

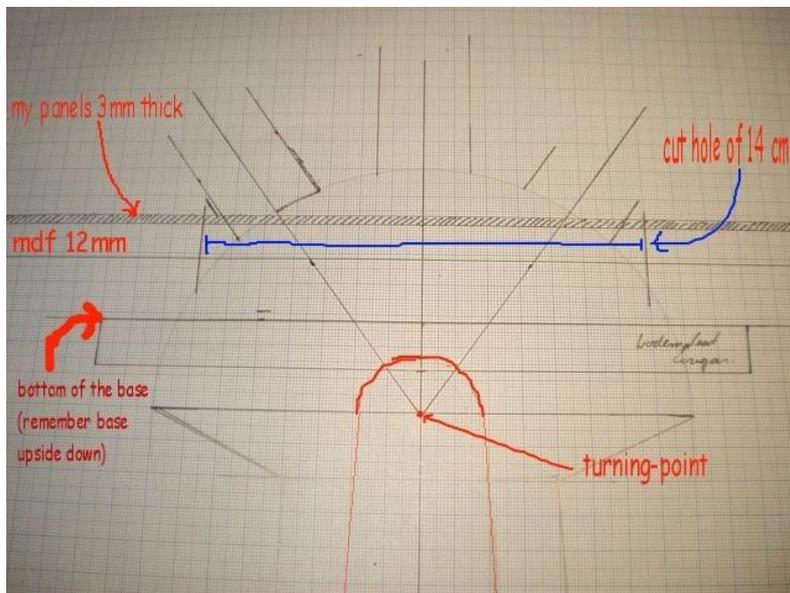


## *A throttle extension, my approach !!*

Searching the internet for a home made throttle extension of the Cougar Throttle(are there others), I found, there was no such thing available.

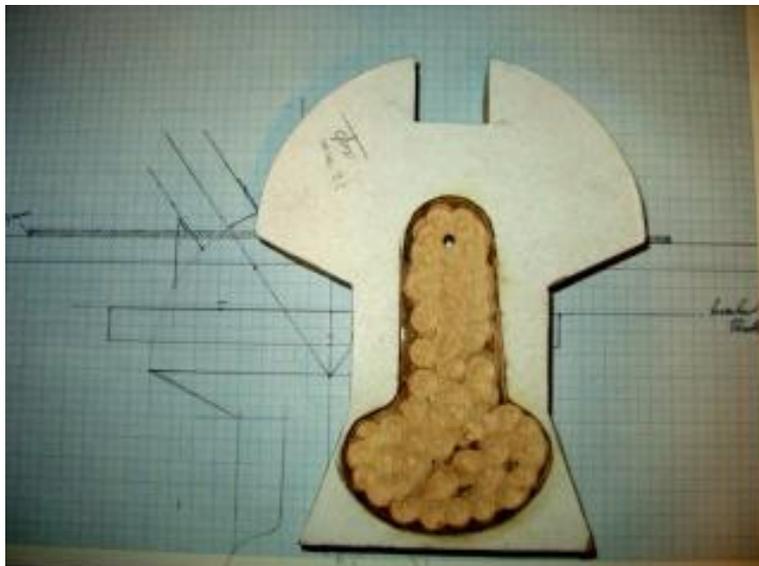
One of the main problems is the little room there is between the handle and the top of the throttle base. Just lowering the base and extending the handle will cause the turning-point to be too low, so the handle will move too far from back to forth, I guessed.

Looking at the base I realized, the turning-point sits in the lower half of the base, why not turn the base upside down, and use the existing handle. Just make a handle and fasten it on the existing



handle **without** any cutting or sawing in the original throttle.

Here you see what I cut out of 3cm thick plywood. The throttle handle shape is 14mm deep.



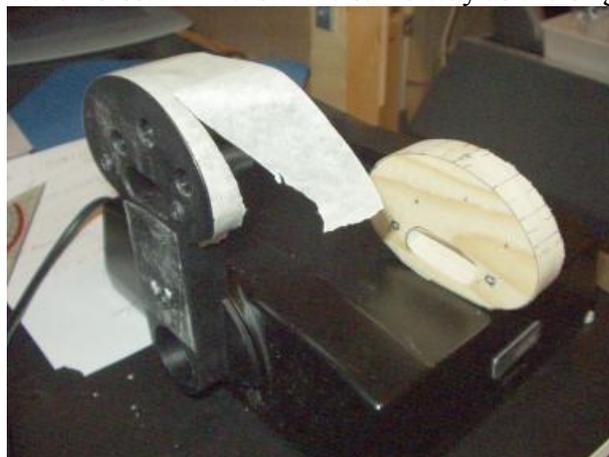
Another pic of the bottom part of the new handle, the base of the handle will be 3cm X 3cm.



The new grip.



Saw the same shape as the original out of wood. Use a piece of paper (same size) to determine where you will have to drill the holes. Drill them the same way as the original.



Put on the original some paper tape. Cut off what is over the edge. Hold the new wooden shape beside the original (the flat outside) and draw some lines from the tape on the wood. So you are able to put the tape at the right place on the wood.



With a knife you can cut 2mm deep at the edge of the tape.  
Then cut gentle at the backside towards the end of this cut of 2mm deep.  
In this way you will get a shape that will perfectly fit on the grip.



Use the drilled holes on the inside to determine where the wood should be thicker.  
(here you can see also a bolt through the wood , it is used to fasten it to the wooden-handle)



I soldered a new connection . Be sure the hole in the wood is big enough to put the connector through. (in the middle a little wider)



Take your time when cutting the edge and you will see it fits perfect. These pictures show the first one I made.



Back to the complete handle, just to see of all fits.

Looks fine to me ;-).



I had to make the shape of the handle so it fits into my simulator.

Pictures of the original handle you can find on the site of Martin Schmitt [HTTP://www.xflight.de](http://www.xflight.de)  
You can use your own layout for the shape of the handle and use my description to hollow it out.



Drill a wide hole in the base of the handle.

So a ribbon cable will fit through it.

Drill some cm inside the (cougar)throttle-  
shape, there the cable will go into the base.



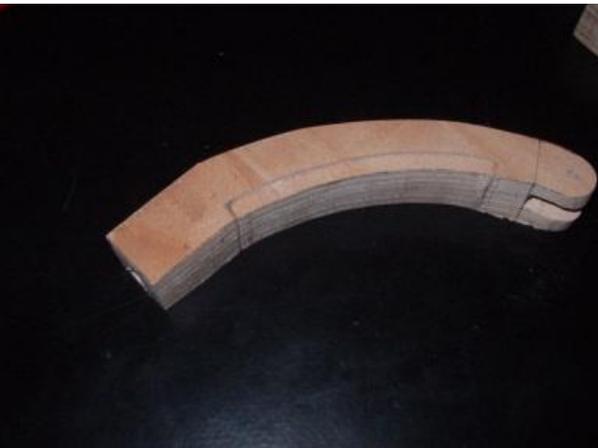
Drill also on both sides a hole in the handle, about 4 cm deep.



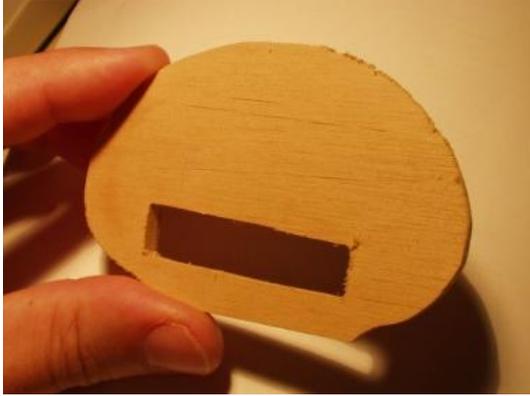
Saw a shape similar as the one on the left.  
You will have to glue it back in place later.



Then mill in the inside enough room for the cable.



Glue the piece of wood into place.  
(First check if the cable will go through ;-)



Then we will have to make a thin wooden form.  
I used plywood, and it has to be the same size as the grip.  
Saw a hole for the connection.



Make two shapes where the bolt for the ax  
will be put through.  
Leave room for the connector and sand the  
top smooth

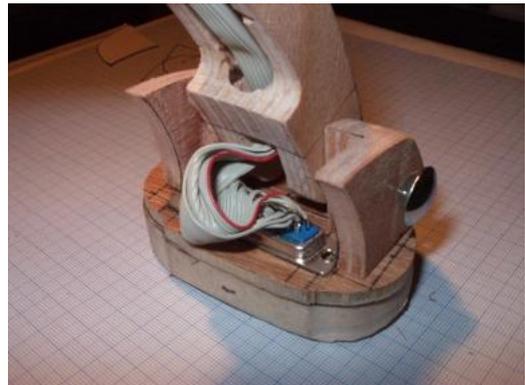


Drill the hole for the bolt.  
And if all fits, you can screw it together.

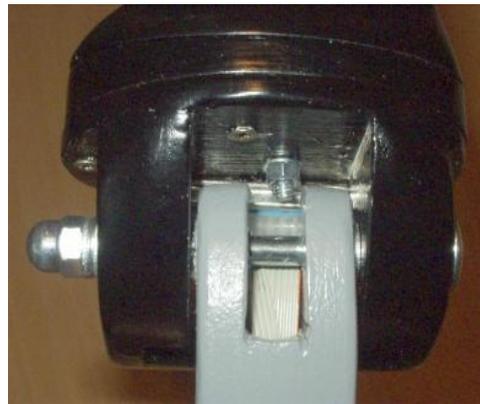




One more check!



I'm satisfied.

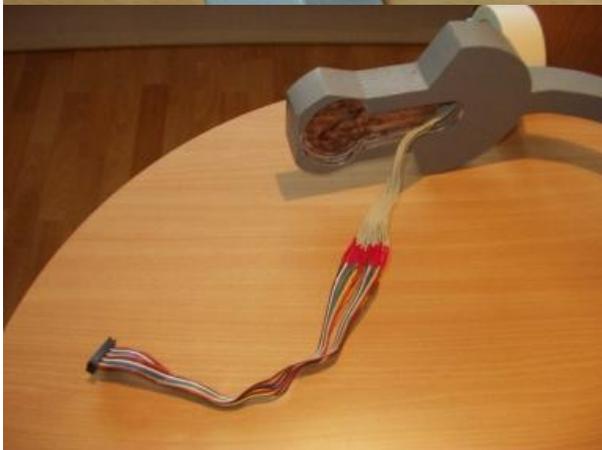


There has to be a little bar between the two shapes on the left and right side.

On the original you can adjust the angle of the grip with a bolt. In our case, with the cougar there is no room for the same solution.

So I made this little bar and you can put through it a bolt for the adjustment if you like

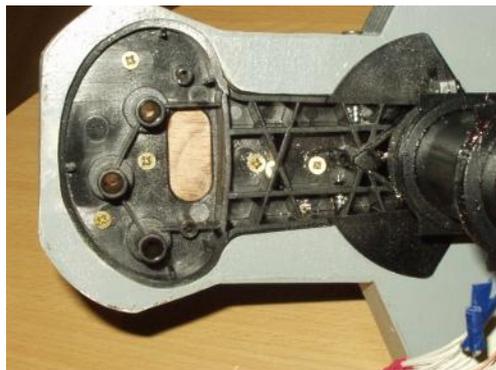
I also melted some hot glue on the wires to the connector just to be sure.



I soldered the original ribbon to the new one.

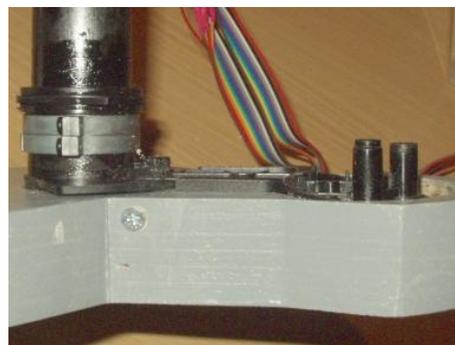


Make the surface of the original flat.  
Put the cable through the original.



Screw it on the new handle

And I placed 2  
screws on the  
sides



Just put the cables back in place and reassemble the  
base.



I think this rocks!



This is how I did it.

It was my first attempt.

I admit, it was after a long period of thinking or drinking , I'm not sure anymore.

There was nothing I had to do twice, so I can say it wasn't that hard to make and I'm just a normal guy and this wood shaping isn't my hobby. (it became a part of it ;-)

I hope this will be a start for others to make this better, and please make pictures and publish them so we can all benefit.

(Oh, and after my son keeps asking me :‘Will it function daddy‘, I plugged it in, (sometimes I start worrying to) and....., YES all functions are fine.)



For me this was a 'little step', but a giant leap for my project ;-).

Keep 'm flying!!

Rien 'Hammer!!!' Heideveld

For questions or comments

[f16simulator@cs.com](mailto:f16simulator@cs.com)

HTTP:\\www.f16simulator.nl

Copyright ©2005 R. Heideveld

