

The 5th Annual Report of the Radio Communication Examination Standards Committee, May 2011

1. Introduction

This is the fifth annual report of the Radio Communication Examination (RCE) Standards Committee, set up under the terms of the agreement between Ofcom and the Radio Communication Foundation (RCF) for the conduct of amateur radio examinations (the Radio Communication Examinations).

The annual reports of the Standards Committee are published on the RCF website, <http://www.commsfoundation.org/rce/>. Other documents relevant to the RCE are also available on this website, including the terms of reference of the Standards Committee and the agreement between Ofcom and RCF.

2. Membership

The membership of the Standards Committee is as follows:

Prof Simon Watts MBE FEng, G3XXH, Thales UK (Standards Committee Chairman)
Prof Hugh Griffiths FEng, G4CNV, Department of Electronic & Electrical Engineering, UCL

Dr Julian Gannaway, G3YGF, Roke Manor Research Ltd
Murray Niman BSc MIEE, G6JYB, BAE Systems ATC
Dave Powis BSc, G4HUP, College Lecturer

Paul Jarvis, MCMI, G8RMM Ofcom

Alan Betts BSc CEng MIEE MIFL, G0HIQ (Chairman of RCE Examination Committee)
Jeff Smith, MI0AEX (RCE Quality Manager)

Brian Reay, G8OSN (RSGB Board Member)
Barry Maxwell (RCF Trustee)

3. Assessment of Overall Examination Performance

The committee received detailed reports from the Examination Committee, the RCE Quality Manager and the RSGB Examination Department on the management and performance of the examination processes. Their reports are summarised below.

The Standards Committee is satisfied that the current Foundation, Intermediate and Advanced examination syllabuses are suitable for the award of Amateur Radio licenses. Further, the examinations are compatible with the CEPT harmonised arrangements set out in Recommendations TR 61-01 and TR 61-02. The committee will continue to review the syllabuses and examinations to ensure compatibility with international and national regulations.

4. Syllabus Revisions

Digital signal processing and analogue TV switch off will be covered in the next syllabus review.

Industry advice on connections to vehicle batteries has changed following the issue of FCS1362 to replace MPT1362 and some bank questions have been altered as a result.

Revision of the syllabuses will occur from time to time. In all cases changes will be approved by the RCE Standards Committee and normally a notice period of at least 12 months will be given before they are implemented in examinations.

5. Review of the Examination Committee (EC) report.

Question Banks

Some progress had been made with obtaining new questions, especially at Intermediate level, but each of the examinations still has a pressing requirement for additional questions. The status of each of the of question banks was reported to be:

- Foundation 15 more required and a further 14 desired.
- Intermediate 45 more required and a further 36 desired.
- Advanced 266 more required and a further 99 desired.

Interest from authors has risen. Successful authors are now given £20 RSGB book tokens to acknowledge their contribution.

Further initiatives are required to promote good question writing. This has been addressed in meetings between the EC and ARDC, and it is planned to set up training seminars for potential authors. There is also a need for procedures for reviewing submitted questions and providing constructive feedback, especially for unsuccessful offerings. The ARDC and EC were asked to actively pursue these initiatives.

Results for 2010

The table shows the number of examinations offered and the overall results for 2010. The 2009, 2008, 2007 and 2006 results (bottom) are shown in brackets.

| | Foundation | Intermediate | Advanced |
|--------------------------------|-------------------|---------------------|-----------------|
| Number of Examination sessions | 605 | 239 | 121 |
| | (643) | (260) | (155) |
| | (614) | (265) | (169) |
| | (616) | (206) | (95) |
| | (640) | (230) | (154) |
| Number of Candidates | 1896 | 652 | 321 |
| | (2021) | (704) | (426) |
| | (2003) | (733) | (397) |
| | (1965) | (646) | (289) |
| | (2034) | (625) | (446) |

RCF Standards Committee

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| Number of Passes | 1605 | 596 | 222 |
| | (1704) | (662) | (289) |
| | (1678) | (677) | (263) |
| | (1605) | (603) | (161) |
| | (1719) | (604) | (326) |
| Pass rate | 84.7 | 91.4 | 69.2 |
| | (84.3%) | (94.0%) | (67.8%) |
| | (83.8%) | (92.4%) | (66.2%) |
| | (87.4%) | (93.4%) | (64.1%) |
| | (84.5%) | (96.6%) | (73%) |

The Foundation and Intermediate examinations were available at ‘short notice’ during 2010 and Advanced examinations were held at 6 set times with an average of 20 centres active on each occasion with 2.65 candidates per centre.

The SC noted that there had been a fall in numbers of candidates for all three examinations in 2010. For Foundation the average number of candidates per course over the last 3 years (2010 first) was 3.13, 3.14, 3.26; for Intermediate the averages are 2.73, 2.71, 2.77; and for the Advanced they were 2.65, 2.75, 2.35. Given the consistent averages it is not possible to speculate whether the number of courses available has caused the drop in number or the reduced demand has caused some courses to be cancelled.

The EC has produced a detailed report on the results of the RCE in 2010, aimed at examination tutors and candidates. This will be published on the RCF website at <http://www.commsfoundation.org/rce/committees/index.html#ec> .

Pass Marks

There were no changes to the pass marks set for all the examinations during 2010.

For the past few years the pass mark for the Advanced Examination has not been published. However, it has remained stable over this time and the SC instructed the EC that it should now be published. Future changes are not ruled out and these will be notified in advance as required.

As reported last year, Merit and Distinction grades at Advanced level will be introduced in the summer once the new optical marking software is in use (see the report of the RSGB Examination Department, below).

6. Review of the Quality Manager's Report

Examination Administration

Good liaison with the RSGB Examinations Supervisor has continued. The Quality Manager made an unannounced inspection of the RSGB Examinations Department during 2010 and was able to make several recommendations that are being followed-up by the RSGB.

Conduct of Examinations and Inspections

Examinations are liable to routine unannounced inspections at any time, either from the Quality Manager, working with RSGB, or from Ofcom.

Since the last SC annual report, 28 unannounced visits to examination venues were arranged by the Quality Manager. All were completed successfully and no untoward incidents were disclosed. Minor difficulties occasionally arose when visits were considered for examinations in the London area due to lack of availability, due to other commitments, of RSGB Deputy Regional Managers or the Regional Manager. Elsewhere, in the West Midlands and also in Northern Ireland, independent inspectors have now been appointed to assist the Quality Manager and increase the opportunities for examination visits.

Quality Manual

Work is continuing on the production of a Quality Manual which will document all the procedures undertaken by RSGB HQ and the EC in the administration of the RCE. Progress on this has been slow, due to operational difficulties. It is hoped that good progress can be made in the coming year, working in conjunction with the RSGB Examination Department.

7. Review of the Report from RSGB HQ Examination Department

The Examination Department has made significant progress during this year to clear the backlog of outstanding work on the examination question banks. The two moratoriums that were held during February and August 2010 allowed all the work to be completed with the exception of some technical issues for questions with drawings, which will be resolved when the new examination software is installed during the summer of 2011.

The Examination Department also assisted during 2010 with the administration of the regular CRB checks required for Registered Instructors.

Examination Software

The new examination software is currently being written by a contractor. As well as a more user-friendly and modern alternative to the current software this will also include optical marking of examination papers. The use of optical centralised marking of all Advanced exams will be a major change and will greatly enhance the examination process.

In preparation for the new examination software being installed an Optical Mark trial took place during June 2010 with the Advanced exam. Letters were sent to clubs who had applied for Advanced exam to ask whether they would be willing to participate in the trial. Those who had agreed were sent optical mark sheets in with the question papers which were then given to the candidates to record their exam answers. The returned papers were passed to John Vinters (the exam software writer) for scanning. This trial was successful.

Assessment of Practical Examinations

During the latter part of 2010 a trial for Practical Assessments started. The purpose of this is to try to reach a common standard nationally. Letters have been sent to a selected number of instructors and those who have been willing to participate have been sent assessment packs for the trial. When the instructors have completed the assessments they have been asked to complete and return a questionnaire to comment on how the trial went. This trial is still underway.

Examination Fees

During November it was announced that there was to be a further increase in examination fees for all examinations with effect from 1st January 2011:

- The Foundation Licence exam is now £27.50
- The Intermediate Licence exam is now £32.50
- The Advanced Licence exam is now £37.50

Examination Appeals or Irregularities

Three problems were encountered during the year. These were all investigated by the Quality Manager and have all been resolved. One case of irregularities in the record sheets for Foundation course work resulted in a formal warning to a club but the candidates' examination results were not affected.

8. Complaints Received by the RCE Examination Committee

Thirteen questions were challenged during the year. Two had relevant typographical errors which resulted in a mark awarded and a resulting pass. Two were considered potentially ambiguous and were edited but did not result in any change of marks; the exam results did not depend on those decisions. The others were not upheld.

9. Recommendations

The RCE Standards Committee made the following main recommendations for action during 2011:

- Continuing urgent consideration should be given by the Examination Committee, working with the RSGB, to improving the supply of questions for the RCE question banks.
- The Quality Manager will continue development of the quality process, including a quality manual for the administration of the RCE.
- The new examination software should be implemented during 2011, allowing full updating of the examination question banks and the introduction of optical marking for the Advanced Examination.