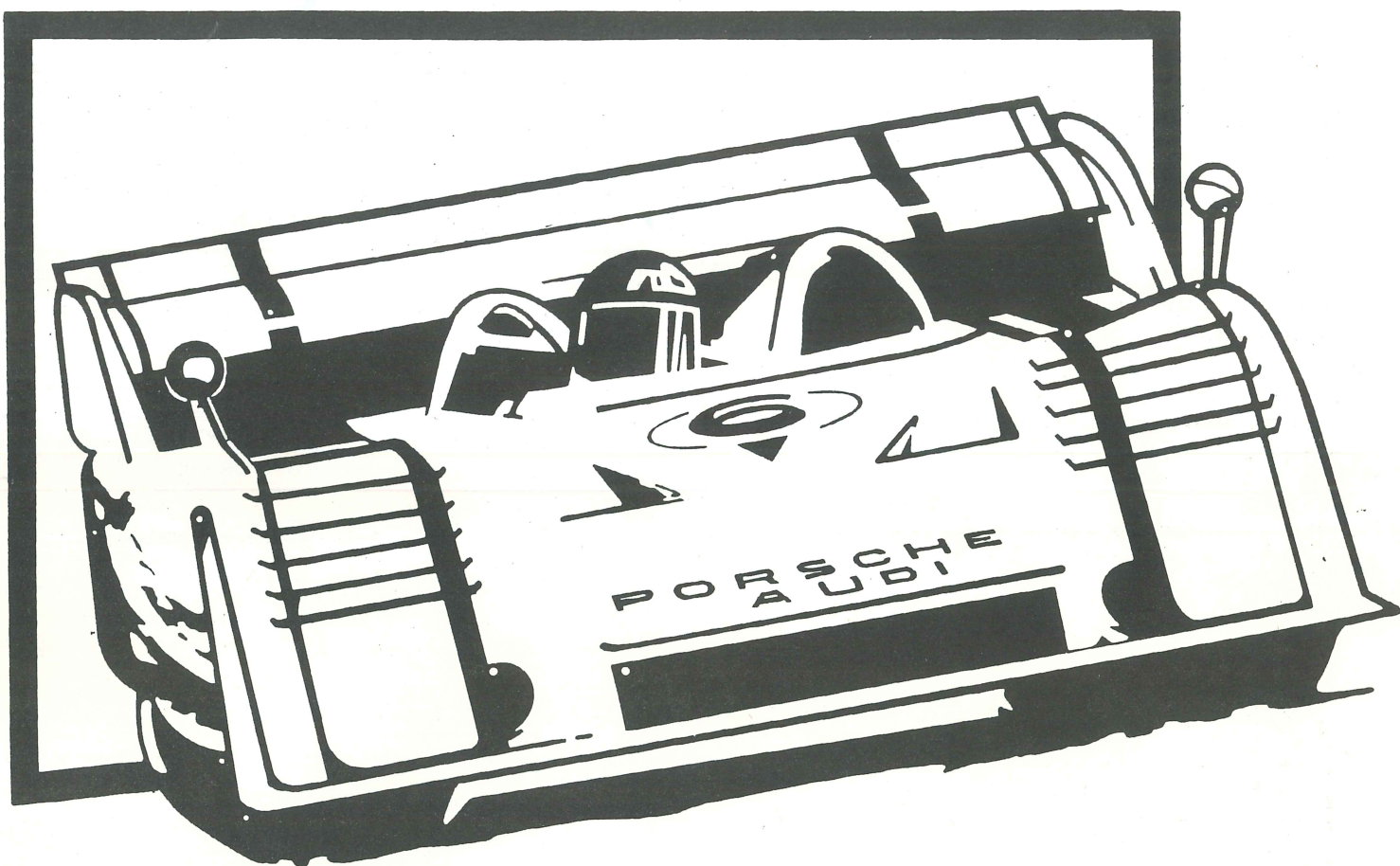

parma

INTERNATIONAL INC.



PRO PANTHER 12

ASSEMBLY INSTRUCTIONS

1/12th PRO-PANTHER INSTRUCTIONS

Congratulations on buying one of the most competitive 1/12th on-road race cars available today. The Pro-Panther offers up-to-date suspension theory in an easy to assemble and maintain kit.

TOOLS NEEDED FOR ASSEMBLY

#2 Phillips screwdriver
Small blade screwdriver
Needlenose pliers
X-acto knife
Metal file
Soldering iron and solder
Wire cutters

NOTE: Due to the wide variety of servos being used, the Pro-Panther DOES NOT come with a servo saver. We recommend the Parma #11810 Universal Servo Saver. Also the Pro-Panther requires the use of an electronic speed control.

Before beginning assembly, read through the entire instruction sheet to familiarize yourself with the car and parts.

555	4/40 set screws for pinion gear.
558	4/40 allen wrench.
618	1/8" nylon spacers, motors and axles.
725*	Parma Little Squirt oiler.
7900*	Silicone lube, for rotating parts.
7906*	Handle for Parma allen bits.
8005	4/40 aluminum locknuts.
8007*	Panther aluminum flat head screws 6/32" x 1/2".
8008*	Suspension Panther throttle plate standoff.
8009*	Suspension Panther chassis grommets.
8010	6-32 nylon locknuts.
8012	Adjustable lightweight body mounts.
8019	3MM metric motor screws.
8030	1/8" washers, front axle spacers.
8033*	Asst. nylon washers for rear axle spacers.
8038	"Super" gripper hood pins.
8039	Quick clip hood pins. Pre-bent/easy removal.
8040	E clip front wheel retainers.
8047	3" tie wraps.
8055	Servo tape 1" x 3 feet, super sticky.
13401	Break free CLP oil. Cleans, lubes and preserves.
13801	12 V. soldering iron.
18601*	Rocker ball socket.
18602*	Rocker ball socket.
18630*	Dampener plate washer.
18631*	4/40" x 1/2" countersunk allen bolts.
18632*	6/32" x 1/2" cap allen bolts.
18633*	5/40" x 1/4" allen bolts.
18634*	5/40" x 7/8" allen bolts.
18635*	6/32" x 1/2" countsunk allen bolts.

*Item not shown.

Machined Steel Pinions

6000-A*	9T.	6000-D*	12T.	6000-G	15T.
6000-B*	10T.	6000-E*	13T.	6000-H*	16T.
6000-C	11T.	6000-F*	14T.		

Aluminum Pinions

6018-A	9T.	6018-D*	12T.	6018-F*	14T.
6018-B	10T.	6018-E*	13T.	6018-G*	15T.
6018-C*	11T.				

6044*	44 Tooth spur gear for Parma-Associated diff.
6046*	46 Tooth spur gear for Parma-Associated diff.
6048*	48 Tooth spur gear for Parma-Associated diff.
6062*	48 Tooth Kimbrough spur gear.
6063*	50 Tooth Kimbrough spur gear.
6064	52 Tooth Kimbrough spur gear.
6066*	54 Tooth Kimbrough spur gear.
6120	Graphite axle for Parma-Associated diff.
6310*	1/8" precision differential balls.
6312	1/4" precision thrust bearing assembly.
6313	Parma-Associated Differential rebuild kit.
6315	10-32 nylon lock nut.
6316*	8-32 inch locknut for graphite differential.
12530	Pinion storage and display case.

*Item not shown.

front end, rear end & chassis parts

FRONT END PARTS

6502	Castor wedges 1°, 2°, and 3°.
6511	Euro Panther front end cross bar with standoffs.
6512	Euro Panther graphite front end crossbar by D & D.
6513	Euro Panther king pins and mounts.
6516	Euro Panther spindles.
6521	Euro Panther spindle springs.
6585	Tie rod kit with ball ends and 2-56 threaded rod.
6611*	Pro Panther cross bar with standoffs.
6685*	Pro Panther steering linkage kit.

REAR END PARTS

7025	Euro Panther aluminum wing tubes.
7035	Rear axle oilites 1/4" x 3/8".
7037	Rear axle bearings 1/4" x 3/8".
7067	Nylon hubs.
7070	Panther wheel hubs for Parma Associated diff.
7100	Aluminum rear pod for Euro Panther.
7110	Cross plate for Euro Panther Aluminum rear pod.
7115	Front Standoff Euro Panther Aluminum rear pod.
7120	Rear Standoff and dampener Aluminum rear pod.
7121	Euro Panther 360° rear dampener, improves performance on carpet or asphalt tracks.

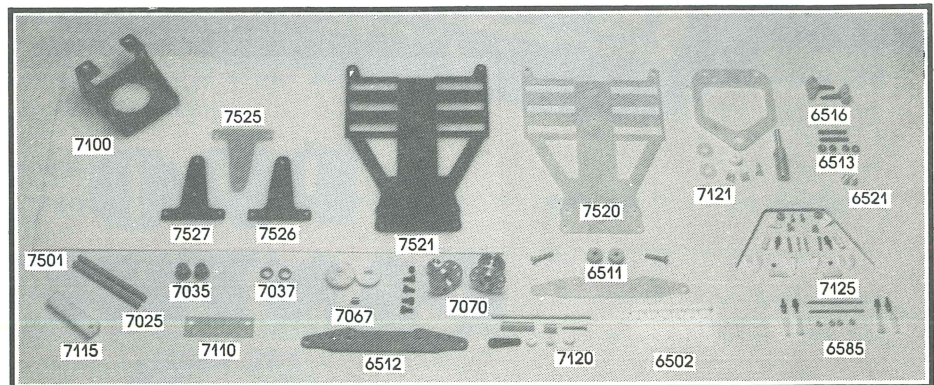
7125	Adjustable rear anti-roll bar for Euro Panther.
7320*	Pro Panther dampener plate.
7321*	Pro Panther dampener support post.
7322*	Pro Panther dampener post.
18019*	Rocker Ball Set

CHASSIS PARTS

7501	Fiberglass chassis material 1/16" x 8" x 15".
7502*	Fiberglass chassis material 3/32" x 8" x 15".
7503*	Fiberglass chassis material 1/8" x 8" x 15".

7520	Euro Panther chassis plate.
7521	Graphite chassis for Euro Panther.
7522*	D & D graphite chassis for Associate RC12 I.S.
7525	Flex plate .047 for aluminum rear pod.
7526	D & D graphite flex plate .020 for rear pod.
7527	D & D graphite flex plate .032 for rear pod.
7720*	Pro Panther chassis plate.
7725*	Pro Panther flex plate.
7726*	Pro Panther flex plate spacer.

*Item not shown.



FRONT END ASSEMBLY (BAG #1)

Start by taking the king pins out of the bag. These must be polished using 600 grit sandpaper followed by fine crocus cloth or steel wool. Lightly chuck the king pins in a drill or dremel on the threaded end and polish the entire length of the pins. Check for smooth operation of the steering blocks on the pins. Polish until this is achieved. Thread the polished king pins into the king pin mounts. Make certain the pins bottom-out in the mount. Insert the assembled king pins and mounts into the outside holes of the crossbar.

NOTE: The front of the crossbar is the straight edge.

The 5-40 hex nuts can now be installed and the mount pulled in the rest of the way by tightening the nuts. Use a small square to make sure the king pins are at 90° on two planes. If not, shim the appropriate side with tin foil or thin shim stock. Seal the nut using Loc-tite or paint. File off the excess threads sticking through the nuts.

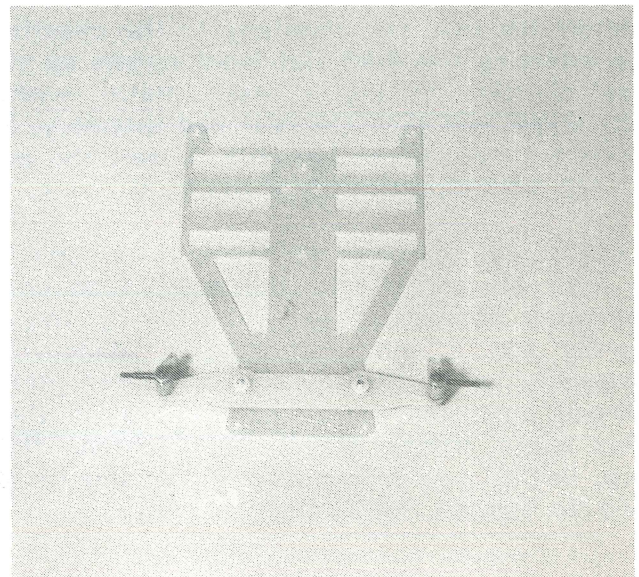
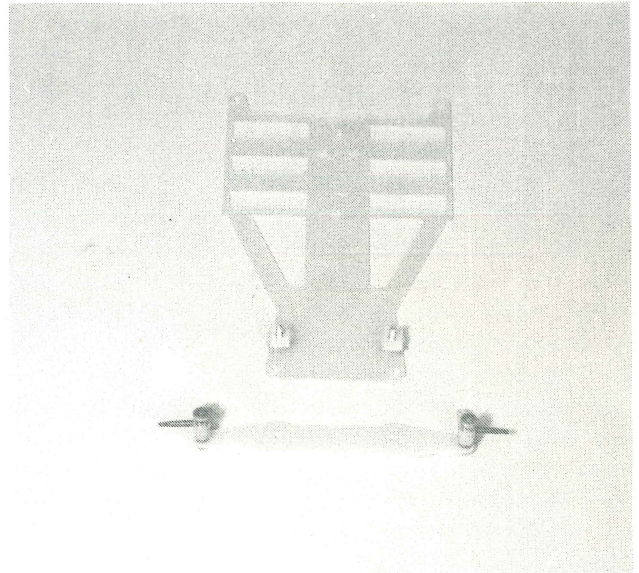
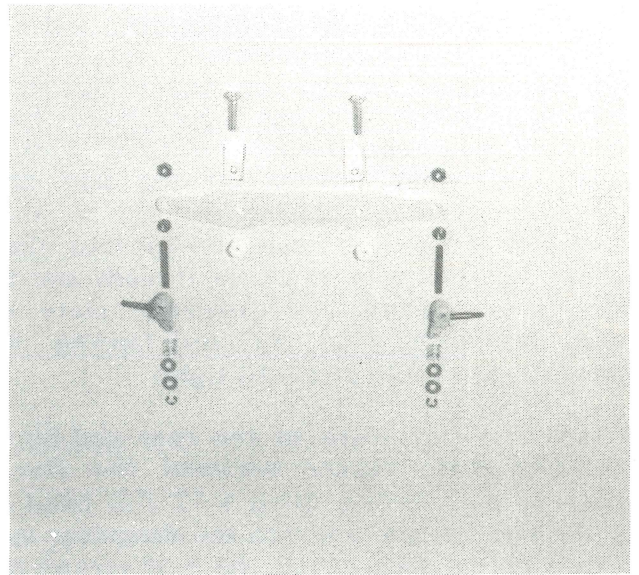
Next, install the steering blocks checking for smooth operation. Put a light coating of grease or oil on the king pins. Now install the springs, two 1/8" flat washers per side, and the E-clips.

Take the nylon stand-offs and remove all the molding flash. Attach these to the chassis using the 6-32 x 3/4" flat head Phillips screws. Cut a 2° caster wedge from the wedges supplied. Then cut each 2° wedge in the center of the two holes. This will give you two sets of 2° wedges; 1 thick and 1 thin. Place the thin ones on top of the stand-offs with the angle facing the rear of the car. Next, place the crossbar on the stand-offs and secure with 6-32 nylon locknuts.

- | | |
|---------|--|
| 614 | Ball bearings 1/8" for Panther front wheels. |
| 623 | Oilite bushing 1/8". |
| 665* | Parma braid and tire conditioner. |
| 730-A | "Light" tire traction. |
| 730-B* | "Medium" tire traction. |
| 3571 | Ball bearings, Associate and Parma front wheels. |
| 5501 | Trac Tite. |
| 5503-A* | Parma T-rubber donuts, yellow-medium. |
| 5503-B* | Parma T-rubber donuts, green-firm. |
| 5504-B | Parma T-rubber donuts, yellow-medium. |
| 5504-C | Parma T-rubber donuts, green-firm. |
| 5509* | Rear pre-trued donuts, 2 3/16" diameter medium. |

*Item not shown.

- | | |
|-------|--|
| 5512* | Front pre-trued donuts, 1 15/16" diameter medium/firm. |
| 5530 | Front wheels, Panther, yellow. |
| 5536 | Front lightweight black wheels. |
| 5554 | Front tires and yellow wheels mtd. Fits all mfs. m/firm. |
| 5556* | Front tires and yellow wheels mtd. Fits all mfs. firm. |
| 5561 | Front green T-rubber mtd. on orange wheels. |
| 5569* | Medium and hard combo front tires and wheels. |
| 5578 | Rear yellow wheels, Panther. |
| 5581 | Rear lightweight wheels for Associated and Delta hubs. |
| 5586 | Rear tires and wheels mounted, yellow. |
| 5588* | Rear yellow T-rubber mtd. on black wheels. |
| 5589 | Rear green T-rubber mtd. on black wheels. |



Next, assemble differential per instruction enclosed in bag.

Then take differential assembly and install two (1/8" wide) white nylon spacers up against aluminum collar on differential axle.

Next, install the 1/4" x 3/8" flanged bearings into the rear pod. Then slip axle through on opposite side. Put remaining nylon spacers, then other wheel hub. Then tighten set screw leaving a slight amount of end play in axle assembly.

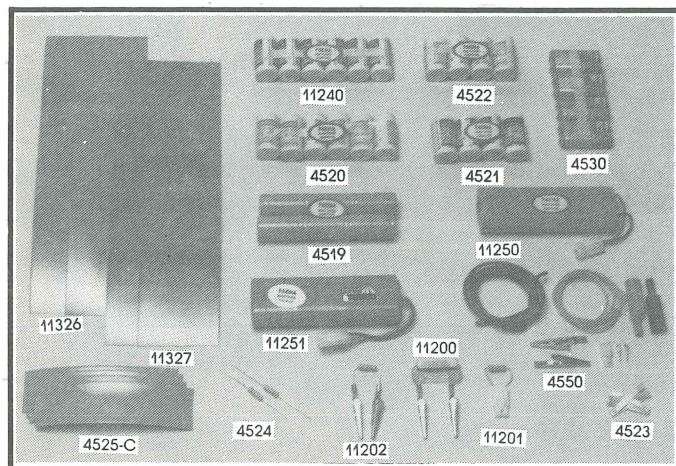
FINAL ASSEMBLY

Place a 1/8" x 5/16" flanged ball bearing on each side of the two front wheels.

Install the front tires on the front spindles and secure with 4-40 aluminum locknuts. Make sure the wheels rotate freely.

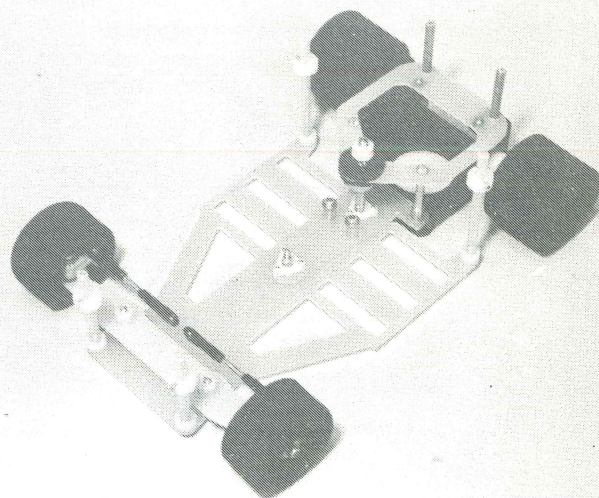
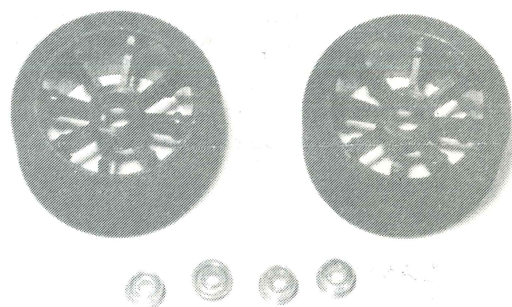
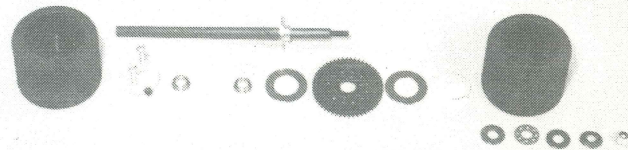
Next, install the nylon body mounts using the instructions included with the mount kit.

batteries, chargers & accessories



4519	Computer matched Sanyos, two 3 cell sticks	11251	6 cell turbo Panasonic battery pack.
4520	6 individual matched Sanyo cells.	11255*	Same battery pack as #11250 with charge cord.
4521	4 individual SCR matched Sanyo.	11325*	2 1/2" wide shrink wrap for 6 cell pack.
4522	4 individual matched Sanyo cells.	11326	3" wide shrink wrap for 6 cell hump.
4523	Silver plated battery jumper braid.	11327	3 1/2" wide shrink wrap for 6 cell hump.
4524	Battery pack discharging resistors.		
4525-A*	Shrink wrap for 3 cell stick, white.		
4525-C	Shrink wrap for 3 cell stick, blue.		
4530	"AA" Nicad transmitter and receiver batteries.		
4550	Panther 6 cell Sanyo or GE charge cord.		
11200	Discharge resistor with bulb.		
11201	Battery discharge resistor with Tamiya male plug.		
11202	Battery discharge resistor with Alligator clips.		
11240	6 individual SCR matched Sanyo.		
11250	6 cell matched Sanyo battery pack.		

*Item not shown.



TRIMMING AND PAINTING YOUR LEXAN BODY

TRIMMING:

Popular ways to trim lexan bodies include using small rounded manicure scissors, curved tin snips, or a sharp knife. If using the scissors, trim around all the lower trim lines on the body and the wheel wells. Using the hobby knife, scribe along trim lines and wheel wells. Then bend the plastic back away from the scribed line. The plastic will cleanly "crack" along the scribed line and peel off. Be extra careful using the hobby knife method; one slip could ruin your lexan body and give yourself a nasty cut!

PAINTING:

For paint we recommend Parma paints which are specifically formulated for use on lexan plastic. Be sure to use Parma thinner or the paint will not adhere properly. We recommend using any available air brush for the best results.

1. If using Parma paint, no preparation is needed to the body before painting. If using lacquer or other paints, the body should be washed out with warm water and a mild detergent before masking.
2. Lexan bodies should be painted on the inside. Stripes can be masked off using standard masking tape or Parma "liquid mask" (#701). Complex striping and layouts are easily achieved using this "brush-on" mask. Simply follow the instructions on the label.
3. Thin your paint until you get a spray that covers well. Too thick and you'll have "spiderwebs." Too thin and the paint will "run."
4. If the main color of the body is a light color, such as white or yellow, spray several thin coats to prevent the darker colors of your stripes from "bleeding" through the main color.
5. After the main color has dried, you can remove the masking tape where you want to paint next. Spray the darkest color first. This way it will not "wash-out" a lighter colored stripe. Using white or silver paint to back-up the stripes adds brilliance to the color.
6. After all the painting is finished, wipe the overspray off the outside of the body using lighter fluid and a soft rag.

HANDLING AND PERFORMANCE TIPS

CASTER:

Team Parma has found that 2° caster is an excellent starting point. By using the extra wedges supplied, caster can be varied from 0° up to 5°.

Front ride height can also be adjusted using thicker or thinner wedges. As a general rule, the closer a car gets to 0° caster, the more sensitive or "twitchy" the car is to drive. 2° is a good balance of stability and precision. Only experimentation will determine the best setting for your particular driving style.

REAR DAMPNER ADJUSTMENT:

We recommend for smooth tracks, you use no lubrication or light oil on the dampner washers.

As a general rule, the stiffer the rear end flex, the more steering your car will have. On a rough track, you should use a thick silicone lube which will help dampen the car over the bumps. This will also reduce the amount of front end bite.

TWEAK:

Chassis tweak is the single most important factor to having a proper handling car. When a car is tweaked, it will turn tighter or spin out more one way than the other.

The way to determine if your car's tweak is correct is to set your car on an absolutely flat surface with new tires of an equal size. Now lift the front of chassis off the table surface with the tip of an x-acto knife in the center of chassis leading edge. Then spin each front wheel and lower the chassis. Both front wheels should hit the ground and stop spinning at the same time. If not, adjust the tweak adjuster nuts located on flex plate until this is perfect.