

Bore Sighting System for LCA Air Force

Introduction

Bore Sighting System (BSS) is an opto-mechatronic equipment with design certified by the Centre for Military Airworthiness & Certification – Regional Centre for Military Airworthiness (CEMILAC-RCMA) Chandigarh. The system is



used to install and harmonize cockpit display and optronic systems at the desired position in the aircraft cockpit with reference to the aircraft axis (Fuselage Reference Line - FRL). It provides harmonization capability within tolerance of 1mR for harmonization distance of 60m. With this accurate harmonization, the target positioning for these Optronic Equipment would be within 9 feet for a distance of 20 kms.

Technical Specifications

▪ Overall Dimensions (mm)	: 632 x 360 x 150
▪ Weight	: 18.5± 0.5Kg
▪ Length	: 228mm
▪ Effective Aperture	: 34 mm
▪ Magnification	: 20X
▪ Image	: Erect
▪ Field of View	: 1° 5'
▪ Working Range	: 60 m
▪ Minimum Focus Distance	: 0.4 m
▪ Accuracy	: 1mR at a distance of 60m
▪ Resolving Power	: 3.5''
▪ Measuring Accuracy	: ± 1.5mm
▪ Range	: 60m

Applications

- BSS provides harmonization on Ground before pre-flight and installation of Line Replacement Units (LRUs) such as Head Up Display & Multifunction Displays, Gun Sights, Bore Sighting Tool for Laser



Ranger & Marked Target Seeker (LRMTS), SPA Payloads, Bore Sight Harmonization Tool, Gun Sights, Optical Sights & Holographic Optical Sights in Aircraft, Tanks, Ships, Helicopters & Military Surface Vehicles.

- Harmonization of Optronic Equipment such as Head Up Display & Multifunction Displays, Gun Sights, Bore Sighting Tool for Laser Ranger & Marked Target Seeker (LRMTS), SPA Payloads, Bore Sight Harmonization Tool, Gun Sights, Optical Sights and Holographic Optical Sights.
- Harmonization through BSS is carried out at ground only while harmonization error correction is done on the actual field vehicle (aviation, navy and army vehicle) and field platform.

Status

- DGAQA and CEMILAC approved.
- Used for aircraft installation.
- Under licensed production at Bharat Electronics, Panchkula.

Bore Sighting System for Light Combat Aircraft (AF)



Front View



Side View
Top View



Rear View