

OPITEC

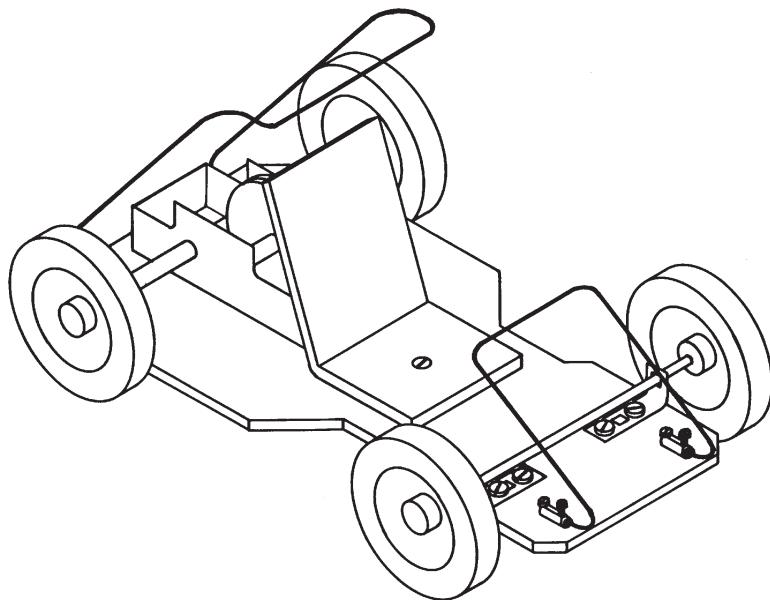
Hobbyfix

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Go - Cart
with Friction Motor

Please Note

The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!



Parts List

Quan.	Description	Material	Size
1	Base	Plexiglas	155 x 80 x 3 mm
1	Seat	Plexiglas	70 x 35 x 3 mm
1	Axle holder	Holed metal	100 x 10 x 0,5 mm
2	Bumper	Welding rod	250 x ø 2 mm
4	Bumper holder	Connector block	15 x 5,5 mm
1	Front axle	Metal axle	95 x 3 mm
1	Drive	Friction drive	
4	Wheels	Plastic	d = 40 mm
7	Joining materials	Bolts	M 3 x 8 mm
4	Joining materials	Bolts	M 3 x 12 mm
1	Joining materials	Bolts	M 3 x 10 mm
13	Joining materials	Nuts	M 3
4	Joining materials	Bolts	For connector block
2	Joining materials	Reducers	3/4 mm
	Front wheel axle		

1.0. Description.

A super- project for young technicians!

Involving project work with different materials and components. An easy to follow plan as start for your designing. Finally a robust motor which works without electricity and a chance to learn about mechanisms in action.

2.0. Steps in building

Base

- Cut out the paper pattern from diagram 1 and glue lightly to the plexiglas base.

Tips: All the corners and the middle parts can be shaped individually to your own design.

- The base should be drilled, sawn, filed, formed and then polished.

If using a fret type saw to cut out the base use blades No. 3-5.

For finishing use wet and dry paper 150 grade and steel wool.

- Forming the seat: - either use the pattern supplied or design your own. Glue the pattern to the plexiglas sheet provided.

Saw out, file, drill, shape and finally bend using a plastic heat former. Take care not to overheat the material.

If a specialised heat former is not available an oven or an electric cooker hob can be used. Opitec supplies specialised plastic forming machines.

However it is carried out, forming plastic is fun for young technicians!

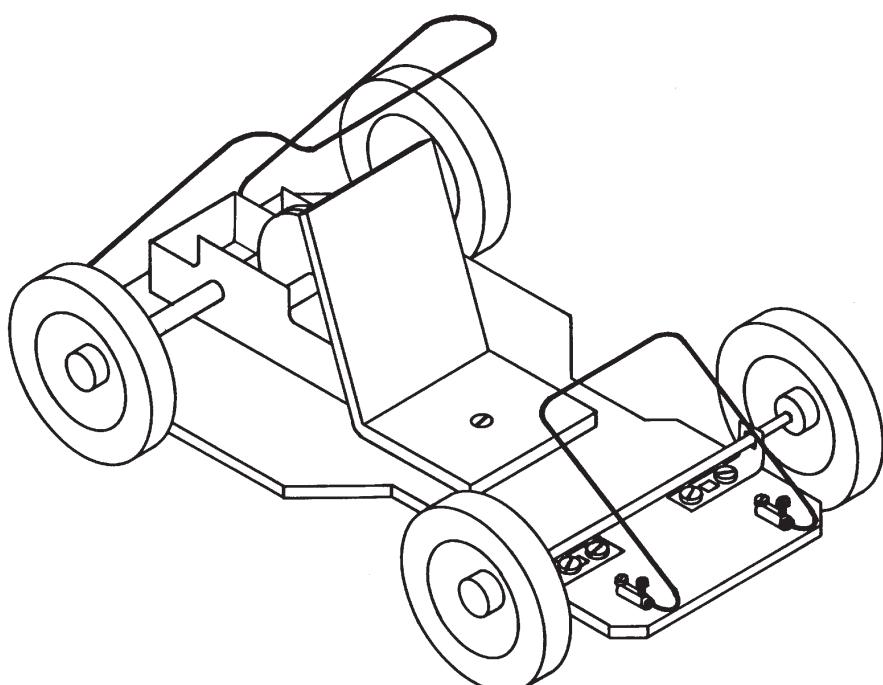
- Holed metal strip- using metal shears cut the metal strip to length as in diagram 1 and bend the metal with pliers.

Tip:- before inserting the axle make sure the holes are large enough for the axle to run freely by easing them with a round shaped needle file.

If you want to mount the axle holders under the chassis remember to make them longer to make up for the thickness of the base.

Construction

- Mount the metal axle holders on the base using the M 3x8 mm nuts and bolts and tighten with a small spanner (size 5,5) and a screwdriver.
- Insert the axle through the holes in the angled metal strips. Fit the wheels (with reducer inserts) on either side.
- Mount the motor on the base using the three M3 x 8mm machine screws
- Screw the connector blocks for the font spoiler and rear roll bar in position
- Bend the roll bars (front and rear) to your own design and clamp them in the connector blocks
- Fix the seat to the chassis



All holes are 3,5 mm diameter

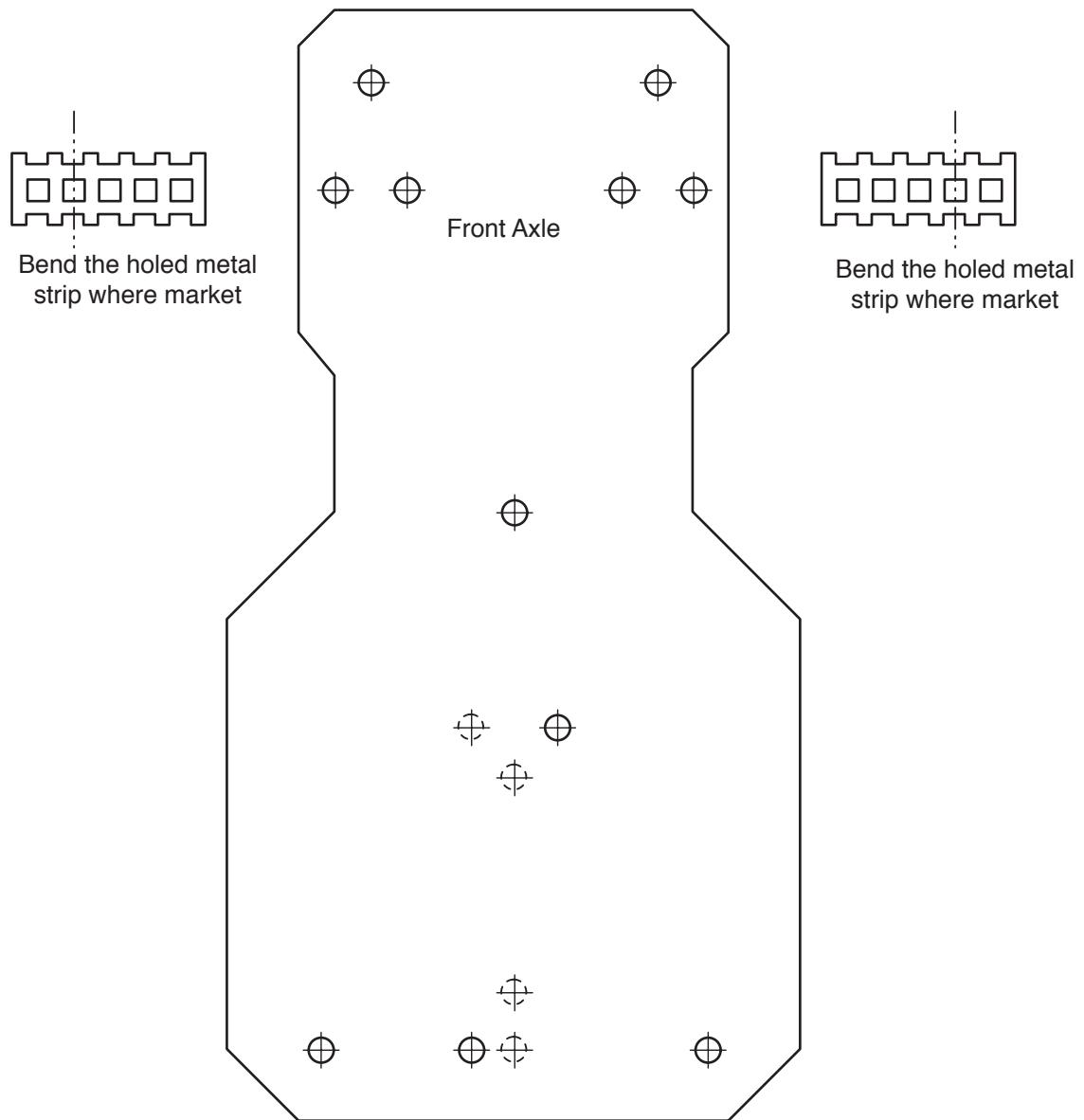


Diagram: 1
Drawing: Go-Cart
(Pattern for base)
Scale : 1:1