

## Overview

This Standard is about positioning and operating microphones to capture sound. Microphones can be placed, hand held, boom positioned or pole positioned. This involves positioning microphones and their supports so that they are unobtrusive and cause minimum disruption to performance whilst picking up the best quality sound. It involves achieving an appropriate balance between sound sources and capturing sound with the required perspective, dynamic range and multi-channel information. It is also about responding to cues in a well-coordinated way and dealing with problems during operation.

This Standard will apply to anybody who is involved with positioning and operating microphones.

## Performance criteria

### *You must be able to:*

1. determine working positions and movements for microphones during set-up and rehearsal that meet production requirements
2. achieve a balance between practicality of working positions and expectations for sound quality that are most effective for productions
3. position microphones to minimise unwanted sound or noise
4. position microphones and their supports so that they are unobtrusive and minimise unwanted shadows and reflections
5. position microphones and other equipment to minimise disruption to, and avoid impeding or endangering, contributors and colleagues
6. position microphones to achieve balance between sound sources in line with sound requirements
7. confirm that final microphone positions achieve best possible quality of sound, within production and environmental constraints
8. position microphones in expected working positions, and in ways that can be repeated throughout productions, noting microphone positions in case re-takes are needed
9. maintain a stable image and perspective during microphone movements in line with production requirements
10. capture sound which has perspective that either supports or enhances pictures, has sufficient intelligibility and dynamic range
11. record positions of microphones in formats appropriate for repeated use
12. respond to cues with smooth physical co-ordination, anticipating shot changes and movements of sound sources and cameras
13. move microphones in a smooth, fluid and unobtrusive way, to avoid generating unwanted noise and to remain sympathetic to the mood and sensitivities of contributors
14. maintain positional information whilst moving microphones
15. communicate with contributors and colleagues in ways which gain their support and which minimise disruption to the concentration of others
16. liaise with other crew members to minimise any potential boom shadow or reflection problems
17. identify, contain and remedy any defects and malfunctions in systems and equipment during performance with minimum disruption to performance

18. secure sound capture equipment in a safe way in line with production requirements when not in use

## Position and operate microphones

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### Knowledge and understanding

*You need to know and understand:*

1. where to obtain information on recommended working positions for equipment or operators
2. criteria and methods for evaluating working positions for equipment and operators
3. when it is necessary to adjust expectations of sound quality and parameters for doing so
4. the importance of audibility of dialogue especially with regards to the impaired hearing of an ageing population
5. how to deal with unwanted shadows and reflections caused by the position of the microphone and its support
6. what camera angles, lenses and aspect ratios are in use, and their implications for positioning and operating microphones
7. the characteristics of the required sound, what the sound sources are, and what changes or movements in sources may be expected
8. the cues, and how to move microphones smoothly in response to them
9. the basic principles of lighting techniques in use and their implications for positioning microphones
10. the characteristics of the microphones being used and any accessories, and their applications
11. relevant acoustic principles, and how to apply them in the current context
12. techniques to maintain stable image and perspective during microphone movement especially for stereo and 360 degree sound
13. compatibility issues between mono, stereo, multi-channel and multi-track in the current context
14. indicators of faults, failures and breakdowns, and how to control and contain them
15. the mechanics of boom and microphone suspension
16. the basic principles of picture composition, and how they apply to the shoot
17. the potential for parallax errors and how to avoid or correct them
18. boom tracking, and how to track to meet production requirements
19. how to communicate effectively with clients, contributors and colleagues

20. how to evaluate and respond positively to requests from contributors and colleagues
21. why it is important to communicate in a clear, polite and persuasive way to colleagues and contributors and how to do so
22. how to identify any changes required, and present proposals simply and concisely
23. how to hold and manoeuvre a pole in a safe posture, within your own physical limits and in a way that is possible to sustain for potentially lengthy periods of time
24. how to operate equipment like booms or poles, and maintain your own and others health and safety
25. when it is appropriate to report defects and malfunctions to other people and how to do so
26. production requirements for safely securing sound capture equipment

## Position and operate microphones

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**Relevant Occupations** Sound Production Professionals (Film & TV)

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**Suite** Sound Production (Film & TV)

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