

## Quick and dirty solderless torque meter

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This is a design I threw together when I needed a new torque meter for F1D when I started flying the class. I just had finished the plane and did not have time to make a nice slick looking unit so I threw this together. I have been using it for 2 years now and it is still going strong.

The meter is constructed out of what ever material you have on hand. I used mostly 1/8" hard sheet balsa with some pine for the rear block. The only critical part is the torque wire and then only if you want the meter to be calibrated. If you are going to use it like a Jones with the gradations being arbitrary values then even the wire is not particularly critical. On mine I wanted the meter to indicate 0.6 in/oz in 360 degrees of rotation so I used .013" music wire and made it 5.56" between the rear bend where it is attached to the mounting block and the point in the front where the doubled wire is bound together.

The hook is formed by doubling the wire on itself then bending up the pointer. Next the straight section between the pointer and the hook is secured by wrapping with thread or a single strand of fine copper wire and then coating with glue. The rear is secured with 5 minute epoxy and had the torsion part of the wire sitting over a slot in the mounting block so it can turn freely.

Here are some various combinations for different torques. You can calculate additional ones by going to my site [www.IndoorDuration.com](http://www.IndoorDuration.com) and using the calculator in the Utilities section.

Wire diameter	length	360 deg torque
0.015"	5.92"	1.0 in/oz
0.013"	5.56"	0.6 in/oz
0.011"	5.71"	0.3 in/oz







