



Radio Society of Great Britain



## City of Bristol RSGB Group - G6YB

[At the Bristol Lawn Tennis & Squash Club, Redland Green, Redland, Bristol BS6 7HF](#)

Monday 29th February 1930hrs

### RECENT DEVELOPMENTS IN AMATEUR TELEVISION

Shaun O'Sullivan G8VPG.

Amateur Television has undergone some major changes in recent years. There has been a big move to digital modulation techniques. The Bristol ATV Repeater GB3ZZ changed to DVB-S modulation a year ago and now transmits a two channel digital multiplex. GB3ZZ, like most ATV Repeaters, also streams the output to the internet, so you do not need special equipment to monitor it. The reduced bandwidth needed by digital modulation means ATV has returned to the 70cm band and, using innovative new techniques, can now be transmitted on 2m, 4m & 6m - the mugshot of me is a screen capture from a 146.5MHz transmission. The Ham TV transmitter on the International Space Station is due to be enabled this month (*see next page*). I hope to be supported by another local ATVer, Ian Parker G8XZD, and to have live video links to other local ATV stations.



Live reception of GB3ZZ

G8VPG

Amateur Television  
Saltford IO81SJ

## SARC and Oasis Brightstowe Academy Collaboration



# G4AHG

Shirehampton  
A.R.C.

I'm sure you will have heard that Tim Peake, using GB1SS, spoke successfully to students at the Oasis Academy in North Bristol on Friday 19th Feb at 1420. The atmosphere at the school was electric and filled with emotion; the ARISS team did a great job in creating the right tension for the moment. As well as the radio contact the students were able to see Tim Peake via a Digital Amateur Television transmission from the ISS on 2395MHz. This transmission was received at an amateur station installed by BATC and AMSAT-UK members at Goonhilly, and streamed to the school via the web. Quality was



good and I was most impressed by how Tim managed to hear and answer all the questions so quickly, and with a constant smile - what a great guy he seems to be !

**Shirehampton Amateur Radio Club** put on displays of some of the many club activities including home construction (ancient and modern!), various digital modes utilising SDR, WSPR and Data. An HF station using the club call was active on 20 and 40m. The Royal Signals unit from Blandford brought their Morse units along and were constantly busy with surprising interest from the students. Graham Coomber G0NBI ex-President of the RSGB attended the event. A very successful day - hopefully the club membership will be increased in the future.



# Cyrus Field

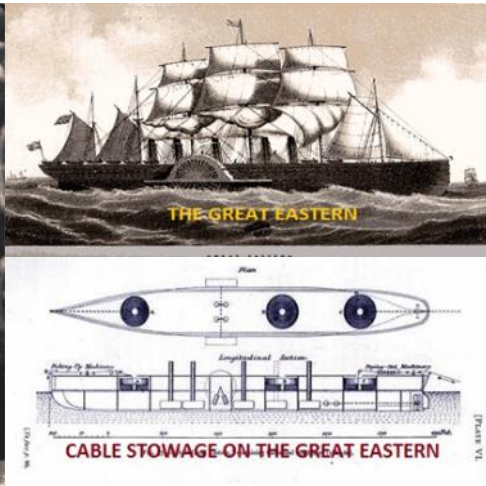
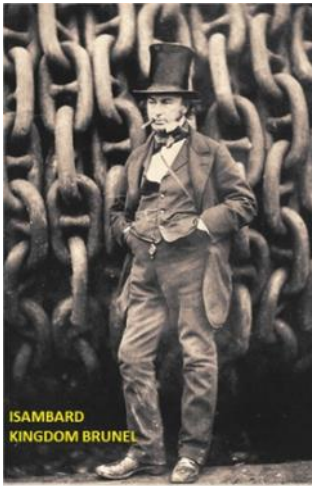
## The Transatlantic Cable - Part 2.

*(A brief outline of an astonishing achievement - continued from November newsletter)*

Though some prominent company board members now saw the attempt at laying a transatlantic cable as utter folly, Field saw otherwise and with the continued ardent support from others, he convinced them to try yet again that same year. Even though the odds were now much against them and this time, with no glorious send off, the disheartened crew quietly slipped the moorings and moved out of port. They returned in August 1858 in total triumph. The cable was finally laid and with the first message exchanged between Queen Victoria and The President of The United States, the whole world was now in a daze of excitement at the possibilities this new link between two continents would bring. Cyrus Field was the hero of the day. But as Field prepared to attend yet another celebratory dinner in New York on September 1<sup>st</sup>, the very disturbing news reached him that the cable had stopped functioning. The line was dead. Though God would save Queen Victoria for nearly forty-three years more, nothing, it would seem, would save the cable.

Storms, inadequate ships, cable technology and sheer bad luck would all contribute to failed attempts. Each time Field came back for more investment into yet another attempt. It would be six long years before confidence and finance could again be raised and for cable technology to advance to a point where another attempt was deemed viable. Governments recognised how important it was to be linked to the far corners of the Earth and if transatlantic communication was viable, then communication with the rest of the world would be too. However, the sheer bulk of the new heavier cable would be beyond the capabilities of the ships that were used in previous attempts and for that matter any other ship... except one.

With the help of possibly the greatest engineer of the time, Isambard Kingdom Brunel, Field would have access to the largest ship in the world *'The Great Eastern'*.



In 1865, a fourth attempt was made. This time, just one ship, the Great Eastern, was needed and on July 23<sup>rd</sup> 1865, the great ship left Valentia Bay, with the new cable trailing. But despite the technological advancements the voyage was not without incident. The signals became weak and it was necessary to haul ten miles of the cable up before the fault was found, which was initially thought to be sabotage. With the

faulty part cut out, the cable was again joined and the ship steadily continued on its mission. When the same thing happened several days later and exactly the same fault was found, sabotage was clearly not in doubt until on the third occasion, the problem was found to be caused by the cable laying-machine scraping against the metal cable shielding wires causing an internal short. It was while they were setting about repairs that the cable got caught beneath the ship and it snapped and flew with a ferocious speed over the side. The cable had gone! Several attempts to grapple the cable were made. But on each occasion the grappling rope broke and the cable fell back to the ocean floor two miles down. There was not enough rope to reach it. The cable was lost.

The Great Eastern set a course home.

Surprisingly, after four failures, the disaster was not looked upon in a derisory way. This incident was caused by sheer bad luck and it had been proved that over the years the technology was sound in principle. Also, the world was changing at such a pace that now, more than ever before, the ability to develop a communication network which would join not only Europe to America but to every continent was not just a wishful option but an absolute necessity

The money was easily raised for yet another - the fifth - attempt in 1866. Still more improvements to the cable design were made. The Great Eastern, loaded with over two thousand miles of cable, set sail from the Irish coast on July 13<sup>th</sup> trailing the cable behind. With only a few minor incidents throughout the voyage, the onlookers at Heart's Content in Newfoundland were greeted by the sight of the magnificent ship gliding gracefully into Trinity Bay.

**July 27<sup>th</sup> 1866.** Cyrus Field to Associated Press New York. *"Heart's Content, July 27. We arrived here at nine o'clock this morning. All well. Thank God the cable is laid and is in perfect working order"*.

The cable was brought ashore and was in perfect working order. There was also further reward because immediately the Great Eastern departed to rescue the cable lost in 1865. When it was eventually joined and found to be in working order after a year on the seabed, the rest of the cable was laid and thus within a month, two working transatlantic cables were fully functional.



As Cyrus Field contemplated his achievements after so many failures, he must have realised that this was a great moment in history in an age which produced the most supreme scientists, engineers and men of genius who over the course of the nineteenth century had transformed the world of commerce and industry beyond anything that had been achieved previously in history of mankind. Even today in the age of space travel we take for

granted, some of the greatest feats of 19<sup>th</sup> century engineering achievement are still regarded as wonders of the world. No obstacles seemed too difficult to overcome through sheer persistence and entrepreneurial will power.

Cyrus Field's gravestone reads...

‘Cyrus West Field, to whose courage, energy and perseverance  
the world owes the Atlantic telegraph’.

**Bob G4BWB**

## **Coming soon to the Bristol Group**

March 28th: Phil G3SWH “Effective QSL-ing”

April : Roger Dixon G4BVY “Matching - Amateurs do it in different ways”

May: John Thomas G4DVV “Rockets and X rays”

**Ideas needed for speakers later this year please !**

## **At the local clubs :**

Bath and District ARC <http://badarc.webs.com/>

Chepstow and District ARC <http://www.gw4lwz.org.uk/>

Chippenham & DARC <http://www.g3vre.org.uk/archive.asp>

MidSARC [www.midsarc.org.uk/](http://www.midsarc.org.uk/)

North Bristol ARC <http://www.nbarc.org.uk/>

Shirehampton <http://www.shirehampton-arc.org.uk>

South Bristol ARC <http://www.sbarc.co.uk/calendar/>

Thornbury and South Gloucs ARC <http://tsgarc.uk/>

Trowbridge and District ARC <http://www.radioclubs.net/trowbridgedarc/events.php>

Weston Super Mare RS [www.radioclubs.net/wsmrs/](http://www.radioclubs.net/wsmrs/)

If you want to buy or sell something, let me know - Or tell us on the [Bristol RSGB Yahoo Group](#) !

I need articles for “How I started in radio” or “Things you may not know about members of the group” - If it’s publishable it can appear here!

[Robin G3TKF](#)

RSGB Bristol Group Sec.

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<http://www.g6yb.org> Don’t forget the history of the group here: [History](#)