



TNMoC Valve Workshop - Saturday 18th June 2022

0900 – Registration and Coffee

0915 – Welcome, Timetable, Location of Facilities, Fire Precautions etc.

0930 – Introduction to Thermionic Valves (Steve Kay)
Valve history
Basic Valve theory, types of valves

1010 - Short break

1020 – Introduction to Thermionic Valves continued (Steve Kay)
Valve coding systems
Health and Safety – Radioactive valves, poisonous materials, high voltages.
Simple multimeter valve tests
Introduction to valve testing and matching
Other technologies contemporary with valves: relays, CRTs, Dekatrons etc.

1100 - Coffee

1115 – Valve circuits in Audio (Charles Coultas)
Power Supplies
Audio amplifiers

1145 – Valve circuits in Radio (John Pether)

1230 – Lunch

1300 – Visits to EDSAC, WITCH and HEC-1 valve computers

1345 – Visit to Tunny and Colossus

1430 - Valve circuits in Colossus (Phil Hayes)

1515 – Tea

1530 - Valve circuits in EDSAC (Nigel Bennee)

1615 – Wind up and Questions. (Plus Recruitment of Volunteers/Supporters)

1700 - Finish



General Information

You will be provided with pen and paper and printed lecture notes for you to annotate.

A buffet lunch, tea and coffee will be provided.

There is information on getting to TNMoC here: <http://www.tnmoc.org/visit/getting-here>

To book a place on the June course, go to the Events page on the TNMoC website here: <https://www.tnmoc.org/events/2020/5/9/tnmoc-valve-workshop-day-1>

About the presenters.

Steve Kay BA, PGDCCI, MIEEE worked for OSRAM making electric lamps in the 1970s, but then moved into Computing, specialising in Data Communications and eventually Network Security products as a Principal Test Engineer with HP. My early interest in valves mainly stems from playing bass guitar in pop groups in the 1960s and Country and Western groups in the 1970s. I restored and own the three valve radios on display in the Meeting Room. I am currently the Volunteer Trustee at TNMoC, representing the Volunteers on the Board of Trustees.

Charles Coultas: Played in a school band (lead guitar), Cliff and the Shadows were our inspiration. Used valve amps - EL34 GZ34 ECC83. Learned all about valves at college, there wasn't really anything else in those days. Rediscovered valves when I met Tony Sale at Colossus rebuild. A member of the Heath Robinson rebuild team.

John Pether joined the then GPO in 1969 as an apprentice. Served 36 years before taking early retirement. During that time I was on internal construction - installing telephone exchange and repeater equipment. Circuit provision which involved providing trunks and junctions between exchanges and the provision of private data circuits. Main interests are: Amateur radio - licensed since 1969 - and model engineering - built and run a 5" gauge live steam locomotive. Member of the Colossus rebuild team right from the start and currently working on Heath Robinson.

Phil Hayes Studied electronics at Brighton in the early 70's, then worked at several large companies and organisations until I moved into data communications in the early 90's. I finished my working career as a Network Security Architect for one of the major clearing banks in the city. My interest in thermionic valves came about when I was involved on the construction of a 1 Megawatt Medium Wave transmitter for the Foreign and Commonwealth Office in the mid 80's. As a volunteer I joined the Colossus Rebuild Project in 2000, and then in 2011, I was approached by the National Museum of Computing, to take on the full time role of Chief Colossus Engineer.

Nigel Bennée PhD FBCS MInstP Teenage years spent playing with valves. After gaining a PhD in Nuclear Physics had a brief spell working for Ferranti at Bracknell then 11 years for SHAPE Technical Centre in The Hague. On return to England together with his wife ran Lucidata Data Communications Consultancy until a few years ago when retirement and the lure of the EDSAC Replica project kept him busy exercising old and almost forgotten skills.