

# St Richard's Catholic College STEM Space Conference & ISS Contact

April 29, 2016 Written by [Steve \(2E0GHX\)](#)

Hastings Electronics & Radio Club was delighted to be asked to participate in St Richard's STEM Space Conference and witness their ARISS contact with Major Tim Peake on the International Space Station on Monday 18 April. Whilst the ARISS team prepared for the ISS contact, HERC participated in the Space Conference alongside exhibits and activities by the Herstmonceux Space Centre's astronaut led Destination Earth workshops, East Sussex Astronomical Society [IMG\_1734], University of Sussex with their inflatable planetarium [IMG\_1735] and University of Brighton with Maths Challenges. The RSGB stand, manned by Youth Committee Secretary James Monahan, included an example of the RSGB Rodway II Receiver which 25 pupils had built at a Build-a-thon a week earlier, supervised by 7 Club members and Region10 Manager, Mick Senior. The Club's stand [IMG\_1733] included a live HF Station, operating mainly CW on 40 & 20m using the Club callsign G6HH with a full-size G5RV hung high above the school, and a game for pupils to send their name in Morse, which is always popular with children. One laptop showed the 3 latest RSGB videos about amateur radio whilst another showed the current amateur satellite passes, including the FunCube and ISS both of which were being used by the ARISS team to set up for the ISS contact. The display board exhibited reprints of news reports of the very first satellites, a history of amateur radio satellites, and the emergency and community support role of amateur radio by the local Raynet group. It also included information on the Licence training available through the Club, who have now been asked to follow up the Foundation Licence training which was given to 10 pupils by the Hersmonceux QRZ Group in preparation for this ISS contact.

The ARISS team had erected their massive Yagi array on a 50 ft mobile mast that towered over the school [IMG\_1732]. Carlos G0AKI, who had brought the RSGB mobile station GB4FUN to 5 Hastings schools in July 2006, was at the control console [IMG\_1742] with a Kenwood TS2000SAT as the main radio and had the facility to select the best combination of antenna and circular polarisation, and a monitor to view the antenna in case of tracking problems. Unfortunately the video feed from the ISS, which had recently been commissioned, was not available but the team had alternative audio feeds from Goonhilly and the Netherlands so they could select the best audio to play to the audience during the pass. This was

important because, as Ciaran the ARISS Operation Lead explained, the amateur radio antenna is on the Columbus module at the front of the ISS but there were currently no less than 6 transport capsules docked below and behind it which might obstruct the signal as the ISS passed overhead and moved away.

Over 300 pupils, mostly from neighbouring schools as part of the College's outreach program, had assembled in the main hall to witness the ARISS contact by GB4SRC with Major Tim Peake on the International Space Station. After an introduction by a massed choir of St Richard's pupils singing David Bowie's Starman, we were entertained with videos of the College's cross-curricular participation to the College Space project with contributions from all departments including Drama, English and Modern Foreign Languages as well as the science team, before 2 members from the European Space Agency's education outreach program outlined how Tim Peake had been selected and his scientific experiments on the ISS. The ISS Dashboard from the ARISS website, displayed for the audience on a large screen, showed the approach of the space station in real time and, as the AOS counted down, Lucy, one of the successful Foundation Licence students, stepped up to the microphone to call GB1SS. At her sixth call, Tim Peake responded "GB4SRC I hear you loud and clear, over". For the next 10 minutes, under the supervision of Ciaran, a succession of 14 St Richard's pupils stepped up to ask a series of very interesting questions before the contact was terminated to a huge cheer and applause from the audience. The whole of the contact, recorded by BBC South East Today and available via the link on the St Richard's website ([www.strichardsc.com](http://www.strichardsc.com)), is well worth viewing. All in all, a memorable day and one we're all proud to have been involved in. Well done St Richard's and the ARISS team.

73 Phil, G3MGQ



HERC's station G6HH and inquisitive visitors.



Mike M0EDU's Amateur History presentation against the wall behind G6HH.



Long shot of the STEM space conference hall at St. Richard's Catholic College as the event winds down.



STEM hall.



Students and guests watching the Tim Peake contact take place.



ARISS team hard at work at the St. Richard's station.



STEM hall.



STEM hall.



STEM hall.



Pete G0FUU by the G6HH station, a great help on the day.



FISTS CW and HERC member Mike G0JHK caught on the key.



Peter G0FUU on the HERC stand, inflatable planetarium in the background.



Side shot of STEM space conference hall.



Phil G3MGQ talking to parents and students about Amateur Radio.

## St. Richard's Catholic College Buildathon/STEM/ARISS events

April 20, 2016 Written by [Steve \(2E0GHX\)](#)

The Hastings Electronics and Radio Club were very kindly invited and delighted to participate in the St. Richard's Catholic College events in April 2016, starting off with the RSGB Build-a-thon on Tuesday 12th April, and shortly afterward, the college's STEM space conference and ARISS contact with Tim Peake on Monday April 18th. Below are the two sections leading to reports of these fantastic events.

### St. Richard's Catholic College RSGB Build-a-thon



The RSGB Rodway II MW/160m receiver, a great beginners kit.

The RSGB supported Build-a-thon at St. Richard's was broken down into two three hour long classes, and led by Dr. Joolz Durkin who provided ample enthusiasm and energy throughout, guiding the classes to a successful conclusion. HERC members were present to advise and support St. Richard's students, who were of mixed ages from 8 to 16 years old. Continue reading the HERC report of the [St. Richard's College RSGB Build-a-thon](#).

### St. Richard's Catholic College STEM & ARISS contact with Tim Peake



ARISS team hard at work at the St. Richard's station.

April the 18th was the date scheduled for St. Richard's to hold both the STEM space conference event and the ARISS contact event with Tim Peake aboard the International Space Station. Both went extremely well, thanks in no small part to the first class roganisation from the college's event organiser Joolz', ARISS, and of course the other attending organisations who participated at the STEM conference. HERC was delighted to be able to attend, and play a part at this fantastic one-of-a-kind event with the college's students. Read more about [St. Richard's ARISS and STEM space conference events](#).

## St. Richard's Catholic College RSGB Build-a-thon

*April 20, 2016* Written by [Steve \(2E0GHX\)](#)



St. Richard's Catholic College students pictured with HERC members at the end of the AM Build-a-thon class.

On Tuesday April 18th, members from the club attended St. Richard's College RSGB supported Build-a-thon, an event which preceded the ARISS Tim Peake contact event on April 18th. Suffice to say, the students attending the AM and PM classes were full of 'space-fever' and ready to get hands-on with the Rodway II receiver and find out more about Amateur Radio.

For those unfamiliar with the Rodway II, it is a an easy to construct beginner level MW/160m receiver. Below is a completed Rodway II.



The RSGB Rodway II MW/180m receiver, a great beginners kit.

I should mention without further ado, that St. Richard's College's lead Science Teacher, Dr. Joolz Durkin was wonderful and generous with HERC members. We were looked after extremely well at the college. Her organisation of college operations and the students was exemplary.

Richard G0ILN, Mike G0JHK, Rodney, Steve 2E0GHX, Phil G3MGQ and Mike M0EDU, arrived at the college bright'n'breezy at 7.30am, and met the college's Principle, Miss Cronin, and supporting members of staff before the briefing in one of the schools well-equipped laboratories where the Build-a-thon took place.

The AM class ran from 8am to 11am, with the students training for their amateur radio licences, using the construction of the Rodway II receiver as part of their Foudnation licence training requirement, all of which were constructed and tested successfully.

We broke for lunch to restore ourselves before the PM class which started at around 1pm, and this class was a wonderful challenge as it consisted of a wide age-range of students, and more of them, so it was all hands to battle stations and resulted in the successful construction of many recievers despite only 5 HERC

members being present in the afternoon. All of the students who attended the Build-a-thon classes showed great enthusiasm and interest in what they were doing. It was quite humbling to watch some of them solder extremely well after only having a few attempts.

MiKe Senior G4EFO, the RSGB S.E. regional manager was present and provided a useful set of extra hands in the afternoon!

The RSGB Build-a-thon at St. Richard's Catholic College was undoubtedly a successful event and enjoyable for everyone involved, and doubt we will see Rodway II's constructed with such gusto for a while. The students were a delight to work with. We understand through the media's coverage of the recent ARISS contact at St. Richard's, a new Amateur Radio club is in the making at the college, known as StAR (St. Richard's Amateur Radio) club which, led by Dr. Joolz Durkin, will provide St. Richard's College students with all the resources they need to become active and skilled licenced amateurs of the future.

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## **HERC to attend RSGB Build-a-thon at St. Richard's Catholic College in Bexhill**

*April 10, 2016* Written by [Steve \(2E0GHX\)](#)

The Hastings Electronics and Radio Club is delighted to announce that it will be attending the RSGB supported Build-a-thon at St. Richard's Catholic College in Bexhill, East Sussex, on Tuesday 12th April. Two, three hour long classes are being held under supervision of St. Richard's staff, where 7 HERC members will be helping students construct the RSGB Rodway II MW/160m receiver kit. The age range of students is between 9 and 16 years old, with the AM class consisting of Foundation licence students who will be constructing the kit as part of their licence training.



But .. that is not the whole story!

Later in the month, the college will be one of the few selected colleges in the U.K. who will be taking part in the ARISS space contact event with Tim Peake, the now famous British astronaut aboard the International Space Station. The date for the contact will be revealed by the ARISS team on Monday 11th April, and may be as soon as the 15th of April, or as late as 24th April.

The contact day will take place at the college with the assistance of the ARISS team. More to follow!

St. Richard's will also be holding a two-day STEM space conference at the college, held in the capacious gymnasium where other organisations will be present with outreach activities from University of Sussex, University of Brighton, Herstmonceux Science Centre, QinetiQ, East Sussex Astronomy Society and RSGB and the QRZ Amateur Radio Group. My home club, the Hastings Electronics and Radio Club will be present also, providing an Amateur Radio History presentation given by Mike Wade M0EDU, and a full HF/VHF/UHF Amateur Radio demonstration station, organised by Phil G3MGQ and operated by a selection of HERC members across the two-day STEM conference with G6HH.

It has been a pleasure to work with Joolz, the lead Science Teacher at St. Richard's Catholic College, and helping to co-ordinate these events will undoubtedly be an exciting, educational and enjoyable experience for the students, staff and organisations involved with these events. Thanks to Mike Senior G4EFO, regional RSGB manager also for his help with the event co-ordination.

Hastings Electronics and Radio Club members attending the above St. Richard's College events are:

Richard G0ILN

Rodney King

Leon G1HSM

Steve 2E0GHX

Phil G3MGQ

Mike Wade M0EDU

Mike Hedges G0JHK

The STEM space conference dates are yet to be cast in stone, pending the ARISS confirmation date for contact with Tim Peake which will follow in the next day or two. To be updated shortly!

Update April 20th 2016 – We have now attended the college's events. You can read the reports of the [St. Richard's College RSGB Build-a-thon](#), [STEM space conference](#) and [ARISS contact event with Tim Peake](#) here.