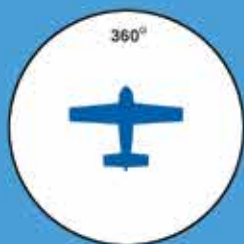


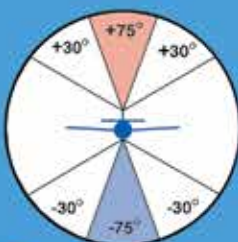
# WHELEN AVIATION LIGHTING

## POSITION LIGHTS AND ANTI-COLLISION LIGHT DISTRIBUTION PATTERNS REQUIREMENTS



An approved anti-collision strobe light system must project light 360° around the aircraft's vertical axis. One or more strobe lights can be used.

An approved anti-collision strobe light system must project light + or - 30° above and below the horizontal plane of the aircraft. One or more strobe lights can be used. The + or - 75° projected light is required since July 18, 1977.



## LOCATIONS ON THE AIRCRAFT FOR ANTI-COLLISION STROBE LIGHTS, TO COMPLY TO THE LIGHT PATTERN REQUIREMENTS



### VERTICAL FIN

One anti-collision strobe light mounted on the vertical fin will meet the minimum requirements on most aircraft. A half red and half white lens is recommended.



### WING TIP

Two wing tip strobe lights that protrude beyond the wing tip.



### ENCLOSED WING TIP

Enclosed wing tip anti-collision strobe lights, require a third strobe light on the tail or vertical fin, to fill in the required light envelope. This is an approved anti-collision system.



### FUSELAGE

In a fuselage mounted anti-collision strobe light system, a minimum of two strobe lights are necessary to get the required vertical coverage. This is an approved anti-collision system.

## ANTI-COLLISION AND POSITION LIGHT REQUIREMENTS, LOCATIONS, & DISTRIBUTION PATTERNS

All aircraft must have an approved anti-collision light and position light system for nighttime operations. The position lights consist of an Aviation Red on the left side, an Aviation Green on the right and an Aviation White taillight (REF. FAR 23.1389).

The anti-collision lighting system is required under FAR PART 91.205(c). There are different requirements affecting different aircraft. These aircraft are categorized by the date of application for type certificate. Home built aircraft are determined by the date of issuance of the Experimental Operating Limitations. The different categories are as follows:

**Aircraft for which type certificate was applied for after April 1, 1957 to August 10, 1971:**

These anti-collision systems must produce a minimum of 100 effective candela in Aviation Red or White (REF. FAR 23.1397), 360° around the aircraft's vertical axis, 30° above and below the horizontal plane (REF. FAR 23.1401).

**Aircraft for which type certificate was applied for after August 11, 1971 to July 18, 1977:**

These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (REF. FAR 23.1397), 360° around the aircraft's vertical axis, 30° above and below the horizontal plane (REF. FAR 23.1401).

**Aircraft for which type certificate was applied for after July 18, 1977:**

These anti-collision systems must produce a minimum of 400 effective candela in Aviation Red or White (REF. FAR 23.1397), 360° around the aircraft's vertical axis, 75° above and below the horizontal plane (REF. FAR 23.1401).

**Note:** The position lights must be wired independently of anti-collision lights.

## INSTALLATION LOCATIONS

### WING TIP:

The major difference in systems is the location of the strobe power supplies which can be mounted locally, one in each wing tip, or a single power supply can be mounted in the fuselage. Installation time can be greatly reduced if done in conjunction with an annual or one hundred-hour inspection. Properly installed power supplies and cabling are necessary for the safe operation of Whelen or any light systems.

### FUSELAGE:

Fuselage mounted units can be either self-contained with the power supply and lighthouse as one unit, or remote lighthouses run off a separate power supply. To meet the field of coverage, one must be on the top of the fuselage and one on the bottom.

### VERTICAL FIN:

Finally, if applicable, a single anti-collision light can be mounted on the vertical stabilizer. It can be either a self-contained or remote lighthouse depending on the aircraft.

## HOME BUILT & KIT AIRCRAFT

For Aircraft with Standard Wing Tips – The most widely used system on the market, this provides all of the components for anti-collision and position lights without the need for a taillight. The power supply is mounted in the fuselage and shielded cable is run to the strobe lights. The following is recommended:

Quantity	Model #	Part #	Description
1 each	HDACF	01-0770028-05	Power supply
1 each	A600PG14	01-0790006-00	Wing tip strobe/position/taillight, 14 VDC
1 each	A600PR14	01-0790006-02	Wing tip strobe/position/taillight, 14 VDC
<b>Note:</b> Model 9034001 and 9034002 can replace Model A600 for a LED solution			
1 each	HD60	01-0750206-00	Installation package

For Aircraft with Enclosed Wing Tip Fairings – If the position and strobe lights are mounted under a clear fairing, a third tail strobe is required. The following is recommended:

Quantity	Model #	Part #	Description
1 each	HDACF	01-0770028-05	Power supply
1 each	A650PG14	01-0770054-00	Wing tip strobe/position light, 14 VDC
1 each	A650PR14	01-0770054-02	Wing tip strobe/position light, 14 VDC
<b>Note:</b> Model 7111001 and 7111002 can replace Model A650 for a LED solution			
1 each	A500AV14	01-0770024-00	Tail position/strobe light assembly
1 each	HDT390	01-0750205-00	Installation package

For Aircraft with Enclosed Wing Tip Fairings & Wing Tip Mounted Power Supplies – If position and strobe lights are mounted under a clear fairing, the need for a third tail strobe is required. The following is recommended:

Quantity	Model #	Part #	Description
2 each	A490ATSC	01-0770062-03	Power supply
1 each	A650PG14	01-0770054-00	Wing tip strobe/position/taillight, 14 VDC
1 each	A650PR14	01-0770054-02	Wing tip strobe/position/taillight, 14 VDC
<b>Note:</b> Model 7111001 and 7111002 can replace Model A650 for a LED solution			
1 each	A500AV14	01-0770024-00	Tail position/strobe light assembly, 14 VDC
3 each	HS5	01-0750215-00	Installation package

For strobe system recommendations for certified aircraft and for Whelen/ Aeroflash/ Grimes/ Cessna cross reference lists please visit our website  
[WWW.AIRCRAFTSPRUCE.COM](http://WWW.AIRCRAFTSPRUCE.COM)

EL