

## **The 7th Annual Report of the Radio Communication Examination Standards Committee, May 2013**

### **1. Introduction**

This is the seventh 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 RSGB website, <http://rsgb.org/main/about-us/committees/examination-standards-committee/minutes-papers-and-reports/> 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 FREng, G3XXH, Thales UK (Standards Committee Chairman)  
Prof Hugh Griffiths FREng, 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  
Sqn Ldr Dave Taylor, M0NAV (Air Cadet Radio Officer)  
Alan Betts BSc CEng MIEE MIFL, G0HIQ (Chairman of RCE Examination Committee)  
Jeff Smith, M10AEX (RCE Quality Manager)  
Steve Hartley, G0FUW (RSGB Technical and Education Committee, TEC)  
Barry Maxwell (RCF Trustee)

### **3. Assessment of Overall Examination Performance**

The committee received detailed reports from the Examination Committee, the RCE Quality Manager, the RSGB Examination Department and the Air Cadet Organisation, 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**

The outstanding syllabus changes for the Intermediate and Foundation examinations have now been implemented in the question bank. The cessation of analogue TV transmissions has been recognised without the need for a syllabus change.

The committee has agreed that the EC will consult with the RSGB TEC to review all three syllabuses over the next 3 or 4 years. The review will concentrate in particular on ensuring a steady progression from one level to the next, with an aim of encouraging a higher proportion of candidates to progress to Intermediate and Advanced levels.

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

### Membership

The EC had recruited a new member during 2012 but two other members had resigned. The EC wishes to recruit new members with specialist qualifications, especially those with experience of a school education environment, familiar with the examination practices of major examination boards.

### Question Banks

The committee is pleased to report that good progress has been made with clearing the backlog of question entries into the new examination software. The status of each of the of question banks as of April 2013 was:

- Foundation 22 more questions required.
- Intermediate 7 more questions required.
- Advanced 95 more questions required.

These figures are a considerable improvement on the situation last year.

The EC has set up a question writing pool, led by EC member Richard Ferguson. This has led to a substantial reduction in the question backlog for all examinations. More questions are needed and this initiative will continue. The RSGB TEC, supported by the EC, will run local seminars during 2013 to provide guidance for potential question writers.

### Results for 2012

The table shows the number of examinations held and the overall results for 2012 with earlier years, 2011 down to 2006 for comparison.

		<b>Foundation</b>	<b>Intermediate</b>	<b>Advanced</b>
<b>Number of Examination sessions</b>	2012	<b>606</b>	<b>261</b>	<b>199</b>
	2011	581	235	152
	2010	605	239	121
	2009	643	260	155
	2008	614	265	169
	2007	616	206	95
	2006	640	230	154

## RCF Standards Committee

<b>Number of Candidates</b>	2012	<b>1874</b>	<b>756</b>	<b>497</b>
	2011	1837	694	408
	2010	1896	652	321
	2009	2021	704	426
	2008	2003	733	397
	2007	1965	646	289
	2006	2034	625	446
<b>Number of Passes</b>	2012	<b>1599</b>	<b>702</b>	<b>350</b>
	2011	1570	632	279
	2010	1605	596	222
	2009	1704	662	289
	2008	1678	677	263
	2007	1605	603	161
	2006	1719	604	326
<b>Pass rate</b>	2012	<b>85.3%</b>	<b>92.8%</b>	<b>70.4%</b>
	2011	85.5%	91.1%	68.6%
	2010	84.7%	91.4%	69.2%
	2009	84.3%	94.0%	67.8%
	2008	83.8%	92.4%	66.2%
	2007	87.4%	93.4%	64.1%
	2006	84.5%	96.6%	73%

The Foundation and Intermediate examinations were available at 'short notice' during 2012 and Advanced examinations were held at 7 set times to provide exams on every day of the week with weekend exams during the day and weekday exams in the evening.

Foundation examination sessions averaged 3.1 candidates per exam, Intermediate 2.9 and Advanced 2.5. These may be considered rather low average numbers per session. Many clubs hold exams for 6-12 at a time, which means that there must be a number of exams held for single candidates. This is very commendable of the clubs, given the effort involved.

The 2% rise in Foundation candidates is good but well inside the 'noise' of random variations. The 9% rise for Intermediate candidates is a very healthy trend but the 22% rise in Advanced candidates is a welcome surprise, supported by a 31% rise in the number of Advanced examination sessions. Possibly this is due to having two weekend exams but the actual reason is unknown.

Just over 40% of Foundation candidates go on to sit the Intermediate exam and 66% of Intermediate enter for the Advanced exam. It is accepted that some Foundation candidates may well decide that amateur radio is not for them and there are some who would not have even considered taking the old C&G RAE, which was broadly comparable to the present Advanced exam. Nonetheless the committee believes that there is merit in considering whether there are measures which could increase the numbers progressing to higher levels.

The EC has produced a detailed report on the results of the RCE in 2012, aimed at examination tutors and candidates. This is available on the RSBG website.

### Pass Marks

There are no proposed changes to the pass marks set for all the examinations. As reported last year, Pass, Merit and Distinction grades at Advanced level will be introduced once the new optical marking software is in use.

## **6. Review of the Quality Manager's Report**

### Examination Administration

Good liaison with the RSBG Examinations Supervisor has continued.

### Conduct of Examinations and Inspections

Examinations are liable to routine unannounced inspections at any time, either from the Quality Manager, working with RSBG, or from Ofcom. During 2012 there were 73 unannounced inspections of examination venues. This represents 6.8% of all examination sessions and it is intended to aim for an average of 10% of all sessions to be inspected each year. During 2012 no concerns were raised by any of the inspectors from any of the inspections.

The ability to inspect examinations as requested by the RCE Quality Manager is currently restricted by the limited availability of inspectors. There are currently 4 independent inspectors and the remainder of the work is undertaken by RSBG RMs and DRMs. It would be desirable for more independent inspectors to be appointed, if appropriate volunteers can be found.

### Examination Manual

Work is continuing on the production of an Examination Manual which will document all the procedures undertaken by RSBG HQ and the EC, in the administration of the RCE. Progress on this has again continued to be slow, due to operational difficulties. The Quality Manager will be working with RSBG Examination Department during 2013 to resolve this.

## **7. Review of the Report from RSBG HQ Examination Department**

The efficiency of the exam administration work increased, with 6% more applications for examinations than in 2011 processed with the same level of staff support.

Turn-round timescales for results of Foundation and Intermediate examinations are now within 3 working days of receiving the paperwork at HQ. The Standards Committee has recommended that Advanced Examination results are not released for at least 6 days, to allow for the receipt of any appeals or reports of irregularities.

Much of the user documentation and other information associated with examinations are now accessible on the web. This has resulted in a reduced number of telephone enquiries, reducing pressure on Examination Department staff.

Accessibility to examinations for candidates with Special Needs has been improved, with the development of guidance notes and standardised procedures. Readers were requested and approved in 22 cases during the past 9 months. Further documented procedures are needed to

respond to the needs of mature, dyslexic candidates (where statementing procedures have not been carried out) and candidates whose first language is not English.

#### Examination Software

The new software administration system is now in place. However, the new examination software is still not operational, with final adjustments still being undertaken by the software developer. This has meant that some syllabus changes to the examinations are still not being implemented in the examination questions.

### **8. Review of the Report from the Air Cadet Organisation**

Following agreement reached with Ofcom in 2012, the ACO Foundation Equivalent Examination is now accepted for the issuing of a Foundation Amateur Radio licence. The Air Cadet Radio Officer is now a member of the Standards Committee and also attends meetings of the Examination Committee. The Standards Committee will maintain a review of the syllabus and administration of the ACO Examination to assure conformity with HAREC requirements

Arrangements are now in place for the RSGB to forward to Ofcom details of successful ACO Foundation Equivalent Examination candidates who wish to be issued with a Foundation Licence. Good cooperation had been achieved between the ACO and RSGB in administering this activity.

The committee was informed that the ACO had achieved a 73% pass rate in their Foundation Examination, with an average pass mark of 82.4. It is not known how many candidates achieving passes subsequently took out a Foundation licence. As with the examinations run by the RCF, the ACO examinations are subject to unannounced inspections, which are undertaken by the Air Cadet Radio Officer and his team, none of whom have a direct role in the local running of examinations.

The Air Cadet Radio Officer also reported good cooperation with the Army Cadet Force (ACF) and it is envisaged that the ACF will in future use the ACO Foundation Examination.

### **9. Complaints on Questions Received by the RCE Examination Committee**

Three questions were queried during the year. One was not upheld, one was upheld but was considered clear enough to stand in the exam causing the query (the candidate passed in any case) and the other, a typo, meant there was no correct numerical answer and resulted in one candidate gaining a pass. It was noted the transfer to the new banks has provided an opportunity both to check questions and to make transfer errors.

The EC and TEC have used the tutors' reflector to advise how to correctly alert the EC to possible problems with questions using the web, without divulging the text of the question in any way.

### **10. Examination Appeals or Irregularities**

Eight incidents or allegations of irregularities occurred during 2012. Each case was investigated by the EC and one involved an appeal managed by the Quality Manager. All cases have now been resolved.

One case was resolved by requesting an inspection with no further action required.

Another involved recovering an illicit copy of an exam paper. There was no direct evidence that anybody in fact benefitted.

Another case was an application to become an examination secretary by a person who had been barred from holding such office. Registration of the individual was refused.

Two cases involved unauthorised readers, resulting in invalidation of the papers and subsequently successful re-sits.

A very young candidate had an approved reader who became an unauthorised writer. The incident did result in some publicity and controversy. Given the written assurances of what happened by those present, the EC decided to allow the paper and the candidate passed. The procedure for authorising readers and reader/writers was revisited by the EC following that incident.

A further incident involved a very late return of the exam papers and the removal of a paper from the exam room by the candidate concerned. There was no evidence of mischievous intent, just very sloppy procedures for which a written warning was issued.

Finally, there was an incident where initially the EC decided to declare an examination unsafe and this decision was upheld on appeal to the Quality Manager. However, the Radio Communications Foundation Trustees reconsidered this decision and, in conjunction with representatives of Ofcom and the Foundation's own internal examination committees, the Trustees took the decisions to:

1. award the candidates their Advanced Radio Communications Examination Pass Certificates;
2. re-emphasise that there was no evidence of wrong doing by the club, invigilators or candidates concerned;
3. confirm that the Foundation remains committed to ensuring the highest possible standards of integrity in the examination system and will continue post-examination reviews of returned papers to support this objective. The Foundation's Standards Committee further agreed to review all examination appeal processes and procedures drawing on lessons learnt in this case. The Foundation and the club mutually agreed that no purpose would be served by further public comment on this matter. One of the outcomes from this incident was that it was agreed that the Standards Committee should review all examination appeal processes and procedures, drawing on lessons learnt in this case. This review is currently underway and its findings will be published later in the year.

## **11. Recommendations**

The RCE Standards Committee made the following main recommendations for action during 2013:

- The examination software should be implemented as soon as possible during 2013.
- Continued consideration should be given by the Examination Committee, working with the RSGB TEC, to improving the supply of questions for the RCE question banks.
- The Quality Manager will continue development of the quality process, including an examination manual for the administration of the RCE.
- The SC will undertake a review of all examination appeal processes and procedures, drawing on lessons learnt during 2012.