CLAIMS

What is claimed is:

1. A gun sight for use with a weapon configured for superelevation, the gun sight comprising:

an imaging system configured for rotation in elevation;

a drive mechanism associated with the imaging system and configured to rotate the imaging system;

a gyroscope associated with one of the weapon and the imaging system; and

a processor communicatively coupled with the drive mechanism and the gyroscope and configured to control the drive mechanism to rotate the imaging system in a manner that causes the imaging system to maintain an initial angular orientation based, at least in part, on information provided by the gyroscope when the weapon is superelevated.

2. The gun sight of claim 1, wherein the information provided by the gyroscope is indicative of a change in angular orientation of the gyroscope.

3. The gun sight of claim 1, wherein the gyroscope is associated with the imaging system and wherein the processor is configured to control the drive mechanism to rotate the imaging system when the gyroscope detects a change in an angular orientation of the imaging system.

4. The gun sight of claim 1, wherein the gyroscope is associated with the weapon and wherein the processor is configured to control the drive mechanism to rotate the imaging system when the gyroscope detects a change in an angular orientation of the weapon.

5. A gun sight for use with a weapon configured for superelevation, the gun sight comprising:

an imaging system adapted to be operatively coupled to a display unit having a display, the imaging system configured to control the display unit to depict an image of a scene that includes a target, the imaging system further configured for rotation in elevation;

a gyroscope associated with the imaging system and configured to detect both an angular orientation of the imaging system and a change in the angular orientation of the imaging system;

a drive mechanism associated with the imaging system and configured to rotate the imaging system; and

a processor communicatively coupled with the drive mechanism and the gyroscope, the processor configured to control the drive mechanism to rotate the imaging system in a manner that causes the imaging system to maintain an initial angular orientation based, at least in part, on information provided by the gyroscope when the gyroscope detects the change in the angular orientation of the imaging system during superelevation of the weapon.

6. The gun sight of claim 5, wherein the processor is configured to control the drive mechanism to rotate the imaging system to cause the target to continuously remain stabilized on the display during superelevation of the weapon.

7. The gun sight of claim 5, wherein the processor is configured to obtain the initial angular orientation of the imaging system from the gyroscope when superelevation of the weapon is initiated.

8. The gun sight of claim 5, further comprising a housing, wherein the imaging system is enclosed within the housing, wherein the housing is configured to rotate together with the weapon during superelevation, and wherein the imaging system is configured to rotate with respect to the housing.

9. The gun sight of claim 8, further comprising a drum, wherein the imaging system is mounted to the drum and wherein the drum is rotatably mounted to the housing.

10. The gun sight of claim 9, wherein the drive mechanism is configured to engage the drum and rotate the drum in relation to the housing.

11. The gun sight of claim 5, wherein the imaging system comprises a daylight imaging system and a laser range finder.

12. The gun sight of claim 11, wherein the imaging system further comprises a thermal imaging system.

13. A gun sight for use with a weapon configured for superelevation and having an angle measuring device configured to measure both an angular orientation of the weapon and a change in the angular orientation of the weapon, the gun sight comprising:

an imaging system adapted to be operatively coupled to a display unit having a display, the imaging system configured to control the display unit to display an image of a scene that includes a target, the imaging system further configured for rotation in elevation;

a gyroscope adapted for mounting to the weapon and configured to detect a current angular orientation of the weapon;

a drive mechanism associated with the imaging system and configured to rotate the imaging system; and

a processor communicatively coupled with the drive mechanism and the gyroscope and adapted for communicative coupling with the angle measuring device, the processor configured to obtain the current angular orientation of the weapon during superelevation from the gyroscope and to obtain the change in the angular orientation of the weapon during superelevation from the angle measuring device, the processor further configured to control the drive mechanism to rotate the imaging system in a manner that maintains a desired angular orientation of the imaging system based, at least in part, on information provided by the gyroscope when the gyroscope detects the change in the angular orientation of the weapon while the weapon is superelevated.

14. The gun sight of claim 13, wherein the processor is configured to control the drive mechanism to rotate the imaging system to cause the target to continuously remain stabilized on the display during superelevation of the weapon.

15. The gun sight of claim 13, wherein the processor is configured to calculate the desired angular orientation of the imaging system by subtracting the change in the angular orientation of the weapon from the current angular orientation of the weapon.

16. The gun sight of claim 13, further comprising a housing, wherein the imaging system is enclosed within the housing, wherein the housing is configured to rotate together with the weapon during superelevation, and wherein the imaging system is configured to rotate with respect to the housing.

17. The gun sight of claim 16, further comprising a drum, wherein the imaging system is mounted to the drum and wherein the drum is rotatably mounted to the housing.

18. The gun sight of claim 17, wherein the drive mechanism is configured to engage the drum.

19. The gun sight of claim 13, wherein the imaging system comprises a daylight imaging system and a laser range finder.

20. The gun sight of claim 19, wherein the imaging system further comprises a thermal imaging system.

CLAIMS

1. A gun sight for use with a weapon, the gun sight comprising:
an imaging system configured for rotation in elevation;
a drive mechanism associated with the imaging system and configured to rotate the imaging system;
a gyroscope associated with one of the weapon and the imaging system; and a processor communicatively coupled with the drive mechanism and the gyroscope and configured to control the drive mechanism to rotate the imaging system in a manner that contemporaneously offsets rotation of the weapon to cause the imaging system to maintain an initial angular orientation based, at least in part, on information provided by the gyroscope when the weapon is superelevated.

2. The gun sight of claim 1, wherein the information provided by the gyroscope is indicative of a change in angular orientation of the gyroscope.

3. The gun sight of claim 1, wherein the gyroscope is associated with the imaging system and wherein the processor is configured to control the drive mechanism to rotate the imaging system when the gyroscope detects a change in an angular orientation of the imaging system.

4. The gun sight of claim 1, wherein the gyroscope is associated with the weapon and wherein the processor is configured to control the drive mechanism to rotate the imaging system when the gyroscope detects a change in an angular orientation of the weapon.

5. A gun sight for use with a weapon, the gun sight comprising:
an imaging system adapted to be operatively coupled to a display unit having a display, the imaging system configured to control the display unit to depict an image of a scene that includes a target, the imaging system further configured for rotation in elevation; a gyroscope associated with the imaging system and configured to detect both an angular orientation of the imaging system and a change in the angular orientation of the imaging system;
a drive mechanism associated with the imaging system and configured to rotate the imaging system; and
a processor communicatively coupled with the drive mechanism and the gyroscope, the processor configured to control the drive mechanism to rotate the imaging system in a

manner that contemporaneously offsets rotation of the weapon to cause the imaging system to maintain an initial angular orientation based, at least in part, on information provided by the gyroscope when the gyroscope detects the change in the angular orientation of the imaging system during superelevation of the weapon.

6. The gun sight of claim 5, wherein the processor is configured to control the drive mechanism to rotate the imaging system to cause the target to continuously remain stabilized on the display during superelevation of the weapon.

7. The gun sight of claim 5, wherein the processor is configured to obtain the initial angular orientation of the imaging system from the gyroscope when superelevation of the weapon is initiated.

8. The gun sight of claim 5, further comprising a housing, wherein the imaging system is enclosed within the housing, wherein the housing is configured to rotate together with the weapon during superelevation, and wherein the imaging system is configured to rotate with respect to the housing.

9. The gun sight of claim 8, further comprising a drum, wherein the imaging system is mounted to the drum and wherein the drum is rotatably mounted to the housing.

10. The gun sight of claim 9, wherein the drive mechanism is configured to engage the drum and rotate the drum in relation to the housing.

11. The gun sight of claim 5, wherein the imaging system comprises a daylight imaging system and a laser range finder.

12. The gun sight of claim 11, wherein the imaging system further comprises a thermal imaging system.

13. A gun sight for use with a weapon having an angle measuring device configured to measure both an angular orientation of the weapon and a change in the angular orientation of the weapon, the gun sight comprising:
an imaging system adapted to be operatively coupled to a display unit having a display, the

imaging system configured to control the display unit to display an image of a scene that includes a target, the imaging system further configured for rotation in elevation; a gyroscope adapted for mounting to the weapon and configured to detect a current angular orientation of the weapon;
a drive mechanism associated with the imaging system and configured to rotate the imaging system; and
a processor communicatively coupled with the drive mechanism and the gyroscope and adapted for communicative coupling with the angle measuring device, the processor configured to obtain the current angular orientation of the weapon during superelevation from the gyroscope and to obtain the change in the angular orientation of the weapon during superelevation from the angle measuring device, the processor further configured to control the drive mechanism to rotate the imaging system in a manner that contemporaneously offsets rotation of the weapon to maintain a desired angular orientation of the imaging system based, at least in part, on information provided by the gyroscope when the gyroscope detects the change in the angular orientation of the weapon while the weapon is superelevated.

14. The gun sight of claim 13, wherein the processor is configured to control the drive mechanism to rotate the imaging system to cause the target to continuously remain stabilized on the display during superelevation of the weapon.

15. The gun sight of claim 13, wherein the processor is configured to calculate the desired angular orientation of the imaging system by subtracting the change in the angular orientation of the weapon from the current angular orientation of the weapon.

16. The gun sight of claim 13, further comprising a housing, wherein the imaging system is enclosed within the housing, wherein the housing is configured to rotate together with the weapon during superelevation, and wherein the imaging system is configured to rotate with respect to the housing.

17. The gun sight of claim 16, further comprising a drum, wherein the imaging system is mounted to the drum and wherein the drum is rotatably mounted to the housing.

18. The gun sight of claim 17, wherein the drive mechanism is configured to engage the

drum.

19. The gun sight of claim 13, wherein the imaging system comprises a daylight imaging system and a laser range finder.

20. The gun sight of claim 19, wherein the imaging system further comprises a thermal imaging system.