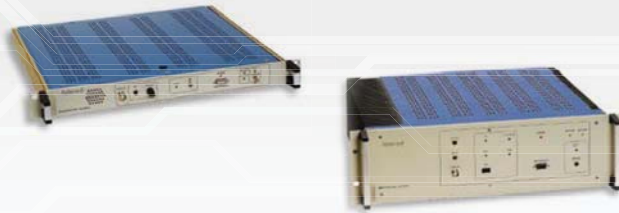


DIGITAL RADIOS EQUIPMENT 9000 SERIES

DURATION: 5 DAYS



AUDIENCE:

This training course is intended for technical personnel specialising in electronics who wish to gain knowledge about the principles of radiocommunications based on radio equipment from the 9000 series.

PREREQUISITES:

Training accessible to anyone who understands the basics of analogue and digital electronics. Holder of electrical accreditation for the practical work section.

OBJECTIVES:

Understand the CNS/ATM (Communication, Navigation, Surveillance, Air Traffic Management) concept.

Understand the modes of the 9000 series.

Master the principles of operation of 9000 series transmitters and receivers.

Handle the equipment, acquire the principles for configuration and measurement.

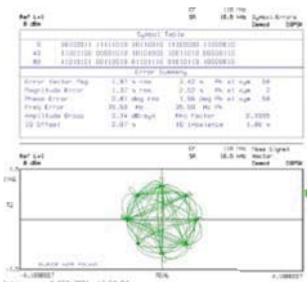
ADDITIONAL TRAINING(S):

Cohabitation of radio Systems.

Radio measurements.

1ST MODULE: THE MODULATION MODES OF THE 9000 SERIES

- General aspects of a transmission system
- Presentation of digital modulation:
 - Real modulation
 - Complex modulation
- The modes of the 9000 series:
 - The A3E mode
 - The ACARS mode
 - The VDL 2 and VDL 4 modes
 - The GBAS mode



2ND MODULE: OPERATING PRINCIPLE FOR A 9000 SERIES TRANSMITTER

- Architecture of a transmitter, IQ modulation, application to the EM9000A-C transmitter
- Description of the VHF amplifier module
- Slaving of the amplifier module
- Characteristic parameters of a transmitter
- Commissioning a transmitter, PGM9000 programmer
- Maintenance



3RD MODULE: OPERATING PRINCIPLE FOR A 9000 SERIES RECEIVER

- Heterodyne structure of a receiver, application to the RE9000A-C receiver:
 - The filters
 - The intermediate frequency
 - The automatic gain control
 - The IQ demodulation
- Characteristic parameters of a receiver
- Commissioning a receiver
- Maintenance



4TH MODULE: PRACTICAL WORK ON THE RADIO EQUIPMENT

- Presentation of the test bench
- Programming and measurement of an EM9000A-C transmitter
- Programming and measurement of an RE9000A-C receiver
- Establishing a transmission/reception radio link



DOCUMENTATION

Each participant will be provided with hard copies of the course materials during training.

MAXIMUM NUMBER OF TRAINEES

8 people

INFORMATION

- Contact: Jean-François Iriart
- E-mail: formation@telerad.fr
- Tel: +33 (0)5 59 58 55 00
- Sheet available on the website: www.telerad.fr

REGISTRATION

Using the attached form

DATES

On demand

LOCATION

TELERAD