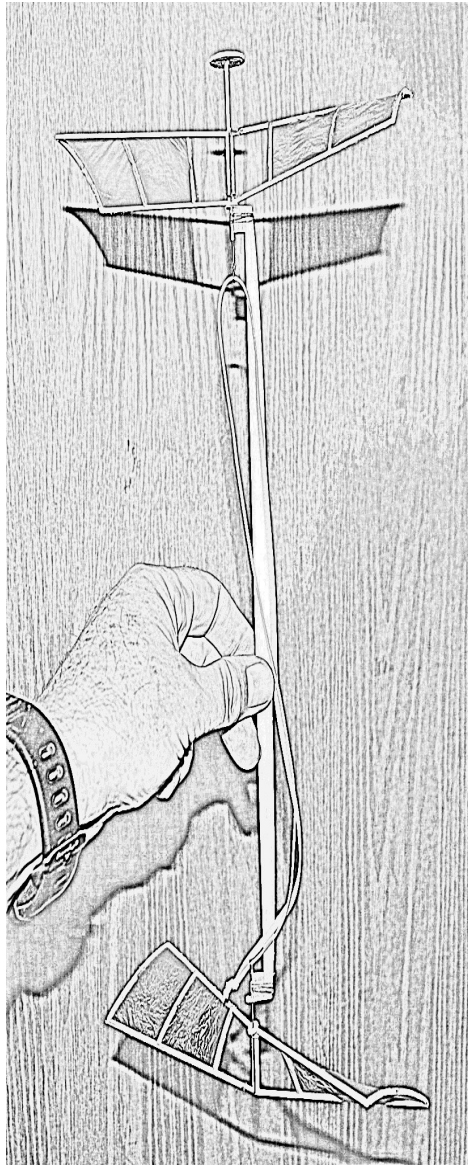


# MINI-PEARL HELICOPTER

Stan Buddenbohm © 2016

Free flight helicopters are tricky to design but easy to fly. The most difficult issue to overcome is stability throughout the flight. Powered by model airplane rubber they must maintain an upright orientation while the rubber changes from full winds and maximum torque to very little torque before landing. The MINI-PEARL does a beautiful job of maintaining this upright posture which increases flight times. The MINI-PEARL complies with the 2017 Science Olympiad Division C rules. Designed by Stan Buddenbohm, holder of all three National outdoor Free Flight Helicopter records.



**ADVANTAGES OF MINI-PEARL:** Designed to use available 1/8" model airplane rubber. This saves the expense of specialized tools to strip your own rubber size which can cost hundreds of dollars. A bearing for each propeller gets them aligned for less copter wobble. This also means the fuselage does not have to rotate – less wasted energy and less drag. This kit is safer to build because no sharp knives or razor blades are needed. Special jigs make for easier construction. Instructions supported by extensive photographs make this project easy to understand. A robust design that comes in at near minimum weight with proven flight times of over 90 seconds. Email Stan at [buddenbohms@gmail.com](mailto:buddenbohms@gmail.com)

## ORDERING INFORMATION

INCLUDED IN MINI-PEARL KIT: MAKES TWO HELICOPTERS

ALL BALSA PARTS READY FOR FINAL FITTING AND GLUEING

DUAL BEARING PARTS READY FOR ASSEMBLY

Including 4 teflon washers, 4 aluminum tubes, and 4 plywood pieces

COVERING MATERIAL

PROP SHAFTS WITH THE DIFFICULT END PRE – BENT

4 RUBBER O-RINGS (Needed for loading rubber motors)

ENOUGH 1/8" MODEL PLANE RUBBER STRIP TO MAKE TWO MOTORS

COMPLETE INSTRUCTIONS SUPPORTED BY EXTENSIVE PHOTOGRAPHS

These instructions will be emailed to the purchaser. This will allow the student to enlarge sections to view details. A great deal of time has gone into developing this project and the value of these instructions are important. Please do not pass them along, in any form, to others so that I can continue to stay in business.

PRICE: \$39 shipping \$8 for any number of kits  
(spare parts listed below can be tossed in for no extra shipping)

SPARE PARTS: 1/8" RUBBER STRIP, more than enough for one motor  
\$1  
RUBBER O-RINGS, 4 for \$1  
TEFLON WASHERS, \$1 EACH

PAYMENT: Cash is best (I live an hour from a bank), postal money order is good, check is okay made out to my name, see below. I do not automatically include a receipt. If you have to have one you need to tell me that. I am just a one man operation. I try to be quick but sometimes life gets in the way so please be patient. If you find yourself in a rush let me know but I would appreciate it if you allowed yourself plenty of time when ordering. I have a good track record, feel free to check out my stuff on the internet, under my name, or gliderbohm, or Stan's Stuff.

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