

IEFIS G3 "ObserveMe" function – setup and use



General

"ObserveMe" is a feature that shows your aircraft on the display as it would appear from an observer closely behind and above or below you depending on if you are ascending or descending.

This is mostly intended for extreme pitch attitudes where the traditional horizon display becomes less useful. "ObserveMe" also contains a horizon pitch lock - the pitch gets locked at your chosen angle (12-15 degrees is recommended) so the horizon is still visible and acts as reference while the observer is placed such that he sees a perspective animated image of the aircraft in a predictable location. Control inputs show an immediate and correct effect - you fly your aircraft under these conditions almost as if you were flying a remote controlled aircraft. In locked condition, the pitch ladder continues operating as normal.

This can be enabled to appear automatically at your desired pitch angles and you can also wrap the side and rear view into a screen item (it's an option in the "simple horizon" screen item).

Images are built in to the binary but you can substitute these for your own. These are MIF files (which you create from ordinary Windows BMP files using the BMPtoMIF converter you can download from www.mglavionics.co.za).

Each of the images is 100x100 pixels in size and you use fully saturated yellow as transparent color. The images are named ACTOP.MIF, ACBOT.MIF, ACSIDE.MIF and ACREAR.MIF and you place them into the screens folder. They will be loaded on system startup if found.

ACTOP should be an image showing the aircraft as seen from the top – nose points up.

ACBOT should be an image showing the aircraft as seen from the bottom – nose points up.

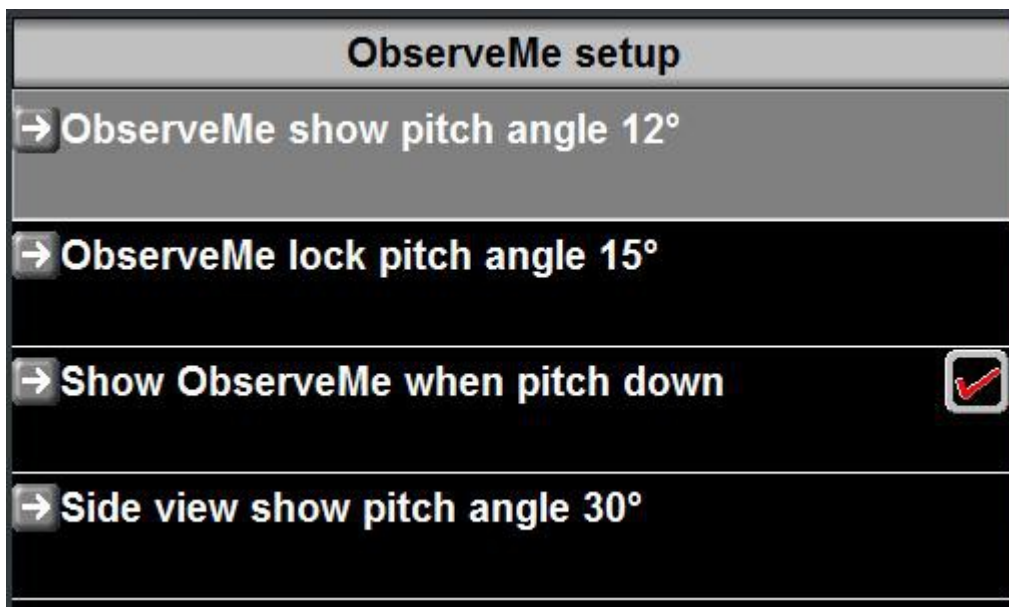
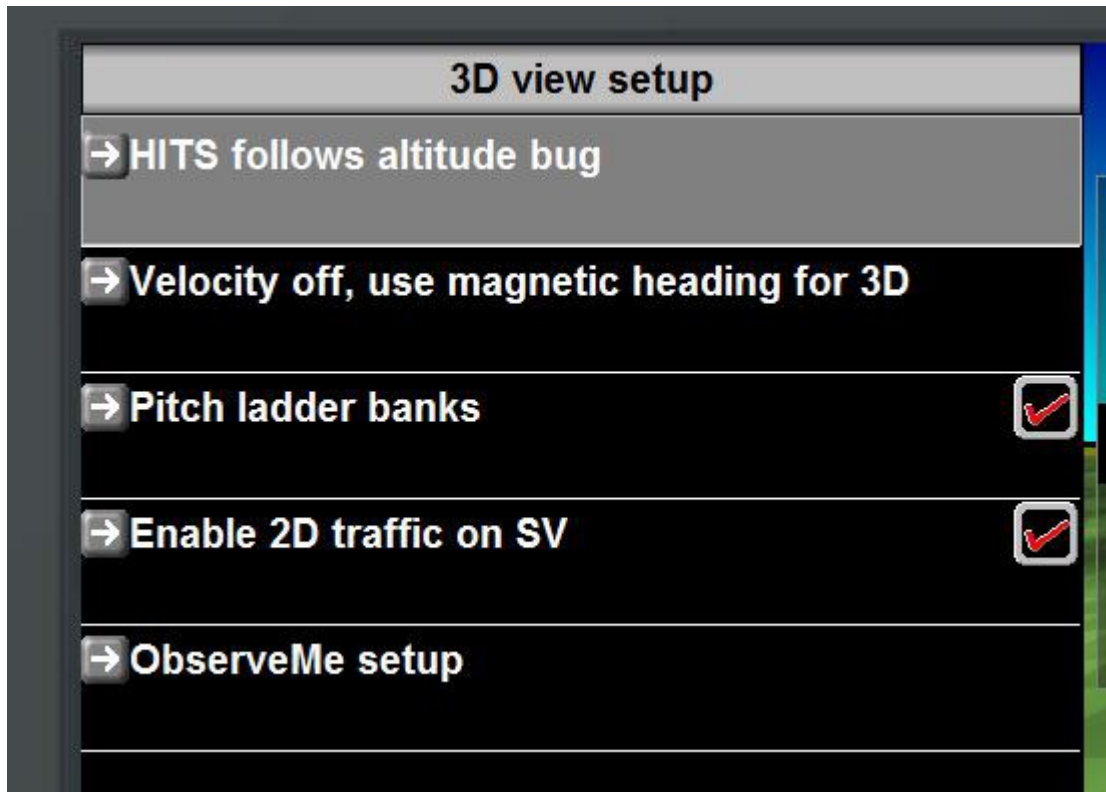
ACSIDE is the side view of the aircraft. Nose points to the right.

ACREAR is the rear view of the aircraft.

The built-in images are of the Lynx space craft for which this feature has been primarily added, however it is also very useful for aerobatics.



“ObserveMe” setup



ObserveMe show pitch angle

Enter the pitch angle at which the automatic ObserveMe function activates. This is applicable for both pitch up as well as pitch down.

ObserveMe lock pitch angle

Enter the pitch angle at which the synthetic vision will lock to. This should be greater than the value entered above and not larger than needed to allow the horizon to remain visible on the screen.

Show ObserveMe when pitch down

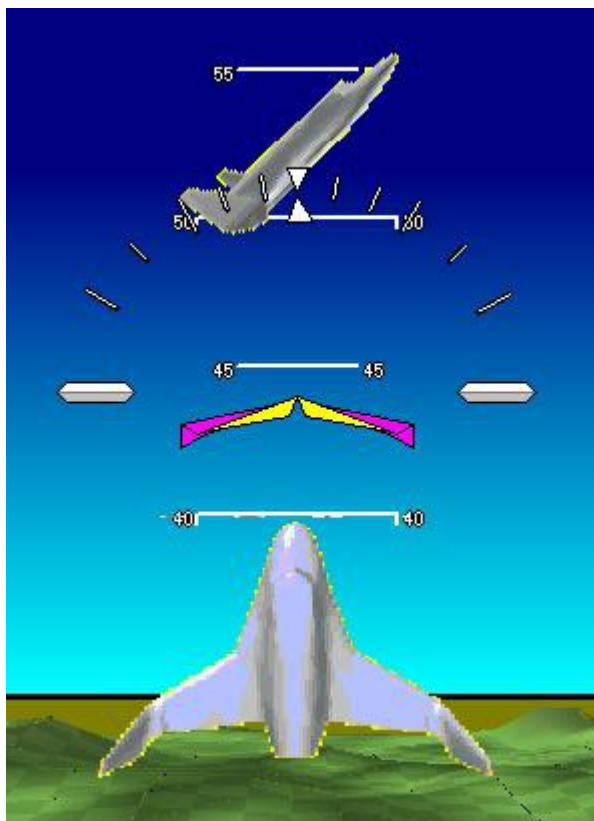
Tick this if you would like to use this function also during pitch down attitudes.

Side view show pitch angle

Enter the pitch angle at which the side view activates.

Example displays – automatic “ObserveMe”

Pitch up at near 45 degrees



Pitch down at 33 degrees

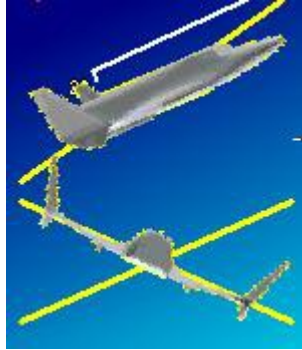


Both images with side view enabled.

Using the simple attitude screen item

With the screen designer you can place side and rear view images anywhere on the screen. These images bank and pitch with respect to the Earth so they show you attitude as seen from an observer that is standing on the ground.

Tip: you can use the drawing primitives to create reference lines for fixed pitch and bank attitudes as shown in these examples:



You can use lines, triangle markers and any other object available to create references if needed.

Note that under “special text items” you also have numeric readouts of both pitch and bank angles that you can use to augment the display.