

TRAINING

Safety Through Knowledge

ABTT Technical Training

ABTT, Fourth Floor, 55 Farringdon Road, London, EC1M 3JB

Tel: 020 7242 9200 Fax: 020 7242 9303

E-Mail: office@abtt.org.uk Website: www.abtt.org.uk

Certificated Courses designed for Theatre Technicians

BRONZE AWARD

- *ABTT Bronze Award: Courses for Theatre Technicians*

SILVER AWARDS

- *ABTT Silver Award: Courses for Stage Technicians*
- *ABTT Silver Award: Courses for Stage Electricians*
- *ABTT Silver Award: Courses for Sound Technicians*

GOLD AWARDS

- *ABTT Gold Award: Courses for Technical Supervisors*



Royal Conservatoire
of Scotland

*Courses accredited by
Royal Conservatoire of Scotland*

January 2015

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ABTT Awards Framework

<p>Bronze Award for the Theatre Technicians</p> <ul style="list-style-type: none"> • Manual Handling & Introduction to Health & Safety at Work Act 1974 • Electrical Fundamentals • Knots & Splicing • Fundamentals of Flying • Safe use of Temporary Access Equipment 		
<p>Silver Award for the Stage Technicians</p> <ul style="list-style-type: none"> • In-service Inspection for Lifting Gear Part 1 • In-service Inspection for Lifting Gear Part 2 • Practical Rigging Part 1 • Practical Rigging Part 2 • Stage Structures • Work at Height with Personal Protective Equipment 	<p>Silver Award for the Stage Electricians</p> <ul style="list-style-type: none"> • Electronics Fundamentals Part 1 • Electrical Installation • Electrical Inspection & Testing • Electrical Inspection (BS 7909) • Portable Appliance Testing • Work at Height with Personal Protective Equipment 	<p>Silver Award for the Sound Technicians</p> <ul style="list-style-type: none"> • Electronics Fundamentals Part 1 • Electronics Fundamentals Part 2 • Sound Essentials • Advanced Sound • Portable Appliance Testing • Work at Height with Personal Protective Equipment • Communications
<p>Bronze & Silver Awards are accredited by RCS to level SCQF 7 & 8</p>		
<p>Gold Award for Technical Supervisors</p> <ul style="list-style-type: none"> • Risk Management • Risk Management Practical • Use of Codes of Practice and of <i>Technical Standards for Places of Entertainment</i> • Written Risk Assessment 		

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Welcome

ABTT Training offers a full range of technical training from the Bronze Award covering the fundamentals of safe working on stage to Silver and Gold Awards for technicians wishing to develop specialist knowledge in the departmental disciplines of Stage, Sound or Electrics and then further on to supervisory roles in technical management.

Candidates should have gained the knowledge covered by the Bronze Award prior to considering undertaking the Silver Awards. Those wishing to pursue the Gold Award should have attained a similar level of understanding and comprehension as achieved by pursuing the Bronze and Silver courses. At Gold level candidates cover formal risk management skills required by managers, HODs or supervisors.

The Bronze, Silver and Gold courses receive accreditation from the Royal Conservatoire of Scotland making the ABTT Awards prestigious and widely recognised vocational courses for theatre practitioners.

These courses are of huge benefit to both technicians seeking personal career development and to employers who wish to ensure that they are fulfilling their obligation to provide appropriate training under the Health and Safety at Work etc. Act 1974 & Management of Health and Safety at work Regulations 1999.

The Bronze Award gives candidates knowledge and understanding of best practice, whether they are working in regional rep, touring, multi-art form studios, community theatre, the West End or as a freelancer. The Bronze Award delivers the first vocational step for professional development for the theatre technician.

The Bronze Award is run on-demand via peripatetic delivery. The course may be delivered anywhere within the UK and the ABTT would welcome interested theatres to act as a host venue. The only specialist requirement is the ability to fly scenery using hemp or counterweight.

Each participant is provided with a Log Book, comprehensive tutor notes and appropriate ABTT Codes of Practice. In addition, candidates will receive an accredited certificate on the successful completion of each Award.

Individual courses may be booked by special arrangement.

ABTT Training is open to all associates, members and to the nominated beneficiaries of membership benefits for ABTT affiliates and ISG Members.

Bronze and Silver courses may be taken as a series of 1 day training courses or over a period of five consecutive days. To achieve a full Bronze or Silver Award each candidate must satisfactorily complete a multi-choice assessment test after they complete their final course.

If you have not yet joined the ABTT, look on the web site: www.abtt.org.uk for membership details.

If you are interested or have any questions please contact: training@abtt.org.uk

Geoffrey Joyce
Training Coordinator

The ABTT is a participant in SkillsScene an organisation developing industry technical training standards for the performing arts.

The ABTT Bronze Award is also available as part of some Technical Theatre Framework Apprenticeships.
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/navms/Forms/Candidate/VisitorLanding.aspx>

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Bronze Certificated Award for Theatre Technicians

Your Passport to Safety

Manual Handling and Introduction to Health & Safety at Work Act 1974 *

It has been estimated that more than one-third of all workplace accidents are caused by manual handling activities. The risks associated with manual handling include musculoskeletal injuries and injuries caused by the handler falling. The Manual Handling Operations Regulations 1992 impose a duty on employers to avoid the risk of injury to employees through instruction and induction. This course directly relates to theatres, stage technicians and workshop staff and includes discussion of the TMA / BECTU guidance on the Code of Conduct for Fit-ups and Get-Outs. This is City and Guilds accredited course

Electrical Fundamentals *

The course content includes accompanying documentation to cover basic electricity - atom - electron flow - conductors - insulators - switching - metering - resistance - power - electrical supply - generation - AC / DC - frequency - three phase - introduction to BS7671 Requirements for electrical installations.

Knots & Splicing *

The course covers the handling of different ropes and tying knots proficiently and safely. Teaching is by practical demonstration of knots that are useful in theatre situations. Candidates learn to differentiate between synthetic and natural fibre ropes; to splice rope ends with long and short splicing; the tools for splicing manila, hemp and sisal ropes and to tie knots including bowline, clove hitch, reef knot, wagon hitch, rolling hitch and sheet bend.

Fundamentals of Flying *

The course teaches the safe handling of counterweight sets and hemp and covers: terminology; parts of a counterweight set; loading and unloading; operating; first line maintenance; single and double purchase systems; putting knots into practice; tying off at a pin rail; spotting and other methods of hanging. This course is relevant to venue technicians who operate counterweight flying or only hemp flying.

Safe use of temporary access equipment *

This course teaches the safe use of temporary access equipment such as step ladders (including Zarges), ladders, trestles, Tallescopes and mobile scaffolding. The course covers selecting appropriate equipment, planning and managing work at height, inspection and record keeping, manoeuvring, assembly and use of access equipment. The course has a major practical bias and includes moving occupied Tallescopes in accordance with the ABTT Code of Practice for the use of Tallescopes for working at height in theatres.

Awards Test

Accredited by RCS to SCQF Level 7

**ABTT Continuing Professional Development certificate (CPD) when taken as an individual course.*

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Silver Certificated Award for Stage Electricians

Electronics Fundamental Part 1

The course teaches basic electrical/electronic theory and soldering skills, culminating in the analysis and assembly of a battery powered impedance/continuity tester. The course covers voltage, current, power, resistors. Ohms Law, sine wave, square wave, alternating current, direct current, capacitors, inductors, fuses, MCBs, RCDs, diodes and transistors.

Electrical Installation

This course considers circuit design in relation to theatre and studio installations. The objectives are to highlight potential problems with cabling installations and how to choose and install the correct cable run. The course content includes cable types, current capacities, voltage drop, length of run, trunking, cable tables, BS 7671 IEE Wiring Regulations 17th Edition and use of drawings in theatre.

Electrical Inspection and Testing

This course teaches how to interpret the legislation and codes of practice when testing electrical installations. The outcome is the understanding of the requirements of BS 7671 Requirements for electrical installations and the Electricity at Work Act 1989. The course includes continuity, insulation resistance, polarity, earth fault loop impedance, and residual current device testing. It also covers Inspection and Testing Certification.

Electrical Inspection BS7909

This covers the requirements of BS7909: 2011 - The Code of Practice for Temporary Electrical Systems for Entertainment and Related Purposes as used in a range of theatres, broadcasting and events. The Code of Practice outlines the necessary management arrangements and the required range of electrical supplies, heavy-duty flexible cables and make-up of portable distribution units needed.

Portable Appliance Testing

The course describes systems to organise the portable appliance testing of theatre electrical equipment and for theatre electricians to comply with the Electricity at Work Regulations for inspection & testing of portable appliances. The course includes visual inspection and electrical testing; testing periods; record keeping; managing the system of inspection and testing and selection of suitable testing instruments.

Work at height with Personal Protective Equipment (PPE)

This course is an introduction to working at height in the entertainment industry. The module includes methods and best practice in using personal protective equipment for working at heights. Its aim is to impart knowledge about using PPE when working at height and an understanding of the *Work at Height Regulations*.

Silver Award Electrical Test

Accredited by RCS to SCQF Level 8

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Silver Certificated Award for Sound Technicians

Electronics Fundamentals Part 1

The course teaches basic electrical/electronic theory and soldering skills, culminating in the analysis and assembly of a battery powered impedance/continuity tester. The course covers voltage, current, power, resistors. Ohms Law, sine wave, square waves, alternating current, direct current, capacitors, inductors, fuses, MCBs, RCDs, diodes and transistors.

Electronics Fundamentals Part 2

This course builds on the theory of Part 1 with an analysis of the components of an integrated circuit, voltage divider, operational amplifier, logic gates and output drivers and looks at typical equipment application within a theatre environment. This course looks at electronics applications within dimmers, lighting and sound control systems which utilize DMX and Ethernet.

Sound Essentials

Sound Essentials covers the important theoretical knowledge that a competent sound technician needs to understand. Topics include: understanding the fundamentals of sound; making the right connections; gain structure; signal to noise ratio; loudspeaker impedance; microphone types and a brief introduction to digital theory.

Advanced Sound

This course covers the more advanced theoretical and practical skills that a sound technician requires. Topics include: sound wave theory; digital theory; MIDI; harmonic series; acoustics; reverberation time and Haas effect. Different styles of sound system plans will be examined and there will be a practical exercise using a computerised playback system. The course will also look at the knowledge required to design sound systems for musical theatre. Aspects discussed will be: different approaches to using microphones and loudspeakers; the use of radio microphones and in-ear monitoring; the effect that the venue acoustics will have on the sound and the part that the audience plays in the process.

Communications

The good sound technician needs to be proficient in sound communication systems used today. The module looks at the different types of communication systems used in theatre to keep the show running reliably. The course discusses: wired headsets systems; show relay and paging; cue lights; CCTV; analogue and digital wireless talkback systems and how to interface several systems together effectively.

Portable Appliance Testing

Candidates will follow the electrical course set out above.

Work at height with Personal Protective Equipment (PPE)

Candidates will follow the work and height course set out above.

Silver Award Sound Test

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Silver Certificated Award for Stage Technicians

In-service Inspection for Lifting Gear Part 1

The Part 1 course brings stage technicians up to date with regulations such as the Machinery Directive / Supply of Machinery (Safety) Regulations the Lifting Operations & Lifting Equipment Regulations (LOLER) and the Provision and Use of Work Equipment Regulations (PUWER). It is designed to equip the stage technician with a good understanding of their responsibilities and the knowledge about how to perform their tasks efficiently and safely.

In-service Inspection for Lifting Gear Part 2

The Part 2 course builds on Part 1 (above) and introduces the practical element of inspecting and using of lifting gear. Candidates must have completed Part 1 before undertaking Part 2.

Practical Rigging Part 1

This course has a strong practical bias and teaches how to rig chain hoists and trusses using man made and steel wire rope slings. The procedure and safe operation of electric chain hoists are fully explained.

Practical Rigging Part 2

Part 2 is a day of problem solving, reviewing techniques and further training in the use of lifting and rigging equipment. This course seeks to test the understanding and skill of the stage technician in using a range of rigging equipment to hang hoists efficiently using a safe system of work. Stage technicians will work in pairs to carry out rigging tasks and will need to bring suitable clothing and footwear.

Stage Structures

This course provides an introduction to basic engineering concepts applicable to stages and scenery. The aim is to impart an awareness of mechanical and structural principles; and to give the stage technician an appreciation of engineering issues relating to stage structures. Topics include: beams; columns & ties; forces and types of loading; modes of failure; joints and supports; mechanical advantage and design standards. With an emphasis on realistic examples and practical experience this subject will be covered through presentation and discussion.

Work at height with Personal Protective Equipment (PPE)

This course is an introduction to working at height in the entertainment industry. The module includes methods and best practice in using personal protective equipment for working at heights. Its aim is to impart knowledge about using PPE when working at height and an understanding of the *Work at Height Regulations*.

Silver Award Stage Test

Accredited by RCS to SCQF Level 8

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Gold Certificated Award for Technical Supervisors

Risk Management 1

This course covers the important aspects of the management of *Health and Safety at Work Regulations*, and deals with the requirement for risk assessment, how to carry out risk assessments and how to record them. It identifies what actions are required under the regulations in terms of supervision, training, provision of information and ensuring the execution of competent risk assessments by managers and supervisors. The module takes place in the workplace environment in order to give candidate a clear grasp of current requirements.

The course also examines roles in emergency/disaster plans, including the use of fire fighting and other emergency equipment: reporting on accidents and workplace hazards; the objectives of the accident investigation procedure; how to contribute to safety committee meetings; the benefits of good housekeeping and how to achieve acceptable standards and general practices for both on and off the job safety.

The course examines: attitudes towards safety; human behavior; managing real risks responsibly and taking a positive health and safety approach.

Risk Management 2

A practical session following on from Risk Management 1 where candidates, working in groups, will complete a suitable and sufficient risk assessment.

Technical Standards for Places of Entertainment

Understanding and use of Codes of Practice and *Technical Standards for places of entertainment*.

Gold Award Assignment options:

This will be a written module, to be completed within three months of the last course date and based on a management Safe System of Work, featuring the candidate's own workplace. The module will be between 2500 – 3000 words. An assignment brief and candidate discussion will take place during the week. This assignment will be subject to external assessment by Royal Conservatoire of Scotland.