MAJOR TOM HOT AIR BALLOON FLIGHT MANUAL

AIRCRAFT LIMITATIONS:

Maximum temperature: 125 degrees Celsius
Minimum temperature: ambient air temperature

Maximum liftoff airspeed: 20 mph

Maximum ambient temperature for liftoff: ambient air temperature
Minimum ambient temperature for liftoff: 16 degrees Celsius

NOTES ON THE AIRCRAFT:

Balloon is quite large, but does not deflate at lower temperatures (deflation/inflation animation would be simple, by simply scaling the balloon in two different axes and making it tilt about the basket depending on vertical speed and temperature thresholds)

Two propane cans – decent fuel capacity

Vertical speed gauge only goes up to 2000, although balloon is capable of much higher vertical speeds

It comes in seven patterns – regular, pixels, a GeoFS house livery, lozenges, all red, an orange two-tone livery, and a spiral scaled livery in green.

The floor of the basket is heavily worn

RECOMMENDATIONS FOR FLYING:

Switching to keyboard controls is advised.

If realistic hot air ballooning experience is preferred:
<u>Start:</u>
Spawn at your start location.
<u>Takeoff:</u>
Heat the balloon by applying flame using the up arrow key and ascend as preferred, unless in the Sahara desert, Death Valley, the deserts of Chile, or other forbiddingly hot locations, in which case the balloon will exceed its envelope temperature limits before taking off.
<u>Flight:</u>

Coast with the wind. Directional control and airspeed control is basically zero, leaving only altitude control. To maintain altitude, apply flame to envelope periodically to keep temperature from falling too low, which will produce an inadvertent descent.

<u>Descent:</u>
Leave flame off for a while, then resume pulsing. This will allow you to hold a continuous rate of descent.

<u>Landing:</u>
Continue descent until touchdown is achieved, then allow envelope to cool.

If maximum fun at cost of realism is preferred:

How to move winds on command:
Options panel > Environment > (Make sure "set environment manually" is ON) > "Advanced" dropdown
You will see two sliders: one for wind direction and one for wind speed. Wind speed is in meters per second, and 1 additional meter per second of wind speed is approximately equivalent to two additional knots of wind speed, minus a little bit. So 5 m/s = around 9 knots of wind speed. Wind direction is which direction the wind is coming from in degrees. 0/360 degrees is north, 90 degrees is east, 180 is south, and 270 is west. Note that if you desire to go north, you must set the wind direction to south so that the wind can push you north from the south, and thus with all other directions.

<u>Start:</u>
Apply enough flame to get it slightly off the ground, then apply wind in the desired direction of taxi. Once you have taxied to your desired liftoff location, apply more flame to gain additional altitude, and then begin your flight.

<u>Takeoff and ascent:</u>
Once you have taken off, ascend as normal.

<u>Flight:</u>
Once airborne, control speed by adjusting wind speed, and direction by adjusting wind heading. Otherwise, fly as normal.

<u>Descent and landing:</u>
Descend as normal and land as normal. Reduce speed by applying wind in the opposite direction to the direction of travel. Just make sure that if you're planning on an after-landing taxi, apply flame after landing to heat balloon and gain a foot of separation from the ground so you can taxi.

WARNINGS:
1. Balloon may swing around violently when suddenly changing direction, which can cause pilot disorientation.
2. The balloon temperature takes a lot of management, and mismanagement or lack of attention may result in an inadvertent descent.