

Contesting

HF contests usually have a selection of single-operator and multi-operator categories from which to choose. In the larger worldwide HF contests such as CQWW and WPX, there can be a range of multi-operator sections, including multi-single, multi-two and multi-multi.

Multi-op sections usually specify that the contest station must be set up at a single site with a physical limit on the size of that site, and with all operators, equipment and antennas located within the confines of the one location.

The multi-distributed format

There are contests that allow exceptions to this 'Single Site' format offering the potential for those who might wish to enter with a multi-station team.

- **HQ stations in the IARU HF World Championship**

Here each IARU National Society is permitted to enter an HQ station which may have distributed operators within their ITU Zone. The RSGB is represented annually by the GR2HQ team (Photo 1).

- **Multi-distributed sections in the CQWW and CQWPX contests**

These entry sections provide the opportunity for contesters to operate as a team from multiple sites, with equivalent rules to those that apply to an HQ station in the IARU HF Championship.

HQ stations in the IARU HF World Championship

The IARU HF World Championship contest is a 24-hour mixed mode (SSB and CW) contest that is held on the second weekend in July each year.

As well as a range of single-op and multi-op categories, there is a unique HQ station category where IARU national society teams compete against each other, usually with a single callsign activated from multiple host stations on the six bands and two modes.

GR2HQ is the RSGB headquarters station in the IARU HF Championship Contest,



PHOTO 1: Angel, MOHDF operating on 15m CW as GR2HQ.

which is coordinated by the RSGB HF Contest Committee and licensed through the RSGB Contest Club.

Host stations

GR2HQ is activated by a network of host stations located around the UK, Isle of Man and Channel Islands. In the IARU contest, with six bands and two modes in use, GR2HQ is permitted to transmit one signal on each of the 12 band-mode slots at any one time.

The host stations are those that activate the GR2HQ callsign and mostly are the amateur radio stations of individuals or clubs who are keen contest participants and are well equipped for the bands and modes that they are allocated to operate. Many of the host stations will welcome contesters to operate during the contest so that operating over the 24-hour period can be shared without any down time.

Host stations can change from year to year as can the allocation of bands and modes within the host stations. Some host stations will make significant changes to accommodate the contest, particularly in erecting additional antennas, to give more worldwide coverage than would normally be expected at an individual location.

Some of the host stations concentrate on a single band/mode, perhaps with only a single operator, whereas other stations may have a small team of operators, activating more than one band/mode slot over the 24-hour period.

As propagation changes during the contest, band/mode allocations may be passed from one station to another, in a different part of the UK. A good example of this is when a new multiplier is spotted but, after a brief QSY, the station running the slot confirms

that they cannot hear the multiplier station. An alternative host station may then step in and, after a coordinated handover, take the slot and make the QSO, before handing back to the original host.

Another important reason for being able to pass a band/mode allocation is in order to exploit geographical differences in propagation. This particularly applies on 28MHz where Sporadic-E propagation is prevalent during daylight hours and communications paths can be very localised and short-lived. GR2HQ has a separate team of stations dedicated to this band, with their own comms and control channels.

Some experiences from GR2HQ host stations

15m CW in 2024: 15m CW was a great slot to run. The band was open to somewhere for the whole 24 hours – USA and Japan were both workable in the early hours of the morning, which is a sign of the band being in great shape.

We had a simple station, single antenna, and no in-band facility to mop up the non-DX QSOs, so inevitably our two operators missed a lot of those, but along with invaluable help from two or more partner stations we kept the run rate going with a good quantity of DX.

160m CW in 2025: On 160m CW we used a top-loaded vertical antenna to transmit and had three beverage receiving antennas, one east, one north and one west.

We started operating at 6.30pm clock time (1730UTC) and quite soon we started making QSOs. Most contacts were with European stations. About two hours before sunrise we had a propagation opening to North America and the Caribbean – the QSO furthest west being with VE3EJ in Ontario, Canada.

We worked through the band-map trying to work all the stations that had been spotted. We stopped operating just after sunrise, when there had been no more callers and there was nothing to be heard.

Partner stations

A unique addition to the HQ team is the contribution made by 'partner' stations. They are, for the most part, individuals who use their own stations to increase the QSO rate and logging accuracy of the host station operators.

This is achieved by the partners feeding real-time information about the callsigns that they are able to hear on a host station's run frequency. The host station operator will proceed immediately to make QSOs with stations which they did not initially hear in the pile-up of those attempting to contact them. Partners are also often able to confirm reception of stations who are new multipliers in the band-map of the host station and send a message requesting the host to QSY to work the multiplier.

Messaging between the host and partner stations

With a complex team of stations such as this, reliable control messaging between stations is imperative.

Every station involved in the team needs to have the same logging software and be connected over the internet to all other GR2HQ team stations. This includes not only the host stations, but all the partner stations as well.

The GR2HQ team uses an HQ version of Wintest logging software, which is specifically written for the IARU HF contest. The choice of Wintest has been made due to its reliable interconnectivity and suitability in this context. QSOs logged at each station are automatically broadcast over a network connection to every other station and partner in the GR2HQ team. All team members then have a complete log at all times, to help to verify unworked multipliers and to alert the host stations of their presence. This is useful because HQ and Zone multipliers apply only once per band, whether worked on CW, SSB or both.

Make a difference, join the team

Each year, the HQ section of the IARU HF contest proves to be very competitive. This is the only contest where national teams compete against each other.

The UK team has been working hard to improve its performance, and earned second place in 2024, but propagation in northern Europe can make it difficult for RSGB to compete with other European HQ stations.

It is important to note that each year RSGB asks if there are any contest enthusiasts who would like to join the operating team, either at a host station or as a partner operator. There is room for both those who are experienced in contest operating and those who are starting out. There are some unusual aspects to taking part in a networked team, when contesting is most often a single-handed pursuit; this is particularly true of the use of Partner Mode where trusting the callsigns provided by partner operators is key to success.

The RSGB website has a page dedicated to the RSGB HQ station including pages with



PHOTO 2: Gary, MOCTP and Paul, G7SLP in the G6MC shack during a contest.

annual reports on the experiences at each host station [1].

Multi-distributed – an opportunity for multi-op teams

Multi-distributed is an entry category that was introduced to CQ World Wide WPX contests in 2021 [2], and to the CQ World Wide DX contests in 2025 [3]. The distributed functionality is similar to that of the HQ stations in IARU but reduced in that these contests are single-mode.

Bud Trench, AA3B, the WPX Contest Director, wrote: *"Stations operating in this category may have a maximum of six transmitted signals, one per band at any one time, from stations in different locations. All equipment, including remotely controlled equipment, must be located in the same DXCC entity and CQ Zone. Six bands may be activated simultaneously."*

Contest organisers are starting to include similar categories to their contest structures, one other being the EUDX Contest.

Multi-distributed removes many of the restrictions of other multi-op sections, the most important being that of the station location, needing all transmitters, receivers, and amplifiers to be within the single 500m diameter circle.

It gives entrants the opportunity to build a network of stations for their team, rather than have just one station with many operators on the same site. Individual stations can be flexible with the hours that they operate, whilst still making a valuable contribution to the team.

No longer does the team have to find one station that is well equipped for all five or six HF contest bands. It also removes the need to accommodate a large number of operators at one station for the full duration of the contest.

Software - Network - Callsign

Logging software at each station may be interconnected over the internet, as in the GR2HQ case. Several of the popular contest logging

packages provide the communications infrastructure to support this entry category.

Setting up a logging network is clearly something that should be installed and tested well ahead of the planned contest weekend.

All stations making up the team entry should use the same callsign. In the UK, Ofcom permits a Full (Club) licence to be used concurrently by multiple stations, providing each station is supervised by a Full licensee who is a club member.

Contest of the Month – IARU HF World Championship

Organised by ARRL on behalf of the IARU, the objective is to support amateur self-training in radio communications including improving amateur operating skills, conducting technical investigations, and communicating with other amateurs around the world, especially IARU member society headquarters stations, using the 160, 80, 40, 20, 15 and 10m bands.

Dates are the second full weekend of July (July 11-12 2026). It begins at 1200UTC Saturday and runs until 1159UTC Sunday. Both single- and multi-operator stations may operate for the entire 24-hour period [4].

This year the WRTC Contest will be concurrent so please look out for and work WRTC entrants who will be on all bands other than 160m.

References

- [1] GR2HQ IARU Contest Team: rsgb.org/main/radio-sport/gr2hq-iaru-contest-team
- [2] CQ World Wide WPX contests: cqwpw.com
- [3] CQ World Wide DX contests: cqww.com
- [4] IARU HF World Championship: arrrl.org/iaru-hf-world-championship

Further reading

RadCom Contesting: rsgb.org/radcom-contesting

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