

Review of  
**TPR Pendular Rudder Pedals**  
Manufactured by ThrustMaster

*Intro*

---

Flight simulation has changed greatly the past decade and is becoming more and more professional with a high degree of realism, in-depth systems configuration and quality in the software - here both the platforms which e.g. are upgraded to 64-bit, as well as the add-on aircraft and sceneries. Also the interest and demand for flight simulation gear has changed, and I believe the interest specifically for hardware / flight simulation gear is increasing due to better technology providing the simmer with an increased experience of actually flying an aircraft.

I have for several years now had a keen focus on hardware and flight simulation gear, and this time I have moved my focus on to the rudder pedals which quite often is an overlooked piece of flight simulation gear. The various rudder pedals that I have tested before these TPR pedals are all with a straight forward/backward movement, but this time I have set my eyes on the new pendular rudder pedals from ThrustMaster. This new and innovative design is in real life not a new design, but it is within flight simulation and it completely changes the experience of using the rudder pedals – this absolutely in a very positive way.



## *Packaging, Delivery & Assembly*

---

The TPR pendular rudder pedals were delivered directly from ThrustMaster in France and to my home address in Denmark. The package was sent by FedEx and the complete delivery time was shot, only 3-4 business days in total. When I received the package I quickly checked the box for potential hard handling, and found that the box was in perfect condition.

The outer box is made from hard and thick cardboard providing the package with great stability and protection. Inside of the outer box I found the sales box which is just a thin cardboard box and inside the sales box were the rudder pedals perfectly packed, first within a thin plastic bag and secondly in form-shaped polystyrene pieces for perfect support of the rudder pedals.

When unpacking the rudder pedals from the form-shaped polystyrene, I noticed that the brake pedals was not attached. I found the brake pedals each placed inside a specific designed sealed compartment of the form-shaped polystyrene, where they were perfectly fastened and unable to get scratched or anything else from outside material. Really good protection and excellent designed for optimal packing. Both brake pedals was of course also packed within a thin plastic bag just for extra protection.

Since the rudder pedals are not completely assembled when received, you will need to do the final assembly yourself. This however is very easy, there is included a guide for the assembly and also for the adjustments of the pedals as well as the necessary tools for fastening etc. The tools are placed in a small plastic bag also placed in a small space in the form-shaped polystyrene.

The assembly specifically is just to mount both rudder pedals on to the pendular brackets and thereafter to connect the left brake sensor to the left rudder pedal and the right brake sensor to the right rudder pedal. Now the set is complete and ready to be mounted into your home cockpit setup and connected to the computer. The entire assembly took me about 10 minutes including reading and understanding the guide which is very user friendly and with good quality images that shows 'how-to' etc.

When performing the assembly, well... at any given time of course, you can adjust the angle of the pedals to support your specific configuration or preference. The angle could vary depending on your seating compared to the height of the pedals.

Also included are 1x standard black USB2 cable with male USB/A to male USB/B of app. 1½ meter in length that is used for the connection to your computer or USB-hub or similar.





## *Look & Feel*

---

Taking a look at the TPR rudder pedals, the first thing I noticed was the massive size of the complete set, not just the pedals but the entire set also featuring the column and the connection brackets – the other rudder pedals that I have previously tested were all very flat, but this set is rather tall and do require more available space for mounting into the home cockpit.

The pedals, the column, the brackets and the bearings etc. are all made of metal – this is a 100% metal structure resulting in a rather heavy weight of 7 kgs equal to about 15.4 lbs. This heavy weight provides the simmer with a feeling of high quality as well as providing the pedals with superb ballast if you desire to use the pedals directly placed on the floor without being mounted/fastened.

There are a total of 32 plain bearings which all are of industrial quality. The metal structure, the industrial quality and the heavy weight provides the set with a great sense of quality, sturdiness and realism. Most of the electronics are placed inside the column with a few exceptions as the left and right brake sensor which are placed on the sides and connected to each pedal.

The look is awesome and features clean, smooth and high quality black paint. The rudder pedals are absolutely beautiful and very professional manufactured with an eye for perfection – certainly real craftsmanship for sure. They have a really cool aviation look due to the size, the pendular system but also the pedals themselves which most of all looks like some fighter pilot aircraft pedals.

Mounting the rudder pedals into your home cockpit setup can easily be done using the integrated floor mounting bracket that features holes for four screws. Since the floor mounting bracket is painted I do recommend that you insert a plastic washer between the screw and the bracket just to avoid scratching the bracket.

The brake sensors are cylindrical and they are activated when being pulled out. The resistance in this sensor mechanism is fair providing a great feel of realism and accuracy, and the back-to-start position is firm with a good tension that automates the return perfectly.

Focusing on the motion of the rudder itself I found it to be very smooth and noiseless with a superb sense of how much rudder motion I applied. The traveling distance is long so you get a very good feel of even the smallest corrections. The large traveling distance helps the simmer to gain more accuracy and makes e.g. taxiing an aircraft more easy.

Also the back-to-center position is awesome – there are two rather large springs placed on the backside of the column controlling this function, and the springs generates a firm and realistic resistance that are much like real life. If needed, these springs can manually be adjusted to a specific preference. The pedals are very comfortable and the pedal itself has a good size however, the pedal does not support a footrest.



Each rudder pedal also features a super smooth and noiseless motion however with a shorter traveling distance than the rudder function. This it also should be and it fits the pedals nicely providing a very realistic and authentic experience when using these pedals. Each pedal has an adjustable tilt with each 5 different basic positions at angles between 35 and 75 degrees. To be able to change the tilt on the pedals makes the pedals more versatile and now able to mount into almost any home cockpit. No matter if the pedals are, like in e.g. a fighter jet placed close to the same level as the seat, or more like a tubeliner placed on the floor, the tilt option make the usage of the pedals perfect in any home cockpit environment.

I cannot verify the durability since I have only used these pedals for two month for this review, but the quality of the components is certainly high level quality, so my expectations will be that the pedals will also have a great durability – I'll let you know ...



## *Connection & Performance*

---

Connecting the TPR pendular rudder pedals are quickly done, you just need to connect the included USB2 A/B cable to the USB chassis connector found on the backside of the rudder column, and then plug in the cable into the computer or USB hub or similar. The pedals work perfectly using either a direct connection or through a hub – even a 7 port hub without external power supply performed flawlessly. Additionally I also tested the connection on both USB2 and USB3 connections, this because I have several times experienced that connecting hardware on a USB3 connector could result in issues where the hardware would not be recognized and thereby not working, this however was no issue with the pendular rudder pedals.

The rudder system is a plug and play unit and works straight out of the box. No 3<sup>rd</sup> party software is needed to get the pedals to work however, I do of course recommend to calibrate all 3 axes (rudder and both wheel brake axis) as well as to check the assignment of the wheel brake functions on both pedals together with the rudder axis.

I tested the connection on both OS Win7 and Win10 and I found no issues. Also I tested the pedals on several flight simulation platforms as FSX, Prepar3Dv4, Xplane11, DCS World 2.5 and Wings of Prey and the pedals was perfectly recognized on all platforms.

Even though the pedals are plug and play you can of course assign other functions that fits your preference – here you can use the various assignment tools found within each simulator or you can use FSUIPC created by Pete Dawson's or any other 3<sup>rd</sup> party programming tools. I have tested the assignment using all the built-in tools in each simulator platform as well as the FSUIPC and they work perfectly. Recommended by ThrustMaster is of course their own T.A.R.G.E.T. software where you can setup specific profiles for the various TM devices etc.

These rudder pedals features the H.E.A.R.T. → Hall Effect AccuRate Technology – 3D hall effect with magnetic sensors which provides extra accuracy. Description of Hall Effect sensors according to the Wiki:

*'A Hall Effect Sensor is a device that is used to measure the magnitude of a magnetic field. Its output voltage is directly proportional to the magnetic field strength through it'*

Each axis features a 16-bit precision (both wheel brake axis and the rudder axis) and each axis have a total of 65,536 values with a precision of 0.005 degree providing these pedals with an exceptional high performance. In regards to the firmware, then you can of course also update the firmware if needed and how to do this is described in the included guide or you can go to the support page at ThrustMaster.

## *Conclusion*

---

The pendular rudder pedals from ThrustMaster is certainly a new and very interesting concept which I am sure will catch on in the flight simulation community. My experience of these rudder pedals are that they are professional, high quality, sturdy and durable rudder pedals that absolutely increases the experience of flight simulation greatly.

The pendular motion is awesome and super smooth, the ‘back-to-center’ is firm and precise as well as the motion of the pedals itself are extremely accurate detecting even the smallest changes. In my opinion the pendular motion works much better and provides a much more realistic experience than what I have previously tested with a forward/backward motion.

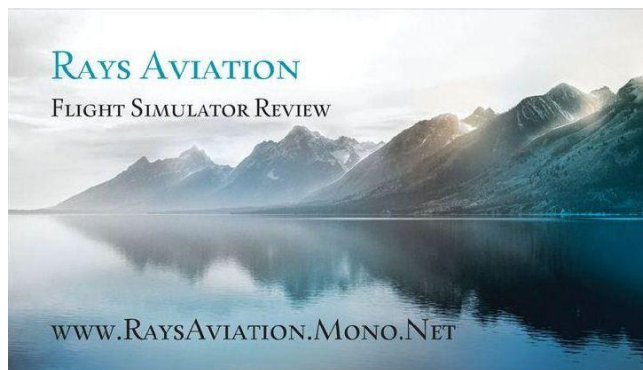
The pedals are plug and play and work perfectly on all platforms that I used for my tests. The weight of the pedals, the finish, the high level of quality and the entire experience again shows that ThrustMaster is a serious company that has kept a perfect focus on creating a serious and high quality new concept for the flight simulation community.

Yes, the price tag for these pedals is above average but that said they are absolutely worth it. This is a high quality product featuring an interesting new concept and I just love it. If you are a serious simmer I would most certainly recommend taking a closer look at these spectacular new rudder pedals. The rudder pedals works perfectly for flying everything from gliders and GA aircrafts to airliners, business jet, military jets and even helicopters.

I rate these pendular rudder pedals with a full house, a 5/5-stars rating together with the Rays Aviation Excellence Award – An absolutely professional piece of hardware that is a perfect solution for the serious flight simmer. Thank you ThrustMaster for thinking out-of-the-box and creating these beautiful and awesome rudder pedals for the home cockpit.

Keep up the great work!

## **Rays Aviation**



## *Review Computer Specifications (primary test-bed)*

---

- Windows 10 (64-bit)
- Windows 7 (32-bit) (secondary system)
- Intel Core™ i7-4790K 4x4.00GHz (Turbo 4x4.40GHz)
- Asus Maximus VII Ranger (ROG-series)
- Antec Kuhler H20 650 Water Cooler
- Kingston HyperX Beast-series 32Gb DDR3-2133 RAM
- 500Gb Samsung 850 EVO SSD
- 3Tb Seagate Barracura (7200rpm, 6Gb/s)
- Asus GeForce GTX 980 Strix OC 4Gb
- 150/150Mbit Fiber Internet Connection
  
- Tested on the following flight simulation platforms
  - Prepar3Dv4+
  - Xplane11
  - FSX w/Acceleration Pack
  - Wings of Prey
  - DCS World 2.5