

CELEBRATING THE FIRST 50 YEARS OF QUALITY REED RELAYS





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John Keith Moore 1932 - 2017The founder of Pickering Electronics

About our Founder

John Moore grew up in Halifax, West Yorkshire, in a two-up two-down terrace house, with his five brothers, two sisters, his mother and father, and grandparents. Growing up in this impoverished background gave John a very strong passion and drive to succeed.

After John's 2 years' national service in the Royal Air Force he had several electrical engineering jobs in the 1950's and early 1960's, at companies including Marconi Instruments, where he helped design their first 'White Noise' tester, De Haviland Aircraft and Knowles Electronics. John had very fond memories of his time at Knowles and always spoke of their "stunningly successful" business model.

After landing a new job for a company called Astralux Dynamics in Brightlingsea, John moved to Great Bentley, in Essex. Fortunately, this job did not work out, so he started his own company in January 1968, and this is how Pickering was established, which over the next 50 years grew to employ over 370 people worldwide.

Sadly, John Moore passed away in 2017, but Pickering's 50 year history will continue to be overseen by John's son Keith Moore. "I have every intention to continue the growth of the Pickering Group while keeping John's original values and employee-orientated behaviour", said Keith.

Where it all Started



Pickering Electronics Ltd. Certificate of Incorporation.

Pickering Electronics parking light.



Original Pickering Electronics parking light box.

Before the birth of Pickering Electronics as we know it today, Pickering was a small start-up firm selling one bulb parking lights for cars that clipped on to the driver's window.

In those days, it was necessary by law in the UK to have a light on cars when parked at night by the roadside. Cars also had to be parked on the correct side of the road. Companies like Halfords, sold a parking light like the one in the illustration, which plugged into the cigarette lighter socket if the car had one, or clipped straight onto the battery terminals. The problem with this was that you had to go out to your car when it got dark to plug it in and again when it got light to unplug it to avoid a flat battery.

Pickering bought standard lights and modified them by adding a simple photo-cell which switched it on at dusk and off again at dawn. Looking at the picture you will see the round photo-cell which faced downwards so as not to be affected by streetlights.

Why 'Pickering' Electronics?

While attending a 3-year management course at Brighton Polytechnic (now Brighton University), John Moore became friends with a man called Peter Pickering. John & Peter decided to set up a company together and at the time, John was also working for a company called Knowles Electronics, and thought that his employer may disapprove of moonlighting, hence the name Pickering, and not 'Moore' Electronics Ltd. After John moved to Essex, Peter was still on the company register as a Director for a few years, before resigning due to not being involved in the company anymore.

John was happy to keep the company name 'Pickering', as if it had been called Moore Electronics, it would be obvious to customers that it was a small company when John visited them as the Technical Sales Representative. He always tried to portray Pickering as a larger, well established company.

The Birth of Pickering Reed Relays



First sales order in 1968.

1968:

On January 1st, 1968 John decided to focus solely on Pickering Electronics and started designing and manufacturing high quality Reed Relays for use by Original Equipment Manufacturers (OEM).

Pickering's first official Reed Relay sales order was for 9 of the Series 10 Reed Relays on 5th February 1968 to a company called Sound Diffusion Ltd. Note the invoice is in Pounds, Shillings and Pence as this was pre-decimal currency.





Pickering
Electronics first
manufacturing
facility, at 64
Barrack Street,
Colchester, is
now a fish and
chip shop.

64 Barrack Street in Colchester is where Pickering was first located in 1968. This small shop was shared with Paul Jones (one of John's colleagues from when he worked for a firm called Astralux, in Brightlingsea, Essex). Paul had some winding machines for winding small transformers which were used for 12 volt fluorescent fittings for caravans, as well as other things. Pickering Electronics' first manufacturing facility can be seen in the top left image, which has been a chip shop from the late 1960s onwards. Keith, John's son and current owner of Pickering, visited the chip shop on what would have been John's 85th birthday, apparently the chips were pretty good (see bottom left image).

Within 6 months Paul and John moved on to 50 Military Road, on the 2nd floor of a 3-story building in Colchester. The building originally had a tin roof and John once said this was arguably the most grotty place in Colchester.

Not long after John and Paul, Dermot Moriarty also set up in the same building, manufacturing Current Transformers. John recalled Dermot to be a very nice man, and a capable electrical engineer. DK Moriarty are still trading today, located in Eastgates Industrial Estate, Colchester.



48 and 50 Military Road, previous Pickering Electronics manufacturing facilities.



Small unit in Brunel Road, Pickering Electronics' first Clacton-on-Sea factory.

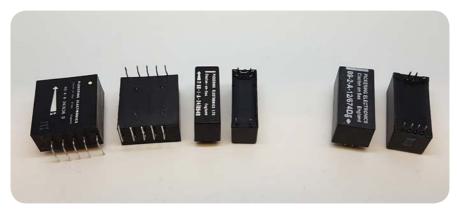
Shortly after, the shop next door, 48 Military Road, became available. John rented it, which was one of the biggest risks he had ever taken. At the time, John had a mortgage that was 9 months overdue, a wife and 7-year-old son to take care of.

John's risk paid off. Pickering ended up with four full time staff members, two of whom were sisters Rosemary and Judy Allen. Rosemary would eventually become John's second wife, and the business steadily expanded at a fairly modest rate.

Pickering stayed there until moving to Clacton in 1974.

In July 1973, John's first wife Alice, saw an advert about some small factory units in Brunel Road, Clacton-on-Sea. Together they went to look at them and decided to purchase one, which was completed in December 1973. This was Pickering's first Clacton-on-Sea factory, which had a mezzanine floor added, more than doubling the production area. As the business continued to expand, Pickering slowly increased in head count.

A Major Supplier in the UK Automatic Test Equipment Market



Special mercury wetted reed relays manufactured for early Marconi Instruments and Membrain Automatic Test Equipment.

Pickering becomes a major supplier to most UK Automatic Test Equipment (ATE) companies in a growing market.

In the image to the left are 4 Pole relays and Single Pole relays manufactured for Marconi in St. Albans, for use in their very successful System 80 and 80X series of Automatic Test Equipment. Many hundreds of thousands of these relays were manufactured between 1978 and 1984. The 4 pole types were affectionatley known here as 'Crabbies'. On the right of the picture are 2 Pole mercury wetted relays manufactured for Membrain in Poole.



Pickering Electronics building being built in 1979.



Pickering Electronics building when first opened in 1980.

The New Home of Pickering

1980:

In 1979, Pickering approached the local council to buy an acre of land to build a purpose built factory, again in Clacton-on-Sea, that would enable Pickering to expand in the future. At the time, Pickering's Production Manager, Klaas Jansma, was very much into railway modelling and designed a scaled model of a factory using railway modelling material, this model was then given to the architect and formed the basis of today's factory. In 1980, Pickering moved into this newly built factory, which was John Moore's pride and joy, to have the best looking factory in Clacton.

Pickering Quality Engineered Reed Relays For You

ASK US FOR A SAMPLE /

Please contact us for a free sample and a full catalogue. We can also help you with any technical queries and special models.

Our Telephone number is 0255-28141 or Telex 987283.

If not of immediate interest hold this data sheet for future reference. This leaflet contains all the data you require for simple switching circuits using reed relays. Should your colleagues require copies and full catalogues please contact us. We will also be able to assist you with any technical queries you may have.

The new home of Pickering Reed Relays



We have just moved into our new factory. This will enable us to continue expanding in the specialized area of reed relays. We produce a very wide range of catalogue items that switch from microvolts to kilovolts and in addition we design and manufacture several hundred models to customers specific requirements. Typical of these are reed relays for switching RF signals up to a few hundred MHz and from low levels up to 50 watts.

If you have a switching application and you want to discuss it with experts, please give us a ring and we will try to help you.

Pickering Electronics Limited

Stephenson Road, Clacton-on-Sea CO15 4NL England Telephone: Clacton-on-Sea (0255) 28141 Telex: 987283

Mailer sent out when the new factory first opened.

Introduction of Single-in-Line (SIL/SIP) Reed Relays

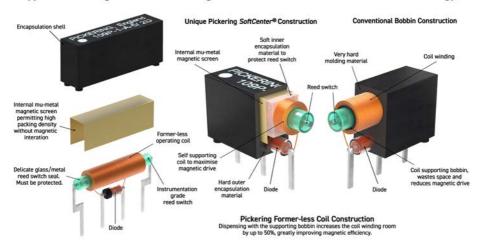
1983:

Introduction of the first Single-in-Line (SIL/SIP) Pickering Reed Relays - the Series 105, including for the first time, changeover and two pole types.



Pickering Series 105 Reed Relays.

Typical Pickering Construction using Former-less Coils and SoftCenter® technology



The Pickering Reed Relay Construction

1983:

Pickering established *SoftCenter®*Technology to protect the sensitive glass/metal seal of the reed switch capsule, thereby increasing contact resistance stability and life expectation.

Former-less coil construction was also developed to maximize magnetic drive and increase packing density.

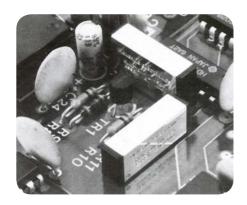
There was very little machinery available in those days for winding former-less coils. Klaas Jansma spent a lot of time researching something suitable. Special Swiss made machinery that was originally designed to wind the operating coils for electronic watches was selected after visiting their factory in Geneva. The first of these machines with the skeining attachment, cost Pickering about £40,000, a very large investment at that time for what was a new technique for manufacturing relays.

Historical Timeline

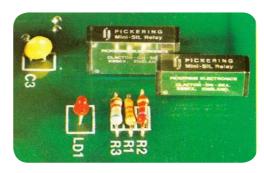


Graham Dale and Klaas Jansma at Pickering Electronics' head office in Clacton-on-Sea.

In the early 1980s Graham Dale, who was formally responsible for reed relay test equipment was moved by John to reed relay design. This was the start of a golden era in Pickering Electronics' development and leadership in high density reed relay design, moving Pickering Electronics from a follower, to becoming a real innovator in high performance reed relay design.



Pickering Series 107 Reed Relays.



1984:

Introduced the first ever Mini-SIL/SIP Reed Relay with a patented Mumetal screen/can – the Series 107 increased packing density and improved efficiency and reliability.

In the same year, the manufacturing area was tripled in size to 2000m² (20,000 sq ft), due to the company's growing success.

Pickering Controls Ltd & the Birth of Pickering Interfaces Ltd.



Pickering Interfaces Certificate of Incorporation.



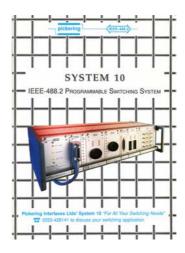
Pickering Interfaces' first employees, Keith Moore, Ian Johnston and Dave Howe in front of the first Pickering switching system.

You may notice that Pickering Interfaces incorporation certificate states an earlier date under the name Pickering Controls. Pickering Controls was originally a sister company of Pickering Electronics designing, manufacturing & distributing fan controllers, that were used for ventilation and heat control in chicken sheds, which housed many thousands of poultry. John decided to focus solely on the Reed Relay side of the business, which was rapidly growing and had gained an excellent reputation for quality in both the UK and continental Europe.

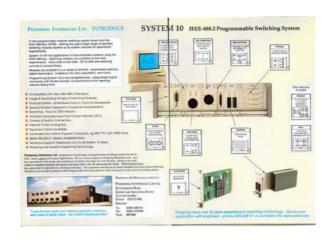
In 1985, Pickering Controls Ltd was changed to the name Pickering Interfaces Ltd. John's son, Keith Moore, started a research and development project to start designing switching systems based on the General Purpose Interface Bus (GPIB).

In 1988, the System 10 was launched to provide a complete modular solution for switching systems.

This was the birth of Pickering Interfaces, which would later become leaders in switching systems based on many other platforms, including PXI, PCI, and LXI.



Pickering Interfaces first literature for the System 10 Switching System (designed using very early desktop publishing software on an Apple Mac).



Historical Timeline Continued

1988:

Introduced the first ever SIL/SIP Reed Relay for high voltage applications – the Series 104.

1989:

Introduced the first ever Micro-SIL/SIP Reed Relay for high density applications – the Series 109 required little more than half the board area of any other SIL/SIP Reed Relay on the market at the time, setting a new standard within the industry.

1992:

Introduced the first ever Vertical-SIL/SIP Reed Relay for high density applications – the Series 110. The switches in this range were mounted vertically within the package, allowing the use of the same switch types as would normally be found in relays requiring a very much larger board area.



Pickering Series 104 Reed Relay.



Pickering Series 109 Reed Relay.



Pickering Series 110 Reed Relay.

Pickering became ISO 9002 (BS 5750) certified to ensure commitment to quality and customer satisfaction, as well as continuously improving the company's operations.



2001:

Appointed a representative in Scandinavia - Pickering Interfaces A.B., based in Varberg, Sweden



Bo Ohrwall, Director of Pickering Interfaces A.B.



Pickering Series 117 Reed Relay.



Pickering Series 116 Reed Relay.

Introduced the Series 117 - very high density Relays stacking on a 0.15" x 0.27" pitch. The highest density available at that time.

2003:

Introduced the Series 116
- which has an identical configuration to the Series 117 but a higher profile.
Power rating increased to 10 Watts.

Appointed a representative in China - Tomtech Mechantronics Co. Ltd.



Johnson Liuqiang, Owner of Tomtech Mechantronics Co Ltd.

深圳市同泰科技有限公司

Pickering supported the European Union's commitment to the Restriction of Hazardous Substances by committing to RoHS compliance and the Lead Free philosophy.



Opened a factory in the Czech Republic for volume manufacturing.



Pickering Electronics s.r.o.

Appointed a representative in South Korea – Leitik Co. Inc.



Appointed a representative in Taiwan – Winningway Material Development Ltd.



Winningway Material Development Ltd. logo.

Reed RelayMate from Pickering Electronics



Pickering Electronics Reed RelayMate book.

2011:

Published 'The Reed and how to interpret their specifications and make best use of them in their

Appointed a representative in India – Vigven Tech Mark Pvt Ltd.



2017:

Appointed Rapid Electronics to become Pickering's first official distributor in the UK.



Rapid Electronics logo.



Pickering Series 120 4mm²™ Reed Relay.



A total of 528 Series 120 relays on Pickering Interfaces ultra-high-density PXI module illustrates the packing density of these extremely small Reed Relays.

2017:

Yet another Pickering first: Introduced the world's smallest footprint reed relay for high density applications - the Series 120 4mm² ™.

Exhibitions Over the Years



Electronica, Munich, 1990: Pickering's first European exhibition.



Electronica, Munich, 1992: British exhibitors were visited by Royal Highness, Prince Edward, The Duke of Kent.

Exhibitions Over the Years

International Test
Conference (ITC), 1999:

One of Pickering's first American exhibitions.





International Test Conference (ITC), 2005

Nepcon, USA, 2005



Exhibitions Over the Years



Electronica, Munich, 2006



Exhibitions Over the Years

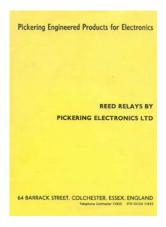


International Test Conference (ITC), 2007

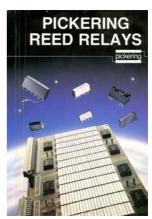


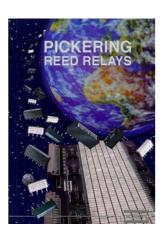
Semicon West, 2014

Literature Over the Years Catalogues:

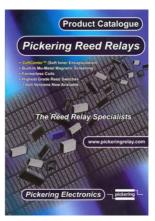








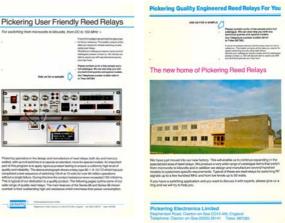


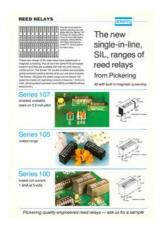


Literature Over the Years

Flyers:













Klaas Jansma – Business Development Consultant

Pickering's longest standing employee – Klaas has worked for Pickering for just under 44 years. He was originally John Moore's drinking buddy in the local pub and often visited John in the Military Road factory, helping out from time to time. When Pickering Electronics moved to Clacton-on-Sea, Klaas helped to kit out the new factory and built all the work benches

A short time after this he was invited to join the company. On April 1st 1974, Klaas joined as Production Manager, overseeing all the manufacturing of Pickering relays. One of Klaas's first projects was to review the costing and manufacturing times of each relay made and subsequently, produced the first accurate price list.

As the company grew Klaas became responsible for sales and purchasing. In 2004, Klaas was promoted to Sales Manager and focused on managing the sales team. Klaas is now semi-retired and has taken on the role of Business Development Consultant, focusing on pricing and business strategy.





Klaas retiring from Pickering before eventually returning part time.



Graham Dale - Technical Director

Graham has worked for Pickering for 43 years and became John's right-hand man. In John's memoirs of the rise of Pickering Electronics, he spoke very fondly of Graham's work for the company. 'His designs became superb, and they still are. I think Graham is the best reed relay designer in the world'.

When John Moore sadly passed away in May 2017, Graham Dale commented, "Pickering has been based in Clacton for over 45 years. In that time, John has seen many hundreds of local employees pass through our doors, some staying with the company for 20, 30, or even 40 years. John always had a very high regard for our staff, considering them to be our most valuable asset. In turn, he was held in high regard by so many and will be greatly missed."

How Graham Dale became an employee at Pickering

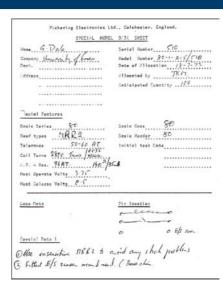
In the early 1970s, Graham was at Essex University, working on a research project sponsored by British Telecom. Within the equipment he was designing, quite a lot of Reed Relays were used. However, Graham had a few technical problems with these relays.

Graham was visiting an Electronics Trade Show at Olympia, London, when he spotted a small trade stand with a sign saying 'Pickering Reed Relays' The man on the stand asked if he could help, that man was John. Graham explained the problems he was having with the relays.

Graham recalls that John was very helpful and it was refreshing for him to talk through the problems with an engineer rather than a salesman. John designed a special relay that did exactly what Graham needed, and he purchased about 200 of them. By today's standards, this may not seem many but as there were only about four people working at Pickering then, it was a very worthwhile order for the company.

Little did Graham know then, that 2 and a half years later, he would be working as an Engineer for John at Pickering.

"Although Pickering is a very different company today, being much larger and selling all over the world, we still try very hard to achieve the same sort of relationships with Engineers, as John did with me forty-five years ago", said Graham.



Special model data sheet, for Graham Dale, written in John's hand-writing.



Kevin Mallett – Director of Operations

Kevin has worked for Pickering for 33 years. Kevin was originally employed as a technician, working on the production and testing of reed relays. He then became the Final Test Department Manager and the Technical Manager giving him a great understanding of Reed Relays and their applications. He also leads the production teams for both UK and Czech manufacturing. Along with Graham Dale, he is involved in all technical issues within Pickering Electronics and the general running of the company as part of the management team.



Lynda Williams - Reed Relay Test Supervisor

Lynda joined Pickering in March 1984 and for the past 34 years has worked in the Test Department, becoming Test Supervisor in the mid '90s.

Julie Benson - Purchasing Manager

In 1987, Julie joined as a factory operative and has spent the last 30 years working her way up through Manufacturing, Test, Dispatch and Purchasing departments. In 2011 Julie was promoted to the Purchasing Manager.



Julie Nunn - Production Manager

Julie joined Pickering in 1988 and over the past 30 years has worked in most of the manufacturing departments. Julie worked her way up from a Production Operative, to a Welding Supervisor, then Assistant Production Manager. In 2015, Julie took over as Production Manager, after the sad loss of Pickering's former Production Manager, Steve Oldfield.









Sue Proctor - Production Operative

Sue has been working for Pickering as a Production Operative for just under 30 years. Sue has many fond memories of times past at Pickering, she recalls at her first Christmas party, she danced the Lambada with John Moore.

Jenny Lovegrove - Production Operative

Jenny has been working for Pickering as a Production Operative for just under 30 years.

Katharine Huckle - Production Operative

Katie joined Pickering in 1992 and during her first 5 years with the company, she worked in the Soldering and Welding Departments. For the past 20 years Katie has been working in the Test Department.

In Loving Memory and Thanks to Some of Pickering's Longest Standing Employees

John Moore - Founder

The driving force of the Pickering Group, John sadly passed away in 2017. His ambition will forever be an inspiration to all of us at Pickering.



Jan Dale - Office Manager

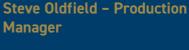
Jan worked for Pickering for 37 years. In 2014, Jan sadly passed away. Whilst Jan is no longer with us physically, her spirit is always around



In Loving Memory and Thanks to Some of Pickering's Longest Standing Employees



Steve Oldfield with John Moore celebrating 25 years at Pickering.



Steve worked for Pickering for 29 years. He sadly passed away in 2015 and is missed by his friends and colleagues at Pickering.



Rachel Aylott – Production Manager

Rachel worked for the Pickering Group for a total of 21 years, 13 of which were with Pickering Electronics as Assistant Production Manager, before moving to work for Pickering Interfaces as Production Manager. Rachel tragically passed away in 2011 and is remembered by colleagues as a much loved, hard working and a fun loving lady.

Giving Back to the Community

As the company has grown in revenue, we have been keen to give back to the local community.

Two charities that were close to John Moore's heart were St. Helena's Hospice Tendring Centre, in Clacton-on-Sea, and Guide Dogs for the Blind.

Annual donations
to Helena's Hospice
Tendring Centre has
allowed for a complete
refurbishment of a
dedicated space for
patient use, to run patient
groups within that space,
pay for further equipment
and the creation of an
additional counselling
room.





Giving Back to the Community

Having just enjoyed a record year in 2017, with approximately 30 percent revenue growth compared to the previous year, Pickering will continue to give to local charities and will be sponsoring another guide dog in memory of our founder, John Moore.



Pickering sponsored their first guide dog in June 2017 when Rosie, a Golden Retriever, was born.



Rosie came to the factory for her first visit in November 2017.

In addition to this, Pickering wanted to engage with their employees and find out what local charities they are passionate about. For this reason, employees have been encouraged to write in and suggest further sponsorships and donations which focus on supporting children, the elderly, the terminally ill, the homeless and other vulnerable people.

We also appreciate the charitable activities our employees do outside of work to help make our community a better place. This is why Pickering matches the donations employees receive for participation in charitable fundraising walks, runs, bake sales and other voluntary giving activities.

To produce a book of such detail and historical fact could not be accomplished without the help of several people who have contributed information and photographs. We would like to thank all those who have assisted us in the compilation of content for this book - our founder, our directors and employees, past and present; all who have shared their stories, quotes and personal photographs. While we aimed to include the contributions from all our employees and stakeholders, there will be fragments that have been left out due to time restrictions.

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