



TECHNICAL TRAINING

Eclipse

Maintenance, Installation and Operation TR-ECL-01

Course Specifics

Duration:	3-day
Class capacity:	12 students
Location(s) for open enrolment:	San Antonio, TX, Hamilton, UK, Lagos, Nigeria.
Materials provided:	Instruction Manual (CD-ROM) Student Guide
Target Audience:	Courses are intended for installation and service personnel requiring a working knowledge of installation, configuration, and test maintenance procedures for Eclipse radio platforms

Prerequisite

Participants should have a basic understanding of point-to-point microwave links, telecommunications and IP fundamentals, and have basic computer skills.

Each student must bring an IBM compatible laptop PC and have administrator rights on the PC (to allow installation of the Portal craft tool).

The PC must have minimum parameters of:

- 500 MHz CPU, Pentium 3
- 256 MB RAM
- 80 MB of available hard disk space
- CD drive
- Ethernet 10Base-T LAN port with RJ-45 connector for local Ethernet connection
- 800x600 resolution, 256 color display (16-bit color)
- SVGA display adaptor card
- 2 or 3 button mouse
- Microsoft Windows 98, 2000 Pro, XP or Windows NT
- TCP/IP installed and configured for LAN operation

Recommended is a serial COM port (COM1 or COM2), or USB port plus external USB-to-serial adaptor to exercise a local V.24 connection.

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Objectives

Upon successfully completing a course participants will be able to install, configure, administer and maintain the relevant Eclipse platform(s).

Course Content

Eclipse Introduction

- Introduction to Node and terminal platforms

Eclipse Node

- Node concept
- Basic architecture and capabilities
- Super PDH
- Indoor Units: INU and INUe
- Plug-in cards
 - NCC -FAN RACs -DACs -AUX -NPC
- Backplane bus
- Slot assignment rules
- Node capacity rules
- Path capacity and bandwidth options
- Node licensing

Eclipse Terminal

- Terminal concepts
- 100 and 300 series platforms
- PDH and Ethernet variants
 - E1/T1
 - Ethernet with Connect ES
- Auxiliary services and alarm I/O

Eclipse ODU

- ODU 300 and ODU 100
- Frequency bands and band plans
- Capacity and modulation options
- Power Output

Eclipse Protection

- Protection options for Eclipse Node and Terminal
- Eclipse Node protection operation
 - Path Protection
 - DAC protection
 - NCC protection
 - Super PDH ring protection
 - Protection In the IP domain using DAC ES and DAC GE
 - Service Restoration times
- Eclipse Terminal protection Operation
 - Terminal Pairing
 - Service Restoration times
 - Protection in the IP domain (Connect ES training module)

Eclipse Node Co-channel Operation

- CDDP concepts
- XPIX
- Co-channel operation
(Co-channel training module)



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Performance Features

- Summary of Eclipse Node and Terminal performance features

Eclipse Configuration

- Introduction to Portal craft tool
- Portal PC configuration for Ethernet and V.24/RS-232 connections
- Portal screens
- Configuring a new installation
 - Work flow / Licensing
 - Layout(Eclipse Node)
 - Plug-ins /modules
 - Protection
 - Circuits (Eclipse Node)
 - Networking (NMS)
 - Date and Time
 - Software Management
 - Security

Eclipse Diagnostics

- Introduction to Portal diagnostics
 - System summary
 - Event Browser
 - System Controls: locks and loopbacks
 - History screens
 - Performance screens
 - Alarm screens
 - Parts

Installation Commissioning and Troubleshooting

- Pre-installation requirements
- Health and Safety
- Indoor Installation
- Outdoor installation
- Antenna installation
- Commissioning
 - Introduction to Node and Terminal commissioning forms
 - Typical commissioning test
- Troubleshooting
 - Introduction to troubleshooting basics
 - Troubleshooting path problems
 - Troubleshooting configuration problems
 - Eclipse LED's
 - Portal Alarms descriptions, probable cause(s) and recommended actions

Course Specifics

Minimum durations are listed below. Where customers have extended requirements such as Ethernet alternate-path protection in the IP domain (DAC ES, DAC GE, Connect ES), allow up to one additional day. Similarly for dual-path protection. Additional time must also be considered where the services of a translator are required.



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Core Node and Terminal course	2 day
Core Node course only	2 day
PDH terminal course only	1 day
DAC ES and DAC GE –extension to Node core	+1 day
Ring network configuration and operation	+1 day
Co-channel configuration and operation	+1/2 day
Connect ES course only	1 day
Installation Best practices	1 day