

Review of  
**TCA Officers Pack Airbus Edition**

Created by ThrustMaster

*Intro*

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The past decade I have seen flight simulation change greatly and seen many new home cockpit builders starting up projects of building both authentic but also dynamic or multi-purpose home cockpits to increase their flight simulation experience. To do so, you need to be able to either build your hardware yourself, which is actually becoming more and more for everyone since the prices for e.g. 3D printers and home CNC machines are getting into price ranges where a private person can also afford it, or you need to have a series of professional companies that will invest in the flight simulation community and build professional grade hardware to be purchased by the home cockpit builder.

Today we have several professional companies who develop and produce hardware for the home cockpit builder and one of them is ThrustMaster. In this review I will cover their latest addition for the flight simulation community – the TCA Officers Pack Airbus Edition which consists of a side stick and a dual throttle quadrant that both are built as replicas of the real Airbus side stick and throttle quadrant.



## *Packaging, Delivery and Assembly*

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I received the TCA Officers Pack Airbus Edition directly from ThrustMaster – the set was ordered on a Tuesday and I received the set already Thursday morning giving the packaging and transportation a total lead time of only two days. That is a really good delivery time from departure in France and to arrival in Denmark using the transport company FedEx.

The set is packed in one box where the exterior box is designed as a heavy duty transport box and features hard and thick cardboard with an excellent support for the internal box. Inside the external hard cardboard box is the display box which fitted perfectly (dimension wise) into the external box, again for better protection. The display box is made from thin cardboard and does not support the set itself. Opening the display box I could now see the side stick and the throttle quadrant – they were both perfectly packed in a 2-piece form-shaped cardboard wrapping that was a perfect packing and shock absorbent for the transportation. Furthermore each item was also wrapped in small plastic bags to make sure that the side stick and throttle quadrant would not be scratched or similar during packing, transport or unpacking at the customer. Overall this is indeed a superb packaging that absolutely supports the set perfectly.






When I had unpacked both the side stick and the throttle quadrant, there were actually no assembly needed to be performed – I could just plug both units into my computer and go flying right away. Of course there are ways to modify both units as you like to, but this I will get into more details later in the review.

There are a few tools included in the set such as a mini special-shaped Phillips screwdriver which has multi-purposes and can be used on both the side stick and the throttle quadrant (the various functions will be described later), two plastic fittings that can be used to attach and extra throttle quadrant or the upcoming extra side pieces for the throttle quadrant, and finally also four standard screws colored black. For the throttle quadrant there are also included stickers to be placed on the engine starter switches – there are two sets included where both sets features the numbers 1 to 4 providing the home cockpit builder to set up a full A340/A380 throttle quadrant setup.

For the side stick there are two additional button pieces included – when you receive the side stick you already have one red cylinder shaped button and one black orb button mounted on each side of the side stick. There are another set of each button included however these are mirrored buttons so that these can be placed on the opposite side of the side stick than the original buttons – this feature provides great versatility so that you can customize or inter-change the side stick to be for either the captains or the first officers side (left vs. right side) – or.... You can mount either both red cylinder buttons or both the black orb buttons with one on each side to create a new side stick layout.

There are no specific manuals included in the set – here you need to visit and download the various manuals and measurement spec drawings from <https://support.thrustmaster.com/>. When you enter this

download section you will find the following files ready for download. All files are PDF files and will just take you a few seconds to download.

 T16000M-FCS-cockpit-Setup.pdf	23-10-2020 15:01	Adobe Acrobat D...	349 KB
 TCA_Quadrant Airbus_Edition_user_man...	23-10-2020 15:02	Adobe Acrobat D...	9.654 KB
 TCA_Quadrant-cockpit-Setup.pdf	23-10-2020 15:01	Adobe Acrobat D...	2.050 KB
 TCA_Sidestick_AE_User_Manual.pdf	23-10-2020 15:01	Adobe Acrobat D...	19.718 KB
 TCA_Sidestick_Throttle_modes.pdf	23-10-2020 15:01	Adobe Acrobat D...	1.699 KB

The **T16000M-FSC-cockpit-Setup.pdf** is a one page technical scale sheet in A3 format providing the layout with measurements of the bottom of the side stick.

The **TCA\_Quadrant Airbus\_Edition\_user\_manual.pdf** is a 379 pages technical user manual for the throttle quadrant and the features included – this is recommended to go through to get to know each function better. Don't worry – the 379 pages are because the manual is written and translated into multiple languages. Each language is about 18 pages, so this is quickly completed and provides a very nice overview of the entire throttle quadrant.

The **TCA\_Quadrant-cockpit-Setup.pdf** is a 3 pages technical scale sheet in A3 format providing the layout with measurements of the bottom of the throttle quadrant, two throttle quadrants connected as well as the side pieces which will be released later on to support the quadrant setup.

The **TCA\_Sidestick\_AE\_User\_Manual.pdf** is a 160 pages technical user manual for the side stick and the features included – this is as the throttle quadrant user manual, created in multiple languages where each language is about 6 pages. Again I would recommend going through this manual for sure to be able to detect all the included features of the side stick.

The **TCA\_Sidestick\_Throttle\_modes.pdf** is a 44 pages manual that describes the throttle axis on the side stick and how to change from mode 1 to mode 2 and vice versa. This is because the throttle axis on the side stick also features a virtual button to activate the reverse thrusters – this can be set on mode 1 which is normal usage of the throttle axis meaning with a 100% movement and no virtual button; or mode 2 which has a virtual button for the remaining 17% of the lower movement. This manual is also created in multiple languages and each language is about 3 pages long.

All manuals and technical sheets are written in a very easy-to-read way and the fact that they are all created in multiple languages, improves the success rate of informing simmers around the globe of all the awesome features that this set contains. Additionally the manuals and technical sheets feature perfect illustrations/images of each function, so you can easily transfer the info from the manual directly to the throttle quadrant or side stick.

## *Look & Feel*

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I set my eyes first on the replica throttle quadrant – that is one really amazing piece of hardware which beautifully replicates the real throttle quadrant of the Airbus A318-A330 series. The colors are a perfect match according to the pictures that I could find of the real quadrant. The levers are created in great detail with actual working thrusters on each lever and which is also very much visually in accordance to the real quadrant.

The throttle quadrant features two thrust levers that are independent but which can also be locked together by the Phillips screwdriver (one of the several functions that this screwdriver has). Each thrust lever has one reverse thrust mechanism as well as one active pushbutton. The thrust levers have a super smooth and elegant movement and they also feature a combined tension control to support the specific simmers preference. The tension control is located on the front end on the base of the throttle, and is a Phillips screw-head that can be turned either left or right using the included screwdriver. Turning left releases the tension and provides a looser movement of the levers versus turning the tension control to the right, will result in a tighter and more firm movement of the levers.

The reverse thrust mechanism is not a button but instead a spring-load that will either block or unblock the hatch that controls the levers movement to go lower than idle – the mechanism is super smooth and looks very authentic.

On the levers you also have a reverse thrust lock mechanism – this mechanism enables you the possibility to use the throttle levers as either a quadrant with a the reverse thruster function or simply a standard GA throttle with a 100% movement. The same idea as with the throttle axis on the side stick mentioned earlier. Turn the knob to ‘I’ means that the reverse thrust mechanism is enabled and turning the knob to ‘O’ means that the reverse thrust mechanism is disabled. Before you turn the knob to ‘O’ to disable the reverse thrust mechanism you need to hold the reverse thrust mechanism up while you turn the knob, otherwise it will not work – remember that you need to do this on both levers.

Next to the thrust levers you find two iconic on/off switches with a hat/knob perfectly shaped as a replica for the engine starter switches. Here you can add the legends for the corresponding engine numbers found on the included stickers. These engine switches are downscaled according to the real switches to make sure that there is space enough for them, but they still provide excellent feeling and certainly adds to the overall experience of the throttle quadrant.

Further back you find two black click/push buttons as well as one rotator switch which can be turned left and right as well as centered. The knob supporting this rotator switch is a beautiful Airbus style replica knob but also in a downscaled version then of the real knob.

Flipping the throttle over and taking a look at the bottom side you find an interesting feature. Using the Phillips screwdriver you can unscrew the two brackets placed in the center of the throttle (there are a

total of four screws for these brackets). These two brackets can be turned 180 degrees and by doing so, you can here customize if the throttle should work as an Airbus style throttle featuring detents or as a Boeing style featuring no detents. Also you will find on the bottom the connectors for connecting a secondary throttle or the side pieces – these are described later under *Connections & Performance*.

In total the throttle has 2 axes and 8 active action buttons. Additionally the throttle also has 4 virtual buttons on each axis providing the set with a total of 8 virtual buttons. These virtual buttons are used when you setup the throttle quadrant for the Airbus style providing the detents of reverse thrust, idle, climb, flex and TO/GA. The detents are firm and very noticeable but still also very smooth and fluently and provides a good sense of realism when e.g. flying the Aerosoft Airbus series.

Neither the throttle cabinet or base nor the throttle levers or engine starter switches are made as die-cast aluminum pieces but instead they are made from hardened high quality plastics which has been perfectly smoothed and then painted. The look is awesome and indeed very realistic, and the throttle is absolutely very professionally made. I would have loved it even more if each throttle lever would have been made using metal and if the casing had an increased weight. The weight is very low which is perfect to limit transport/delivery costs, but as a simmer I would have loved to feel an increased weight as I have also seen and felt in other ThrustMaster products. Never-the-less, the quality is high and the throttle quadrant is beautiful and a very authentic replica.

I did notice that there were no dust-covers to protect dust from getting into the electronics around each throttle lever. This there are on the real quadrant and it would have been awesome for this quadrant if the covers were included. It would have been the icing on top of the cake in my opinion.

The Engine starter switches looks like metal knobs but they are actually also made from plastic – the look is superb but the feel is average. The knob for the rotator is also plastic, but that is actually quite ok since that is true to real life. I know that there are several good reasons for making this throttle using plastics and not metal, and that is e.g. production costs as well as transport/delivery costs, so to be able to provide the flight simulation community with a fair priced, awesome and authentic looking Airbus throttle quadrant, the plastic version would be preferred.

In regards to the scale of the quadrant, then the levers and reverse thrusters are as far as I can see, very realistically made however, in regards to the engine starter switches as well as the rotator knob, then these seem quite small in size and I am quite sure they are not a scale 1:1 as also previously mentioned.





Now I moved my focus to the side stick which defiantly also is a very impressive piece of high quality hardware. The side stick looks like the original idea and base of the *T.16000M FSC* but the grip is heavily modified and upgraded to Airbus style. The color shades are perfect and very true to real life and the layout of the stick resembles the real side stick perfectly.

On the base you will find 12 action buttons – six placed on each side. The buttons are click buttons which need a fair amount of force to be activated. Furthermore you also find a slider which functions as default as a throttle lever. This throttle lever you can customize to function either with a detent on the lower 17% of the movement or with a full 100% movement without a detent. The difference is that if you set the throttle to be without detent, you hereby deactivate the build-in virtual button and the throttle will function as a standard throttle without a reverse thrust function. On the other hand you can set the throttle to have an active detent and virtual button providing the option of reverse thrust activation on the lower 17%. (also previously described)

The grip features one hat-switch, one left and one right click switch and two index finger controlled click switches (the top one is easily overlooked). This means that the side stick in total features 16 action buttons, one hat-switch and one virtual button. Additionally you also have a total of 4 axes – the X & Y for the elevator and ailerons, the Z axis for the rudder and the slider axis for the throttle.

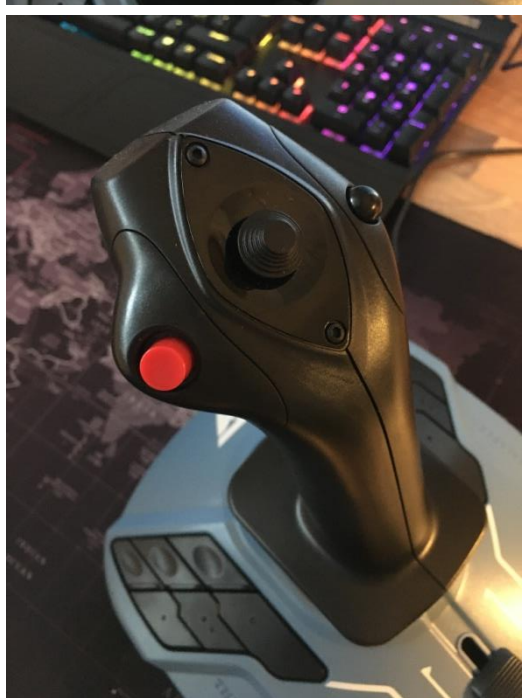
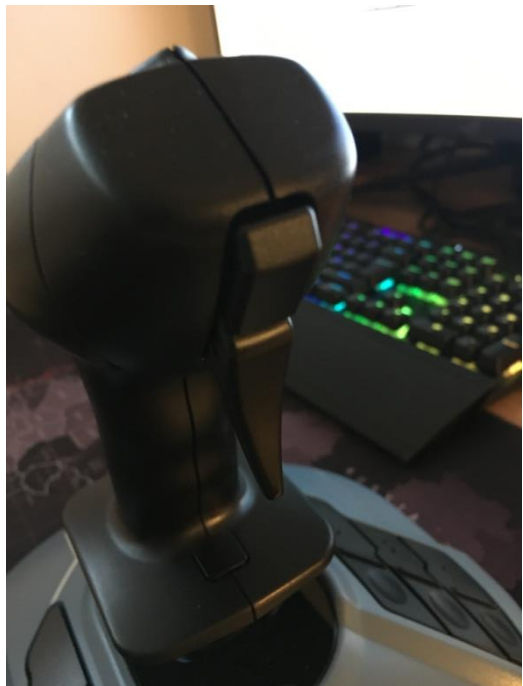
Another feature that the side stick grip has compared to the original T.16000M FSC is a hard lock mechanism feature placed on the front of the hand rest. Not easily seen but if you click the mechanism you will lock the rudder (Z-axis) in neutral and hereby deactivating the rudder function. This feature is perfect if you use the TCA pack with additional rudders and do not wish to have a dual overlay function.

The side stick is as the throttle quadrant made from hardened high quality plastic with a smooth finish and a beautiful and realistic paint.

Taking a closer look to the side stick, then this side stick can be modified to be used as either the captain's side stick or the first officer's side stick. The left and right button on the top of the grip can be removed and replaced by the additional button pieces included in the set. That means that you can quickly convert the layout of the top buttons to be for either the left or right hand. What an awesome and superb versatile grip, that really is an excellent idea. That said, you can also modify the grip for your own layout by using e.g. the two 'red' buttons or the two 'black' button together with each other, now providing a completely new look – that you can do as you prefer. (also previously described).







## *Connection & Performance*

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First we will have a look at the throttle quadrant – on the base of the quadrant there are placed the following connectors and features. On the back end in the left side there is placed a slider switch which is used to define if the throttle quadrant should be recognized as engine 1 and 2 or engine 3 and 4. This enables the simmer to have a dual throttle quadrant setup so that you can have a total of 4 engines and hereby accommodate e.g. a A340 or A380 setup – well any 3 or 4 engine setup, but since the quadrants are Airbus replica's then the A340/A380.

On the bottom of the throttle quadrant there is placed two SATA connectors which are to be used to add e.g. an extra throttle quadrant or the upcoming side pieces, so you don't need to use additional USB connectors to complete the setup – a very good idea since most home cockpit builders often struggle with way to many USB connections.

On the front end of the base there is located one RJ12 connector marked TFRP that can be used to add a set of rudder pedals to the configuration. This is again a very good idea for how to keep the number of USB connections as limited as possible. Actually the PCB within the throttle quadrant features 7 axes where 3 are reserved for the rudder pedals (one for the rudder function and one for each of the wheel brakes).

On the front end you also have the connector for the USB cable – the cable is included in the pack but it is not fixed to the throttle quadrant so you have to manually connect the cable. The connector is the USB-C and the cable included is a USB A/C cable for standard connection to the USBs in the computer or in a USB-hub.

There are no other connectors found on the throttle but the tension control previously described is located in between the two connectors on the front end of the quadrant. Each throttle levers features a potentiometer with a full range of 0-65536 values providing the quadrant with a very high quality and great sensitivity.

Moving the focus to the side stick there are not that many connectors – actually none. The side stick connects to the computer or a USB-hub using a fixed USB-A cable (attached to the side stick and cannot be removed). However if you flip the side stick upside down and take a look at the bottom you will here find a small slider switch marked 'Left handed / Right handed' – using this switch in a setup featuring only one side stick, will not have any impact or effect, but if you are creating an environment featuring a dual setup, then you can apply the captain's side stick as left and the First Officer's side stick as the right. Now each side stick is recognized as an individual side stick which is awesome and makes the side stick a superb and versatile piece of hardware.

If you have a setup with no rudder pedals, then no worries – the side stick also features a twist function to support the rudder pedals – this is previously described and also how to lock the twist if you do have

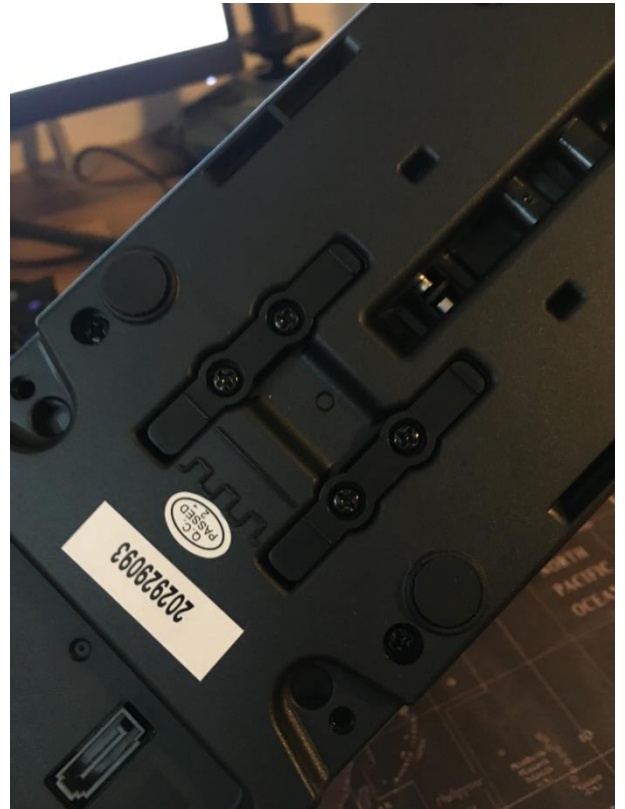
a set of rudder pedals connected. The twist function features a 255 degree twist which is very good for use as a rudder function if you don't have the rudder pedals.

The scale of the side stick is as far as I can see, very close to a full size scale 1:1 and the stick just looks awesome.

The X and Y axes on the side stick each has 16383 values from 0-100% and both axes feature magnetic hall effect sensors providing a total resolution of more than 268 million values – now that is high quality for sure. The slider axis (the throttle axis) has 0-255 values where the first 17% are as default fixed with the virtual button and the reverse thrust function previously described.

Supported OS systems are Win8 and Win10 – I tested the set on Win10 and I can confirm that the set works perfectly. Furthermore I have tested both the throttle quadrant and the side stick on the platforms P3Dv4.5, Xplane11 and DCS2.5 and the throttle and side stick is perfectly recognized as gaming ware that you can assign/program within each platforms assignment tools. I did not test the TCA set on FSX or MSFS2020, but since they work perfectly on P3Dv4.5 I would assume that they would also work on these platforms as well.

Programming or assigning the various functions is quickly done through the build-in assignment tools on each platform. You can also use the software supplied and supported by ThrustMaster which is the T.A.R.G.E.T. software or actually any other external programming software like FSUIPC, SIOC, LINDA etc. should also be okay to use.



## *Conclusion*

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To wrap up my experience of the TCA Officers Pack Airbus Edition from ThrustMaster, then this set is most certainly a superb and high quality set that absolutely increases the flight simulation experience greatly.

The pack is a plug and play setup where the various functions already have default assignments but you can of course customize and assign other functions as you like yourself. There are a total of 31 programmable action buttons, divided on 22 physical buttons and 9 virtual buttons. Additionally there are combined a total of 6 axes with extra axes as spares for e.g. direct connected rudder pedals.

Hall Effect Accurate Technology (H.E.A.R.T) ensures high quality and perfect sensibility for the demanding flightsim enthusiast and the throttle quadrant as well as the side stick feels super smooth on all axes.

Over all a perfect, versatile and beautiful replica of the Airbus throttle quadrant and side stick that absolutely looks awesome and will fit any simpit for sure - if you like flying the Airbus series, then this is certainly a must have set of controls.

The set scored an excellent 4/5-star rating and I will absolutely recommend this set for my fellow flight simulation enthusiasts. The price is fair, the quality is superb and the looks are amazing. Thank you ThrustMaster for creating this awesome replica set.

## **Rays Aviation**

