

Indoor Flying Model

Build Your Own RC Plane Plan Spoke Wheels!

Easy method using thread and the "lost jig" to build your own spoke whe

[Ads by Google](#)

[RC Aircraft Kits](#)

[Model Plane Plans](#)

[Scale Aircraft](#)

[Model](#)

[RC Model Glide](#)



Build your own thread [RC plane plan](#) spoke wheels - no special tools required

[RC Plane Plan Spoke
Wheels](#)

[Home](#)

[About Tim](#)

[Primer](#)

[How to Fly RC](#)

[Ready to Fly](#)

[Kits](#)

[Plans](#)

[Spoke Wheels](#)

[RC Flight Sim](#)

[E-Fest](#)

[Video](#)

[Crashes!](#)

[Site Map](#)

[Privacy Info](#)

[Contact Us](#)

[Ads by Google](#)

[Sale On Wheel](#)

[Balancers](#)

Quality Wheel

Balancers In

Stock. Ships Next

Day! Call

866-607-4022.

www.naautoequipment.cc

[Sell Your Home in](#)

[10 Days](#)

Fill Up Our 2

Minute Online

Form & Get An

Offer On Your

Home Today!

HouseBuyerNetwork.com



RC plane plan spoke wheels [Chickadee plans](#) built RC model airplane

International magazine.



Quiet and Electric Flight International article on spoke wheel, pg 1

Spoke wheels are almost a requirement for building a any airplane, such as the [1912 Blackburn](#) or [1908 Den](#) that flew in the era before World War I. These early pi flight, from the time period of roughly 1907 to 1914, n remarkable progress with the art and science of succe flying an airplane. Aircraft construction techniques, en basic airmanship skills all advanced at a very rapid pa

Due to their light weight and inherent strength, spoke were a standard feature on all these aircraft. It has al been a challenge, however, to obtain [RC plane plan s](#) wheels for indoor model aircraft. A model's RC plane f spoke wheels need to be strong, yet lightweight for th flyer. Building **RC plane plan spoke wheels** usually i constructing complex jig arrangements to properly ins spokes to the wheel rim. One can purchase spoke whe the market place, but they are expensive, and oftentir heavy for typical indoor model aircraft use.

Below is are the first two pages of the spoked wheel a published in the February 2010 Quiet and Electric Fligh



Q&EFI spoke wheel pg 2

Following is a very simple to follow method for produc own indoor RC model spoke wheels, from [easily adaptable plans](#), using what I call the "lost jig" me Using common building materials of balsa and plywood, a brass tube, thread and neoprene fuel tul can easily and quickly make convincing RC plane plan spoke wheels in your home workshop. Let's try!

[Cheapest RC Airplanes](#)

Over 100,000 In-Stock Models to Buy Largest Radio Controlled Airplanes
www.nitroplanes.com

[Spokes and Nipples](#)

Triathlon and cycling retailer Parker-International.co.uk
Parker-International.co.uk

[Discount Tire](#)

Shop, Research & Buy Tires Onlr Over 750 Locations Nationwide.
www.DiscountTire.com

The *RC plane plan spoke wheels* concept involves building a tire rim from two layers of 1/16" balsa, with the wood grain of the two rims set at 90 degrees to each other. Setting the wood grain at 90 degrees is a CRUCIAL step for the light weight and strength of your RC plane plan spoke wheels. A simple, removable jig of 1/8" balsa is inserted across the diameter of the wheel rim, holding the brass tube axle in place. Thread spokes are installed. Once the initial [RC plane plan](#) spoke wheels thread is in place, the temporary jig holding the axle in place is cut out and removed, hence the term "lost jig". The remaining thread spokes are glued in place at the axle ends and on the balsa wheel rim. Neoprene fuel tubing is glued to the balsa rim, and your RC plane plan spoke wheels are complete.



Two 1/16" balsa spoke wheel blanks - glue cross grain for strength

Let's now go through the RC plane plan spoke wheels building process in more detail. The first step is to cut out two wheel rims from 1/16" balsa.

Use a medium to hard grade balsa for strength on this the RC plane plan spoke wheels. Use whatever diameter your model requires. The width of the RC plane plan spoke wheels rim depends on what you desire for the overall the finished wheel. I recommend at least 1/4" rim width maintain wheel strength.

Use a sharp razor blade to cut these two [RC plane plan](#) spoke wheels rims out of the 1/16" balsa, as the circular wheels can break easily at the grain. Once the two RC plane plan spoke wheels rims are cut out, CA glue the two rims together with the wood grain 90 degrees apart for strength. The

RC plane plan spoke wheels rim made from these two 1/16" balsa pieces is surprisingly strong. Now is the time, before any spokes are installed, to apply whatever finish or paint you desire for the wheel rim. The spoke locations on the top of the wheel rim, which will be used for a guide as the thread spokes are woven into place. The RC plane plan spoke wheels marks will be covered later by the rubber tubing.

[Ads by Google](#)

[UAV RC Plane](#)

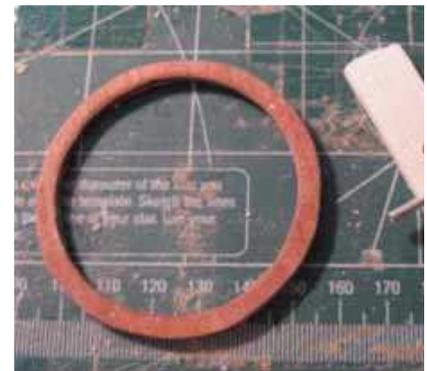
[Micro Aircraft](#)

[Rare Model Aircraft](#)

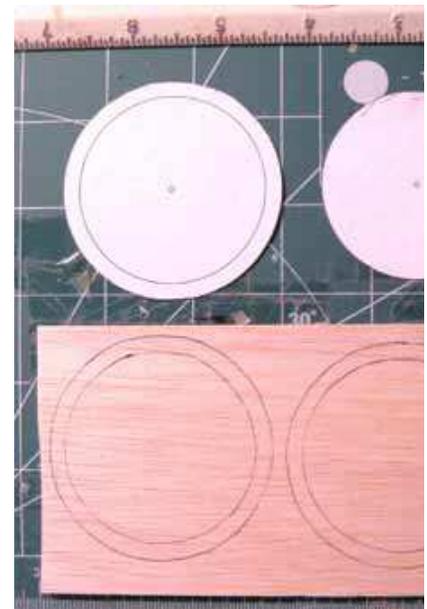
[Electric Aircraft](#)

[Skyleader Aircraft](#)

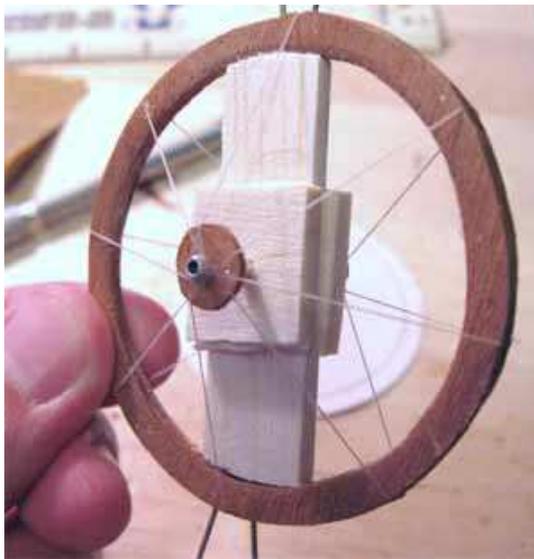
Next, build the temporary jig that will hold the axle in place as the RC plane plan spoke wheels thread is installed. Use a soft 1/8" balsa for this temporary jig. Soft wood is important, as you will have to carefully cut the jig out after the first set of spokes are installed. It is very important that this jig hold the brass tube axle firmly in place as the thread spokes are installed, so add some 1/4" balsa fill on the jig for lateral support where the axle will be installed. Trim the ends of the jig to fit snugly in place inside the RC plane plan spoke wheels rim, and hold the jig in place with pins. Do not glue the jig to the wheel rim, as you will be removing the entire jig shortly.



1/16" balsa spoke wheel blanks glued together; stain applied; axle jig and axle tube at



1/16" balsa wheel blanks and wheel plan



Spoke wheel axle jig pinned in place with eight thread spokes

Drill a hole in the exact center of the jig for the brass tube axle. Drill the hole slightly undersize from your axle, to ensure a press fit. Insert the brass tube axle into the jig. Make plywood washers, and glue the washers onto the ends of the brass axle. These [RC plane plan spoke wheels](#) washer retain the thread spokes at the axle ends as you weave spokes in place.

Now for the fun part, actually installing thread spokes whatever size and color thread you wish for the RC plane spoke wheels. Start by tying the thread to one end of the tube axle. Weave the thread over the balsa wheel rim back to the opposite end of the axle outside the plywood washer. Continue this application of the thread on alternate sides of the wheel. When you have around eight thread spokes in place, tie off the thread at an axle end. Use CA glue to hold the thread in place at the axle ends around the balsa wheel rim. This will not be the complete RC plane spoke wheels installation, as we need to allow room between the thread spokes to remove the jig. However, there are enough spokes to hold the axle in place.

[Automated Wheel Wash](#)

For Sale or Lease - Nationwide
Construction Sites or Landfills
www.innovativeequipment.org

[Discount Tire](#)

Shop, Research & Buy Tires Online.
Over 750 Locations Nationwide.
www.DiscountTire.com

[Buy Custom HRE Wheels](#)

California's Largest HRE Dealer
The Experts Today!
www.wheelenhancement.com/HRE

Ads by Google

Remove the pins holding the jig in place to the balsa wheel rim. Carefully cut out the jig from around the axle, taking care not to accidentally cut any of the thread spokes. Once the jig is completely removed, you can see the beginning of the RC plane plan spoke wheels. Add additional thread wheel spokes as you did before, until you have the desired look for your finished wheel.



Glue on neoprene tubing for spoke wheel tires



Carefully cut out axle jig, then add additional t

We are almost done. Use thick CA glue to install neoprene fuel tubing onto the outside of the balsa rims to simulate the spoke wheel's rubber tires. Cut the tubing long. Glue the tubing on to the wheel, leaving the last unglued. Once dry, trim the tube to fit, and glue the final end of tube on top of the wheel rim. If you cannot find black tubing, use a Sharpie black marker pen to color the tubing before gluing to the rim.

That's all there is to making your own [RC airplane plan](#) spoke wheels. The method allows for RC plane plan spoke wheels of just about any size. Go ahead and give it a try. The "lost jig" spoke wheel method is a fun, easy and inexpensive way to add character to

your next antique indoor RC model airplane. This is also a great way to highlight the early days of model airplane flight as you can see in the [radio control plane primer](#).



RC Plane Plan Spoke Wheels

Finished RC plane plan spoke wheel

Indoor Flying Model - Copyright 2010, all rights reserved

Please review our [privacy policy here](#)