Contesting

Contesting has been an important aspect of our hobby from the very early days. Here is an abbreviated history, from early pioneer events to recent developments.


Coming—An International Relay Party
A World-Wide Contact Contest to be Held in May

FIGURE 1: ARRL journal *QST*, March 1927.

How did it all start?

During the first decade of the 20th Century, experimenters in the USA and Europe began to be able to assemble their own amateur radio stations, exploiting fast-moving developments with coherers through to crystal detectors for receiving and a succession of spark-gap-based designs for transmitting. The flourishing new hobby changed direction in the second decade as regulation was introduced; wavelengths of 200m and below were permitted but, in the UK, licensees were restricted in power. Divergence occurred with US amateurs becoming keen on relaying messages for third parties while UK licensees in smaller numbers were mainly making local two-way contacts – both using Morse code.

After the First World War, things changed again as spark transmitters were slowly replaced by continuous wave (CW) thermionic valve designs and receivers were developed to accommodate the narrower bandwidth of the CW signals.

Early competitive amateur radio, records and achievements

Initial competitive radio activities focused on achieving long distances and fast communication times. In the US, transcontinental relay tests were conducted in January 1921, with a message relayed from the east coast to the west coast and back again in precisely 6.5 minutes, four amateurs forming the chain across the country. Operation was at around 200m – amateurs had yet to exploit shorter wavelengths.

As the 1920s progressed there was a rapid pursuit of distance records, particularly in the US, many of which were achieved as a part of scheduled test periods. Preliminary competitions were held within the US and Canada to decide who would represent North America in Transatlantic Tests. Some records from the time are listed below.

- 12 December 1921 Paul Godley in Ardrossan Scotland heard 1BCG in Connecticut in the Second Transatlantic Tests
- 13 April 1922, 6ZAC in Hawaii worked 6ZQ and 6ZAF in California, the first trans-Pacific contacts
- 11 September 1922, 4OI in Puerto Rico worked 4FT and 4BX in North Carolina

In December 1922, American amateurs were heard in Europe in numbers, then 5WS (the RSGB station) was heard in the US, followed by the French 8AB, in the Third Transatlantic Tests.

A move to shorter wavelengths, starting in 1923, began to bring more international distance records:

- 17 November 1923, 1MO in West Hartford, Connecticut, communicated two-way for almost two hours with French Station 8AB
- 22 May 1924, CB8 in Argentina contacted 2AC in New Zealand
- 18 October 1924, Cecil Goyder, Mill Hill School 2SZ contacted Frank Bell, Z4AA, Shag Hill, New Zealand

Subsequently, with world-wide communications becoming achievable, operators had a thirst to compete within a rules-based structure with awards for winning positions.

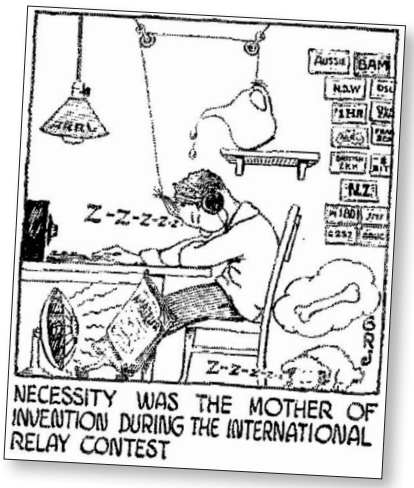

FIGURE 2: ARRL journal *QST*, October 1927.

First contests

In the USA, in March 1927, an International Relay Party (**Figures 1** and **2**) was announced by the ARRL to be held over a two-week period in May 1927, using CW, with rather complex rules, abbreviated below. This was the forerunner of the ARRL DX contests [1].

Participating stations in the United States and Canada were each provided with test messages in advance of the contest. One message was to be given to an amateur in each of the foreign localities worked. The messages each required an answer (but were not returned to the sending station).

The contest started on 9 May at 0000GCT and ended on 23 May at 0000GCT

US and Canadian amateurs each sent just one message to any foreign locality (with an accompanying serial number).

US and Canadian amateurs received only one reply test message from any particular station in a foreign country (with an accompanying serial number).

Reply test messages had to contain eight or more words in the text. These replies were prepared by the overseas contestant who "exercised his own ingenuity to make each message different than other messages for checking purposes." Reply test messages were counted only when sent to a station in the US or Canada, other than the station from which the original message (the question) with its serial number was received.

Lasting for a fortnight this was more akin to a modern radio marathon than a contest but it attracted considerable interest from US, Canadian and international participants.

International Test results

In October 1927 International Test results were published. 178 stations entered in the US and Canada, of whom 31 operated entirely on the 20m band, 42 on both the 40 and 20m bands, and 105 on the 40m band only. Awards were provided as certificates, mostly for the highest number of successful contacts with a particular country. 18 winner's certificates were issued to overseas entries. The adjudicators recognised that the restriction on US and Canadian amateurs to only be able to send one message to each overseas country was a significant restraint on the numbers of contacts achievable.

British Empire Radio Week

In the UK, 22 February 1931 was the start of the first RSGB British Empire Radio Week which was a seven-day period of activity with points awarded for each unique station worked providing they were in a different part of the Empire. The Empire was divided into 12 groups of countries. QSOs on different bands were counted again. Entrants were members of the British Empire Radio Union (BERU) but participants

were allowed to join this group when they submitted their entry. 58 stations submitted logs in the first outing [2].

This contest has continued each year, only missing the Second World War period from 1940 to 1946. The timing and rules have changed many times over the period, currently settled on a 24-hour CW format on the weekend nearest to Commonwealth Day. In 1976 the name changed to the RSGB Commonwealth Contest [3] and significant changes have occurred to the countries that are eligible to participate, due to political changes over the more than 90 years that have elapsed. It has an enduring appeal; if you haven't experienced it then please mark it in your diary for 2025.

Field Days

From the very early days, a popular annual activity for radio clubs was to have a Field Day in the summer, when club members would install an outdoor station. The RSGB responded by coordinating a National Field Day during the first weekend in June 1933, which has continued annually. The original purpose was to show "that if the necessity arose, the Amateur Radio movement in the UK could place into operation an emergency network of stations at short notice." Coordinated Field Days are now run in IARU Region 1, including in the UK; separate weekends each year are devoted to HF CW, HF SSB and VHF/UHF operating.

The growth of contesting

In addition to the ARRL and RSGB, many national radio societies have introduced contests, some of which are intended primarily for domestic entrants. Others target an international audience.

As an example of what a national society might offer, the RSGB runs contests in most of the HF, VHF, UHF and microwave spectrum (**Figure 3**). Some of these have international appeal, with thousands of entrants. Others cater for a small demographic within a specialism.

Radio magazines had a huge influence prior to the internet, being the primary means of spreading information about the hobby, and were significant sponsors of contesting, the American *CQ* magazine being the most prominent. The CQ World Wide series of contests (**Figure 4**) are enduring international events despite little connection remaining to the magazine, production of which is suspended at the time of writing [4].

With the advent of the internet, amateur radio special interest groups have been able to introduce contests, designed to encourage practice in their speciality, for example CWops popular short CW contests [5].

Yesterday's techniques

Paper (and more paper) was the key to success for many years. Each contact would be listed on a paper log sheet and techniques to avoid making duplicate (dupe) QSOs would also be operated on paper. Typically, a 'dupe sheet' would have columns and rows where an operator could enter callsigns, or parts of them, under headings of numbers or letters which appear in the call. The last letter might be a good choice for the key, because it would be likely to be more evenly spread than the first letter of a suffix, or the number in a prefix.

Adjudication bodies were keen that any paper logs submitted clearly identified dupes that had been made.

Technological changes continue to enhance contesting tools

Just as home computing has developed hugely over the last three decades so have the software tools that are available to contesters. Early DOS-based contest loggers such as NA and TR have largely been superseded by Windows PC or Mac-based logging software.

The basic software suite that is essential for contesting now is:

Computer logging – interfacing directly to the radio so that, for example, CW can be sent from keyboard commands, operating in data modes including FT4/8, PSK or RTTY can take place, or phone QSO information can be entered. All of this occurs while a log of QSOs accumulates in a computer file and automatic dupe checking takes place.

Computer log storage – for keeping the QSO information from multiple contests, and uploading logs to the internet.

Additional optional computer tools include: Voice Keying, Super Check Partial (SCP), DX Cluster and Reverse Beacon Network (RBN), ON4KST, Log Analysers, Flight Trackers (reflections from aircraft can aid propagation), and many more.

With all this computing power, it might be suggested that the computer has become the tail, wagging the radio dog. Those who prefer simplicity may keep computer intervention to a minimum.

Contest of the Month: CQ World Wide WPX CW

This runs for 48 hours starting at 0000UTC on Saturday 25 May. Single operators are allowed 36 hours operating time, providing for two six-hour breaks. I think of this international event as a magnified version of many of our RSGB CW contests. It lasts longer but the exchange is the same – a simple incrementing serial number. It's not quite as popular as the CQ World Wide CW Contest in November, but is still a great outing.

Although the six HF contest bands from 160 to 10m can be used, scoring is doubled for QSOs on the lower three bands and then trebled for QSOs with other continents. So, a 40m QSO with North America is worth six points, but a 20m QSO with another European country is only worth one point. QSO points are then multiplied by callsign prefixes worked, which only count the first time the prefix is encountered, not on every band. Lots of interesting callsigns are used; unique prefixes attract callers [6].

References

[1] ARRL DX Contests: https://contests.arrl.org/
[2] History of the Commonwealth Contest 1931-1996 by Bob Whelan G3PJT: https://berucontest.wordpress.com/reflections-in-a-rosebowl/
[3] RSGB Commonwealth Contest: https://www.rsgbcc.org/hf/rules/2024/rcwc.shtml
[4] CQ World Wide DX Contest: https://cqww.com/
[5] CWops: https://cwops.org/cwops-tests
[6] CQ World Wide WPX Contest: https://cqwpx.com/rules.htm
[7] *RadCom Contesting:* rsgb.org/radcom-contesting

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FIGURE 3: Nick, G4FAL operating as VP2MCC in the Commonwealth Contest.

FIGURE 4: Colin, G3VCQ running G6XX on the 20m band in the CQ World Wide SSB Contest.