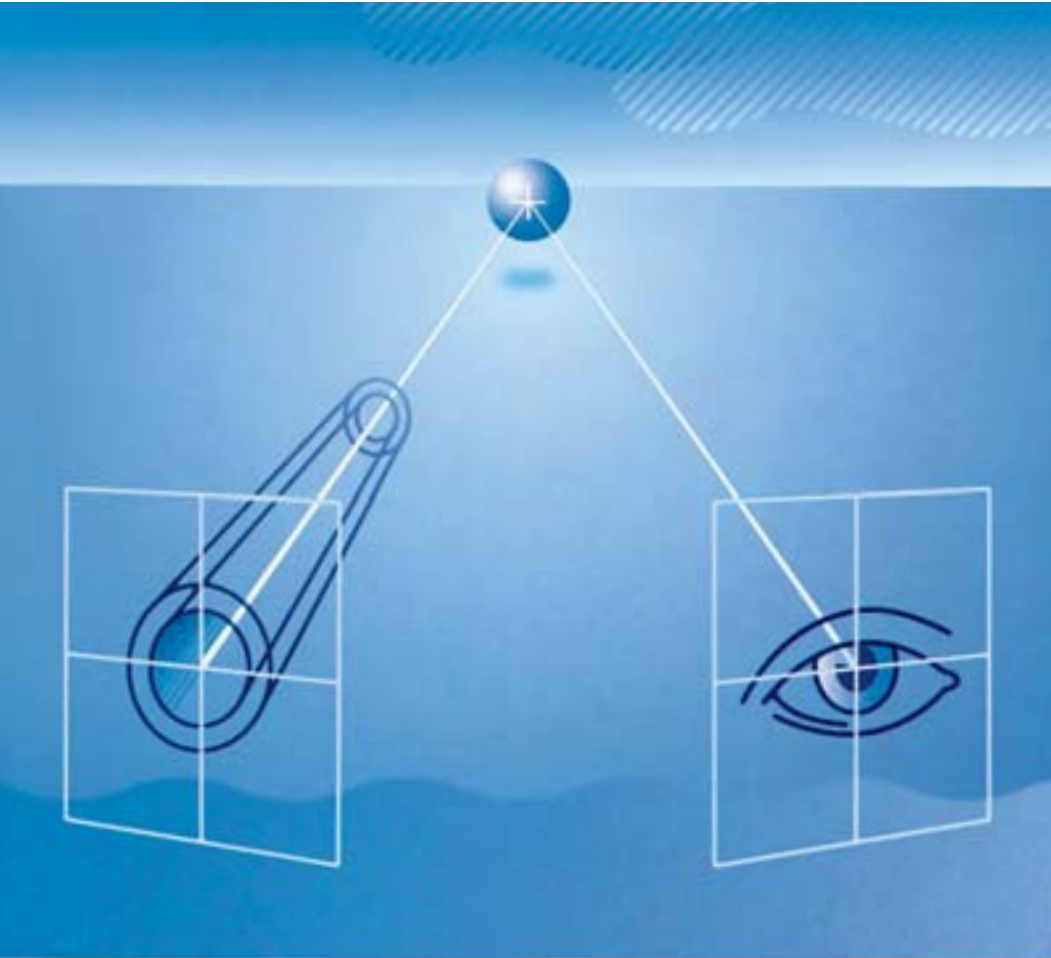


Calibration and Alignment



We make it visible.

Calibration and Alignment

Good soldiers learn to improvise to make a bad situation bearable.

Improvization, however, is not the solution when faced with a need to achieve first round kills of enemy targets.

The technical advancement of ammunition makes rounds effective when they hit their target and modern fire control systems have all the potential necessary to put that round where it is aimed. But, even the best ammunition, fired from the most sophisticated fire control system, will not achieve a first round hit or kill on an enemy target if the weapon's crew has to improvise when aligning the fire control system's optics with the bore of the weapon.

Don't leave your fire control system's and ammunition's ability to achieve first round hits to improvization.

The alignment devices of Carl Zeiss Optronics Wetzlar GmbH allow you to take full advantage of your new and "old" fire control and weapon system's technology by providing improved alignment and calibration capabilities.



The Needs

- Achieve the highest first round hit probability possible with existing fire control systems and ammunition
- Trust the weapon system
- Save ammunition currently fired in calibration
- Minimize the impact on the environment
- Minimize the effect of the environment on boresighting
- Be prepared for future requirements.

The Solution

- Use precise muzzle alignment devices from Carl Zeiss Optronics Wetzlar GmbH for the accurate alignment of aiming optics – such as Day Sight, Thermal Sight, Night Sight or Laser – with a well defined center of muzzle bore
- Be able to boresight whenever necessary:
 - Day
 - Night
 - In the field
 - In a hiding place
 - In the workshop
- Provide accurate instruments that are easy to use on a variety of weapon systems.

Depot and Maintenance Level

HIPAD High Precision Alignment Developed

A system is currently available with

- collimators
- boresight telescopes
- fixed and variable self-centering caliber bars
- quadrants
- and many additional device features.

Its great flexibility makes it ideal for a wide range of applications on different vehicles and weapon systems.

Collimator Alignment

- High alignment accuracy anywhere requiring little space
- Easy to set up
 - no need to bring the vehicle to the alignment system
 - take the alignment system to the vehicle
- No cross leveling of the vehicle required.



Synchronous Operation Tester

The aiming device of a weapon system is very often not rigidly fixed to the weapon, and it may be guided by mechanical or electrical linkage. The user has to be sure that at any time the angle transmittance in azimuth and elevation between the optics and the gun systems is correct.

To check these parameters, Carl Zeiss Optronics Wetzlar GmbH offers the equipment you need.



Crew Level

SZR/SKS Universal Muzzle Boresight Device

Muzzle Boresight Telescope

- easy to use, with built-in reticle
- easy to check and adjust without special tools.

Interchangeable Caliber bars

- perfect fit in the barrel
- no additional special tools necessary

The great flexibility allows its use on

- tanks and armored gun systems
- armored infantry combat vehicles
- anti aircraft guns
- cannons in fighter aircrafts and on helicopters
- infantry weapon systems
- naval guns
- guns, howitzers, mortars, rocket launchers and more.



The SZR/SKS Universal Muzzle Boresight has become the preferred boresight device for military services and industry. Thousands of units are used by

- troops in the field
- armories and repair facilities
- technical procurement services
- industrial and research establishments for alignment work on machines, assemblies and components.

Your Partner

Carl Zeiss has been an innovative technology leader in optics and precision engineering for more than 150 years. Time and time again, we have set the pace in the creation of sophisticated, state-of-the-art technology dedicated to perfecting the processes of seeing and measuring. With leading-edge electronics, we propel the capabilities of our optical instruments into even higher realms of excellence.

Our top priority is to determine and understand the requirements and expectations of our customers and to implement them in the form of dedicated products and services. It is our goal to provide optimum quality and maximum precision at all times, while ensuring that our customers are given excellent value for their money.

In attaining this high product quality, Carl Zeiss demands the same strict adherence to precision standards in calibration and alignment of tools and production machinery as required by you and your systems.

Thus calibration and alignment does not just stand for a range of ZEISS products but for a Carl Zeiss philosophy.

Carl Zeiss Optronics Wetzlar GmbH, a member of the **Carl Zeiss Group**, can offer a comprehensive product line that answers all the alignment and calibration needs of your civil and military defense forces. Our products and production know-how benefit our customers by providing well built devices that take the guess work and improvisation out of your system's alignment and calibration.

Our success relies on our reputation for more than a century of prevailing quality. Our workers' skills, abilities and personal commitment to product excellence have been passed on from generation to generation.

The Zeiss name not only stands for the design and manufacture of high quality products but also for the training, service and maintenance requirements associated with the instruments in use.

If you want to overcome improvisation

If you are considering a weapon upgrade

If you want to achieve best first round hit probability under combat conditions...

...you should talk to us, Carl Zeiss Optronics Wetzlar GmbH, about improving your alignment and calibration capabilities.

Carl Zeiss Optronics Wetzlar GmbH
Your Partner for
all Applications
in the Field of Boresighting

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