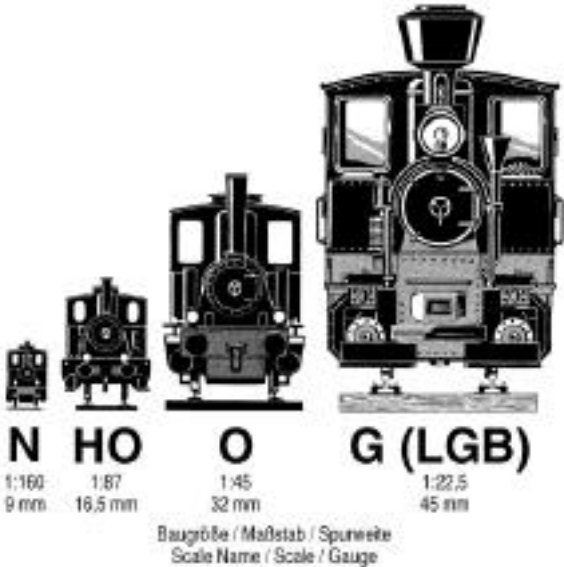
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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are G-scale.

LGB trains are G-scale (1:22.5). That's four times larger than conventional HO-scale (1:87) trains. So LGB trains have more detail and are more rugged than smaller trains. With big wheels and big rails, LGB trains can run outdoors in rough conditions that would derail smaller trains. The result? The bigger the train, the better the fun.



This chart shows the relative size of LGB “G-scale” and other scale trains.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are heavier and sturdier than most trains.

A Z-scale passenger car weighs less than 1 ounce (7 grams). An HO-scale passenger car weighs about 6 ounces (170 grams). But an LGB streamline passenger car weighs more than 4 1/2 pounds (2100 grams). The weight comes from the greater size and stronger materials of "G-scale" LGB trains. The mass means LGB trains can survive accidents that would destroy lesser trains.



This LGB Rhätische Bahn passenger car weighs more than 4 pounds (1830 grams).

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# LGB Quality Fact

Compare LGB to other trains...

The LGB program is the biggest in large scale.

The growing LGB program includes more than 600 quality locos, passenger coaches, freight cars, track sections, power supplies, controls, signals, publications and accessories. In fact, LGB offers you “one-stop shopping” with more G-scale products than all other makers combined. With LGB, you get the selection you want, the compatibility you need and the quality you deserve.



The LGB program offers “one-stop shopping” for all your railroad needs.

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# LGB Quality Fact

Compare LGB to other trains...

Our products and our suppliers have earned international certifications.

It's easy to talk about quality, but it's hard to meet the highest international standards for quality and safety. We do. LGB products have earned the CE, UL, LGA, VDE, GS and "Made in Germany" seals. And we also require our suppliers to meet the toughest standards, like CE, UL and ISO (9000 or 9001 and 9002). With LGB, you get tested quality, not just talk.



LGB products meet the toughest standards, including Europe's CE and America's UL.

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# LGB Quality Fact

Compare LGB to other trains...

LGB sound locos have digital electronics.

Instead of using synthesized sounds, LGB sound locos are engineered with CD-quality, digital recordings of real locos. We go around the world to make these recordings. So when you blow the whistle, you hear a real railroad whistle. In fact, LGB locos offer an amazing range of authentic sounds, from the squeal of the brakes to the call of the conductor. It's the difference between a cheap imitation and an authentic model. It's a difference you can hear.



The sounds for LGB's acclaimed "F7" series diesel locos were recorded from real locos, not synthesized. (Click on the image for a sample sound.)

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# LGB Quality Fact

Compare LGB to other trains...

LGB is the first in innovation.

LGB was the first G-scale program to offer articulated locomotives, the first with electronic sound, the first with automatic pantographs and the first with digital sound. Now, LGB Universal Power brings wireless and computer control of trains and accessories to your layout. With LGB, you're always first.



The LGB 55015 Universal Remote offers innovations like hand-held control of multiple trains, switches and signals ... wired and wireless.

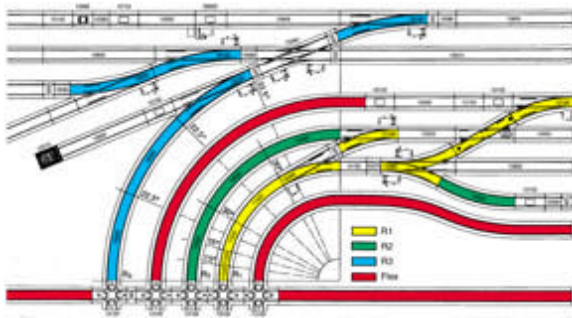
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# LGB Quality Fact

Compare LGB to other trains...

The LGB track program is the largest in G-scale.

The LGB program includes more than 30 different track sections, far more than any other G-scale brand. With LGB, you get four different track radii -- R1, R2, R3 and R5 -- manual switches, electric switches, three-way and double-slip switches, crossings, flex track, insulated sections and straight sections from 41 mm to 1500 mm (1.6 to 59.1 inches). With LGB, you can build the layout of your dreams.



The LGB program has all the track sections you need to build your own railroad empire.

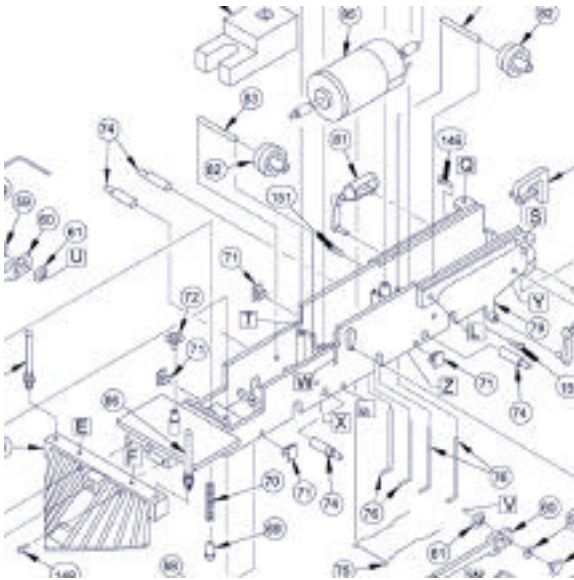
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# LGB Quality Fact

Compare LGB to other trains...

We use advanced design technology.

We employ the latest CAD (Computer Aided Design) and CAM (Computer Aided Modeling) technology to design new LGB trains. Once the designs are proven and approved, we employ advanced milling machines from international leaders, like Krauss-Maffei and Deckel Maho, to build molding dies with aerospace tolerances of 0.001 mm. That precision means consistent quality and reliable operation from your LGB trains.



Precision machine tools are linked to CAD/CAM systems to produce the molds for our models.

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# LGB Quality Fact

Compare LGB to other trains...

We use high-pressure molding machines.

We make LGB parts with high-precision, high-pressure injection molding machines that generate pressures of up to 350 metric tons (770,000 pounds). Why? So we can make parts that are both thick and detailed. So you get trains that are both rugged and realistic.



High-pressure injection molding machines make LGB parts that are both detailed and durable.

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# LGB Quality Fact

Compare LGB to other trains...

We use custom printing machines.

Ever since Gutenberg invented the printing press, Germany has been the world center of printing technology, and we use custom-made, ten-color, automated printing machines to precisely print fine lettering and complex colors on your LGB trains. No one else has these machines, and that's why no other trains are as beautiful.



The custom technology used to paint LGB trains can reproduce fine detail and bold colors.

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# LGB Quality Fact

Compare LGB to other trains...

We use high-technology, high-quality joining techniques.

Few things are more frustrating than things that fall apart. So we build your LGB trains using high-technology joining techniques, like ultrasonic window welding, and high-quality fasteners, like "4016" corrosion-resistant, custom-threaded screws. So while others are fixing their trains, you'll be playing with your LGB trains.



Ultrasonic window welding is just one of the advanced technologies we use to keep your LGB trains together.

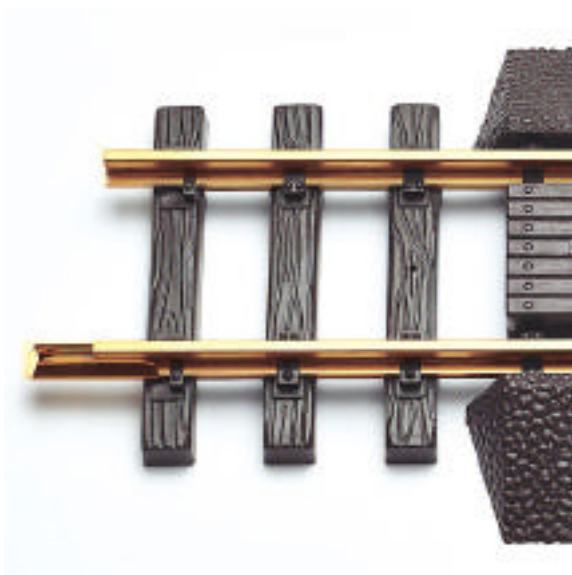
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# LGB Quality Fact

Compare LGB to other trains...

We use virgin brass and plastic.

Some make trains from “regrind” plastic from other products or “remanufactured” scrap brass, but we don’t. We only use virgin “CuZn39PB3” brass along with other DIN-tested metals and plastics. That means you get consistent, reliable quality in every LGB train. That means you get more than what you pay for with LGB.



Solid, “virgin” brass rails in LGB track give you high conductivity and consistent quality.

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# LGB Quality Fact

Compare LGB to other trains...

We use 7-pole, ball-bearing motors.

Many trains have three-pole “open frame” motors, the equivalent of a noisy lawn mower engine. But LGB trains are equipped with seven-pole, ball-bearing motors, the equivalent of a modern, fuel-injected V-8. In fact, our quiet, efficient motors are built to exacting automotive and aerospace standards. In an independent test, LGB locos ran an average of 14,000 km (8,700 miles) — from New York to Los Angeles three times — on a single motor. So your LGB locos will go the distance. Check the other trains. Will their motors outlast the box they came in?



LGB ball-bearing “Bühler” motors give you high performance and long life.

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# LGB Quality Fact

Compare LGB to other trains...

We use electrical pick-up shoes.

Between the wheels of most LGB locos, you'll find some small silver contacts. These unique little devices are called "pickup shoes," and they collect electricity from the track. They're critical to good operation, especially on outdoor layouts, and so we make them from precisely contoured and plated brass. We also equip them with high-performance, heat-treated springs. That way, you spend more time running trains and less time cleaning track.



These small "pickup shoes" are a big reason why LGB trains run so well.

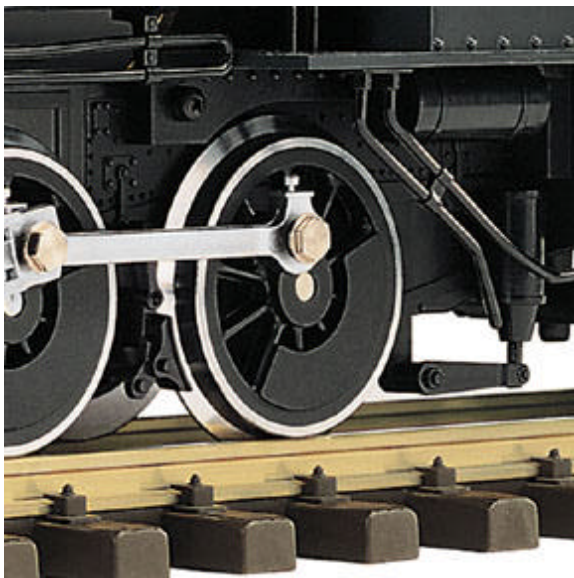
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# LGB Quality Fact

Compare LGB to other trains...

LGB wheels are precisely round.

You can't see if the wheels of a train aren't round, but if they're not, your train will wobble. So we don't just stamp out our wheels as others do. We make our metal wheel rims from low-tension, glowed brass tubing. The interior surfaces are turned precisely with a natural diamond. The entire rim is plated with 15-20 microns of chromium. Then we test the whole wheel/axle assembly to a tolerance of just 0.2 mm (0.008 in). All so your LGB train doesn't wobble.



LGB wheels are engineered to eliminate wobble and improve operation.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are protected from UV damage.

The biggest threat to an outdoor railway isn't rain or snow. It's the sun. The sun's heat and ultraviolet rays can destroy regular plastics. That's why other trains quickly fade when they're used outdoors. But we use engineering plastics, that meet ISO 75 requirements for temperatures from -40°C (-40°F) to 100°C (212°F). And most LGB trains have a coat of UV-resistant paint on top of the plastic. Think of it as a permanent layer of sunscreen for your trains.



The bright colors of most LGB trains are protected by a coat of UV-resistant paint.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains use high-quality plastics.

When accidents happen, sheet metal will bend and cheap plastics will crack. So we use expensive engineering plastics like those used in automobiles and helmets, like Ultraform® and Ultramid®. We even use glass-fiber reinforced polyamide for critical parts you can't even see, like gearboxes. Together, these tough plastics keep small accidents from becoming costly mistakes.



Critical, but hidden, LGB parts, like this gearbox, are made with glass-fiber reinforced composites.

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# LGB Quality Fact

Compare LGB to other trains...

Most LGB body parts are painted and molded in the same color.

LGB body parts are painted and molded in the same color.

It's a small feature, one you'll never notice unless you scratch one of your trains, for example, if a pet knocks the train off the track. We dye the plastics in most LGB trains to match the color of the paint. Why? So if you scratch the paint, the damage is barely noticeable. So when you're shopping, look at other trains. Do the plastics and paints match? Will you notice when they're scratched?



Under this brown paint you'll find brown plastic. Why? So scratches don't show.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are true indoor/outdoor trains.

LGB trains can be used outdoors. Period. Other makers avoid making that simple statement. Some show pictures of their trains outdoors. Some even talk about garden railroading. But do they say their trains can be used outdoors? We do. Use your LGB trains in the garden, in the rain or even in the dead of winter. They can take it.

Note: In response to an e-mail question, another large-scale maker said:  
"You can leave these trains outdoors when not in use, although you may not want to leave them outside during inclement weather. They will get damaged."



Yes, you can run LGB trains outdoors, even in the snow!

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# LGB Quality Fact

Compare LGB to other trains...

We use 24-karat gold for critical electrical contacts and detail parts.

Look at the shiny details on many LGB locos. They look like gold, don't they? That's because they are gold. In fact, they're plated with 24-karat gold. And we use gold in many places you can't see, like on critical electrical contacts. Even though you can't see them, they're important to us ... and they're important to making your LGB trains run as good as they look.



Real gold is used on LGB trains to make them look and run better.

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# LGB Quality Fact

Compare LGB to other trains...

LGB products are tested by safety agencies.

Taking tests may make some people — and some train makers — a bit nervous, but we don't mind. After all, our paints have already passed the tough European CE "EN71" and U.S. "Consumer Product Safety Commission" tests for child safety. Our power supplies have already passed the stringent CE and UL tests for electrical safety. We study hard to pass these tests, so you can be confident LGB trains will pass your tests.



LGB power supplies have passed the stringent Underwriters' Laboratories and CE (European Community) tests for safety.

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# LGB Quality Fact

Compare LGB to other trains...

Our oldest trains are compatible with our newest.

LGB trains and accessories are designed to be “backwards compatible.” For example, all LGB locos and rolling stock obey the “1100 Rule.” No matter how large, all LGB locos and rolling stock can be operated on LGB’s earliest, smallest-radius “1100-series” track. For another example, many LGB “analog” electrical components can be used with our digital “Multi-Train System.” So no matter how old your LGB trains are, you can always feel safe adding new items, knowing they’ll work together.



Even the biggest LGB loco, the Sumpter Valley Mallet, will run on the smallest radius LGB track.

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# LGB Quality Fact

Compare LGB to other trains...

LGB track has passed the “Elephant Test.”

LGB track is so strong that you can walk on it. It's made with solid, virgin brass rails and high-impact, UV resistant ties. In fact, LGB track is strong enough that an elephant can walk on it. So you can use LGB track in the living room or in the yard without worrying about errant feet.



Yes, the elephant did step right on the LGB track, and the track was undamaged.

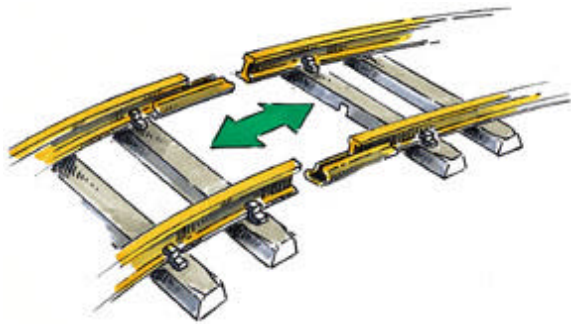
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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are easy to assemble.

LGB trains are engineered to be truly “plug and play.” LGB starter sets include quick-connect electrical cables. You don’t need screwdrivers or wiring tools. LGB track sections use specially engineered rail joiners. You don’t need tools, and you don’t have to worry about losing tiny screws or flimsy pins.



LGB track sections connect easily, without screws or pins.

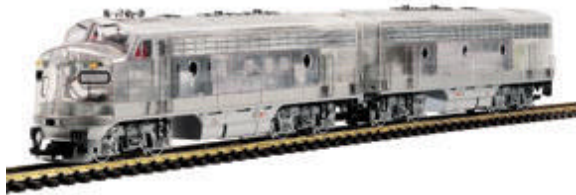
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# LGB Quality Fact

Compare LGB to other trains...

The LGB program is always growing.

Over the past decade the LGB program has more than doubled in size. We're always working to give you all the trains you want. And we're always working to bring you the newest and best model railroad technology, like the digital Multi-Train System. So with LGB, there's always a future.



There are always new LGB products, like these unique "see-thru" locos (22578/22588).

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are made in a clean factory.

For a fine finish, painted products have to be manufactured in a clean environment. That's why we filter the air in our painting rooms and maintain clean rooms throughout our Nürnberg factory. So your LGB trains aren't covered with dust speckles or bumps. That's why your LGB trains look great.



See any dust speckles? We filter the air in the LGB factory so you don't.

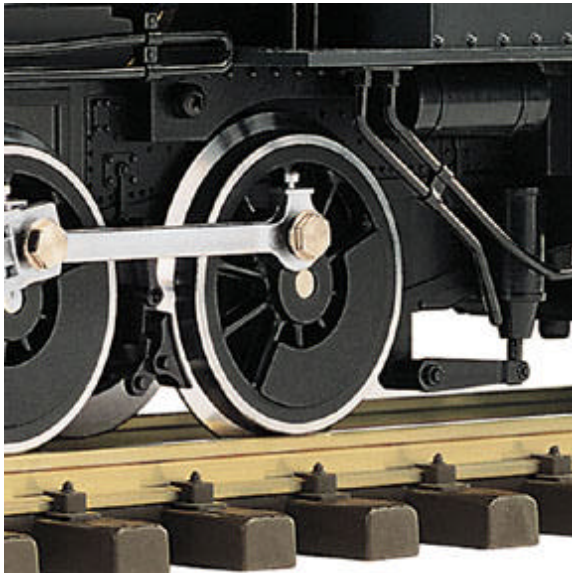
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# LGB Quality Fact

Compare LGB to other trains...

LGB wheels and rails are engineered to work together.

Look at the wheels on LGB locos and rolling stock. The wheels have deep flanges that are specially engineered to help the train stay on the track, even in rough outdoor conditions. Plus, the materials used in the wheels are matched to the virgin brass in the solid rails to reduce friction and wear. So your LGB trains run smoothly ... for years and years.



LGB wheels and rails are engineered for smooth, reliable operation, even outdoors.

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# LGB Quality Fact

Compare LGB to other trains...

LGB layouts have been running for more than 30 years.

LGB trains were introduced in 1968, and soon after, LGB fans began building LGB layouts indoors and outdoors. Those pioneering layouts are a proving ground for LGB products, and we're proud to say that many of our original trains, track sections and accessories are still in use on those layouts. So your LGB trains will run for years and years on your layout.

Note: A list of public LGB layouts can be found in the LGB catalog.



You can visit public LGB layouts that have been in operation for decades.

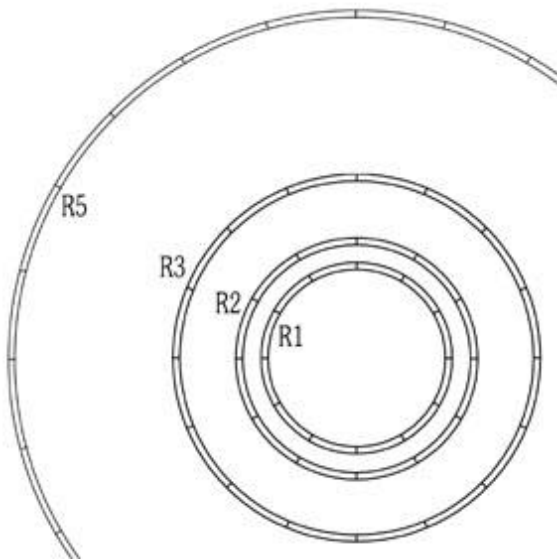
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# LGB Quality Fact

Compare LGB to other trains...

LGB trains fit in small spaces.

Even though LGB trains are big, you can still run them indoors in small spaces like bedrooms and dens. All LGB trains are engineered to run on very tight "R1" curves, so you can fit a full circle of LGB track in a space less than 1.3 meters (51 inches) wide. Of course, the LGB program also includes wider radius curves (R2, R3 and the new R5) to suit your every need.



The LGB program includes tight-radius "R1" curves (center) so you can build compact, indoor layouts.

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# LGB Quality Fact

Compare LGB to other trains...

LGB offers both analog and digital power.

If you want to power your layout with traditional analog power, the LGB Universal Power program offers you the power supplies and controls you need, including the acclaimed 10 amp JUMBO power pack. If you want advanced features, LGB Universal Power also includes the LGB "Multi-Train System" of digital train, switch, signal and accessory controls, including the 55060 MTS Computer Interface.



Critical LGB Universal Power components, like the 50110/50111 "High-Performance" AC Transformer can be used on both analog and digital LGB layouts.

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# LGB Quality Fact

Compare LGB to other trains...

LGB details are small, but tough.

Even the detail parts on LGB trains are engineered for outdoor operation. Handrails are made of flexible plastics to survive minor impacts. Locomotive wheels are chrome-plated to resist corrosion. Bells and whistles are gold-plated to stay shiny. So the whole train looks good, for years and years.



Ladders and other details on LGB trains are made of flexible materials to resist damage in accidents.

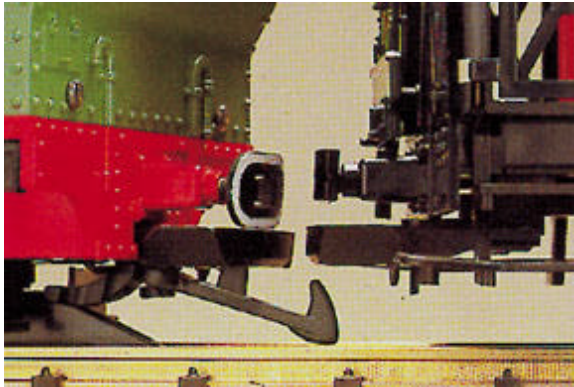
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# LGB Quality Fact

Compare LGB to other trains...

LGB couplers are patented.

Conventional model railroad couplers aren't made for operation on outdoor layouts. So we invented our own "hook and loop" coupler to securely hold LGB trains together, even on uneven track sections. LGB couplers are so unique they're patented. Plus, you can couple and uncouple them easily by hand or remotely using our mechanical and electrical uncouplers.



LGB "hook and loop" couplers are engineered for easy, reliable operation, even on uneven track sections.

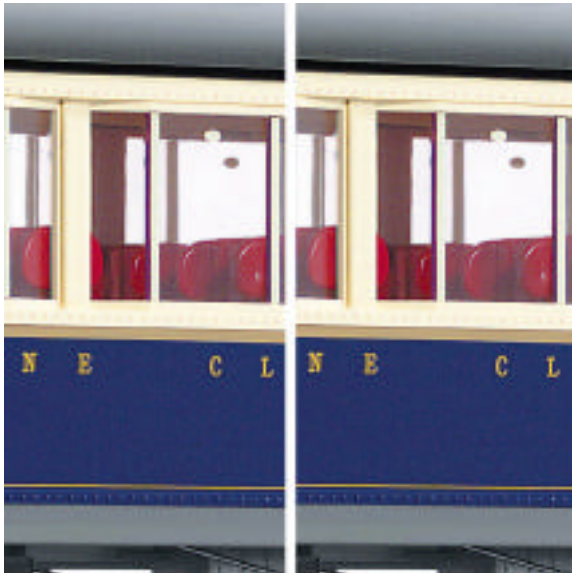
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# LGB Quality Fact

Compare LGB to other trains...

LGB matches new and old colors.

Whenever we start a new production run of an existing model, we make sure the colors of the new production run match the colors of the old production run. We match the colors of the plastic. We match the colors of the paint. We match the colors of the markings. So you can buy two LGB trains, years apart, and know they'll still match.



LGB trains are made to match ... even when they're manufactured years apart.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains are easy to customize.

Because they're much bigger than most model trains, LGB trains are easy to modify. You can repaint and reletter LGB trains for your own railroad. You can weather LGB trains using simple chalks and charcoals. You can add custom details from a wide variety of G-scale detail suppliers. With "The Big Train," you can have a lot of fun!



You can "scratchbuild" and "kitbash" LGB models to create anything you can imagine, like this wonderful Sam Muncy model.

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# LGB Quality Fact

Compare LGB to other trains...

LGB trains include clear, complete instructions.

When you get a new LGB train, you also get complete instructions written in English by an English-speaking LGB expert. You don't have to translate a foreign language or read a clumsy translation. Clear diagrams show major components and controls. Product lists tell you which LGB products are made for use with your train. Parts lists simplify maintenance. And historical information on real trains make your LGB model even more enjoyable!



LGB instructions make it easy to use and enjoy your LGB trains.

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# LGB Quality Fact

Compare LGB to other trains...

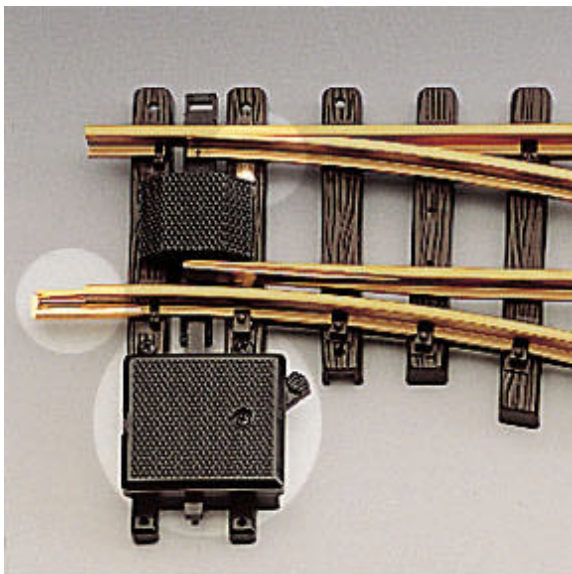
LGB switches are better engineered than USA Train switches.

USA Trains switches (turnouts) may look like LGB switches, but LGB switches are engineered to work better and last longer ... indoors and outdoors. For example:

1. LGB switches are designed for electrical reliability with welded connections and conductive sliders. USAT switches have loose, screw connections and no conductive sliders. The supplemental electrical contacts supplied with USAT switches are inadequate for G-scale current loads.

2. LGB switches have precision manual and electric drives that operate smoothly and reliably. USAT switches have rough-working manual drives. No electric controls are currently available.

3. LGB switches, like all LGB track sections, feature screw-less, high-conductivity rail joiners. These easy-to-assemble joiners automatically adjust for rail expansion with changing temperatures. USAT joiners require small screws which, if tightened for adequate conductivity, do not allow necessary adjustment.



LGB switches have exclusive, engineered features, like conductive sliders (top), screw-less rail joiners (left) and precision drives (bottom).

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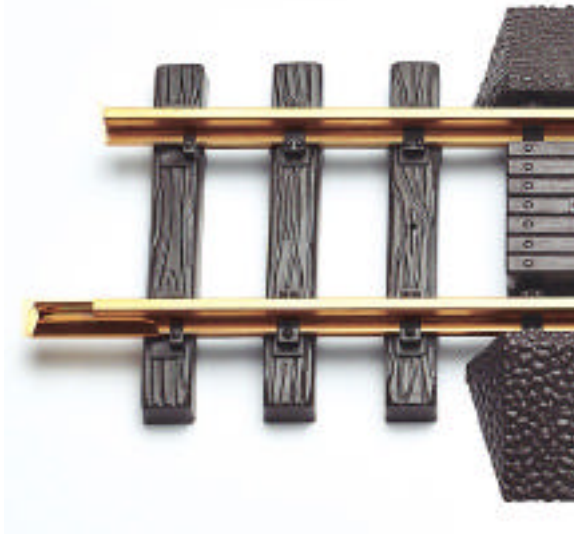
# LGB Quality Fact

Compare LGB to other trains...

LGB track ties are made for long-term, outdoor use.

LGB track tie strips are a blend of two materials chosen for long-term use in indoor and outdoor applications. The first material is an engineering polyethylene, again not a polycarbonate. This material is designed for use in a very broad temperature range, from approximately -180 degrees F to +248 degrees F. So LGB tie strips can survive everything from winter in the high Alps to summer in the Sacramento Valley.

This high-grade polyethylene also has an extremely low water absorption rate and superior chemical resistance. All of these factors are critical to long-term survival in the outdoor environment. However, this material does not, by itself, have superior UV resistance. So Lehmann blends it with an additive to give it excellent UV resistance. The blend also gives LGB ties their brown color, and since the color is part of the material, scratches and nicks in the plastic are naturally concealed.



LGB ties can take it!

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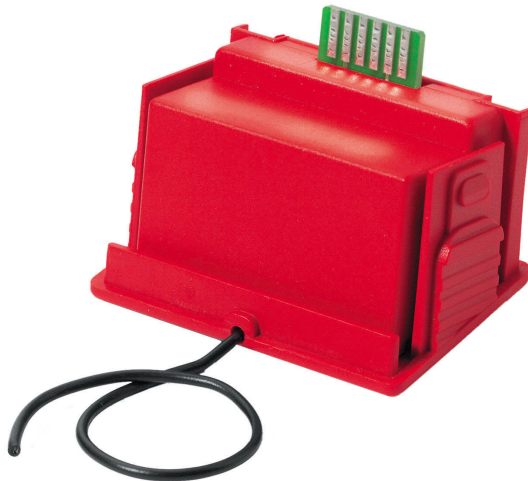
# LGB Quality Fact

Compare LGB to other trains...

LGB has wireless train controls for digital and analog layouts.

Enjoy the ultimate freedom of wireless remote control ... with the plug-and-play simplicity you expect from LGB! Just unplug the cable from your 55015 Universal Remote or 55016 Loco Remote. Then plug in the compact 55050 Wireless Transmitter (55051 in North America). It fits right inside the remote along with batteries (not included). That's all!

On Multi-Train System layouts, you can use up to eight transmitter-equipped remotes with one 55055 Wireless Receiver. (On analog layouts, you can use up to eight receivers with a matching number of 51070 throttles to control up to eight track blocks.) So you and your friends can all enjoy wireless freedom together!



The Wireless Transmitter just plugs into your 55015 or 55016 remote.

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# LGB Quality Fact

Compare LGB to other trains...

LGB MTS: The Digital Solution

It's a familiar problem: You begin with one loco. When you turn the throttle, the loco runs. But once you add a second loco, you need extra wiring just to keep one loco parked while the other runs. If you want to control both locos independently, it gets really complex with lots of wires, lots of controls and lots of hassles.

But there is a better solution. It's the LGB Multi-Train System, an advanced digital system that lets you control multiple trains on the same track at the same time without complex wiring.

All you need is a 55105 Multi-Train System Starter Pack and some 55020 MTS Decoders. Once the decoders are installed in the locos, you and your friend can operate your trains completely independently. Just like the engineers of real locomotives, you and your friend can accelerate, stop, turn on the lights and sounds anywhere on your layout ... even with other locos around!



Control the sound functions of your locomotives anywhere on your layout with the LGB Multi-Train System. (Click on the image for a sample sound.)

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# LGB Quality Fact

Compare LGB to other trains...

## LGB Wins Independent Endurance Test: Runs Up To 32 Times Longer

An LGB train far outlasted competing trains from Aristo-Craft, Bachmann, Märklin and USA Trains in endurance testing conducted by an independent international testing firm. The LGB train ran five times longer than the average competitor and 32 times longer than the Bachmann test subject.

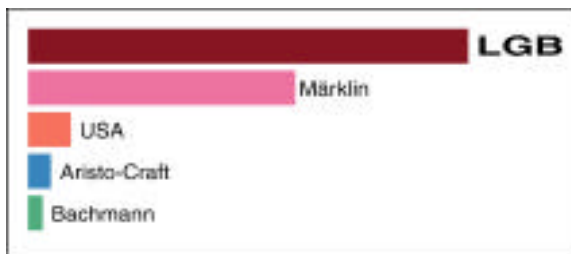
The scientific test employed comparable U.S.-specification starter sets purchased by a third-party from independent retailers. The retailers were not aware that the sets would be tested, and the manufacturers were not aware of which sets would be tested. The locos in each starter set were run until failure in accelerated testing using the track included in the set. Power analyzers were used to constantly monitor the power being drawn by the motors. The results of the test were:

Brand	Model	% of LGB
Aristo-Craft	0-4-0 Passenger Set (28101)	4.9
Bachmann	Silverton Flyer Set (90025)	3.0
Märklin	MAXI Work Train Set (54404)	60.6
LGB	Passenger Set (72302)	100.0
USA Trains	Mighty Moe Set (72100)	9.5
Average of non-LGB locos		19.5

The testing firm reported additional failures, including:

- The smoke generator on the Bachmann loco did not function on the sample supplied for testing. Also, the wiring in the Bachmann sample caused a direct short circuit.
- The power pack included with the Märklin MAXI set failed multiple times, apparently due to a faulty thermal cut-off switch.

"We engineer and build our trains to last," said Johannes Richter of Ernst Paul Lehmann Patentwerk, the maker of LGB trains. "It is not the least expensive way to make trains, but this test shows it is the best way for our customers."



LGB trains are built to last. This chart shows the relative operating time of starter set locos in endurance testing conducted by an independent international testing firm.

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# LGB Quality Fact

Compare LGB to other trains...

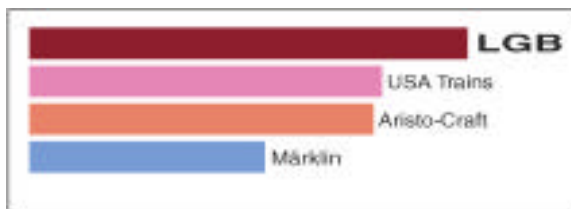
LGB Motor Outpowers Competitors: Up to 86% More Powerful

The motor from an LGB starter set loco outpowered motors from Aristo, Märklin and USA Trains starter set locos in testing conducted by an independent international testing firm. The LGB motor produced 41% more power than the average competitor and 86% more power than one competing brand.

The scientific test employed comparable U.S.-specification starter sets purchased by a third-party from independent retailers. The retailers were not aware that the sets would be tested, and the manufacturers were not aware of which sets would be tested. The motor power ratings were measured with each motor operating under normal load and powered by the power pack included in the starter set. The results of the test were:

Brand	Model	HP in Watts
Aristo-Craft	0-4-0 Passenger Set (28101)	12.0
Märklin	MAXI Work Train Set (54404)	8.2
LGB	Passenger Set (72302)	15.3
USA Trains	Mighty Moe Set (72100)	12.3
Average of non-LGB locos		10.8

“We use powerful motors so our trains run better and last longer,” said Johannes Richter of Ernst Paul Lehmann Patentwerk, the maker of LGB trains. “Yes, they are expensive, but they make our trains far more valuable.”



LGB locos have powerful motors. This chart shows the relative horsepower of starter set locos in testing conducted by an independent international testing firm.

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# LGB Quality Fact

Compare LGB to other trains...

## LGB Passes Paint Safety Tests: Meets Tough European and U.S. Standards

In testing conducted by an independent international testing firm, paints used on an LGB train were found to have heavy metal levels far below European and U.S. standards.

"Safety is always our top concern," said Johannes Richter of Ernst Paul Lehmann Patentwerk, the maker of LGB trains. "It costs more to make sure our paints are safe, but we always want to protect our customer and their families."

The tests included measurements of nine different heavy metals -- including chromium, lead and mercury -- in sample coatings from an LGB train set. In all measurements, the levels were far below the European Community and United States limits (Europe: EN71 Part 3: 1995, U.S.:16 CFR Part 1303). Indeed, in all measurements, the levels were below the reportable limits.

The results for the LGB samples were:

European Community (EN71 Part 3: 1995 )		Sample 1	Sample 2
Element	Description Limit ppm		
Antimony	60	<10	<10
Arsenic	25	<10	<10
Barium	1000	<70	<70
Cadmium	75	<10	<10
Chromium	60	<10	<10
Lead	90	<20	<20
Mercury	60	<10	<10
Selenium	500	<10	<10
United States (16 CFR Part 1303)			
Element	Limit mg/kg		
Lead	600	<50	<50



LGB paints are tested for safety. In independent testing, LGB samples tested below reportable limits for lead and also eight other heavy metals.

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# LGB Quality Fact

Compare LGB to other trains...

We choose the right materials for the right applications.

Our goal is to produce rugged, long-lasting trains for the harsh outdoor environment. To do that, we use many different plastics. For example, we use glass-fiber reinforced polyamide, not polycarbonate, for many LGB gearboxes. Why? Because "GRP" has excellent dimensional stability, which helps keep the moving parts correctly aligned.

We also use ASA, an engineering styrene, instead of polycarbonate in some applications. Why? ASA is less susceptible to tension-induced cracking. It has better resistance to chemicals and better resistance to moisture. All are key issues in the garden railroading environment. Plus, ASA is better suited to detailing processes, like metal plating, that make LGB trains beautiful ... indoors and out.



Critical LGB parts, like this gearbox, are made with glass-fiber reinforced composites.

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