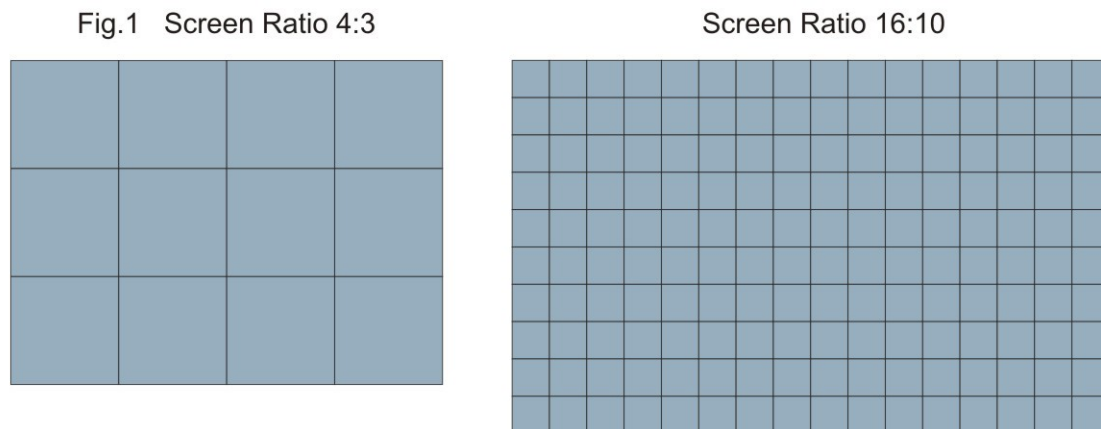


MONITOR RATIO AND THE FIELD OF VIEW

Screen ratio

We have three monitor ratios today. There is still the ratio of 4:3. Then there are the widescreen ratios of 16:9 and 16:10. To demonstrate that, we use a math paper example again. A screen with the ratio of 4:3 means, that we have a ratio of 4 squares horizontal, to 3 squares vertical. The squares don't stand for any resolution here; they just demonstrate the ratio of width to height. A 16:9 monitor would be 16 square horizontal, by 9 squares vertical.



The Field of View

The field of view (FoV) is the part of your whole environment, that you can see on your monitor. I want to use photography as an example to demonstrate possible variations. If you look through a zoom or telephoto lens, you can see things in a distance larger. But at the same time, your overall field of view is smaller – you just see a detail much better, but not the whole environment. With a wide angle lens, it's the opposite. You use it, when you want to catch a very wide view of your environment. But also, everything will appear more remote or smaller.

The OFF Workshops offer us some choice for setting up our personal FOV. First, we should check the right box at the left, for either a 4:3 monitor, or a 16:10 (use that setting also for 16:9). This will cause OFF to provide us with the right basic ratio. It will only get to work, when you close OFF after selecting, and start it new.

Now we come to the more individual setting of the FOV.

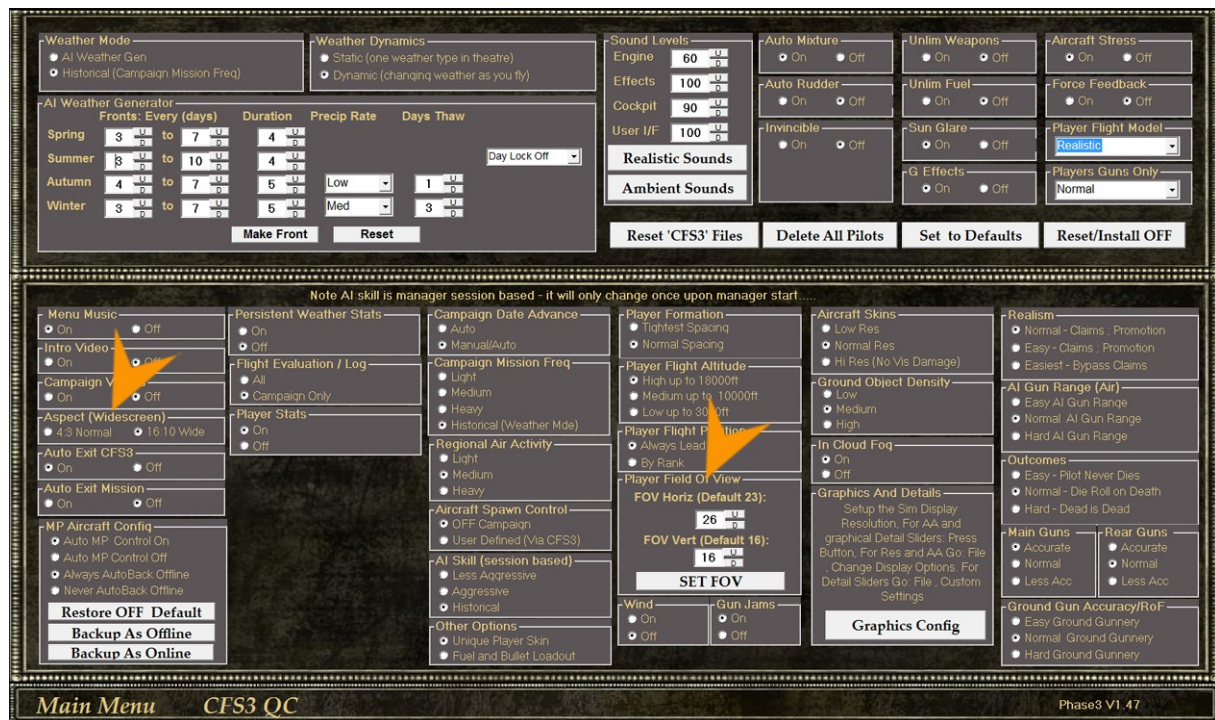
Here now, we can decide, if we want to be closer to everything, or more remote from all.

Closer means: distant aircraft specs appear larger, but also your aircraft around you will be closer to you/will appear larger. More remote means: you see more of the total environment, but also distant aircraft specs appear smaller, and so does your aircraft.

There is not one perfect choice really – it is rather a matter of your own preference.

But it is important to get the values for horizontal and vertical degrees in the right proportion.

And that's why I regard the values as degrees. If we have a vertical FOV of 15 degrees, that is less than 17 degrees; with 15 degrees we see less environment, but therefore closer/larger; and with 17 degrees we see more environment, but also more remote/smaller.



For the Workshop setting of Aspect (Widescreen) you need to select 4:3 or 16:10. Use 16:10 even when your monitor is 16:9 as it is still Widescreen.

The Field of View (Part 2)

The default values for the FOV settings given in OFF Workshops are 23 x 16. That works fine for all monitors with the ratio 4:3 but what about the widescreen monitors? Well, we will just find out about our own perfect FOV.

To find the perfect proportion of both values, we first need our screen resolution. Then we make a choice for a vertical value between 15 and 17 degrees. Now we divide our vertical monitor resolution by that choice.

Let us begin with a 4:3 monitor, with 1480 x 1024 pixels resolution. First, I choose a vertical value of 16 degrees. So divide the vertical screen resolution 1024 by 16 and get 64. Now we must find out, how often 64 fits into the horizontal resolution. So we divide the horizontal 1480 by 64 and get 23,125. If we get values with numbers behind the comma, we must round them up or down. In our case we could use a FOV of 23 horizontal and 16 vertical. You needed to choose those numbers in the right field, and click on Set FOV to save it.

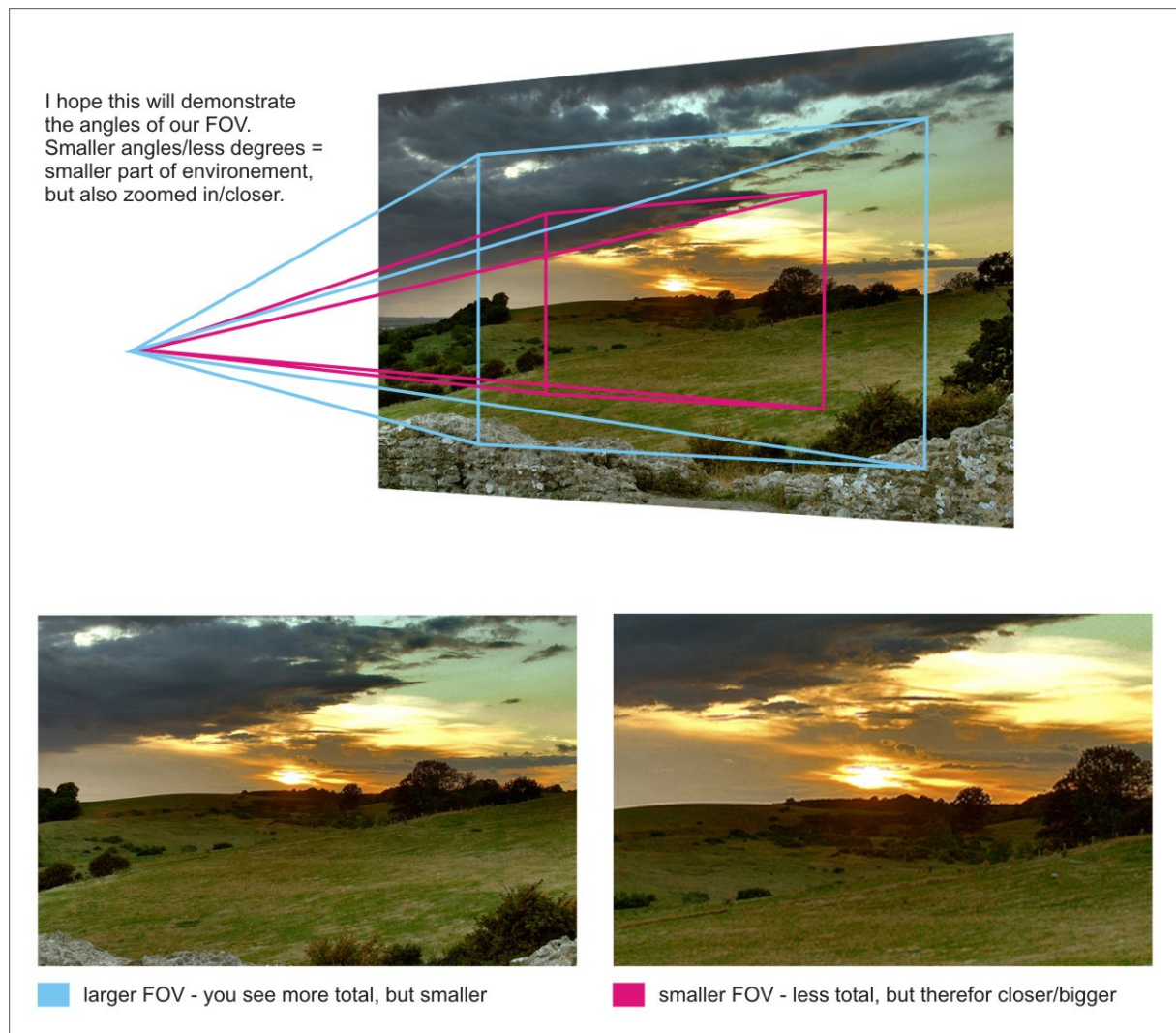
Now you should fly a Quick Combat to test your new FOV. If you find everything too remote, you could start again, and go for a smaller value. Let's try 15 vertical. So we divide the vertical 1024 by 15 and get 68,266. Now we must find out, how often 68,266 fits into the horizontal resolution. So we divide the horizontal 1480 by 68,266 and we get 21,55. With these results, we could use a FOV of 22 x 15.

Now we try the same for my widescreen monitor. It has a resolution of 1980 x 1050.
I divide the vertical 1050 by 15 and get 70.
Then I have to divide the horizontal 1980 by 70 and get 28,28.
We round that to 28, and so I could use a FOV of 28 horizontal, and 15 vertical.

For a wider Field of View, I could use 17 degrees vertical instead.
Then I need to divide the vertical res. Of 1050 by 17 and get 61,76.
Now I divide the horizontal resolution of 1980 by 61,76 and get 32,05.
Rounded, I would be able to use a Field of View of 32 degrees horizontal and 17 degrees vertically.

The graphic I hope may be able to demonstrate two possible Fields of View.
None of them must be the right one it is rather a matter of personal taste really.

For pilots with a less good eyesight, who easily miss the enemy aircraft specs, a closer, smaller FOV might be better. But it will be for the price, that you will have to move your head a bit more to check the whole environment. Your own choice.



To sum up: divide your vertical resolution by 15, 16, or 17
Then divide the horizontal resolution by the resulting number.
Now you get the horizontal degrees, that fit with the number you first picked.
Hope you're not dizzy now; I wish you much success! *Olham*