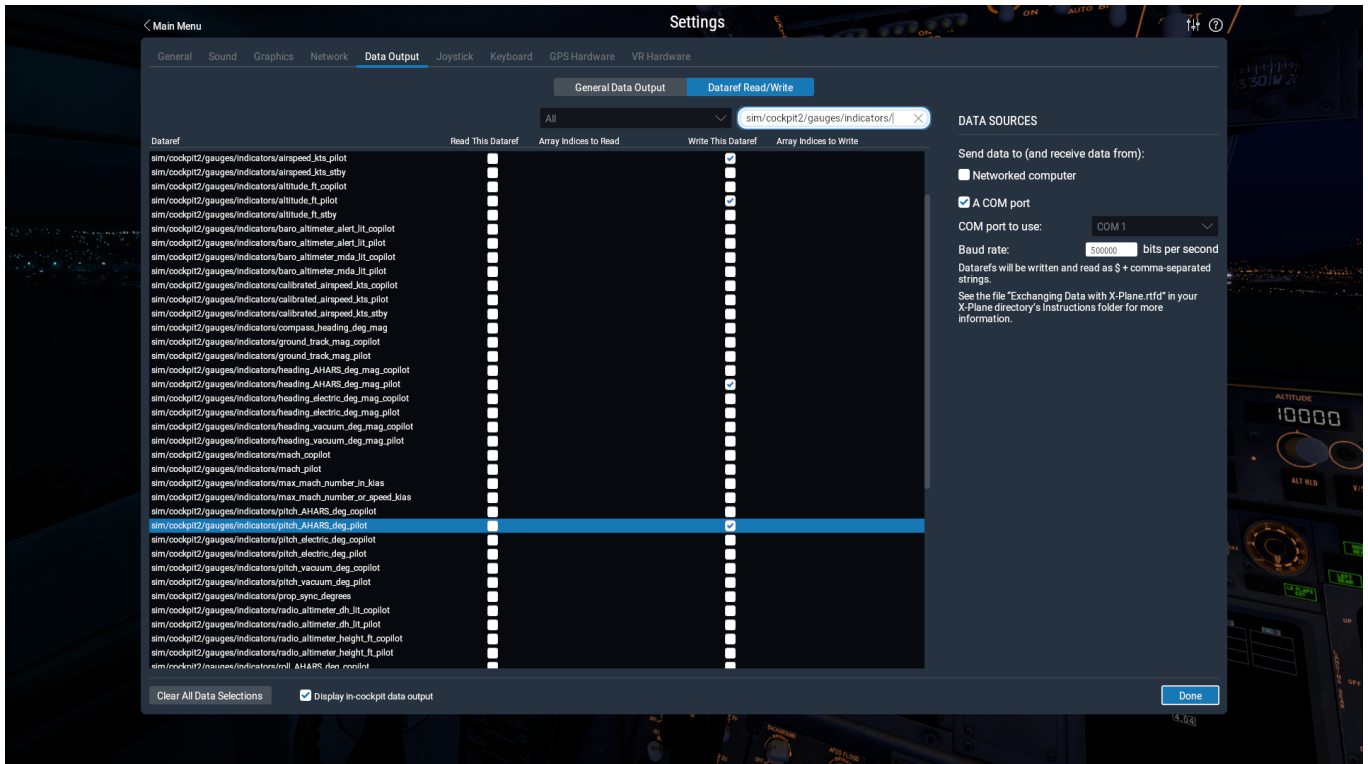
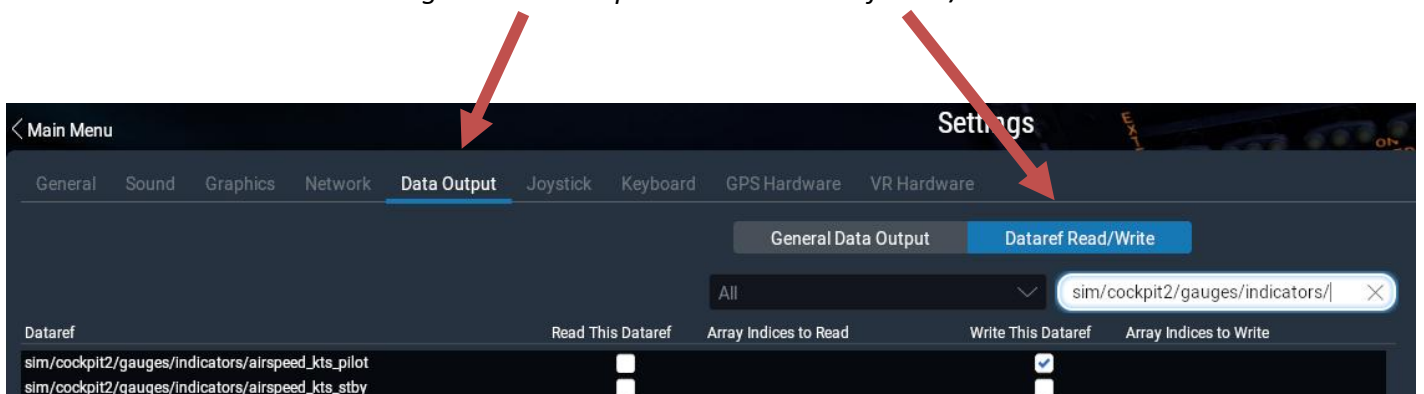


How-to setup X-Plane data output (without plug-ins or other applications)



The directions below refer to X-Plane v.11 but they should be about the same for other versions as well. From *Main Menu* → *Settings* → *Data Output* choose “*Dataref Read/Write*”.



This setup is only needed to be done once since after it is completed, all the settings are maintained so we don't have to repeat it every time the simulator is started.

There is a huge list of “Dataref” values but we only need a few of them. We need the simulator to write “datarefs” which will correspond to the following 7 values: speed, altitude, heading, pitch, roll, slipball and rate of climb/descent in this order. It is crucial to select the required values in the specified order otherwise they will be received in the wrong order which is not useful. Select a value by checking “Write This Dataref”. One example of chosen datarefs is this:

- 1) sim/cockpit2/gauges/indicators/airspeed_kts_pilot
- 2) sim/cockpit2/gauges/indicators/altitude_ft_pilot
- 3) sim/cockpit2/gauges/indicators/heading_AHARS_deg_mag_pilot
- 4) sim/cockpit2/gauges/indicators/pitch_AHARS_deg_pilot
- 5) sim/cockpit2/gauges/indicators/roll_AHARS_deg_pilot
- 6) sim/cockpit2/gauges/indicators/slip_deg
- 7) sim/cockpit2/gauges/indicators/vvi_fpm_pilot

General Data Output Dataref Read/Write				
Writing Search				
Dataref	Read This Dataref	Array Indices to Read	Write This Dataref	Array Indices to Write
sim/cockpit2/gauges/indicators/airspeed_kts_pilot	☐		☒	
sim/cockpit2/gauges/indicators/altitude_ft_pilot	☐		☒	
sim/cockpit2/gauges/indicators/heading_AHARS_deg_mag_pilot	☐		☒	
sim/cockpit2/gauges/indicators/pitch_AHARS_deg_pilot	☐		☒	
sim/cockpit2/gauges/indicators/roll_AHARS_deg_pilot	☐		☒	
sim/cockpit2/gauges/indicators/slip_deg	☐		☒	
sim/cockpit2/gauges/indicators/vvi_fpm_pilot	☐		☒	

In the example above we selected “sim/cockpit2/gauges/indicators/airspeed_kts_pilot” for the first data which corresponds to the speed value. This is the pilot’s speed gauge indicator in knots but if we wanted to, we could select any other dataref as long as it outputs speed; for example we could select the co-pilots gauge instead).

If you later want to check if everything is ok (or troubleshoot) you can view the file “X-Plane.prf” with a text editor. In X-Plane v11 this is kept under this path:

“\X-Plane installation location\Output\preferences\X-Plane.prf”.

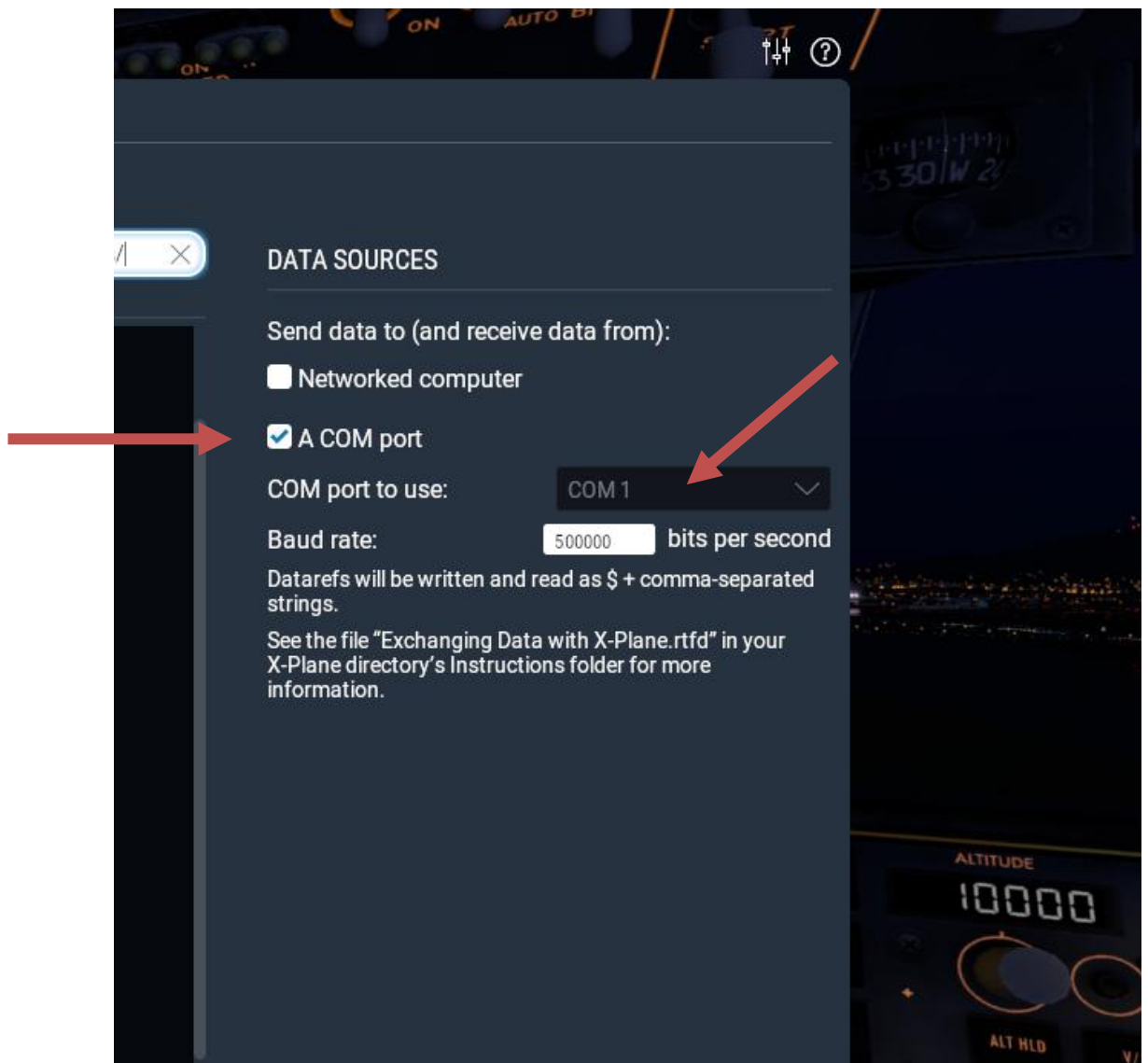
Near the end of the file you can view if the selected datarefs for output are in the correct order. As this is a general preferences setting file, make sure to only view the contents without altering anything!

Note that, presence of every single of the 7 datarefs is mandatory. If you do not want some part of the data to appear, for example if heading information is not required then it should be disabled through Horizon Clock’s setup menu.

The datarefs we choose will be sent to the communications port. This is set in the right pane as follows:

Under “DATA SOURCES” click and select “A COM port” and select the com port to use from the drop down list. When you plug in Horizon Clock depending on the Operating System (Linux, Windows etc) it will be identified as a new com port. Under Windows you can see the com ports of the system via “Device Manager”.

Finally under “Baud rate” type “500000” bits per second (that is five zeros). This completes the setup.



Within Horizon Clock's configuration setup menu choose "Other → Sim Mode → X-Plane" or "X-Plane.s". Option "X-Plane.s" is reserved to increase response time (by use of a plugin), but alternatively can be selected if the appearance of speed and altitude tapes are preferred to be a solid grey color.