

# WOODWORKER'S JOURNAL

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## Classic Project



### In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

## Two Toy Dragsters



These rubber-band powered dragsters make a relaxing weekend project. And they're toys that will be used and abused, not neglected on the shelf. Our thanks to Paul Meisel of Meisel Hardware Specialties for providing the dragster designs.

Start by preparing stock for the cars. For the engine cowling (A) and trunk (C) you'll need pine that's 1 1/2 in. thick. If you don't have stock that hefty, glue up two 3/4 in. thick pieces. Cut two pieces of 3/4 in. thick pine to 2 1/4 in. wide and 10 in. long, and face-glue them. That will be enough for the two cars.

Next, use the table saw to resaw some pine to 1/2 in. thick for the frame parts. The stock here only needs to be 2 in. wide, so nearly any table saw can do the resaw job. First cut a section of 3/4 in. pine to 2 1/4 in. wide and 3 ft. long. Then set the table saw for a 3/8 in. wide cut and resaw the workpiece. When resawing, you should make sure that the stock stays tight against the rip fence. Also, use a pushstick to keep your fingers away from the blade. Then remove the saw cuts with a hand plane or jointer, and achieve the 1/2 in. thickness and 2 in. width. You should have plenty of 1/2 in. thick stock for the two cars.

Also cut a strip of pine that's 1/4 in. thick by 1/4 in. wide by about 18 in. long. This strip is for the roof pillars (S and T) for the Deuce Coupe. You don't need nearly that much stock, but it's not safe to work with thin strips shorter than about 18 in. You'll also need to have three sizes of dowel (1/4 in., 1/4 in., and 3/8 in.), and the wheels and other parts. If you order the parts package listed in

the Bill of Materials, all the miscellaneous parts will be on hand. That package includes the front axle pegs (G), wheels (J and K), rear wheel covers (M), headlights (N), radiator caps (O), rubber traction bands (P) for the wheels, motor drive bands (Q) and steering wheels (W). Also included with the parts package is enough dowel stock for the rear axles (H), rear axle pins (I) and rubber band dowels (L), as well as the steering wheel and headlight dowels.

With the stock ready, move on to cutting the parts to the sizes and length shown in the Bill of Materials. You'll cut all the common parts for the two cars at the same setting, but place the parts in two groups, one for each car.

Next, glue together the fenders (B) and trunks (C), using white or yellow glue. After the glue dries, use a hand saw to shape the 1 in. radius on the rear of the sections. If you don't have a hand saw, you can also do the shaping with a rasp and file.

Now, cut the angles on the rear axle supports (F) and on the front of the roof (R) and the windshield (U). These parts are small, so work with hand tools. A dovetail saw will work best for the axle supports; a block plane for the roof and windshield.

Then stack the four rails (D) together and bore the five 1/4 in. diameter holes for the rubber band dowels (L). Next,

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The Woodworker's Journal



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With the stock ready, move on to cutting the parts to the sizes and length shown in the Bill of Materials. You'll cut all the common parts for the two cars at the same setting, but place the parts in two groups, one for each car.

Next, glue together the fenders (B) and trunks (C), using white or yellow glue. After the glue dries, use a band saw to shape the 1 in. radius on the rear of the sections. If you don't have a band saw, you can also do the shaping with a rasp and file.

Now, cut the angles on the rear axle supports (F) and on the front of the roof (R) and the windshield (U). These parts are small, so work with hand tools. A dovetail saw will work best for the axle supports; a block plane for the roof and windshield.

Then stack the four rails (D) together and bore the five 1/4 in. diameter holes for the rubber band dowels (L). Next,

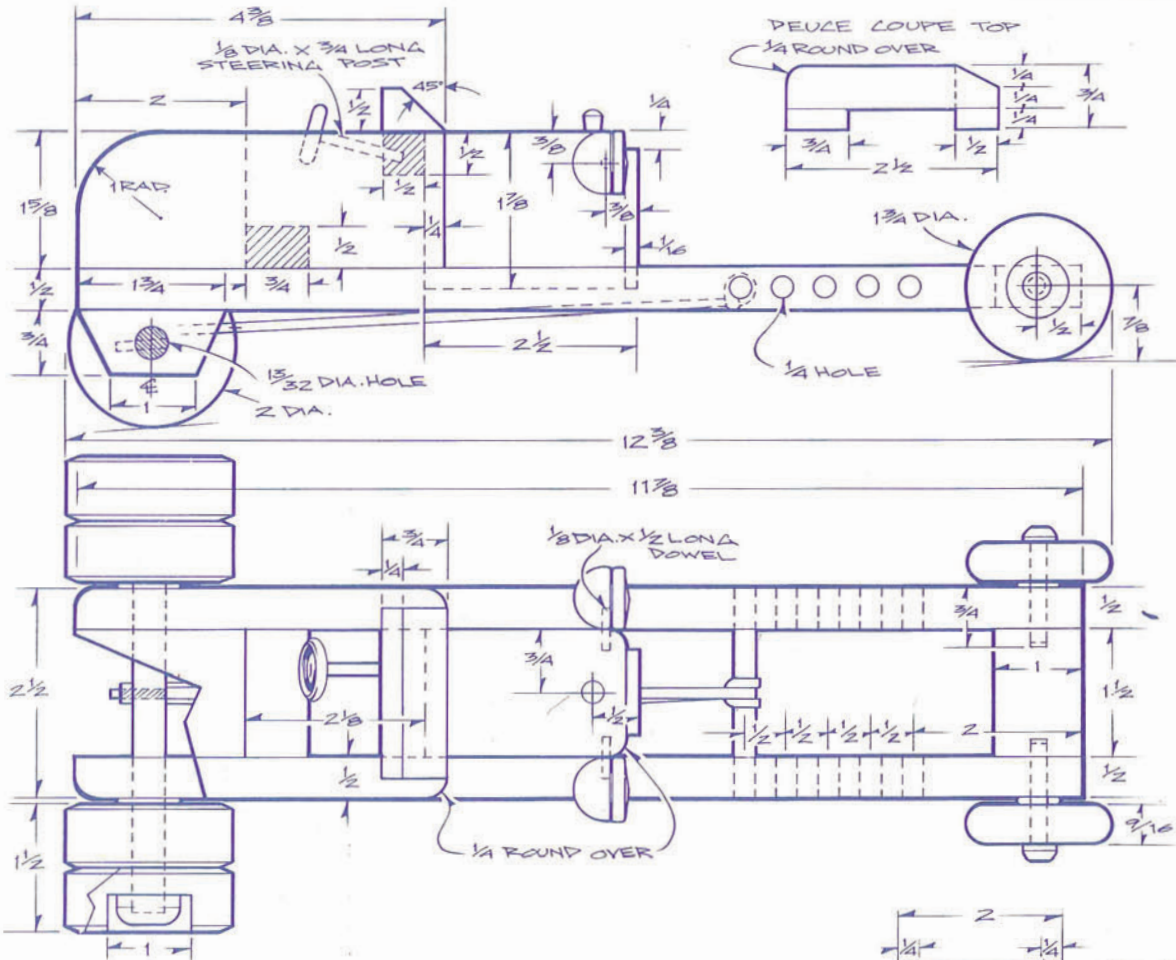
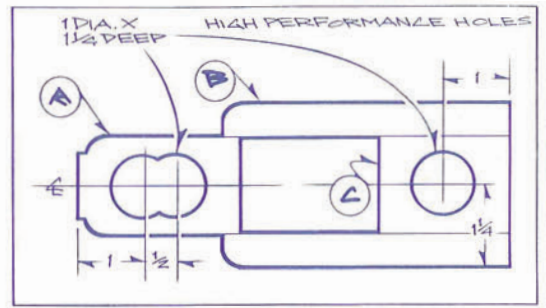
Next, use the table saw to resaw some pine to 1/2 in. thick for the frame parts. The stock here only needs to be 2 in. wide, so nearly any table saw can do the resaw job. First cut a section of 3/4 in. pine to 2 1/8 in. wide and 3 ft. long. Then set the table saw for a 9/16 in. wide cut and resaw the workpiece. When resawing, you should make sure that the stock stays tight against the rip fence. Also, use a pushstick to keep your fingers away from the blade. Then remove the saw cuts with a hand plane or jointer, and achieve the 1/2 in. thickness and 2 in. width. You should have plenty of 1/2 in. thick stock for the two cars.

Also cut a strip of pine that's 1/4 in. thick by 1/4 in. wide by about 18 in. long. This strip is for the roof pillars (S and T) for the Deuce Coupe. You don't need nearly that much stock, but it's not safe to work with thin strips shorter than about 18 in. You'll also need to have three sizes of dowel (1/8 in., 1/4 in., and 3/8 in.), and the wheels and other parts.

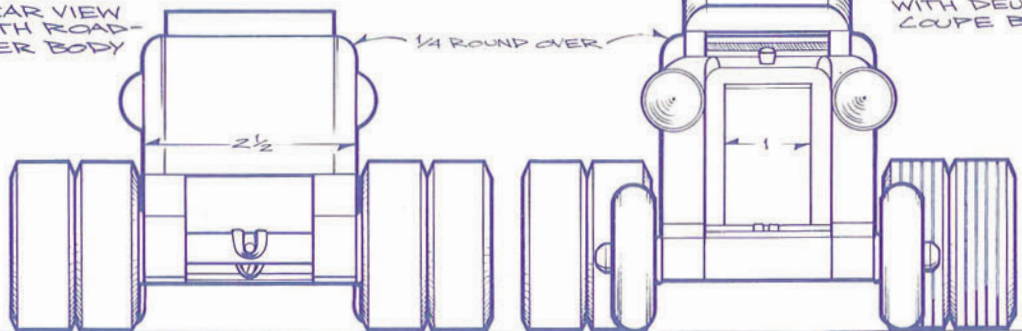
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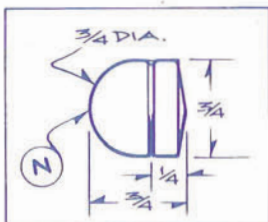
Start by preparing stock for the cars. For the engine cowling (A) and trunk (C) you'll need pine that's 1 1/2 in. thick. If you don't have stock that hefty, glue up two 3/4 in. thick pieces. Cut two pieces of 3/4 in. thick pine to 2 3/4 in. wide and 10 in. long, and face-glue them. That will be enough for the two cars.



REAR VIEW WITH ROAD-STER BODY



FRONT VIEW WITH DEUZE COUPE BODY



glue the rear axle supports to the rails and the rails to the front spoilers (E). For the glue-up, make a spacer block the same length as the front spoiler so the rails stay parallel and you have support for the drilling operation done next.

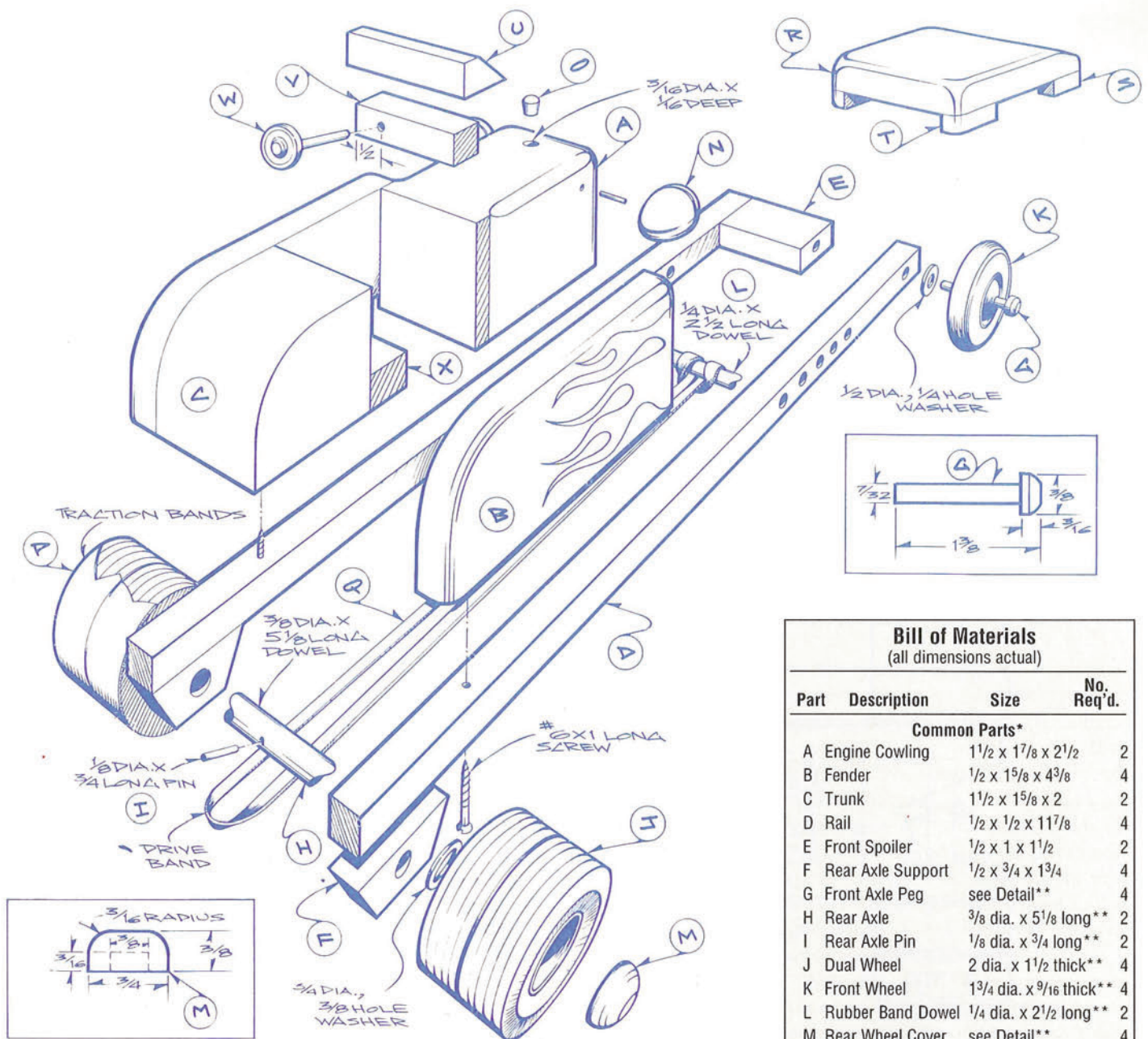
After the glue dries, drill the 1 3/32 in. diameter holes for the rear axles (H) and the 7/32 in. diameter by 3/4 in. deep holes

for the front axle pegs (G). Use a drill press and a stopblock for this drilling operation so all the holes line up.

Next, use a router and 1/4 in. radius beading bit to establish the radiator profile on the front of the engine cowlings (A). Also use the beading bit to round over the edges at the top of the engine cowlings and on the chassis and

roof. These are small parts, so put them in a vise and keep your fingers clear. Note that the roundover on the top of the cowling stops 1/4 in. from the end, where it meets the chassis.

Now, glue the cowlings between the fenders. Also, drill the high performance holes in the underside of the body (see detail). The holes lighten the cars which



makes them go faster.

Next, glue the roof pillars and roof in place for the Deuce Coupe, as well as the windshield, dash (V) and seat (X) for the Roadster. Drill holes to mount the steering wheel, headlights, rear axle pins, and radiator caps, but dry-fit them only. They are painted separately from the car itself.

Give the cars and the parts a good sanding. We used spray enamels in a matte finish. First apply a coat of gray primer to the cars and parts. Carefully sand that with 220-grit paper and apply silver to the rail assemblies, rubber band dowel, wheel covers, axle pegs, headlights and radiator caps. Paint the car bodies yellow and red and paint the wheels black. You may need two or three coats of the colors; be sure to sand

thoroughly between coats.

Use our full-size pattern to paint in the white and red flames. You can make a stencil from the full-size pattern and spray on the flames.

After all the paint dries, attach the wheels, rear axle pin (I), the steering wheel on the Roadster, and the silver parts. Don't forget to put the washers between the wheels and the rails. The washers are a hardware store item and aren't included with the parts package. Screw the bodies onto the rail assemblies. The rubber band dowel is adjustable in the five holes for different sizes of rubber bands. The motor drive band loops around that dowel and is wound around the rear axle. To power up, catch the drive band on the axle peg and wind the wheels in reverse.

### Bill of Materials (all dimensions actual)

Part	Description	Size	No. Req'd.
<b>Common Parts*</b>			
A	Engine Cowling	1 1/2 x 1 7/8 x 2 1/2	2
B	Fender	1/2 x 1 5/8 x 4 3/8	4
C	Trunk	1 1/2 x 1 5/8 x 2	2
D	Rail	1/2 x 1/2 x 11 7/8	4
E	Front Spoiler	1/2 x 1 x 1 1/2	2
F	Rear Axle Support	1/2 x 3/4 x 1 3/4	4
G	Front Axle Peg	see Detail**	4
H	Rear Axle	3/8 dia. x 5 1/8 long**	2
I	Rear Axle Pin	1/8 dia. x 3/4 long**	2
J	Dual Wheel	2 dia. x 1 1/2 thick**	4
K	Front Wheel	1 3/4 dia. x 9/16 thick**	4
L	Rubber Band Dowel	1/4 dia. x 2 1/2 long**	2
M	Rear Wheel Cover	see Detail**	4
N	Headlight	see Detail**	4
O	Radiator Cap	see Detail**	2
P	Traction Band	as shown**	4
Q	Motor Drive Band	as shown**	2
<b>Deuce Coupe Parts</b>			
R	Roof	1/2 x 2 x 2 1/2	1
S	Roof Pillar (front)	1/4 x 1/4 x 1/2	2
T	Roof Pillar (rear)	1/4 x 1/4 x 3/4	2
<b>Roadster Parts</b>			
U	Windshield	1/2 x 3/4 x 2	1
V	Dash	1/2 x 1/2 x 1 1/2	1
W	Steering Wheel	3/4 dia. x 3/16 thick**	1
X	Seat	1/2 x 3/4 x 1 1/2	1

\* Bill of Materials includes enough parts for one of each car shown.

\*\* Parts available from Meisel Hardware Specialties, P.O. Box 70, Mound, MN 55364. Order catalog number 7469, which costs \$16.94 postpaid. The parts package includes enough parts for four cars. Full-size plans for more dragsters are also available from Meisel (send \$1 for a catalog.)

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Matt Becker  
Internet Production Coordinator