

SMF/Sign - Photometric Instrument for Taxiway Guidance Signs

COMPLETE DATABASE

System database is able to store all the instrument life measurements including information on Countries, Airports, Vertical Guidance Signs brands and models, light measurement results, graphics and pictures.

COMPLETE REPORTING

Test output includes:

- False color image of the Sign luminance, with a resolution of 1 mm
- Color map image of ICAO/EASA admitted colors (white, red, yellow, black, green, orange), with 1 mm resolution
- Average Luminance for each Sign color, both calculated over the ICAO/EASA standard grid and on each instrument camera pixel
- Chromaticity for each color on the grid and on each image pixel (CIE x, y)
- Luminance Ratio between adjacent points on the grid for each color.
- Luminance Ratio between maximum and minimum values points on the grid for each color.
- Luminance Ratio of red color to the white.
- Luminance factor (knowledge needed of the luminance of the illuminant standard source D65).
- Dimensional Ratio of characters fonts to the Sign.

REALTIME TESTING

System allows the maintenance team to test the whole airport park of vertical guidance signs in a single night working time by taking pictures shots of each sign.



SMF/SIGN system is the fastest instrument for the in-field real-time assessment of Vertical Guidance Signs able to perform Luminance and Chromatic measurements with just a single camera shot.

All has been studied for a complete, easy and comfortable experience of in-field photometric testing.

A complete database allows the Airport maintenance team to test and store data for each Vertical Guidance Sign.

SMF/SIGN allows the user to collect all the vertical signs pictures installed in an airport signs park in just one night.

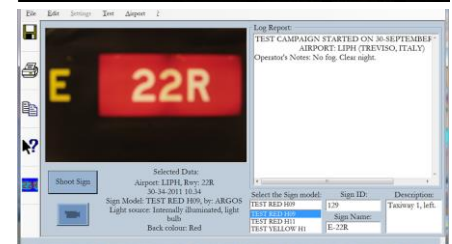
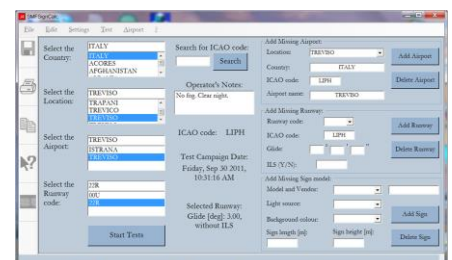
No more huge procedures for measuring just a single vertical sign on the ICAO grid with a conventional luminance sensor.

With this instrument is now possible to apply the full ICAO recommendations for Luminance, Luminance ratios, Color, Letter and Numbers dimensions, Color Ratios, Dimensional ratios, etc.

- Complete Photometric Analysis
- Real time fast measurements
- Halogen, LED and Neon tube Vertical Guidance Sign units supported
- Light Intensity Measurement according to ICAO/EASA reference grid points
- Light Colour measurement according to CIE 1931
- GPS SBAS module for Sign identification
- Able to measure internal, external and/or retro-reflecting illuminated vertical signs type
- Short realtime reporting for maintenance instructions
- Automatic PDF complete reporting
- In field and/or Workshop operations

Collected Images may be analyzed easily by the PC in the maintenance car vehicle or comfortably in the office.

Automatic reporting is easily printed at the end of image analysis.



Characteristics

TRAINING COURSE

A complete training course covers all the operating, reporting and maintenance issues allowing the customer to reach the complete control of the instrument for a complete guidance signs maintenance procedures

COMPLETE DOCUMENTATION

The system includes:
System Manual, Operating Manual, Software Manual
Test data report and Calibration Certificates

TECHNICAL SUPPORT

Argos technical support assists customers during the whole system lifetime

ZERO INACTIVITY

Fast mounting in field
Rapid runway clearance
Realtime suggested

TURNKEY SOLUTIONS

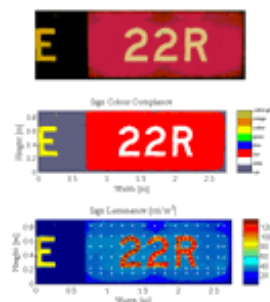
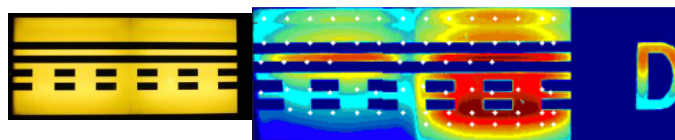
The instrument is equipped with all the necessary accessories for powering up and positioning

For further information on Argos products and services please see our website:
www.argosingegneria.com

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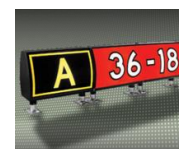
SMF/SIGN System kit includes:

- Professional SLR camera with 50 mm objective
- Network charger for the camera
- SBAS GPS receiver
- Notebook and power supply
- Professional Tripod for field use
- Car window camera mount
- System Software (database, camera control, image processing, report generation)
- Camera connecting cables
- Manuals
- Test and calibration certificates
- System Case



Specifications

Camera:	
Sensor	CMOS 22.3 x 14.9 mm, 18.1 Mega pixel
Optics	f/1.8 image stabilization. Equivalent Focal 50 mm
Max Resolution	53 µrad, equivalent to 0.5 mm at 10 m
Field of View	40° x 27°
Selectable Options	9 points auto focus; 35 zones auto-exposition; software automatic setting
PC Interface	USB 2.0 (cable included)
Weight	600 gr.
Power supply	Rechargeable Lithium Battery, 400 shots
Global:	
Luminance Accuracy	< 5 %
Chromaticity Accuracy	0.02 on x, y CIE
Measurement duration (1 Sign Tab)	< 5 min typical
Working Temperature	0°C +40°C
Storage Temperature	-20°C +80°C



References

Italy, Bangladesh,
Cameroun, Croatia,
Dubai, Germany, Hong
Kong, Korea, India,
Ireland, Malta,
Netherlands, Portugal,
Thailand, Turkey