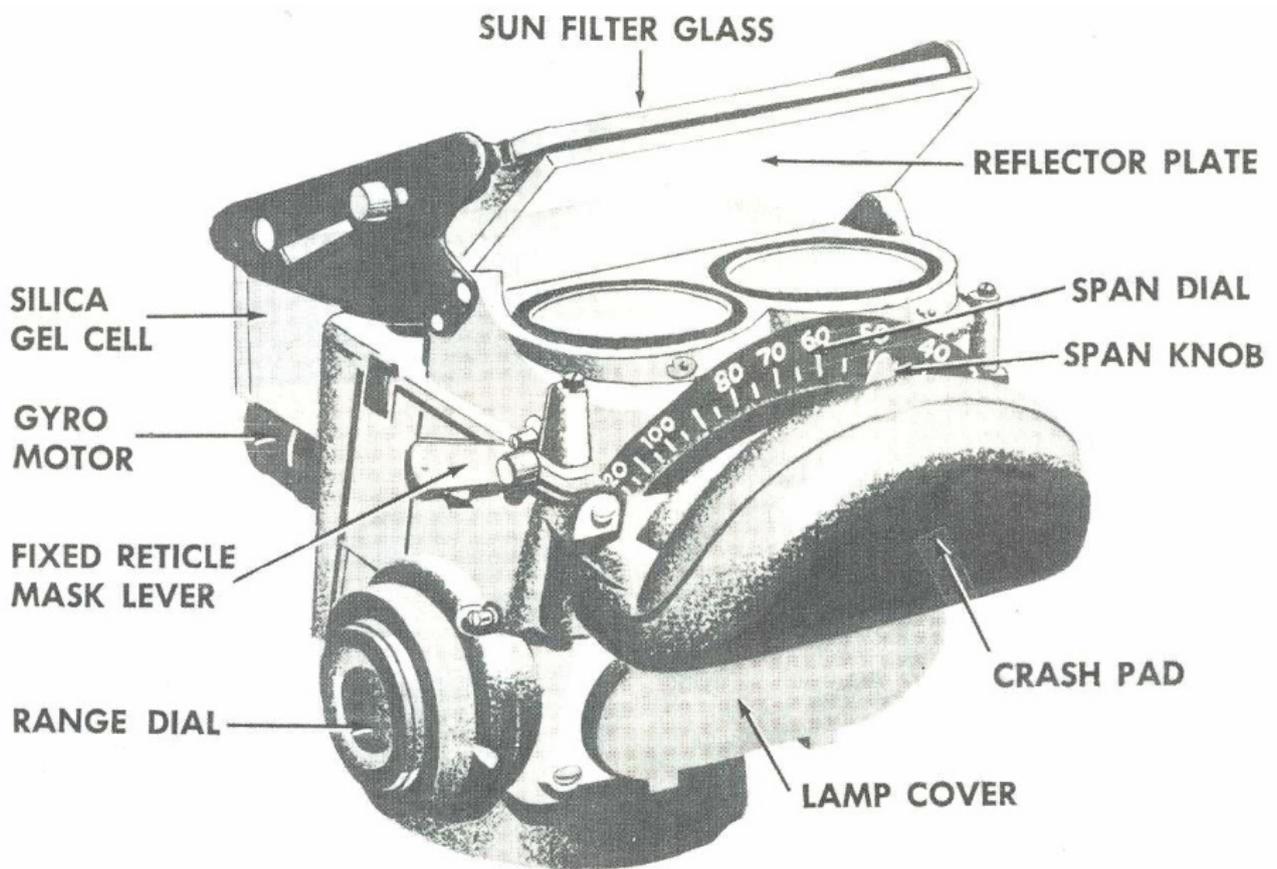


Operation
instructions
for
K-14 Gunsight

Component detail



K-14A COMPUTING SIGHT



GYRO Selector Switch: FIXED, FIXED & GYRO, and GYRO positions allow the sight to be used as a fixed sight, combined fixed and compensating sight, or compensating sight only.

GYRO MOTOR SWITCH: Turn the gyro on and off by placing to ON or OFF position.

SIGHT DIMMER RHEOSTAT: Adjust the sight brightness between DIM and BRIGHT.

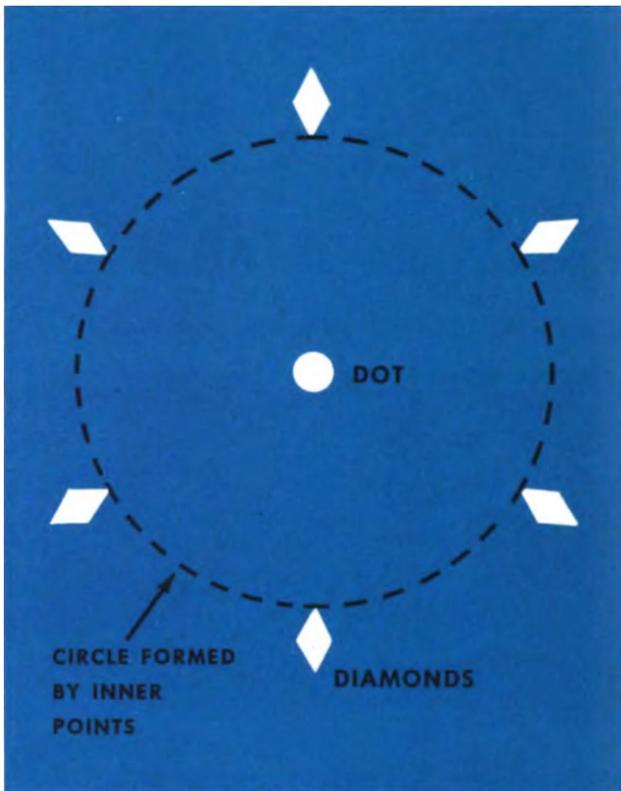


Throttle Control handle with twist grip: The grip is attached to the sight ending with a range pulley containing a dial calibrated from 2400 to 600 feet.

When the twist grip is positioned to full counter-clockwise, the indicator points to 2400 feet on the dial. v

As you maneuver to place and keep the dot on the enemy, use the grip to adjust the reticle of diamonds, so that the inner points surround him.

Note: you must keep the sight on the target for ONE SECOND before firing to give the sight time to do its work. Fire a Burst of At Least TWO Second.



Use a circle passing through the inner points



When a plane is at right angle from you-a 90 degree deflection shot- you can't use the diamonds to span the wings, even if the plane is banked. On most planes the distance from the cockpit to the extreme end of tail is about half of the wing span. Therefore, place the dot on

the cockpit with the imaginary circle touching the tail.

Note: Circle is on extreme end of tail; not just in the assembly.



If neither the wings or fuselage are at right angles, make your imaginary circle slightly larger than the plane to compensate for the part you can't see.

If wings and fuselage are at 45 degrees, allow 1/6 of the diameter, or 1/3 of the radius, on each side of target, ranging on the tip of the wing and the tip of the tail. This is the maximum allowance.

When the separation of the fixed cross and the dot shows that a long lead, around 85 to 100 mils, is being allowed, any small ranging error is magnified by distance and makes long range firing unprofitable. When only a short lead is indicated, small ranging errors are unimportant.



25 FEET, SINGLE ENGINE PLANE



60 FEET, TWIN ENGINE PLANE



110 FEET, FOUR ENGINE PLANE

Note: In case your aircraft identification is feeble, set the wing span as above

Fire at maximum range.

When closing in on a target at ranges of less than 600 feet, the diamonds can be ignored altogether. Effective fire can be made by simply keeping the dot on target.

Target Pattern. Right and Wrong



Correct—You have exact range now. Fire!



Incorrect—Dot is not on target.



Correct—Circle of diamonds corresponds to target's wing span.



Incorrect—Circle of diamonds is too large, making range and lead angle wrong.



Correct—On broadside attacks the circle should be a trifle larger than length of fuselage, as wing span is greater than length.



Incorrect—Imaginary circle formed by inner tips of diamonds should correspond to target's wing span.

Pre-flight Check of the K-14 Gunsight

1. On any P51 equipped with a K-14 gunsight, before starting the engine, place selector on FIXED & GYRO.

Note: To avoid damage, Gyro Selector must be place to FIXED during landing.

2. Place Gun Safety switch on GUNS, CAMERA & SIGHT
3. Turn on battery or use outside power source to start gyro.

Note: To avoid damage, gyro must be running during every takeoff and landing. You turn it off only in the event of failure.

4. Make sure gyro reticle image dot is superimposed on fixed- reticle cross.
5. Check the dimmer control for regulation of brightness of reticles
6. Check twist grip. Full clockwise range dial reads 600 feet. Counter clockwise-2400 feet.
7. Check lamp bulbs in flight. Open lamp compartment. Feel bulbs. A cold bulb indicates bulb has not been burning.
8. Adjust sun shades.

Firing Guns with the K-14 Gunsight

1. Place Gun Safety switch on GUNS, CAMERA & SIGHT
2. Place span adjustment lever to correspond with span of target aircraft.
3. Place the target aircraft within the gyro reticle circle
4. Twist the grip until the diameter of the gyro reticle circle corresponds to the target size.
5. Keep the sight on target for one second and Fire a burst of at least two second.

Reference

Headquarters Army Air Force, Pilot Training Manual for the Mustang P-51, Hq, Army Air Force, 1945

Headquarters Army Air Force, Pilot Training Manual for the Thunderbolt P-47N, Hq, Army Air Force, 1945

The DCS: P-51D Mustang Development Team, DCS: P-51D Flight Manual, DCS, 2010