



A U T O G R A P H

100 Wardour Street
Noise Statement for Licence
Hearing

Introduction to Autograph

The Autograph Group, based in London and New York, comprises Autograph Sales, Autograph Sound, and Autograph A2D; three companies whose combined professional audio experience is unmatched worldwide. Formed in 1973 by leading sound designer Andrew Bruce, the Autograph name has become synonymous with outstanding audio professionalism.

The group has been responsible for designing and supplying sound systems for the most prestigious venues and productions; these include international musicals - (*Les Miserables, Cats, Mamma Mia, We Will Rock You, Chitty Chitty Bang Bang, Jersey Boys, Wicked, The Lion King, Book of Mormon, Charlie and the Chocolate Factory, Aladdin and Harry Potter*) corporate events - (*BUPA, Merrill Lynch, Twickenham Experience*) and permanent installations and systems for concert halls - (*Guildhall School of Music and Drama, Barbican, Perth Concert Hall, Royal Academy of Music*), theatres - (*Royal Shakespeare Theatre, Royal National Theatre, English National Opera, The Alhambra*), houses of worship – (*Kerith Centre, St Pauls Covent Garden, Shree Swaminarayan Mandir London*), Educational - (*University of York, Latymer Upper School, Bedales, St Pauls Girls School, Ibstock Place*) and a host of other diverse clients including *The Drink Factory, Ministry of Defence, BBC, London Metal Exchange, BP and Goldman Sachs*.

Our consultancy, design and engineering expertise is employed by a variety of clients from a wide range of backgrounds – the ability to provide fair, unbiased advice and a thorough technical understanding has always been a key part of our service.

Autograph personnel are all world-class experts in their field; with the addition of a regular and loyal pool of the best freelance talent in the audio industry, we are always able to keep a project in-house, rather than subcontracting to others.

This, and our personal ambition to produce the best possible results, guarantees a level of service that is never less than excellent.

Autograph Sales and A2D are proud to be exclusive and approved distributors for various industry standard pro audio brands in the UK and USA respectively; our product portfolio includes some of the names that have, over the last three decades, changed the standard of live and recorded sound forever.

Our track record and reputation allows us a very close working relationship with almost every manufacturer of professional sound equipment, ensuring that we can offer a complete package and comprehensive support for our clients. As engineers and designers, we are constantly working with major manufacturers to improve and evolve their products, in order to provide the industry with the tools it requires.

1. Qualifications & Experience

- 1.1. I am Euan Dale Mackenzie and I am a Technical Audio Engineer (Military and Government Specialist) at Autograph Sales Limited.
- 1.2. I am a certified Senior Technician (SenTechInstSCE) with the Institute of Sound and Communications Engineers.
- 1.3. I have worked in the field of Audio for over fifteen years. I have worked for Autograph Sales Limited for six years as a Technical Audio Engineer.
- 1.4. My role at Autograph includes design, project management, and commissioning of commercial audio, and control systems in a wide range of venues including theatres, concert halls, bars, clubs, education, and houses of worship.

2. History

- 2.1. D&D London approached Autograph in August 2018 to put together a proposal for a new basement sound system.
- 2.2. The primary objective of the brief from D&D was to ensure noise from the sound system was inaudible in neighbouring residences. The secondary objective was to improve audio quality within the venue.
- 2.3. A temporary system was supplied by Autograph and limiter settings were set with John Crockford's input. This system would remain in place until the new system was ready to be used, except for the period that the demonstration system was in place.
- 2.4. Autograph put together our recommendations for the new d&b Audiotechnik sound system and an on-site demonstration of the proposed system took place on March 5th 2019.
- 2.5. The demonstration confirmed the suitability of the (now installed) d&b Audiotechnik system.
- 2.6. The new installation was carried out between April 8th and April 26th 2019. During this time the settings of the installed limiter remained unchanged.
- 2.7. On the 2nd of May new limiter settings were set in accordance with the WCC's requirements. After the settings were applied a new password known only to Autograph was applied to the system so that no further changes can be made.

3. New Sound System Specifics

- 3.1. In Ear Monitors for stage performers in the basement have been increased from one set to five sets. These are worn by the performers in a similar way to headphones. The effect of the Ear Monitors is to reduce the reliance on loud speakers on stage, and in addition will reduce the overall volume on the stage. The old system relied on only one In Ear Monitor, and all other performers required stage monitors.
- 3.2. The new stage monitors we have supplied will be powered by new DSP (Digital Signal Processing) amplifiers. All amplifiers are permanently installed off-stage and are in a passcode locked room. These amplifiers allow Autograph to set the overall volume of which these speakers are capable during commissioning, in line with the Council's requirements and limiter level settings. These levels will be password protected by Autograph, and neither the venue nor performers will have access to make changes.
- 3.3. Unlike the amplifiers in the previous system, there are no physical controls available on the upgraded, new amplifiers, other than the power switch.
- 3.4. All stage input connections to the new stage monitors are controlled by the settings applied to the amplifier. The input connections are hard-wired to the amplifier, and therefore cannot bypass the amplifier and the volume limit settings applied to it.
- 3.5. All offstage speakers in the basement are powered by the same password protected amplifier type and will be limited by the sound system processor.
- 3.6. A new password for the sound system processors is now held securely by Autograph. Autograph will change and keep secure the password which may be changed if and when deemed appropriate.
- 3.7. For the avoidance of doubt, all inputs to the sound system must travel through the sound system processor, and the limiter settings agreed with the Council during commissioning. This includes any DJ desks.
- 3.8. If the power is cut to either the limiter, or amplifiers no sound would be output from the sound system.

- 3.9. The loudest speakers in the basement sound system are the main speakers to the left and right of the stage. The new speakers have a more controlled, narrow dispersion which helps contain volume levels within the space and lowers the required volume level overall. The old speakers covered a wider area preventing more accurate containment of sound levels.
- 3.10. The new main left and right speakers are also mounted at an angle so that the loudest audio is directed away from the structural columns. This was not the case with the previous left and right speakers and this might have contributed to increased noise bleed.
- 3.11. The new main left and right speakers employ a design that reduces the noise they create directly behind the speaker, across a wide frequency range. This reduces the potential vibration of the column directly behind the speaker.
- 3.12. Where new speakers have been mounted to the ceiling, anti-vibration mounts have been used. This type of mounting was only used on some of the old speakers.
- 3.13. All new subwoofers are mounted on Isolation platforms.