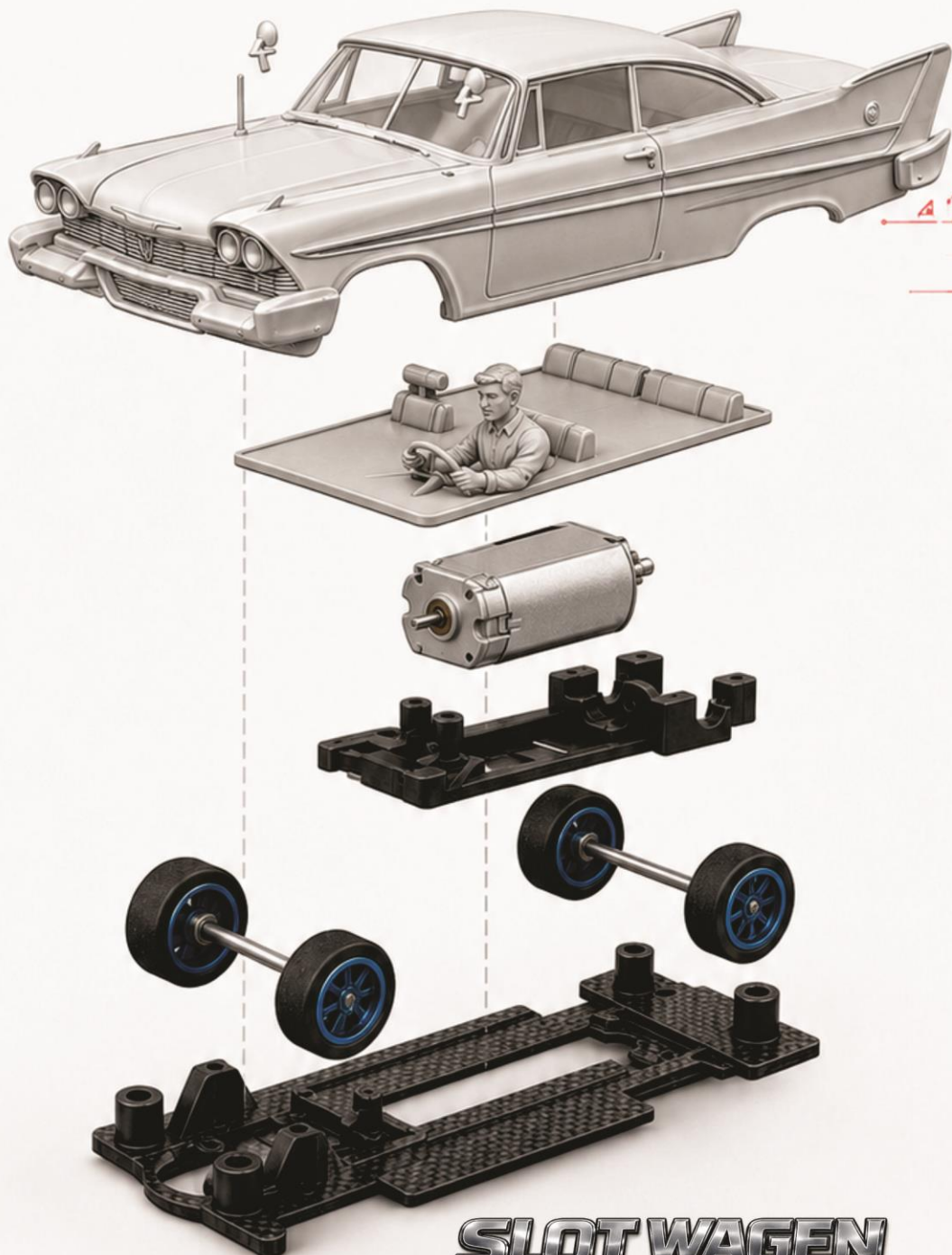


SLOTWAGEN BUILDER SERIES

1:32 WHITE SCRATCH-BUILD KITS

CLEANING | PREPARATION | PAINTING | CHASSIS INSTALLATION



SLOT WAGEN

BUILD IT. FINISH IT. RACE IT.

01 | SLOTWAGEN BUILDER SERIES

The White Kit: Where the Builder Becomes the Manufacturer

A complete introduction to 1:32 resin scratch-build slot car kits - from the first wash to the first clean lap.

BUILD IT. FINISH IT. RACE IT.

A 1:32 white scratch-build kit is not a ready-to-run slot car and it is not merely an unpainted body. It is a carefully designed starting point for a personal slot car: a scale resin body and detail parts combined with a purpose-built chassis system, motor pod and running gear. The builder cleans, corrects, paints, details, assembles and tunes the model. That hands-on process is the heart of the hobby.

Slotwagen white kits are intended for two kinds of enthusiast at once. The display builder can pursue crisp paint, fine decals and authentic detail; the racer can concentrate on weight, wheel clearance, axle alignment and dependable mechanical setup. A well-built car can satisfy both aims. The key is to treat appearance and engineering as one continuous project rather than two unrelated jobs.

THE ESSENTIAL IDEA A white kit rewards patience. Dry-fit before gluing, use light coats instead of heavy coats, and tighten screws only enough to work. Nearly every avoidable problem comes from rushing one of those three decisions.

What makes a white kit different?

1. **You make the finish.** The body arrives as a blank canvas rather than a factory-painted shell.
2. **You control the mechanics.** Axle height, gearing, pod movement, guide action and tire preparation are set by the builder.
3. **You can repair and refine it.** Minor print marks, casting gates and small surface imperfections can be corrected before primer.
4. **You create a unique car.** Colour, race number, livery, interior and final stance are all personal choices.

This article follows the correct working order: understand the parts, clean the resin, prepare the surfaces, prime, paint, apply decals and clear coat, install the carbon-fibre-infused PETG chassis and motor pod, complete the electrical and running gear, then test and tune. The exact contents of individual models may vary, so the kit-specific parts sheet and manufacturer instructions always take priority.

02 | SLOTWAGEN BUILDER SERIES

Know the Kit Before You Touch the Paint

A ten-minute inspection at the beginning can prevent hours of correction after primer and final assembly.

Lay every component on a clean, light-coloured cloth and compare it with the supplied parts list. Do not cut, sand or glue anything yet. Resin components may include a body shell, separate grille, mirrors, light inserts, spoiler, interior or driver pod and other model-specific details. The chassis package may include a black carbon-fibre-infused PETG chassis, a Slot.it-compatible motor pod, mounting hardware and selected running gear. Exact equipment depends on whether the product is a Body Kit, ECO Kit, PRO Kit or another package configuration.

Area	Typical components	First inspection
Body	Resin shell and detail parts	Check symmetry, edges, mounting points and wheel openings.
Glazing	Vacuum-formed or clear plastic window insert	Keep protective film on; check orientation without forcing.
Interior	Driver pod, driver and dashboard details	Confirm that it clears the motor, wires and body posts.
Chassis	Carbon-fibre-infused PETG chassis and motor pod	Check that it is flat and that all slots and screw holes are clear.
Running gear	Motor, axles, gears, bushings, wheels, tires, guide and braids	Confirm sizes, quantities and free movement.
Hardware	Body screws, nuts, grub screws and spacers	Separate by size in a small labelled tray.

Tools and consumables to prepare

5. Soft toothbrush, mild dishwashing liquid, two clean containers and lint-free cloths.
6. Flush cutters, craft knife, needle files and sanding sticks or wet-and-dry paper in several fine grades.
7. Eye protection, nitrile gloves and dust protection appropriate to the resin, primer and paint safety data sheets.
8. Resin-compatible filler, cyanoacrylate (superglue), masking tape, primer, hobby paint and compatible clear coat.
9. Small Phillips screwdriver, 0.9 mm hex driver for Staff wheels where supplied, tweezers, ruler and setup block.
10. Soldering iron and solder only if electrical leads are not pre-fitted or plug-and-play.

TOOLS ARE NOT INCLUDED Pinion pullers, screwdrivers, hex drivers, sanding materials, paint and adhesives are workshop items. Check your requirements and items needed before starting.

Handle the resin body by its stronger areas, not by thin window pillars, mirrors or spoiler mounts. Store clear parts separately so sanding dust cannot scratch them. Photograph the parts layout before packing anything away; it becomes a useful reference later when several similar screws or brackets are on the bench.

03 | SLOTWAGEN BUILDER SERIES

Cleaning the Resin Body Correctly

Paint can only bond to the surface that is actually there - not to fingerprints, sanding residue or mould-release contamination.

The cleaning stage is simple, but it is one of the most important parts of the build. A supplied body should already be fully cured; the builder is cleaning the finished part for paint, not performing the solvent wash used during resin printing. Start with the gentlest effective method. Aggressive solvents can soften, craze, swell or permanently mark some resins, and they can damage clear parts.

The recommended soap-and-water method

11. **Prepare the bath.** Fill a clean container with lukewarm water and add a small amount of mild dishwashing liquid. Avoid very hot water.
12. **Wash gently.** Hold the body over the container and use a soft toothbrush to work the solution into panel lines, vents, wheel arches and the underside.
13. **Rinse completely.** Use fresh lukewarm water until no soap remains. Trapped detergent can interfere with primer just as easily as grease.
14. **Inspect the water break.** On a clean surface, rinse water should sheet rather than form isolated greasy patches. Repeat the wash if necessary.
15. **Dry without touching.** Shake off excess water, blot only the strong edges with a lint-free cloth, and allow the body to air-dry for at least several hours - preferably overnight.

SAFETY DISTINCTION If a part is sticky, smells strongly of uncured resin, leaks from a hollow cavity or appears incompletely cured, stop. Wear gloves, isolate the part, Take photos and contact the supplier. Do not treat it as an ordinary paint-preparation problem.

What not to do

16. **Do not soak the body in acetone or lacquer thinner.** These can attack resin quickly and may destroy fine detail.
17. **Do not scrub with a hard wire or abrasive brush.** It rounds edges and produces deep scratches that primer will not hide.
18. **Do not wash clear windows with strong solvent.** Use mild soapy water only unless the glazing manufacturer specifies otherwise.
19. **Do not handle the clean shell with bare, oily fingers.** Use clean nitrile gloves or hold the body on a temporary paint handle.

If paint has previously beaded or lifted from a test area, surface contamination may remain. Consult the kit supplier before moving to a stronger cleaner, then test any proposed product on the inside of the shell. Material manufacturers consistently recommend checking their safety data sheets and testing paint compatibility on a small area before committing to the full model.

04 | SLOTWAGEN BUILDER SERIES

Surface Preparation: Fit First, Sand Second

The goal is not to sand away the character of the body. It is to make every surface intentional before primer reveals it.

Start with a dry fit. Place the chassis under the shell, position the interior and glazing, and temporarily locate major separate parts. Check the wheelbase, wheel-arch clearance, body mounting holes, chassis outline and the space needed by the motor pod and wires. Correcting a tight window insert or a rubbing wheel arch is safer before paint than after it.

Remove production marks with control

20. **Trim gates and supports.** Use flush cutters to remove the bulk, leaving a small proud edge. Pare the remainder with a sharp blade pointed away from the model.
21. **Level seams and print marks.** Use a fine file or sanding stick. Support thin panels from behind and work in short strokes.
22. **Refine progressively.** Move from roughly 600-800 grit for controlled correction to 1000-1500 grit for a primer-ready finish. Wet-sand where the material and abrasive allow.
23. **Preserve lines and edges.** Fold abrasive paper into a narrow strip for panel lines and use a firm sanding block on broad flat surfaces.
24. **Fill only what needs filling.** Apply resin-compatible filler sparingly, allow it to cure fully, sand level and inspect under strong side lighting.

DUST CONTROL Sanding resin creates fine dust. Work with ventilation, wear eye protection and use respiratory protection specified by the resin or filler manufacturer. Wet-sanding helps control dust, but it does not replace the product safety instructions.

Prepare the mounting system now

Test the body nuts and screws before paint. If the design uses loose nuts inserted into body recesses, open a tight recess very gradually with a fine file. The nut must sit straight, flush or slightly recessed - never protruding below the mounting surface. A tiny amount of cyanoacrylate may secure it, but keep adhesive away from the thread. Fit a lightly oiled spare screw while positioning the nut only if your adhesive method and kit instructions permit; remove it once the glue is stable.

Clean the shell again after all sanding and filling. Use the same mild soap method, rinse thoroughly and allow the body to dry. Blow dust from panel lines with clean, oil-free air at low pressure or use a soft clean brush. At this point the body should feel uniformly smooth, mounting components should align without force, and nothing should depend on paint to fill a defect.

25. View the body from front, rear and directly above to check symmetry.
26. Run a fingertip beside, not across, fragile details to feel for steps or roughness.
27. Mark remaining defects with small pieces of low-tack tape, not with a greasy pencil on the paint surface.

05 | SLOTWAGEN BUILDER SERIES

Primer: The Honest Coat

Primer is an adhesion layer, a colour foundation and an inspection tool. It is not a substitute for preparation.

Choose a primer specifically described as compatible with resin, plastic models or automotive plastic substrates, and confirm that it is compatible with the paint system that will follow. Acrylic hobby paints generally work well over a suitable fully cured primer, but brands and chemistries differ. Always test the complete sequence - primer, colour, decals and clear - on a spare resin part or hidden area.

A dependable priming sequence

- 28. **Mount the body.** Use a temporary handle fixed from inside so the exterior can be sprayed without fingerprints. Keep mounting holes accessible.
- 29. **Control the environment.** Work in a ventilated spray area within the temperature and humidity range stated on the product label. Wear the specified protective equipment.
- 30. **Apply a mist coat.** The first pass should be light and slightly translucent. Its job is to establish grip, not full colour.
- 31. **Build coverage gradually.** Add one or two light coats after the stated flash time. Move past the model before releasing the spray to avoid heavy spots.
- 32. **Let it cure.** Dry-to-touch is not the same as ready-to-sand. Follow the primer manufacturer's recoat and cure times.

Primer result	Likely cause	Corrective action
Beading or fisheyes	Oil, release agent, silicone or incompatible surface	Stop, allow to cure, remove the failed area, clean and test again.
Rough dry texture	Spray too far away, excessive air pressure or hot airflow	Cure, smooth gently, then apply a controlled light coat.
Runs or filled detail	Coat too heavy or passes too slow	Let it cure fully; level carefully rather than wiping wet primer.
Cracks or wrinkling	Incompatible layers or recoat outside the safe window	Allow extended cure; strip only with a resin-safe method.

INSPECTION LIGHT Hold the primed shell under a bright lamp at a low angle. Shadows expose pinholes, ridges and sanding flats far more clearly than overhead room light.

Correct only the defects that remain. Spot-fill pinholes, sand the repair, feather the surrounding primer and re-prime lightly. Do not repeatedly flood the entire shell. A sound final primer coat should be thin, even and fully cured, with sharp panel lines and no glossy contaminated patches. Before colour, remove dry dust with a clean soft brush or approved tack cloth used very lightly.

06 | SLOTWAGEN BUILDER SERIES

Painting the Body: Thin Coats, Clean Edges, Patience

A professional-looking finish comes from controlling each layer, not from trying to achieve gloss in one heavy pass.

Decide the paint sequence before mixing colour. For a single-colour car, the plan may be straightforward: base colour, detail colours, optional gloss for decals, decals and final clear. A multi-colour livery needs a masking order that places the easiest and lightest colours first while avoiding unnecessary tape over delicate paint. Make a quick sketch and record the products used so repairs can be matched later.

Colour-coat workflow

33. **Mix and test.** Stir paint thoroughly, thin only with the recommended thinner and spray a test card. Record the ratio and airbrush settings.
34. **Start with a tack coat.** Apply a fine first coat that leaves some primer visible. Allow the stated flash time.
35. **Build the colour.** Use several light, overlapping passes. Change viewing angle so door shuts, lower sills and recesses receive even coverage.
36. **Inspect between coats.** Remove dust only after the layer is safe to touch. Never chase a wet speck with a fingertip or brush.
37. **Stop when coverage is complete.** Extra paint softens detail, increases weight and extends curing time without improving colour.

Masking without lifting paint

Allow the base colour to cure fully. Reduce the tack of hobby masking tape by touching it once to a clean surface, then burnish only the paint edge with a rounded tool. Spray away from the tape edge or seal the edge with a very light coat of the underlying colour before applying the second colour. Remove tape slowly, back over itself, while the top layer is stable but not excessively hard.

COMPATIBILITY RULE Use one proven paint system where possible. If combining acrylic, lacquer, enamel or two-part products, follow the manufacturers' compatibility and recoat guidance. A hot clear coat can attack a beautiful colour coat in seconds.

Small details and realistic depth

38. **Grilles and vents:** Use dark paint in recesses, then restore raised edges with a controlled dry-brush or metallic detail.
39. **Lights:** Paint the reflector or backing first, then install the clear lens after final clear unless the kit instructs otherwise.
40. **Panel lines:** Use a fine wash only on a fully cured, compatible surface and remove excess gently.
41. **Interior:** Choose matte or satin tones to contrast with the body gloss; keep paint away from bonding and clearance surfaces.

After the final colour coat, place the body in a clean covered drying box that still allows air circulation. Give it the full cure time required by the paint manufacturer. Patience here protects the finish from fingerprints, masking marks and reactions beneath the clear coat.

07 | SLOTWAGEN BUILDER SERIES

Decals, Clear Coat, Windows and Interior

The final visual layers should sharpen the model while preserving the crisp surface already created.

Waterslide decals perform best on a smooth gloss or satin-gloss surface. A matte surface contains microscopic texture that traps air beneath the carrier film and creates silvering. If the colour coat is matte, apply a compatible gloss layer and allow it to cure before beginning the decals.

Applying waterslide decals

42. **Plan the order.** Begin with large stripes and major sponsor graphics, then add numbers and small markings. Check left and right versions before soaking.
43. **Cut closely.** Use clean scissors or a sharp blade, leaving enough carrier film to handle the decal safely.
44. **Wet and release.** Follow the decal maker's soak time. Slide the image from the backing rather than lifting it unsupported.
45. **Position carefully.** Use a wet brush to move the decal. A setting solution such as Tamiya Mark Fit may help it conform; use only as directed and test compatibility.
46. **Remove trapped water.** Roll a damp cotton bud from the centre outward without dragging the image. Leave the decal untouched until completely dry.

DECAL WARNING Setting solutions can soften a decal so it conforms. Wrinkles may appear temporarily. Do not poke, brush or reposition a softened decal; allow it to settle and dry. Let decals dry completely at least over night or 24 hours.

Sealing the finish

When every decal is dry, remove water marks with a barely damp lint-free cloth and inspect the edges. Apply the first clear coat as a very light mist to reduce the risk of solvent attacking the decal. Build subsequent coats only within the clear manufacturer's recoat window in stages. Tamiya X-22 acrylic clear is one common hobby option when used in a compatible system, but no clear coat is universal. Allow 24-48 hours or the full specified cure time before assembly.

Glazing and interior assembly

47. **Windows:** Trim vacuum-formed glazing gradually. Test the fit often and keep the protective film in place as long as possible.
48. **Adhesive:** Use a clear-parts adhesive, canopy glue or another non-fogging product. We recommend UV resin glue to set the windows. *Super Glue/ Cyanoacrylate vapour can frost clear plastic.*
49. **Interior pod:** Paint and assemble it separately. Confirm the driver, dashboard and seat do not foul the body, motor or wires.
50. **Mirrors and spoilers:** Install vulnerable exterior parts near the end. Strength comes from accurate mating surfaces, not a large blob of glue.

Perform one last dry fit with the finished interior and glazing installed. Confirm that the chassis can enter and leave the shell without scraping paint. If a hidden edge needs relief, remove the smallest amount of material and seal the exposed area before continuing.

08 | SLOTWAGEN BUILDER SERIES

Installing the PETG Carbon Infused Chassis and Motor Pod

Mechanical accuracy begins with a flat chassis, free pod movement and an axle line that is square to the car.

The Slotwagen carbon-fibre-infused PETG Carbon Infused chassis is designed as a robust, tuneable platform, often using a Slot.it-compatible motor pod. Treat the chassis as a precision component. Do not heat-bend it, enlarge holes aggressively or force screws into misaligned threads. First remove any loose printing whiskers with a sharp blade or fine file, then check the chassis on a flat setup surface.

1. Fit and inspect the motor pod

Place the correct short-can or long-can pod into the chassis as specified for the kit. Insert the pod screws by hand and confirm that each starts squarely. The pod should sit flat without rocking. For a race setup, screws may be adjusted later to allow controlled movement, but begin with the pod centred and secure enough for accurate assembly.

2. Install motor, bushings, axle and gearing

51. **Seat the motor.** Press it into the pod evenly, following the pod's clip or screw arrangement. Do not pull on the electrical terminals.
52. **Fit the bushings.** Seat each brass bushing fully and equally. A bushing trapped at an angle creates drag and gear noise.
53. **Insert the axle.** Slide the 2.38 mm axle through the bushings without forcing it. It should rotate freely before gears or wheels are added.
54. **Align pinion and crown gear.** Set full tooth engagement without binding. Tighten the gear grub screw onto the axle flat if provided.
55. **Add wheels and tires.** Fit Staff wheels and urethane tires where supplied. Set equal track width and confirm the tire does not rub the body or chassis.

GEAR MESH TEST Turn the rear axle slowly with one finger. A smooth, even sound through a full revolution is the target. Tight spots usually indicate misalignment, a bent axle, a poorly seated bushing or excessive gear engagement.

3. Set the front axle

Install the front axle and wheels, using the model-specific height brackets, bushings or grub-screw adjustment. If a bracket needs filing, remove material in very small, equal amounts. The axle must remain square and the wheels must rotate independently without touching the body. Use the front axle grub screw where provided to control vertical movement while still allowing the guide to carry the car correctly.

At the end of this page, the rolling chassis should sit flat, roll freely and show no visible wheel wobble. Do not install it permanently in the painted body until the electrical system and guide have been checked.

09 | SLOTWAGEN BUILDER SERIES

Guide, Wiring, Body Mounting and First Setup

A beautiful build becomes a dependable slot car only when the guide, braids, wiring and body clearance work together.

Guide and braid installation

Smooth any printing residue around the guide opening with a fine file. Insert the guide keel so it turns freely from side to side and returns without catching. Fit the braids flat and even, with enough spring to maintain rail contact but not so much that the guide lifts the front wheels excessively. If the guide uses grub screws, tighten them only enough to secure the wires or braids as designed.

Electrical connections

- 56. **Route the leads.** Keep both wires clear of the axle, crown gear, motor shaft, tires and pod movement.
- 57. **Connect consistently.** Follow the kit's polarity or colour coding. If soldering is required, use the minimum heat and protect the motor terminals.
- 58. **Provide gentle slack.** The guide must rotate fully without pulling a wire tight, but loose loops must not enter moving parts.
- 59. **Bench test briefly.** With the chassis safely supported, apply low track voltage for a moment and confirm correct direction and smooth running.

BEFORE POWER Never test with loose tools, screws or wires near the gears. Keep fingers, hair and clothing away from rotating wheels and axles.

Mounting the finished body

Lower the body over the chassis without spreading the side panels more than necessary. Check that the interior clears the motor, pod screws and wiring. Start each body screw by hand. Tighten only until the shell is located; over-tightening can strip a nut, distort the resin or lock the body rigidly onto the chassis. Racers may later introduce a small amount of controlled body movement if the mounting system is designed for it.

Check	Pass condition	If it fails
Wheel clearance	All four wheels turn through suspension/body movement without rubbing.	Re-centre the chassis or relieve only the hidden interference point.
Guide action	Guide reaches both steering extremes and sits fully in the slot.	Re-route wires; check guide post and chassis opening.
Ride height	Chassis and gears clear the track; body stance is level.	Recheck tire size, axle height and body mounts.
Electrical direction	Car moves forward for the intended track polarity.	Swap motor lead polarity according to the wiring plan.

First track test

Begin at low speed on a clean, powered-down track while placing the car, then apply power normally. Run several gentle laps. Listen for gear noise, watch for guide lift and check whether the body or tires rub only under cornering load. Stop immediately if the motor, wires or axle become unusually hot. Make one adjustment at a time and record the result.

10 | SLOTWAGEN BUILDER SERIES

Final Tuning, Troubleshooting and Long-Term Care

The finished car should be easy to inspect, easy to maintain and predictable on the track.

The final builder's checklist

Stage	Ready when...
Body and finish	Paint is fully cured; decals are sealed; no adhesive fogging or trapped dust is visible.
Mounting	Nuts sit flush; screws start straight; body is secure without distortion.
Rolling gear	Axles are straight; bushings are seated; wheels run true; tires do not rub.
Transmission	Pinion and crown gear engage smoothly with no tight point through a full revolution.
Guide and wiring	Guide turns freely; braids sit evenly; wires clear every moving component.
Track setup	Ride height is safe, polarity is correct and low-speed testing is smooth.

Common problems and calm solutions

- 60. **Paint lifts with masking tape:** Stop, allow the area to cure, feather the edge and investigate cleaning, primer compatibility and cure time before repainting.
- 61. **The rear axle feels tight:** Loosen the gear and wheels, test the bare axle, then inspect bushing seating and axle straightness.
- 62. **The car chatters or sounds harsh:** Check gear mesh, tire roundness, wheel grub screws and whether the motor is fully seated.
- 63. **The guide deslots at low speed:** Check braid height, guide depth, front ride height, lead-wire tension and chassis flatness.
- 64. **The body sits crooked:** Confirm the chassis is centred, nuts are square, wires are not trapped and the interior is not pushing on the motor.

After racing, remove rubber and dust with a soft brush, inspect the braids and check that every grub screw remains secure. Clean urethane tires with the method approved for the tire and track. Use only a tiny amount of suitable lubricant on bearings or bushings, keeping it away from tires, braids, paint and the motor commutator. Store the car dry, out of direct sun and supported so the tires are not permanently compressed.

THE BUILDER'S STANDARD A successful white kit is not the one completed fastest. It is the one whose paint remains crisp, whose chassis can be serviced, and whose behaviour on track can be explained and adjusted.

Slotwagen - Let's Build. Let's Race.