

# FERRIS COLOR THEORY

Keith Ferris, ASAA

In my 75-year career, I have used ink lines, lamp black and water, premixed grays, watercolor, gouache, caseins, and finally oils on canvas, which I very much prefer today. The evolution through those materials paralleled the nature of clients and their advertising and printing requirements. Without the benefit of an art education, mine was an on-the-job training approach with my learning curve a natural progression from line, to black and white tonal illustration, to two-color illustration, and finally to full-color art.

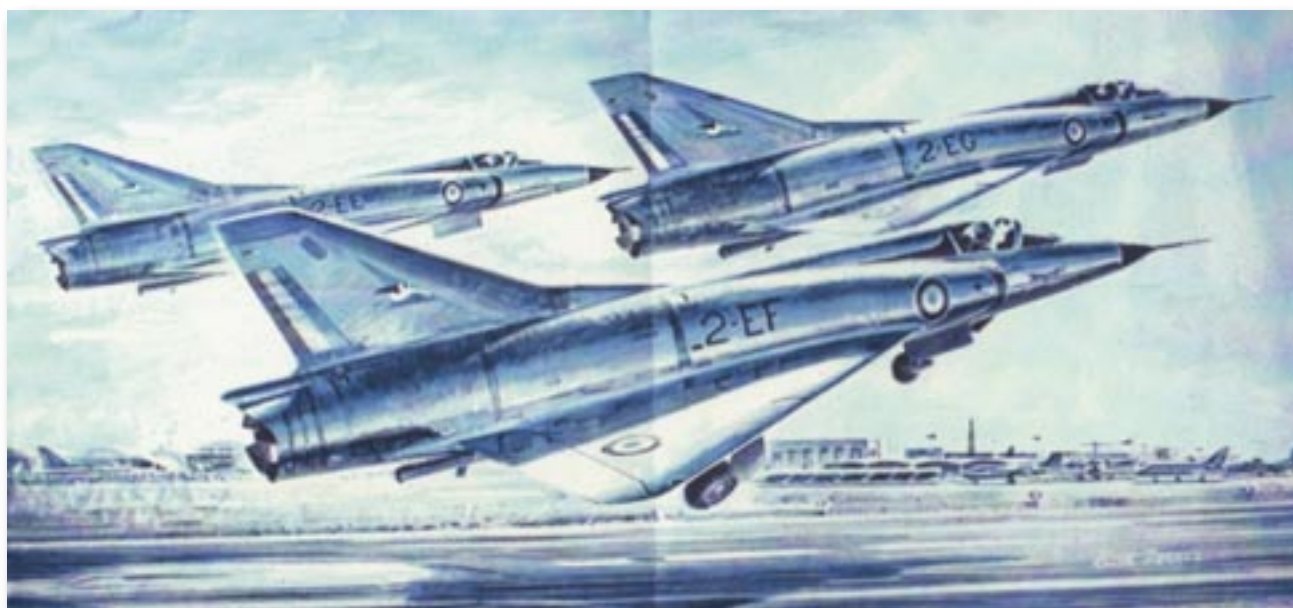
Since my life has been immersed in aviation, my goal was to create the greatest sense of depth in my works no matter which medium I was using at the time. This involved mastering first, linear perspective, then tonal perspective, and finally, color perspective, which I was to learn later all occur simultaneously.

After almost ten years of working in line and tonal media, I was finally required to create two-color art for clients. Two color art required the combination of black and white tonal media with any one of the three primaries approximating the printers' inks (Process Colors), which are magenta, yellow, and cyan. I was soon to realize that by introducing portions of Phthalo Blue (which approximates cyan) as part of a basically black-and-white tonal painting I could introduce warm and cool not available in a sim-



Sperry Ad – Black and White Designers Gouache with acrylic medium Tonal Painting.

Below: Black Designers Gouache Spread demonstrating Warm/Cool Simultaneous Contrast.





Sperry Two-Color Blue and Black Designers Gouache Ad demonstrating Warm/Cool Simultaneous Contrast.

ple black-and-white tonal painting. For example, an unpainted aluminum aircraft reflects all the colors around it. The sun is warm which requires a white edge merging with a gray edge to blue-gray reflecting the sky, lightening to the reflection of the horizon. Below this, the gray would have no blue at all since we are reflecting the warm colors of the earth. The gray, which would appear cool by itself, would turn warm when surrounded by cool blues. To my amazement, I found that a gray (with no blue included); a pure white; and a pure blue insignia; appeared to be Red, White, and Blue. So, contrasting warm and cool became very important tools in controlling depth, even before I tackled full-color painting.

A valuable part of my self-induced education was to serve for 16 months as a stripper and opaquer in an offset lithography house. Color art would be separated by filtered photography into four negatives representing the varying levels of each of the process colors, plus black, which will combine to create the color. These negatives would in turn be screened to dots sized to represent the proportion of each color needed when combined by the press on white paper to match the colors in the art. My job was to strip these negatives onto flats, each representing one of the colors, registering one above the other. The screens had rotated the dots for each color so that when superimposed, they would not fall on each other, but next to each other, in circles on the future white background. The eye observing the reproduction would average these combined varying-sized dots of color with their white background to the colors seen in the original art.



Sperry Two-Color Red and Black Designers Gouache Ad imitating full color art.

When it came time for me to tackle full-color painting, I already had the three primaries approximating the process colors in hand. It seemed to me that if the press could faithfully reproduce original art on paper, I should be able to combine these colors with white to create the necessary color in a painting.

As a stripper and opaquer almost 70 years ago I had noted that all three of the process colors were always in every color reproduced on paper.

As I experimented, I found that an equal amount of all three colors combined without any white appeared to make Black. The introduction of white to this mixture should make a neutral gray. It rarely does until some of one or more colors are added. However that first introduction of white results in either a warm or a cool gray, sometimes a bluish gray, sometimes a brownish or olive gray. We are finding that we are now controlling color and warms and cools. The further you reduce the amount of two of the primaries in the mixture, the more towards the pure third primary you have moved.

Therefore, we can indeed create most needed colors to create a harmonized painting with all of its cools and warms. I found that the introduction of actual black into the palette deadened the whole thing. Creating black with the three colors allows warm and cool blacks, compatible with all color in the painting. Therefore, what has evolved for me is a simple mixing of all three colors in continuously changing combinations to create my paintings. I have found that it is simple to recreate a color by this method since all color is a combination of the three.



***Fighter Pilot Heaven*** by Keith Ferris, ASAA  
An example of using warm/cools and yellow/green color combinations.

An example of this simplicity is demonstrated by the attempt to introduce a cool reflection into olive drab. You cannot simply add blue to achieve this. However, with the three-color process, you can simply reduce the amount of red and blue in the mixture to achieve the bluer cast. Since we are dealing with aviation subjects, the great distances involved force us to work in grays.

Careful control of hues transitioning to grays is imperative. Lighting in flight involves reflecting light from directions all around the aircraft forcing careful control of warm and



***Farmers Nightmare*** by Keith Ferris, ASAA  
Full-Color Red/Yellow/Blue/White oil painting with insignia and markings in mostly primary colors while the rest of the painting utilizes all three primaries to create warm and cool colors, light and reflected light.

cool light with every brush stroke. It may be only my own experience, but I find a palette of multiple tubes of paint very difficult to control with this reflected light impacting all colors on an aircraft. I find it much simpler to control all of these elements simultaneously by creating all colors by combining selected primary colors. The reduction of saturation and value of local color with distance is accomplished by continually adding the two colors making up the complimentary color, plus white, to progressively reduce saturation and tonal value with distance. This holds very well for aviation paintings, perhaps not necessarily so for the landscape painter dealing with all of the greens and earth colors.

I use a basic palette of Titanium White plus Quinacridone Red (for the magenta); Cadmium Yellow; and Phthalo Blue (for the Cyan) for my paintings. NO BLACK. This palette has worked well for me and made possible some reasonably successful aviation paintings.

*Keith*



***First Phantom*** by Keith Ferris, ASAA  
An example of using “blue” as the primary color in the work.



***Real Trouble*** by Keith Ferris, ASAA  
An example of three-color warm/cool greys.