

From:

My Quad yaws and or banks near full throttle! Is that normal? What to do against that?<http://sirdomsen.diskstation.me/dokuwiki/>

Permanent link:

<http://sirdomsen.diskstation.me/dokuwiki/doku.php?id=yawing&rev=1480242565>

First of all, lets explain why Silverware often has "problems" near full throttle. Silverware has all power available from the motors on full throttle (with stock settings), there is no spare throttle left for corrections with stock settings if there is any unbalance - but if all your motors and props are perfect, you should be able to control the quad and have no issues.

BUT if not, you get the mentioned problems!

Before doing the following steps, please make sure your props look good (replace if possible for troubleshooting) and that there is no dust/dirt/hair around the motor shaft!

My quad yaws unexpected at full throttle, one corner/side dips at full throttle

It can be caused by off center CG , or unmatched motors, or quad not built straight. All motors have to be vertical and parallel to each other!

The h8 comes with many different motors made by different companies, and sometimes, the ccw and cw motors are a bit different, and can cause this.

In config.h, there is the option `#define MIX_LOWER_THROTTLE` , which will lower throttle to maintain control. The downside you have less max throttle. Usually enabling this solves most issues at max throttle.

You can add these defines in config.h around line 141:

```
#define MIX_LOWER_THROTTLE
```

Could also add the line below, to reduce the throttle loss:

```
#define MIX_THROTTLE_REDUCTION_PERCENT 30
```

Another way would be to change the pid limits to make yaw have higher priority. In file pid.c:

```
//output limit
const float outlimit[PIDNUMBER] = { 0.8 , 0.8 , 0.4 };//

//limit of integral term (abs)
const float integrallimit[PIDNUMBER] = { 0.8 , 0.8 , 0.4 }; //
```

The default limit for roll and pitch is 0.8, and for yaw 0.4 in this case.

The yaw pid limit could be increased from 0.4 in both places or the other 2 axis could be reduced, for example.

Just play with these values a bit and see what happens. Sometimes even reducing yaw limit (or one of the others) can help - a quad's behavior is not always logical...