

Pedals Come standard with CAM4 and CAM6 , CAM5 is extra order.

**There are three places to adjust centering force :**

1. Spring tension Screw - can increase/decrease the overall force.
2. 2x positions on a Cam - arm - hooking the spring on inner/outer position achieve more or less progressive increase in strength toward the end of deflection while the feel in the center stay the same.
3. Exchanging CAM profiles - small curved pieces which guide the bearing that is responsible for centering force. By using different curve for the CAM different centering feel and forces are achieved.

So, why exchangeable CAM you might ask - since there are so many possibilities already. Well, cam profiles give you possibilities to fine tune centering feel - with or without centering detent, linear increase in force or rapid progressing .... I'll try to demonstrate differences between cam's

CAM4 : It is voted by testers and first customers as best all around CAM. It feature very low center detent which gives you realism and precision around center ( no "bump"). It is realistic until you try to reach the ends of deflection because curve is slightly modified on the middle of deflection in order to reduce strength at the end - not full progressive , and not linear increase in strength. It is made as a compromise, reduced realism a bit toward the end of deflection so it's not so hard to press the pedals fully.

CAM5 : similar to CAM4, same center detent, but has cleaner progressing increase in force toward the end of deflection. It is the most realistic CAM for piston driven planes with simple wired rudder controls. However, because of it's realism - to achieve end of deflection require a lot of force. If you are a PC fighter pilot for example, in the ends of deflection you will not be very precise ( arguable, but common opinion)

Pedal users that previously used „Simped's“ find this CAM too big transformation ( Simped's had only linear and very weak centering, and large center bump) . But after they get used to MFG Crosswind for 1-2 months ...they tend to go from CAM4 to CAM5 if they pursuit realism.

CAM6: completely different from CAM4 and 5. Feature noticeable center detent , not big like on simped, saitek etc, but well noticeable compared to CAM4-5 ( half way in between). Toward the end of deflection it has much less progressing increase in strength compared to CAM4,5. It is made such for two purposes :

- realistically model forces of airliner ( adjust to very tight spring settings and outer CAM arm position)
- best compromise for precision PC dogfighting. ( very weak spring combined with inner CAM arm position).

*Center detent gives possibility to keep the rudder straight without concentrating - to achieve top speed.*

*Less progressive increase in strength gives better aiming accuracy toward the ends*

NOTE :

- few ROF duel pilots asked me to make new CAM which will be like CAM6 around the center, but from cca 30% of rudder deflection toward 100% of rudder deflection to keep the forces at the same strength. They think it will give more precision. I will produce such cam next year and we'll see if they were right :-)
- If you think you can build yourself a CAM, IT is impossible without a proper drawings. You need to know quite a lot of parameters, and even if you know all that you would probably end up building something that you don't like in the end. First of all – cam profile is not symmetrical. If it is symmetrical it will not deliver same amount of force for left and right movement !!!
- I will consider publishing cam drawings in DXF format in the future
- I will also consider making CAM profile calculator for making custom CAM's, but only if there is enough interest.

**Here are CAM drawings overlapped to give you some thoughts. This is a LAYERED PDF...you you can turn ON/OFF different layers in this document in order to hide/show only specific CAM's. Zoom in to take a closer look at the center....**

CAM4 CAM5 CAM6

CAM3 - obsolete

No center detent at all

CAM 2 - obsolete

Simped's alike center detent

