

# Termination of Semi-Rigid Cable Assemblies to ESA Specification ECSS-Q-ST-70-18

Fact Sheet E03 / E03+

ASTA Technology UK Ltd.

This ESA-approved course will review the latest revision of the ECSS-Q-ST-70-18 standard and is followed by an open book multiple choice test. The review of the standard will give an understanding of the contents of the specification and why they are important. The test will develop your ability to navigate the standard and find the relevant information in an efficient manner.

The requirements in the standard are designed to ensure process consistency and acceptable workmanship standards resulting in the production of high reliability solder assembly, formation and preconditioning of semi-rigid R.F. cables. The course is based on the latest revision of Solder Assembly requirements of ECSS-Q-ST-70-18, *The Preparation, Assembly and Mounting of R.F. Coaxial Cables*.

The course also has a practical test. For inspectors the practical will be the QA inspection of others' R.F Cables. For operators the practical will be assembling an R.F Cable in accordance with the standard. Both are inspected by the instructor to ensure an understanding and an acceptable level of practical skills can be demonstrated in accordance with the standard.

All necessary tools and equipment are supplied, although delegates are welcome to bring their own hand tools if desired.

## Course aims

- To review and understand the requirements of ECSS-Q-ST-70-18
- To identify the factors which influence the quality, reliability and performance of the assembly and its solder joints
- To develop appropriate skills and correct hand assembly methods
- To be able to examine and analyse faults associated with the assembly

## Course content

Cable cutting \* Forming to correct bend radius \* Thermal cycling process \* Dielectric trimming \* Connector body preparation \* Gold removal and pre-tinning \* Centre conductor trimming \* Solder assembly of inner connector pin and outer shell \* Dimensional and soldering inspection of all assembly stages \* Theory and practice of R.F. connector faults \* Losses and how to avoid them \* Assembly cleaning and importance of final cleanliness confirmation

## Award

In accordance with ESA STR-258, an ESA approved, Category 3 Certificate, valid for 2 years, will be awarded on successful completion of the course for operators and a Category 2 Certificate, valid for 2 years will be awarded on successful completion for inspectors.

## Experience and pre-requisites

Delegates shall already possess ESA approved certification for Hand Soldering of wiring and THT to ESA Standard ECSS-Q-ST-70-61. If the 70-61 is not held at the time of application, then the course E03+ will need to be applied for.

- Two years industrial soldering experience in R.F Cables required for operators and two years industrial QA experience in R.F Cables, certified by the employer.
- Good practical skills
- A positive attitude to high quality workmanship

## Duration, schedule and fees

E03 course duration is 3 days – please see the current course calendar for dates and fees  
E03+ course duration is 5 days – please see the current course calendar for dates and fees

## Recertification

To renew certification for a further 2 years, a 1 - day recertification course E93 is available.  
3 – day recertification course E93+ is available.

Enquiries are welcome – please use the website [contact form](#) for security.