

QUAD HISTORY

Quad, for hundreds of thousands of people in countries around the world, is the next best thing to a seat in a concert hall, offering a degree of emotional and intellectual satisfaction exceeded only by the real thing. A combination of design engineering, quality of manufacture and a concern for the customer, makes Quad the only logical choice for every person who enjoys listening to music.

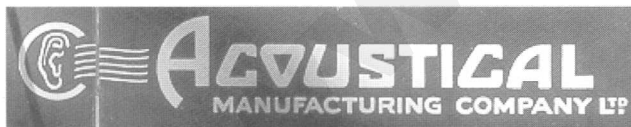
Although designed for music reproduction in the home, Quad products are also used in recording and broadcasting studios where quality is the first requirement.



Peter Walker was awarded the OBE in 1990 for his contribution to the audio industry and an honorary degree of Doctor of Science by Keele University in 1992. He is also a Fellow and Silver Medalist of the Audio Engineering Society.

As a recognised world-leader in amplifier and electrostatic speaker design, Quad has made a significant contribution to the improvement of sound reproduction, collecting on the way an array of awards and prizes, including the **Queen's Award for Technological Achievement** in 1979 – the only one ever awarded to an audio equipment manufacturer.

The story of Quad started in 1936 when Peter Walker set up his own business making amplifiers, under the name of 'The Acoustical Manufacturing Company'. The early days, as in so many small companies, were composed of enthusiasm, hard work and very little reward.



1940s

After being bombed out of London in 1941, the company moved to new premises in Huntingdon, where it has remained ever since.

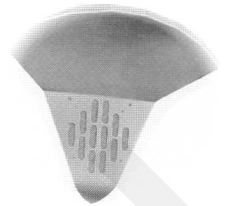
Before World War II, there was no Hi-Fi market as such but Peter Walker, along with a few manufacturers of public address equipment, attempted to achieve a better quality of sound reproduction than that which was economically feasible for the times.

During the war production ceased completely,

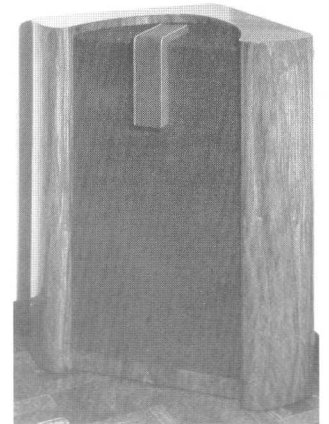
but by the end it was possible to resume 'non-essential' production using war surplus parts. New designs began to appear out of earlier elaborate and sometimes cumbersome equipment, such as the one affectionately known in Peter Walker's home as the 'gas stove' (Class 'A' and DC coupled no less!). Over the next few years, amplifiers like the QA12/P (Quality Unit Amplifier 12 watt with pre-amplifier), designed for lab and studio applications, began to sell for use in the home. By the end of the decade, people started to take an interest in improving the quality of domestic music reproduction; the Hi-Fi market had begun.

The QA12/P (Quality Amplifier, 12 watts with pre-amplifier) was the Acoustical Manufacturing Company's first product designed for the domestic music listener.

The **Corner Ribbon loudspeaker** from this period used a ribbon high frequency unit in conjunction with a moving coil bass unit, and represented a significant step in loudspeaker development. Using a horn loaded ribbon tweeter, it reproduced an octave or so which other loudspeakers did not reach. Many of these are still in use, but this model was discontinued in preparation for the full range electrostatic loudspeaker.



Acoustical PA Loudspeaker



Corner Ribbon, 1949

1950s

In 1951, The QUAD amplifier, successor to the QA12/P found

favour amongst early audio enthusiasts. It was with this model that the 'variable high frequency filter' was introduced, and it has been a 'must' ever since. It established the format for domestic high-fidelity equipment consisting of a pre-amplifier with controls necessary for the selection of programmes, and a separate power amplifier.

Music listeners did not take long to realise the virtues of Acoustical's products and to appreciate



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that the acronym QUAD, derived from 'Quality Unit Amplified Domestic' was much easier to pronounce and remember than Acoustical.

The company also developed the cathode coupling of the output transformer which had been used for many years in their P.A. amplifiers. This was later taken up in the USA in a rather retrograde form and called 'ultra-linear'.

The reputation of Quad is founded on the **Quad II** which was introduced in 1953. Its matching QCII Pre-Amplifier featured push buttons to select inputs and alternative record equalisation characteristics.

Shortly after the appearance of the Quad II, all contract work on P.A. amplifiers was discontinued in order to concentrate efforts on the QUAD line.

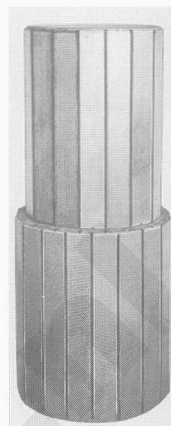
In order to demonstrate the reproduction quality of hi-fi equipment, Quad, in co-operation with the late Gilbert Briggs of Wharfedale, held a series of public concerts in London's Royal Festival Hall as well as in other halls in Britain and the USA. The live concert, using a variety of works and instruments, was instantly compared with recordings of the same performance. This helped considerably to promote a wide appreciation of just how good quality reproduction could be.

research into materials and techniques, all carried out in considerable secrecy at Huntingdon.

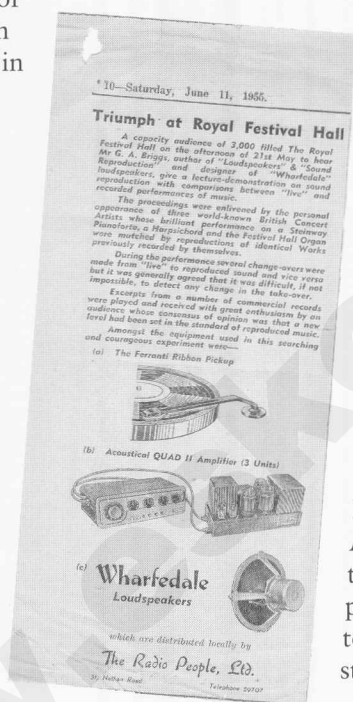
Although electrostatics had long been recognised as providing the answer to most of the basic problems of loudspeaker design, the limitations in earlier days to materials such as animal intestines for diaphragms and the problems of handling very high voltages in domestic equipment rendered the whole idea impracticable. With the introduction of the moving coil

loudspeaker, electrostatics were largely abandoned until the development of suitable materials for light diaphragms which then made it possible to manufacture them.

The fact that the ESL-57 remained in production, virtually unchanged for 28 years, is a credit to the thought and care invested in the design and development of this product, which was truly years ahead of its time. It became the standard by which all others were judged. Braun, in Germany, were the first foreign firm to manufacture the loudspeaker under license, followed by KLH and Acoustech in the USA. Acoustech's were much larger units than the Quad, being similar to the pre-production model which was then too big to sell in any quantity, particularly with stereo on the horizon!



Early experiments in electrostatic loudspeakers



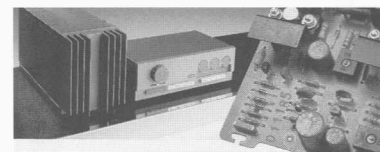
The full range electrostatic loudspeaker, the ESL-57, was first demonstrated in London to an invited audience of leading audio engineers in 1956, and marketed the following year.

This was the result of a long-standing appreciation of the basic advantages of the electrostatic principle and about three years of concentrated, non-stop, often day and night

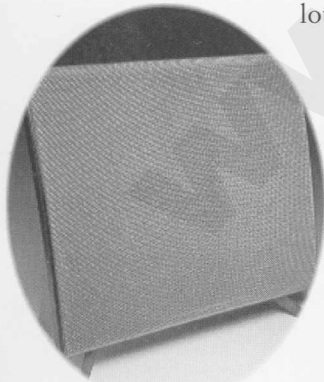
The introduction of stereo records and broadcasts resulted in the Quad 22 Control Unit and the Quad Stereo Decoder. A stereo decoder was added to the Quad FM Tuner to bring the BBC stereo broadcasts into the home.

1960s

In 1967 the first all-transistorised Quad 33 Control Unit and 303 Power Amplifier were introduced. The 'Triples' output circuit of the 303 for the first time successfully overcame the problems of thermal tracking in Class B amplifiers. This was an original



Quad 33 & 303 and 'Triples' output circuit board



'Walker's Little Wonder' - the first full range electrostatic

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development carried out by the company and was the subject of articles in *Wireless World* and similar technical journals overseas.

1970s

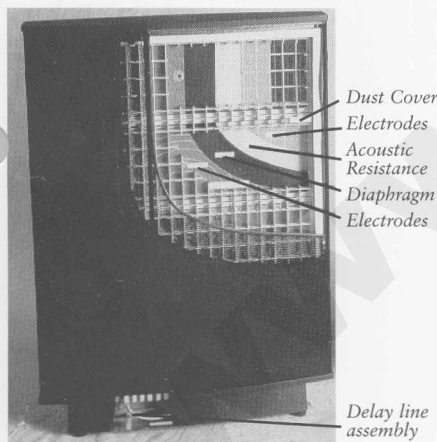
'Current Dumping' was the name given to a new power amplifier circuit design which overcame the need to use carefully selected and relatively fragile transistors to obtain optimum performance. In 1975, Quad presented a paper to the 50th International Convention of the Audio Engineering Society on the new technique and was granted a Queen's Award for Technological Achievement. Quad remains the only high fidelity company to have gained this award.

The Quad 405 'current dumping' amplifier proved to be outstandingly successful and a best seller in markets as diverse as Japan, Canada and France, as well as the UK.

A new Quad electrostatic had been rumoured along the knowledgeable audiophiles for ten years or so, and finally in May 1981, Quad officially took the wraps off of the ESL-63, known affectionately as FRED (Full Range Electrostatic Doublet).

The ESL-63, a full range electrostatic loudspeaker, used two sets of concentric annular electrodes fed via a sequential delay line so that the motion of the diaphragm produced a sound pressure pattern identical to that of a theoretically ideal source.

The advantages of this approach were so clearly evident to those who heard the loudspeaker, that the first year's production was sold within two months of its introduction.



ESL-63 loudspeaker

1980s

In 1982, the 15 years old Quad 33 and its accompanying FM3 tuner were replaced by the completely redesigned 34 Series and FM4, using the latest technology and incorporating several original features.

The FM4 incorporated a specially developed microprocessor and particular attention was paid to ergonomics to make it the simplest tuner on the market to operate, while offering an audio performance limited only by the quality of the incoming signal.

A further development of the 'current dumping' circuit resulted in the 306 Power Amplifier and in 1986 the 606 Power Amplifier, replacing the 303 and complementing the 405-2.

The 66 Series was a step in the direction of one brand system with an ergonomically advanced remote control system. The 66 system offered a combination of performance and ease of use which set it apart from the competition.

The 66 Pre-Amplifier, 606 Power Amplifier and Quad 67CD player all won awards both in Britain and overseas.

1990s

The 77 Series, today, continues this combination of performance and ergonomics. The highly original two way remote control provides the listener with a series of menus on a screen on the handset. A bus links all the units together and carries signal and command functions. The QUAD 77 Integrated Amplifier won European Amplifier of the Year '95-'96, winning the approval of Europe's Hi-Fi journalists.



EUROPEAN IMAGING AND SOUND ASSOCIATION
Awarded to 77
Integrated Amplifier

In September 1995 Quad was acquired by the Verity Group Plc, joining a stable of brands including Mission, Wharfedale and Premier Percussion. With the advent of NXT technology, the Verity Group decided to concentrate solely on this area and so in October 1997, Quad and Wharfedale were brought together through a management buy-out, along with the historically prominent brand, Leak. Added to this new brand was the Airedale loudspeaker company and so the International Audio Group (IAG) Ltd was born.

The successes of Wharfedale, Quad & Leak together make up an impressive portfolio of brands. Together with a market-focused management team and a dedicated sales team, IAG Ltd is now a very important Hi-Fi company within the industry.

