Hot Air Balloon Hype Performance Group



Version: 1.0 Last Updated: 2022/10/6

Compatible only with Microsoft Flight Simulator 2020

Product Page: https://www.hypeperformancegroup.com/products/hpg-hot-air-balloon

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Introduction

Thank you for purchasing our Hype Performance Group Hot Air Balloon for Microsoft Flight Simulator 2020. We invite you to provide feedback on our discord server.

This simulation software and related materials and documents are a computer game which are NOT FOR FLIGHT and not to be used for any training, pilot familiarization, recurrent training or operational awareness training. The included software and manuals are not to be used for training or familiarity with any aircraft. The included software and manuals are not assumed to provide procedures for use on any aircraft and are for entertainment purposes ONLY.

Installation & Setup

What you need	Where to get it
Location of your MSFS Community folder	Where Is The Community Folder Or VIDEO: How to install addons
 Balloon package (HPG-HotAir-Balloon-Buildzip) License key 	Check your email, you will have both a license key and a link to the download. The download will come from Hype Performance Group Downloads. You will get a license key number as well as a link to the Hot Air Balloon Download Center

Locate the **HPG-Airbus-HotAir-Balloon-Build-___.zip** and extract the enclosed **hpg-hotair-balloon** folder to your MSFS Community folder location.

When clicking inside the **Community**hpg-hotair-balloon folder, you will see **HPG Hot Air Balloon User Guide.pdf.** If you have an extra folder, you will need to remove it so the sim can find the aircraft.

Aircraft Elements

Main Elements

The **basket** sits under the envelope and carries the crew and passengers, the **envelope** is the flexible balloon that holds the hot air. The **burners** sit above the heads of the crew and passengers. The burners are connected to Liquid Propane (LP) tanks at each corner of the basket. The burners fill the envelope with hot air, which can also be released more quickly by using the **valve** at the top of the envelope. To control the valve a rope is situated at one corner of the basket.





Avionics

Balloon avionics are very simple. A barometric altitude and barometric vertical speed indicator are used to back up the pilot's visual contact with the ground. The temperature display can show data from either a sensor at the top of the envelope or from the outside ambient air.

The temperature display will show **OVERHEAT** when the envelope exceeds 150C.



Burners

Vertical control is accomplished with the main burner (one or both together) and management of the envelope temperature. Use the temperature display and Vertical Speed indicator to manage your condition.

Note that once you begin an upward ascent, it will continue until the envelope cools, so small inputs are desirable.

Many balloonists maintain a maximum temperature of around 100C, which will give you a shallow ascent under most weight and atmospheric conditions. The balloon envelope material itself is capable of sustaining many cycles at this temperature, but will be able to sustain upwards of 200C for one session.

Burner controls

- Main Gas Valve (Red Trigger): Opens and closes the gas valve. The flame will immediately ignite as long as the pilot light was previously lit.
- Pilot Light (Gold Lever): Opens and closes a small valve and maintains a constant small flame, enabling the main gas valve to be





immediately effective without waiting for ignition. **Inoperative**. The main burner will always ignite as if an electric starter is present.

- 3. Gas metering valve (Blue Lever): This lever meters the amount of gas which the main gas valve will release. **Inoperative**. Our gas valve is fixed at a reasonable position, however the lever will still move in the virtual cockpit.
- 4. Pressure indication: This pressure indicator will confirm that there is gas in your connected tanks and the gas valve on at least one tank is open. If the gas valves are closed or the fuel is depleted, this indication will show zero.

Al Burner control

Automatic burner is available on the tablet (click the top clock), in either HEIGHT or ALTITUDE mode. Height mode will maintain height over terrain. Altitude mode will maintain barometric altitude. When the automatic burner is engaged the use of the rear burner will be exclusive to the AI that controls the burner. If the rear fuel tanks are empty this logic will apply instead to the front burner.



Throttle burner control

Manual burner control can be accomplished by clicking the red trigger, or by using your **THROTTLE AXIS** in MSFS control settings. Throttle axis is configured as follows:

Axis Range	Function
0-10%	Nothing. Leaving your throttle in this position will enable you to use the virtual cockpit or other controls.
10-40%	Shut off any active burners. You will move through this position swiftly but with enough time to move into the Nothing state and also turn off the burners.
40%-70%	Rear burner active
70%-100%	Both burners active

Envelope Valve

The rope in front of the pilot will activate the valve in the top of the envelope. When the valve is open, cool air will rush in from the bottom and hot air will be ejected, resulting in rapid envelope cooling.





NOT FOR FLIGHT - FOR FLIGHT SIMULATION USE ONLY

Envelope inflation and deflation

When standing on a ramp position, the envelope will start deflated (or immediately deflate after loading).

Using the burner controls you may inflate the envelope. The envelope will slowly inflate.









Take care to avoid collapsing the balloon inflight, which can occur if the temperature of the envelope is too high and it fails, or if the temperature of the envelope falls too low, and a wind gust causes the envelope (which is acting like a parachute at such low temperatures) to collapse.

When approaching a condition where the envelope could collapse due to low temperature, the envelope will begin 'wobbling' to indicate that a gust could cause a collapse.





Heading/Yaw control

Option 1 - MSFS Wind

The tablet control (click the top clock) will by default use the current wind conditions in MSFS. Use MSFS live weather or set manual wind layers to configure the atmosphere for your flight.

Option 2 - MSFS Flight Plan

As a fun alternative, the current flight plan may be navigated similarly to wind, by selecting the option on the tablet.

Limitations

Currently we orient the basket away from the wind (and slowly

orient this way as the wind changes), which is not realistic. Some hot air balloons have ropes to help orient the basket in the desired direction, but generally this is not accurate. However this

enables smooth flight without some problems we encountered. In the future we may be able to change this behavior.

Fuel and Payload

Fuel is LP but expressed as JET A in MSFS. You may change fuel condition at any time, or use other addons to change the fuel situation. Fuel will be consumed when burners are on. The front tanks are connected only to the front burner, and the rear two tanks only the rear burner. Each tank has a control valve which can be opened or closed, and a tank quantity indicator.

Pilot and passenger visual models may be selected ON or OFF based on adding at least 20LB on the respective weight station.

Lighting

Hot air balloons are generally for day flight only, but sunrise flights are common. The burner itself will cast a yellow light onto the ground, the basket and illuminate the envelope.

Use **Alt+L** or **L** to toggle the headlight attached to your head, this acts as a lamp and enables reading instruments and indicators in the dark.









Key Bindings

Using the **Hype Operations Center** program, you may assign custom relationships between the MSFS bindings you normally select, and the hot air balloon functions.

1. Install Hype Operations Center. The program will place a shortcut into your Windows Start menu.



- 2. Launch Hype Operations Center, visit the Hot Air Balloon page, and select View/Edit Key Bindings.
- 3. Click Add Binding and then select an MSFS event and a Balloon function.
- 4. Click Save. A new folder hpg-hotair-balloon-usersetup will be created in your Community folder. This folder needs to be read by the sim, so you'll need to restart if you have the sim running when it is first created. If you use Addon Linker, you will need to include this folder so the aircraft can read its key bindings from within.
- 5. If you are in a flight, click **Restart** in MSFS, which will reload the flight and the latest key bindings file.

Hype Operations Center - Home _

In the below example, various ADF and unused events are routed to useful functions.

🔨 Airbus H	H145 🛷 Hot Air Balloon	🚺 Scenario Editor 📕 Hype	Online	e 🖬 Hype Radio 🌣 Set	tings		1.0.16
		Ball	oon	Key Bindings			
		Bt	uilt-in	Key Bindings			•
			No I	Bindings.			
		Cu	ustom	Key Bindings	_		
		TOGGLE ENGINE 4 ANTI ICE MSFS Binding	→	Front Burner TOGGLE Main Controls	Delete		
		DECREASE ADF1 (0.1) MSFS Binding	→	Temperature Display Source TOGGLE	Delete		
		ADF1 SWAP MSFS Binding	→	Held Firework LOAD	Delete		
			Add	Binding			
	Key	/ bindings are stored in hpg-HotAir-B a	lloon	UserSetun			
	You m	nust restart the flight in MSFS to load u	pdated	d key bindings.	Cancel	Save	

The backing data is available in HEvents.txt and MSFSEvents.txt at

Community\hpg-hotair-balloon\html ui\HPGBalloon-System

 \times

Tablet

The tablet has various apps and features. The battery will deplete over time and the tablet is not necessary for flight, you may prefer to turn it off when not in use.

Tablet controls:

Power Button: Upper right corner. This will enable shutting off the tablet to conserve battery or avoid unwanted light.

Home Button: Center on the bottom. This returns back to the home screen (shown to the right).

Dock: Apps are shown along the dock at the bottom. Each one launches a full screen experience, except the center which opens the Action Center.

Action Center: When clicking the clock at the top of the screen, or the icon in the middle of the dock, the contextual controls are displayed.



Action Center

Action center enables setting the display brightness and adjusting the autopilot controls.

The autopilot controls are explained in the **Burners** section of this document.

Action Center may be opened while the app behind it is not closed, enabling quick changes while not leaving your current app.



Aircraft Setup

The aircraft app has various settings to personalize your balloon.

All settings on this page are saved in MSFS and won't need to be set each time the aircraft is loaded.



Setting	Options	Notes
Temperature Units	C (default) F	Temperature Display will be shown in the corresponding units.
Clock Time Reference	PC Time (default) Sim Time PC Time UTC	Tablet clock will follow this setting.
Clock Time Format	12 Hour (default) 24 Hour	Tablet clock will follow this setting.
Fireworks	4 Count (default) Infinite Not Available	4 Count: the fireworks will disappear as you pick them up Infinite: Fireworks will not disappear when picked up, enabling them to be picked up infinite times Not Available: Fireworks will be hidden

Maps

Balloonist maps app has the GPS track and GPS speed, as well as barometric altitude from a sensor on the device.

Weather is available via an online service. OpenStreetMap XYZ tile services are supported by a configuration file.

		Map Orientation North Up Heading	Up
	✓ OpenStreetMap	OpenTopoMap	OpenStreetMap (DE)
	OpenStreetMap (CH)	OpenStreetMap (FR)	OpenStreetMap (HOT)
	OpenStreetMap (BZH)	OSM (OPNVKarte)	📝 Stadia Smooth Dark
	Stadia OSM Bright	CyclOSM	ESRI World Street Map
the set	ESRI DeLorme	📈 Railway (Overlay)	Airspace (Overlay)
AND	Weather (Overlay)		
P. B. Burder	Start -		Photosic Property Constants



Little NavMap

Download LittleNavMap

The LittleNavMap app contacts the LittleNavMap webserver. Click **Tools** then **Run Webserver** to start it. You can test that it is working by viewing the page in your browser.

File	Flight P	lan M	Лар	View	We	ather	Userpo	ints Lo	ogbook	Aircraft	Scenery	Library	Tools	Window	Help		
			2	ça M	1	[+]	[~] [: *	3						light Simul loggle Fligh	ator Conne It Simulator	ction Connection	Ctrl+Shift+C Ctrl+Shift+A
	-				•				• KE	UG Oreg	in .	Bc	~ 1	Run Webser Open Webs	ver erver Page i	in Browser	
	1	7		-					• K	MFR • KLMT		• KREO	1	Reset all Me Reset all Set Gave Option	ssages tings and R is and Appl	estart ication State	
							/	7	2.50	and the second		F. C	1	iles and Di	rectories		,
							/			140	KALC	201 8		Options			Ctrl+Shift+,

Advanced Configuration

There is no need to change the below but the options are available if needed, especially changing the Url to another computer.



Configuration file: html_ui\HPGBalloon-User\Tablet\LittleNavMapApp.json.

Parameter	Values	Notes
Url	Default: http://localhost:8965	Server location (ip or host name including protocol)
FrameDelay	Default: 1000	Milliseconds to wait after receiving a farme before loading the next frame
Scale	Default: 1	Requested view size
ZoomScale	Default: 2	Zoom increment.
Format	jpg or png (Default: jpg)	
Quality	0-100 (Default: 80)	JPEG compression level.

Parameters are passed directly to the LittleNavMap web server.

Hype Radio

Listen to internet radio stations based on your flight simulator location. Start the **Hype Operations Center** app on your PC and then click **Hype Radio** on the tablet.

Radio stations will be updated every time you launch the app and the radio will remain playing even if you leave the range of the station, or go to the menu to change location.

Hype Operations Center - Home	- 🗆 ×
🔨 Airbus H145 🗣 Hot Air Balloon 💷 Scenario Editor 🚦 Hype Online 📑 Hype Radio 🌩	Settings 1.0.1
Now Playing Nothing is playing. Select a station below. Local Radio Stations	
GoodeRaDiO SonodeRaDiO SonodeRaDiO San Juan Diego Radio Funckodogy Kadio Musque 83.0 (cs. Angeles)963.7 M KXOL-FM Spanish Broadcasting System - Los Angeles, California MUXURAMANJSC VICANAMANJSC VICA	



Nearby Balloons

Create nearby clusters of balloons using the Nearby Balloons app. Select the quantity and range and then press Create. You may create as many as you want however the sim will eventually start showing only what it decides is acceptable for the current situation.



Bonus Fireworks

Launchable fireworks have been included and may be used at any time.

To use the fireworks, click one of the fireworks on the floor to pick them up, and then aim. Click the fuse to ignite the rocket. It will take a second and then launch and explode with a firework visual effect. They work during the day or at night, though are more brilliant at night. Four fireworks are included but you can select an infinite amount on the tablet, or turn them off if you don't want them in your balloon.







Fireworks may be reloaded or disabled on the tablet.

Known Issues

We are aware of some issues on release 1.0 and will be issuing an update soon after release to address issues found during content creator preview and taking feedback from balloonists and sim pilots. Please join us on Discord and politely add your feedback and insight to the general discussion.

Known Bugs:

- **The balloon is yawning too much in wind gusts**, it should move much more gently. We will adjust this. Use manual wind layers if this becomes annoying during a flight.
- **The balloon can lift off the ground prior to the envelope animation being finished**. We will adjust this timing to prevent the animation from diverging from the physics.
- Lift-off is too aggressively moving into the wind. This will be adjusted to have a smoother transition into the air mass and more ascension prior to such high speed over the ground being achieved
- **Neary Balloons app** Ensure the sliders are all moved from their default positions, otherwise you may end up unexpectedly with a value of zero for that slider.
- Fireworks were not intended to be launched in multiples by rapidly clicking but we understand people are enjoying this.

Feature requests:

- The **COM1 radio** will be made functional including a keypad. The electrical system has been removed prior to release but will be returning to enable functional radios for online flying.
- A Transponder will be added to the same radio system to aid flying online.
- The **Nearby Balloons** feature will be extended to enable the balloons to follow the wind or remain static. Static balloons will show more varied faces which may make for better screenshots, but following the wind will enable a fun experience. We need to ensure performance is suitable but will be investigating and adding a little more functionality here.

Creator Guide

Liveries

A 3D paint kit for the envelope has been provided.

Take care to create an emissive layer from the reference template by adding a Multiply layer in your graphics editing program. The template is provided in the paintkit. If you don't do this, your balloon will not properly illuminate at night when the burner ignites.

Your livery aircraft.cfg base_container should point at hpg-hotair-balloon.

```
Your texture.cfg is suggested to be:
[fltsim]
fallback.1=..\..\hpg-hotair-balloon\texture
```

Paintkit download: https://flightsim.to/file/41478/hpg-hot-air-balloon-livery-paintkit

SDK Events (H:Events)

These events may be dispatched to the balloon by tools like FSUIPC/SPAD.NEXT/AAOs and will command a function on the aircraft.

```
H:HPGBAL SDK TABLET POWER TOGGLE Tablet - Power TOGGLE
H:HPGBAL_SDK_TABLET_POWER_OFF Tablet - Power OFF
H:HPGBAL_SDK_TABLET_POWER_ON Tablet - Power ON
H:HPGBAL_SDK_TABLET_HOME_PUSH Tablet - Home PUSH
H:HPGBAL_SDK_TABLET_BRIGHTNESS_UP Tablet - Brightness UP
H:HPGBAL_SDK_TABLET_BRIGHTNESS_DOWN Tablet - Brightness DOWN
H:HPGBAL_SDK_TABLET_OPEN_ACTIONCENTER_TOGGLE Tablet - Action Center TOGGLE
H:HPGBAL SDK TABLET OPEN ACTIONCENTER OPEN Tablet - Action Center OPEN
H:HPGBAL_SDK_TABLET_OPEN_ACTIONCENTER_CLOSE Tablet - Action Center CLOSE
H:HPGBAL_SDK_TABLET_MAPSAPP_ZOOM_IN Tablet - Maps/LittleNavMap Zoom ZOOMIN
H:HPGBAL_SDK_TABLET_MAPSAPP_ZOOM_OUT Tablet - Maps/LittleNavMap Zoom ZOOMOUT
H:HPGBAL_SDK_TABLET_OPENAPP_MAPS Tablet - Maps app OPEN
H:HPGBAL_SDK_TABLET_OPENAPP_SETUP Tablet - Setup app OPEN
H:HPGBAL_SDK_TABLET_OPENAPP_LITTLENAVMAP Tablet - LittleNavMap app OPEN
H:HPGBAL_SDK_TABLET_OPENAPP_FLAPPYBIRD Tablet - Flappy Bird app OPEN
H:HPGBAL_SDK_TABLET_OPENAPP_HYPERADIO Tablet - Hype Radio app OPEN
H:HPGBAL SDK TABLET OPENAPP NEARBYBALLOONS Tablet - Nearby Balloons app OPEN
H:HPGBAL SDK BURNER FRONT TOGGLE Main Controls - Front Burner TOGGLE
H:HPGBAL_SDK_BURNER_FRONT_OFF Main Controls - Front Burner OFF
H:HPGBAL_SDK_BURNER_FRONT_ON Main Controls - Front Burner ON
H:HPGBAL SDK BURNER REAR TOGGLE Main Controls - Rear Burner TOGGLE
H:HPGBAL_SDK_BURNER_REAR_OFF Main Controls - Rear Burner OFF
H:HPGBAL_SDK_BURNER_REAR_ON Main Controls - Rear Burner ON
H:HPGBAL_SDK_BURNER_FRONT_PILOT_LIGHT_TOGGLE Main Controls - Front Pilot Light TOGGLE
H:HPGBAL_SDK_BURNER_FRONT_PILOT_LIGHT_OFF Main Controls - Front Pilot Light OFF
H:HPGBAL_SDK_BURNER_FRONT_PILOT_LIGHT_ON Main Controls - Front Pilot Light ON
H:HPGBAL_SDK_BURNER_REAR_PILOT_LIGHT_TOGGLE Main Controls - Rear Pilot Light TOGGLE
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H:HPGBAL SDK BURNER REAR PILOT LIGHT OFF Main Controls - Rear Pilot Light OFF H:HPGBAL SDK BURNER REAR PILOT LIGHT ON Main Controls - Rear Pilot Light ON H:HPGBAL SDK ENVELOPE VALVE TOGGLE Main Controls - Envelope Valve TOGGLE H:HPGBAL SDK ENVELOPE VALVE OPEN Main Controls - Envelope Valve OPEN H:HPGBAL SDK ENVELOPE VALVE CLOSE Main Controls - Envelope Valve CLOSE H:HPGBAL SDK AUTOPILOT VERTICAL MODE ALT Autopilot - Vertical mode ALTITUDE H:HPGBAL SDK AUTOPILOT VERTICAL MODE HEIGHT Autopilot - Vertical mode HEIGHT H:HPGBAL SDK AUTOPILOT VERTICAL MODE OFF Autopilot - Vertical mode OFF H:HPGBAL SDK AUTOPILOT LATERAL MODE WIND Autopilot - Lateral mode WIND H:HPGBAL SDK AUTOPILOT LATERAL MODE FLIGHTPLAN Autopilot - Lateral mode FLIGHTPLAN H:HPGBAL SDK FUEL TANK 1 VALVE TOGGLE Fuel Bottles - Tank 1 Valve TOGGLE H:HPGBAL SDK FUEL TANK 1 VALVE OFF Fuel Bottles - Tank 1 Valve OFF H:HPGBAL_SDK_FUEL_TANK_1_VALVE_ON Fuel Bottles - Tank 1 Valve ON H:HPGBAL_SDK_FUEL_TANK_2_VALVE_TOGGLE Fuel Bottles - Tank 2 Valve TOGGLE H:HPGBAL_SDK_FUEL_TANK_2_VALVE_OFF Fuel Bottles - Tank 2 Valve OFF H:HPGBAL_SDK_FUEL_TANK_2_VALVE_ON Fuel Bottles - Tank 2 Valve ON H:HPGBAL SDK FUEL TANK 3 VALVE TOGGLE Fuel Bottles - Tank 3 Valve TOGGLE H:HPGBAL_SDK_FUEL_TANK_3_VALVE_OFF Fuel Bottles - Tank 3 Valve OFF H:HPGBAL_SDK_FUEL_TANK_3_VALVE_ON Fuel Bottles - Tank 3 Valve ON H:HPGBAL SDK FUEL TANK 4 VALVE TOGGLE Fuel Bottles - Tank 4 Valve TOGGLE H:HPGBAL SDK FUEL TANK 4 VALVE OFF Fuel Bottles - Tank 4 Valve OFF H:HPGBAL SDK FUEL TANK 4 VALVE ON Fuel Bottles - Tank 4 Valve ON H:HPGBAL SDK TEMPERATURE DISPLAY POWER TOGGLE Avionics - Temperature Display Power TOGGLE H:HPGBAL SDK TEMPERATURE DISPLAY POWER OFF Avionics - Temperature Display Power OFF H:HPGBAL SDK TEMPERATURE DISPLAY POWER ON Avionics - Temperature Display Power ON H:HPGBAL SDK TEMPERATURE DISPLAY SOURCE TOGGLE Avionics - Temperature Display Source TOGGLE H:HPGBAL SDK TEMPERATURE DISPLAY SOURCE AMBIENT Avionics - Temperature Display Source AMBIENT H:HPGBAL SDK TEMPERATURE DISPLAY SOURCE ENVELOPE Avionics - Temperature Display Source ENVELOPE H:HPGBAL SDK RADIO TOGGLE Radio - Radio Power TOGGLE H:HPGBAL SDK RADIO OFF Radio - Radio Power OFF H:HPGBAL SDK RADIO ON Radio - Radio Power ON H:HPGBAL SDK HYPERADIO STOP Hype Radio - Current Track STOP H:HPGBAL SDK HYPERADIO RADIO STATION 1 Hype Radio - Station 1 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 2 Hype Radio - Station 2 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_3 Hype Radio - Station 3 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_4 Hype Radio - Station 4 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 5 Hype Radio - Station 5 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 6 Hype Radio - Station 6 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 7 Hype Radio - Station 7 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 8 Hype Radio - Station 8 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 9 Hype Radio - Station 9 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_10 Hype Radio - Station 10 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_11 Hype Radio - Station 11 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_12 Hype Radio - Station 12 SELECT H:HPGBAL_SDK_HYPERADIO_RADIO_STATION_13 Hype Radio - Station 13 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 14 Hype Radio - Station 14 SELECT H:HPGBAL SDK HYPERADIO RADIO STATION 15 Hype Radio - Station 15 SELECT H:HPGBAL SDK EQUIP FIREWORKS 4COUNT Fireworks - Fireworks Availability 4COUNT H:HPGBAL SDK EQUIP FIREWORKS INFINITE Fireworks - Fireworks Availability INFINITE H:HPGBAL_SDK_EQUIP_FIREWORKS_NONE Fireworks - Fireworks Availability NONE H:HPGBAL_SDK_FIREWORK_LOAD Fireworks - Held Firework LOAD H:HPGBAL_SDK_FIREWORK_STOW Fireworks - Held Firework STOW

SDK Variables (L:Vars)

These local variables may be read by tools like FSUIPC/SPAD.NEXT/AAOs and access state information about the aircraft.

L:HPGBAL_SDK_TEMPERATURE_DISPLAY_ENVELOPE_TEMP L:HPGBAL_SDK_TEMPERATURE_DISPLAY_AMBIENT_TEMP L:HPGBAL_SDK_TEMPERATURE_DISPLAY_POWER_SWITCH L:HPGBAL_SDK_TEMPERATURE_DISPLAY_POWER_SOURCE L:HPGBAL SDK RADIO POWER L:HPGBAL SDK BURNER FRONT ON L:HPGBAL SDK BURNER REAR ON L:HPGBAL SDK BURNER FRONT PILOT LIGHT ON L:HPGBAL_SDK_BURNER_REAR_PILOT_LIGHT_ON L:HPGBAL_SDK_FRONT_BURNER_PRESSURE L:HPGBAL_SDK_REAR_BURNER_PRESSURE L:HPGBAL_SDK_BURNER_FUEL_TANK_VALVE_1 L:HPGBAL_SDK_BURNER_FUEL_TANK_VALVE_2 L:HPGBAL SDK BURNER FUEL TANK VALVE 3 L:HPGBAL SDK BURNER FUEL TANK VALVE 4 L:HPGBAL SDK TABLET POWER L:HPGBAL SDK TABLET BRIGHTNESS L:HPGBAL SDK TABLET ACTION CENTER ISOPEN L:HPGBAL_SDK_AUTOPILOT_VERT_MODE L:HPGBAL_SDK_AUTOPILOT_LATERAL_MODE L:HPGBAL_PERSIST_TABLET_TIME_FORMAT L:HPGBAL_PERSIST_TIME_REF L:HPGBAL_PERSIST_FIREWORK_COUNT L:HPGBAL_PERSIST_ENV_TEMP_UNIT