



# MILITARY & LAW ENFORCEMENT TECHNOLOGIES™



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## Pyser-SGI Small Arms Collimators



**Capability:** To zero, check zero or re-zero sights any time, any place with no live firing in the field, in less than a minute.

### **Accuracy/Repeatability:**

±0.15mil - 15mm in 100 meters for sniper rifles

±0.25mil - 25mm in 100 meters for iron sights

### **Benefits including but not limited to:**

Increases in hit probability of over 200% compared to conventional zeroing techniques.

**NSN:** Nato Stock Numbers available for all models.

# Small Arms Collimators

The Pyser-SGI Francis Barker range of Small Arms Collimators (SAC's) is the product of years of experience with Defence and Security Forces the world over.

The increasing use of rapid deployment forces and increasing legal framework in which soldiers now operate means that systems are needed to give soldiers the ability to zero, check zero or re-zero and validate their weapons at any time or place with no live firing. SAC's improve operational capability and optimise the full use of training resources.

The unique, operationally proven design allows all weapon users to maintain complete operational readiness when deployed, providing all personnel with total confidence in their weapon and sighting systems.

SAC's are extremely accurate and provide the end user with a high degree of repeatability. The design concept provides dedicated SAC's tuned to the exact operational requirements of the user.

Each collimator is factory calibrated to the operational zeroing range and ballistic characteristics of the user's ammunition achieving a consistency of accuracy of  $\pm 0.15\text{mil}$  ( $\pm 1.5\text{cm}$  at 100 metres) to  $\pm 0.25\text{mil}$  ( $\pm 2.5\text{cm}$  at 100 metres) dependant upon weapon type.

The rugged design has been proven to give years of trouble free and reliable service, requiring little maintenance with very low through life costs.

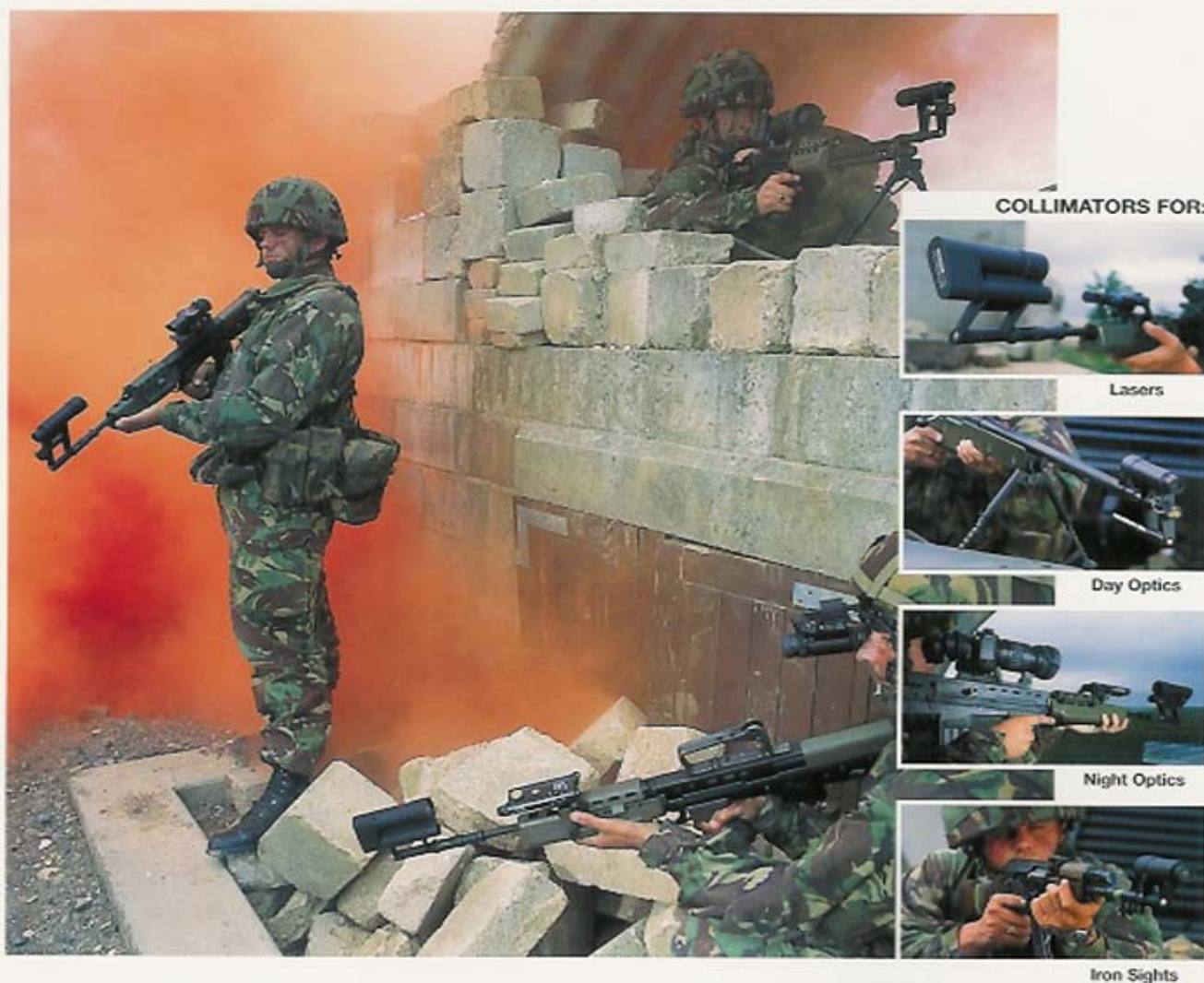
SAC's are available for all/any weapons from 4.7mm to 40mm calibre using iron sights, day optical sights and Image Intensified night vision sights, laser pointers (patented) and thermal imaging sights (patent applied for).

The Francis Barker range of  
Small Arms Collimators from Pyser-SGI  
should be the "**must have**" choice for any  
current or Future Infantry Soldier Technologies  
Programme.

# Francis Barker

Small Arms Collimator

**SAC**



## ON TARGET RIGHT FROM THE START

This remarkably simple, robust and effective device gives all users the ability to zero, check zero or re-zero their weapons in the field with no live firing, improves operational capability and optimises the use of training resources.

The range of Francis Barker Small Arms Collimators is the product of years of experience with defence and security forces the world over. The unique, fully proven design allows all weapon users to maintain complete operational readiness when deployed, providing all personnel with total confidence in their weapon systems.



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## The Requirement

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In out-of-country, covert and peace-keeping missions, live firing is often impossible. The lack of resources to check the alignment of weapon sighting systems quickly and regularly, means that the operational advantages of putting sights on weapons can easily be lost.

The increasing use of rapid deployment forces and increasing legal framework in which soldiers now operate means that systems are needed to allow the user to zero, check zero and validate the weapon and its sighting systems at any time and in any place.

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## The Solution

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The design concept provides dedicated SAC's tuned to the exact operational requirements of the client. Each collimator is factory calibrated to the operational zeroing range and ballistic characteristics of the users ammunition. Every collimator is supplied with the unique confidence checker ensuring that the user knows the SAC is correct before use.

The single piece, rigid aluminium casting, sealed and purged optics and spring fixed spigot, allows users to zero their weapons, without the need for live firing.



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## Ease of Use

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Simply insert the collimator into the barrel of the weapon and align the sight with the markings on the SAC graticule to either a common zero position or, where known, to a personal zero position.

As SAC's are not adjustable and have no moving parts, they will give an accurate and repeatable result everytime - straight out of the bag!

The rugged design has been proven to give years of trouble free and reliable service, requiring little maintenance with very low through life cost.

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## Deployment Quantities

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Individual organisations define their own needs but typically SAC's are deployed on the basis of:

- 1 per section or squad for front line infantry
  - 1 per sniper pair
  - 1 per support weapon
  - 1 per weapon type per Armed Response Vehicle
  - Armourers
  - Weapon repair facilities
  - HQ units
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## Operational Scenarios

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Many armed and police forces around the world now use Francis Barker SAC's in their standard operational procedures:

- For checking alignment before any weapon user goes out on patrol
- Before live firing on a range
- On peace keeping missions
- For special forces
- For rapid intervention teams
- On guard posts
- For secure military compounds in civil security operations
- For front line infantry units
- On operations requiring the changing of sights e.g. from day to night fighting roles

The SAC provides a high degree of confidence in the weapon system and ensures that when the weapon is used, it will be effective.



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## Benefits

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- Sights can be zeroed in the field to an accuracy and repeatability of 0.25mil ( 25mm in 100m / 1 inch in 100 yards ) in less than a minute, without needing specialist personnel or resources
- Cost effective, rapid, accurate and safe zeroing of all small arms, by day or night, without the need for live firing
- Capability to zero and check zero sights any time, any place with no live firing
- Big increases in soldiers' confidence in their weapons and their shooting ability
- Increases in hit probability of over 200% compared to conventional zeroing techniques
- Reduced need for firing range and time/personnel/travel and ammunition costs
- Copy personal zero to other weapons
- Unique self checking system
- Weapons delivered to front line units already zeroed
- Increased weapon life, reduced maintenance costs

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## User Configurations

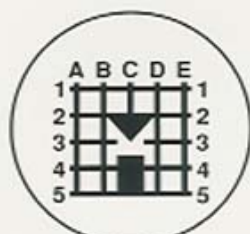
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All aspects of the SAC are user definable. Manufactured to full military specifications, they are passive and they require no power source for their operation. Supplied complete with instructions, a pouch offering suitable protection and a confidence checker. An optional Gaseous Tritium Light Source (GTLs) or battery powered light source is available for full night time use with image intensifier night sights of any generation or for zeroing iron sights in darkness.



## Graticule (Reticule) Patterns

Each SAC is fitted with a graticule pattern designed to maximise the accuracy of zeroing for the type of weapon sight system used. As with all aspects of the Francis Barker Collimator the designs of the calibrated graticule within the SAC are available according to user requirements. Examples of typical standard graticule patterns are shown below.



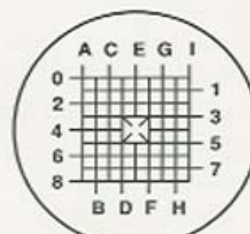
Iron Sight



Optical Sight  
(Day & Image Intensifier)



"Red Dot"



Laser Pointer  
(Visible & Invisible)

## Design Criteria

More than 70 different SAC models are available for all/any weapons from 5.50mm to 40mm calibre using iron sights, day optical sights and II night vision sights and laser pointers.

|                         |                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------|
| Accuracy/Repeatability: | $\pm 0.25$ mil ( 25mm in 100m/1inch in 100 yards )                                           |
| Options:                | Tritium or battery powered light source                                                      |
| Status:                 | In current use, in current production                                                        |
| Service:                | Operationally deployed by more than 30 armed forces world-wide, including six NATO countries |
| NSN:                    | Nato Stock Numbers available for all models                                                  |

Sales of this product are strictly controlled and are subject to U.K. Government Export Licence regulations.

All goods are supplied under our standard conditions of trade.

We reserve the right to amend design and specifications without prior notification.

Pyser-SGI Limited operate a quality management system in conformance to the quality system standard BS EN ISO 9001:1994



BS EN ISO 9001 : 1994  
Certificate No FM 30264



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## Francis Barker Laser Collimator

**Pyser-SGI Limited** are pleased to announce an extension to their range of small arms zeroing collimators with the development of the Francis Barker laser collimator.

In out-of-country, covert and peace keeping missions live firing is frequently impossible. Lack of resources to check the alignment of weapon sighting systems quickly and often means that the operational advantages of mounting laser aimers on small arms can be easily compromised. With the introduction of the Francis Barker laser collimator, night fighting forces can now be equipped with a simple, cost effective device which gives them the ability to zero and check the zero of their lasers in the field without the need to fire their weapons at anytime day or night. Based on the same successful design concept as the small arms collimator the laser collimator gives your front line night fighting force total confidence in their advanced sighting systems.

Alignment of the laser pointer is easily achieved by adjusting it to align with the centre of the collimator reticle, the laser light spot being viewed through the night vision goggles while this adjustment is being made. The entire process is completed in seconds.

The unit is passive and requires no power source for its

operation. Designed for front line use and built to exacting military standards, the unit consists of a one-piece rigid aluminium casting with a fixed spigot. As users cannot alter settings, the laser collimator requires no calibration prior to use.

Francis Barker laser collimators are available for all small arms from 5.56 to 12.7mm calibres equipped with any type of invisible laser aimer and are pre-set during manufacture to the zeroing range specified by the customer to give zeroing accuracies and repeatability to within  $\pm 0.25\text{mil}$  ( $\pm 2.5\text{cm}$  at 100 metres).

The availability of the Francis Barker laser collimator ensures your investment in advanced night fighting equipment delivers real operational advantages in the field in terms of speed of deployment of forces, increases in hit probability and soldier confidence.

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