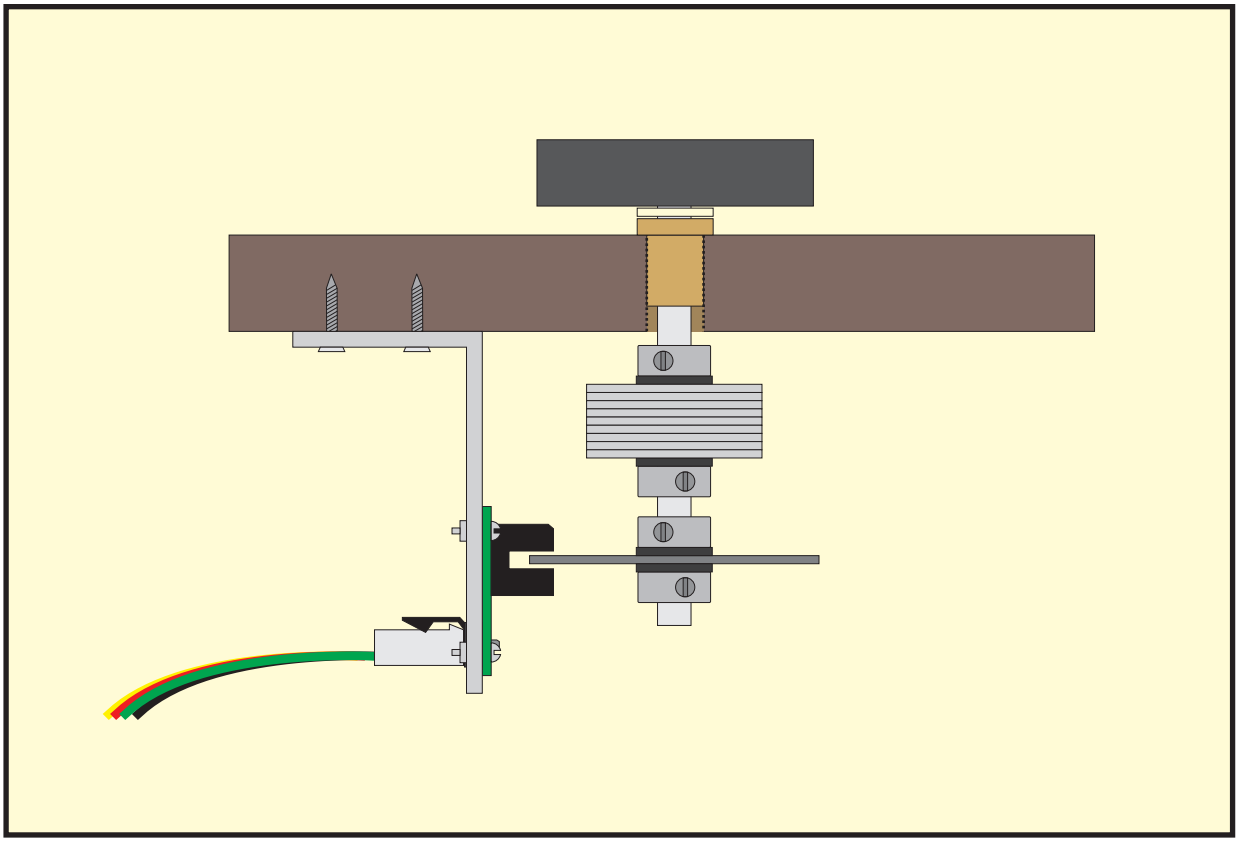
Super Simple Spinner



Designed for use with the

Optic-1

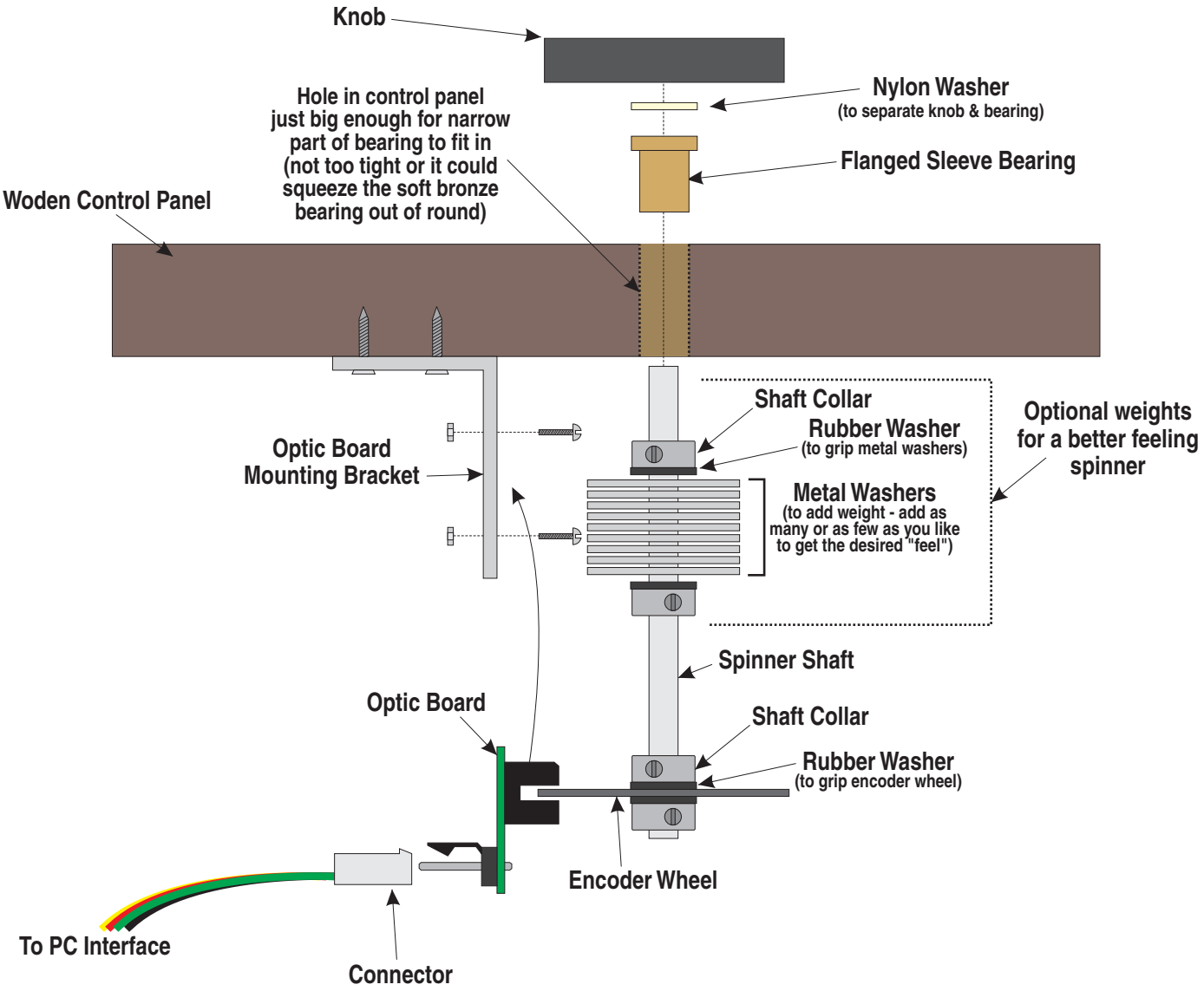
optic encoder board

(with the tons of help and ideas
from the arcade controls community)

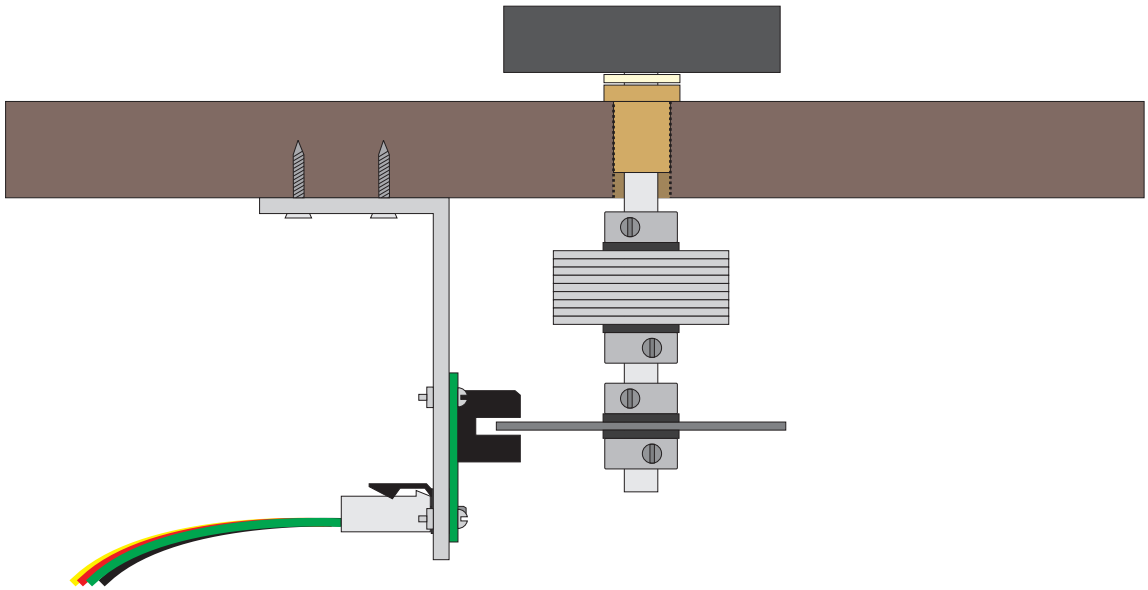
Other Spinner Resources

Main Reference: http://www.gearheadlabs.com/spinner/

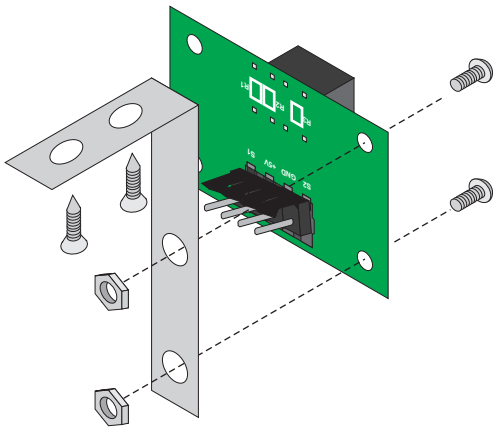
Spinner wiki - http://wiki.arcadecontrols.com/wiki/Spinners
Nathan Strum's Cheep Spinner - http://arcadecontrols.com/files/Miscellaneous/spinner.pdf
DHansen's Arcade Stupidity Spinner - http://www.doughansen.net/arcade/spinner.htm
BYO "Nasty-Spinner" Thread - http://forum.arcadecontrols.com/index.php?topic=17522.0
GroovyGameGear - http://groovygamegear.com/
ArcadeGames4U - http://arcadegames4u.com/
Apache Controls - http://www.apachecontrols.com/
Ultimarc - http://www.ultimarc.com/



Part Description	Source	Part Number
Knob for 1/4" shaft - (lots of knobs available to choose from this was our choice) (Comfort-Grip Finger-Control Knob Fits 1/4" Shaft Dia, 2.0" Diameter X 0.66" Height)	McMaster-Carr (http://www.mcmaster.com/)	7354K13
1/4" Shaft Diameter SAE 841Bronze Flanged Sleeve Bearing 3/8" OD, 3/4" Length	McMaster-Carr (http://www.mcmaster.com/)	6338K451
6" - 1/4" Hardened Steel Shaft (cut to length for your application) (Note - you can also substitute 1/4" aluminum rod from home supply/hardware store to save money, but spinner shaft will not be as durable)	McMaster-Carr (http://www.mcmaster.com/)	6061K11
1/4" Steel Set Screw Shaft Collars	McMaster-Carr (http://www.mcmaster.com/)	6166K21
Optic Mounting Bracket (aluminum bar cut to length, bent to shape and holes drilled for mounting screws)	Home Supply/Hardware Store	
Spinner Style Optic Board & Connector	Mike Grugel (arcade@grugel.com)	Optic-1
Encoder Wheel	?????/Groovy Game Gear/Home Made?	
Rubber Washers (to help set collars grip encoder wheel)	Home Supply/Hardware Store	
Nylon Washer (knob bushing)	Home Supply/Hardware Store	
Wood Screws (for mounting bracket to control panel)	Home Supply/Hardware Store	
Machine Screws & Nuts (for mounting optic board to bracket)	Home Supply/Hardware Store	
(optional) Metal Washers (to add weight to spinner for more professional feel)	Home Supply/Hardware Store	



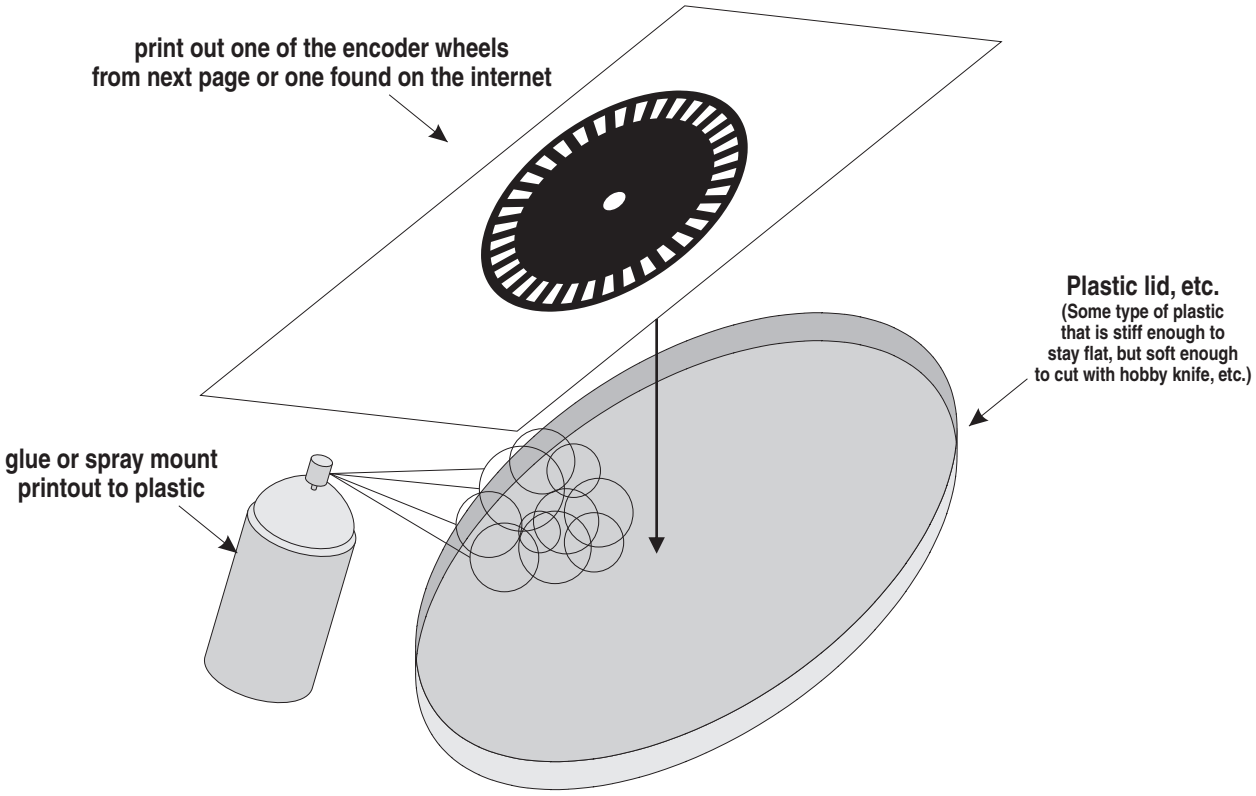
Assembled Spinner

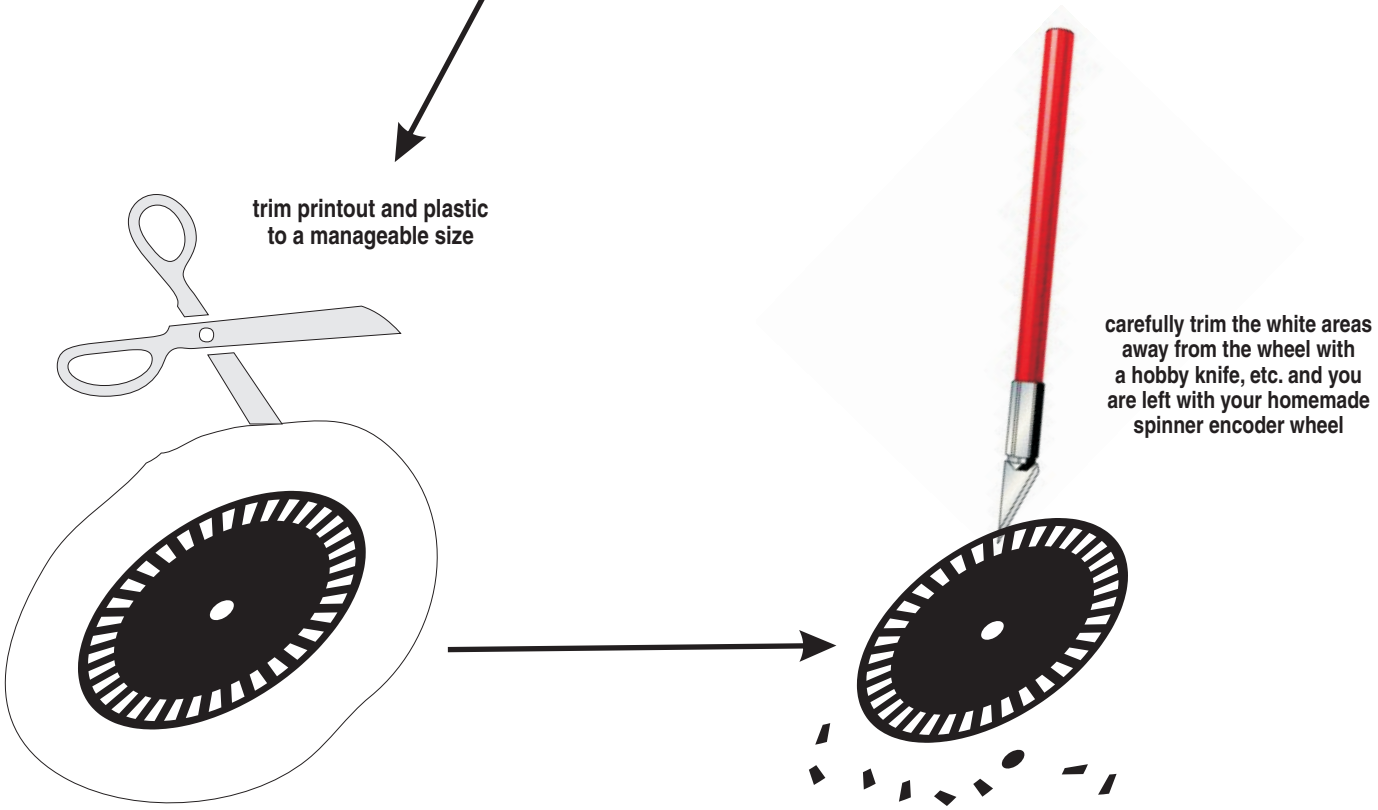


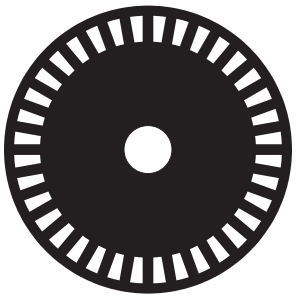
Example Optic-1 board mounting diagram

(suggested mounting only - board can be mounted however it will work best for your application - mounting holes may be drilled any where on the board that does not contain a part or an electrical trace)

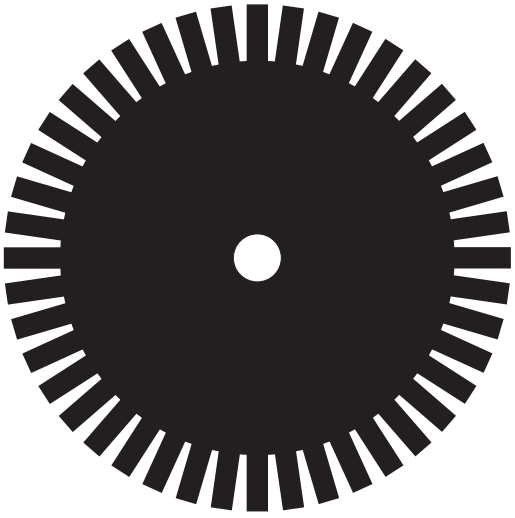
Make Your Own Encoder Wheel



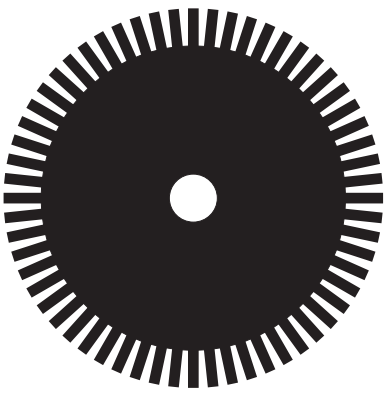




Sample 36 spoke encoder wheel
(Note - you may want 40+ spokes, especially
for games such as arkanoid and others that
expect very high counts per revolution)



Sample 44 spoke encoder wheel
(Note - some games expect 400 or more
pulses per revolution, but this wheel should allow
you to play many games with reasonable playability)



Sample 60 spoke encoder wheel