

Sunglasses for the Pilot's Eyes

by

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Summer days for most pilots means more flying time, favorable weather, clearer skies. And, for better vision on those cross-country flights, these sunny days call for a good pair of sunglasses. Further, they are part of a pilot's image, dated back to the 1930s, when airplanes became an indispensable part of our nation's modern military. During World War II, when aviators ruled the skies of Europe and most of Asia, the sunglass makers developed impact-proof lenses, along with classic gold frames and dark lenses.

Today there are so many styles, lenses, and manufacturers that a few suggestions are helpful for best eye protection from the brightest solar rays, as well as improving distant vision when scouting for other planes, birds, or an unfamiliar runway. Two often forgotten factors when considering sunglasses are comfort and safety. Absorption of ultraviolet rays (UVA and UVB) by the specially designed lens will protect your eyes from damage and fatigue, especially on those long distance flights.

Be careful to avoid wearing polarized lenses when flying. They may cause distortions through some airplane windscreens, as well as reduce your ability to see the glint off other planes, an important clue to traffic avoidance, both in distance flying and in the pattern. Polarized sunglasses are fine for fishermen or skiers, but not good for pilots.

Blue blocking lenses (appearing yellow, amber, and orange) may reduce your ability to discriminate color, making it difficult to distinguish the color of navigation lights, signals, or color-coded maps. They should be avoided when flying, even more so on the newer glass panel planes, with multicolored display screens. Otherwise, any of the common tint choices are fine – gray, gray-green, or brown. The gray tinted lenses distort color the least. For flying, your dark lenses should screen out only 70 to 85 percent of visible light. More than that will affect visual acuity.

Three common lens materials are in use today: optical quality "crown" glass, monomer plastic (CR-39[®]), and polycarbonate plastic. The best optical properties are found in crown glass, which is most scratch-resistant but heavier, and absorbs some of the ultraviolet rays. CR-39 plastic lenses are lighter in weight, and more impact-resistant than glass lenses, but are more easily scratched. They do not hold tints as well as glass, but can be bleached and re-tinted if fading becomes excessive. All of these types offer a large degree of refractive correction potential, as well as being easily coatable for scratch-resistance or to block residual ultraviolet radiation. Polycarbonate lenses are especially recommended for children and athletes, since they are the strongest and most resistant to shattering.

Photochromic glass lenses (PhotoGray[®] and PhotoBrown[®]), like their plastic counterparts (Transitions[®]), automatically darken when exposed to bright sunlight. Most of this darkening takes place in the first 60 seconds, though the clearing may require several minutes. These glasses should not be used at night, however, nor when flying in cloud cover, since they may not brighten adequately for a pilot to see clearly as the ambient light is dimmed.

Selection of sunglasses also involves the choice of frames. While this is mostly a matter of personal preference, the frames should be functional, sturdy, and light weight. They should not interfere with communication headsets, or breathing equipment when oxygen is used. A pilot's sunglasses should fit well, securely enough that sudden turbulence or aerobatic maneuvers do not displace them. A chain or strap may be utilized for prescription sunglasses to prevent them from being accidentally dislodged. The Pro Aviator[™] sunglasses attach with Velcro to the outside of the headset. Some pilots find them more comfortable, though obviously they are intended strictly for the flight deck.

Another option is ColorEyes HDL-3C[™] Performance Sunglasses, which have been designed to improve color sensitivity and contrast apprehension. The lens is decentered to increase visibility and eliminate distortion. Enhanced visual acuity has attracted many to these more expensive but well designed sunglasses. Pilots appreciate the improved perception of moving objects, clouds, and runways, as well as being better able to read maps and flight instruments.

Obviously, there are many possibilities for an aviator searching for the perfect choice of sunglasses. If you already wear glasses, a simple pair of flip-up shades may be all you need. More important, is to get a good pair, take care of them, and wear them whenever the sun is too bright for comfortable flying. Whether you want to look like General MacArthur, a Black Hawk pilot, Hollywood movie star, or NASA astronaut is up to you. Any pair of sunglasses will add to the mystique of being a "cool" aviator, but the dividend comes when you can see better, your eyes are protected from harmful ultraviolet rays, and the eye fatigue with headaches that comes from hours of flying in bright, sunny days can disappear. Enjoy those flight privileges now, taking good care of that most precious sensory asset, your eyes.

*[Doctor Hansen, author of the popular book on home health care, **Get Well At Home**, currently serves as medical director of the **Emerald Valley Wellness Clinic**, and its **Live-for-Health Seminars** in Creswell, Oregon. Pilots who for health reason are having trouble passing their medical should contact us. For further information or inquiries, contact: clinic1@emeraldwellness.com]*