Fibre Optics in Signal Distribution

Suitability

This programme is suitable for participants involved in the TV/RF distribution industry with a desire to learn the developments of Fibre Optic technology focusing on Fibre Integrated Systems (FIRS) and who wish to progress to a higher level of competence and practical ability in this area. A reasonable understanding of conventional IRS would be desirable but not absolutely necessary.

Content

'(P) indicates inclusive practical elements'

- The history and development of fibre optic technology.
- Single Mode & Multimode Fibre principles.
- Health and Safety when working with fibre optics (P)
- Types of cables and connectors used in Fibre systems.
- Components contained within FIRS and their practical application.
- FIRS Sky Q components, upgrade, planning and testing.
- Basic Passive Optical Network (PON) design.
- HDMI over fibre.
- Wavelength Division Multipexing (WDM)
- Multiple Sat Fibre Systems
- GEPON and EDFA. Principles of operation
- System testing using VFL, OLTS and OTDR
- Practical Cable management and Blown Fibre
- Fibre connector inspection, cleaning & analysis of the effects of contamination (P)
- Repair and termination of fibre optic cables by Fusion and Mechanical Splicing (P)
- Measurement and calculation of signal losses within a typical fibre network (P).
- Termination at Customer Premise (P)
- Advanced test commission and fault finding on FIRS (P)

Learning Outcomes

This 2-day programme will enable all participants to;

- Work with main components of a Fibre IRS.
- Carry out fusion splice of optical fibre.
- Connect and terminate fibre cables.
- Specify, design and build a Fibre Integrated Reception System.
- Manage Fibre containment and terminations
- Troubleshoot, test and commission Fibre IRS and basic GEPON.

Learning Style

A PowerPoint led delivery including industry videos, clear theoretical explanations and 'hands on' applications. Continual informal and formal assessments will monitor progress throughout the day. Focusing on a kinaesthetic (learning by doing) style of tuition promoting group activity in a professional environment.

Aims

This programme will enable participants to understand the working and planning of a typical sized Fibre IRS. Participants will design, build and analyse Fibre Optic systems used for Signal Distribution.

Objectives

Over this 2-day programme participants will become practically familiar with all the components of a working Fibre IRS. Participants will become familiar and confident with Fibre technology. They will be able to design, test, commission and fault find on Fibre IRS and other basic optical networks.

Assessment Method

The assessment method for this programme is by means of practical assessment exercises and a multiple choice open book assessment paper with a pass mark of 70%.

Duration

This programme is run over 2-days

Programme Cost

Member Rate £420
Non Member Rate £660