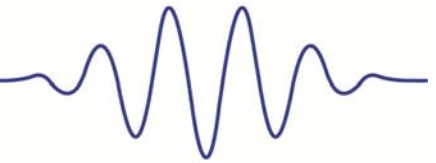




Radio Society of Great Britain

Advancing amateur radio since 1913



The 1st Annual Report of the RSGB Examination Standards Committee, April 2016

This is the first annual report of the RSGB Examination Standards Committee (ESC), which has been set up under the terms of the Schedule of Terms between Ofcom and the RSGB to run the Radio Communications Examinations (RCE). The work of this committee follows on directly from the work of the RCF Standards Committee, following transfer of responsibility for the RCE from the RCF to RSGB on 1st October 2015.

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Introduction

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The annual reports of the Examination Standards Committee are published on the RSGB website, <http://rsgb.org/main/about-us/committees/examination-standards-committee/>. Other documents relevant to the RCE are also available on this website, including the terms of reference of the Examination Standards Committee and the agreement between Ofcom and the RSGB.

Membership

The membership of the Examination Standards Committee is as follows:

Committee Members

Prof. Simon Watts, G3XXH (Chairman)

Paul Jarvis, G8RMM (Head of Business Radio, Ofcom)

Alan Betts, G0HIQ and G8TKV (Chairman of Examination Group and Chief Examiner)

Dave Wilson, M0OBW (Examination Quality Assurance Manager)

Ian Shepherd, G4EVK, (Examination Standards Manager)

Sqn Ldr David Pink, G6EGO and M0ZTT (Air Cadet Radio Officer)

Prof. Philip Willis, M0PHI (TEC Chairman)

Examination Dept representative

RSGB Board Liaison

Steve Hartley, G0FUW

Examination Audit Committee members

Prof. Hugh Griffiths, G4CNV, Department of Electronic & Electrical Engineering, UCL

Dr Julian Gannaway, G3YGF, Chemring Technology Solutions

Murray Niman, G6JYB, BAE Systems Applied Intelligence, UK

Dave Powis, G4HUP, Retired College Lecturer

The terms of reference and constitution of the committee are set down in the Schedule of Terms between Ofcom and RSGB. The RSGB Board Liaison member and the Examination Audit Committee members attend and contribute to all meetings but are formally non-voting members. All current members except the RSGB TEC chairman were members of the RCF Standards Committee.

Assessment of Overall Examination Performance

The committee received detailed reports from the Examination Group (EG), the Examination Quality Assurance Manager (EQAM), the Examination Standards Manager (ESM), the Examination Department (ED) and the Air Cadet Organisation (ACO), on the management and performance of the examination processes. Their reports are summarised below.

The Examination 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.

Syllabus Revisions

The EG is working with the RSGB TEC on a review of all three examinations syllabuses. One of the aims of this review, apart from ensuring the syllabuses appropriately represent modern amateur radio technology and requirements, is to make the steps between the three levels more of a gradual progression. A particular aim is to encourage the progression from Foundation, through Intermediate, to Advanced level. Progress on the new syllabuses has been slower than wished and it is currently expected that they will be available for publication by April 2017. Implementation of the new syllabuses will not be before the first quarter of 2018.

Review of the Report from the Examination Group (EG).

Membership

Following the transfer of responsibilities for the RCE to the RSGB, three members of the EG resigned during 2015. Since then one new member has been recruited so that there are now two full members (including the chairman) and one corresponding member.

In order to assist the EG with their work, the ESC chairman set up an interim operating group, comprising the existing EG members, the ESM, the EQAM and Dave Powis (EAC member). This group continues to be chaired by the EG chairman.

There remains an urgent need to recruit to the EG further members with relevant experience of examination board practice and syllabus development.

Question Banks

The status of each of the question banks, appropriate for the current frequency of examinations, was reported to be:

- Foundation complete.
- Intermediate complete.
- Advanced 7 more required (reduced from 21 in 2014).

The TEC had previously been running of Item Writing Workshops and responsibility for this passed to the EG in 2015. A successful meeting was held near London, using an experienced leader in each of three drafting groups. The EG intends to hold a second of these meetings elsewhere in the country, perhaps in the south-west. It is hoped that these workshops will result in the setting up of more permanent writing groups.

Frequency of Advanced Examinations

It was agreed by the ESC that Advanced Examinations could now be offered on demand, to be implemented by the Examination Dept. when convenient. It was also recommended that a minimum notice period of 4 weeks should be implemented for all Advanced Exams.

The ESC noted that there was a risk in offering Advanced Exams on demand in the short term, due to the limited number of questions in the bank. The EG had calculated that although some areas already met their criterion, a further 143 items are still required to limit the probability of too-frequent repetition of questions. It was acknowledged that there was a small risk that the pass rate would increase if too many questions were repeated and this should be carefully monitored once examinations on demand have been introduced. In any event, further questions will be sought for the Advanced Examination as a matter of priority.

Results for 2015

The table shows the number of examinations held and the overall results for 2015 with earlier years, 2014 down to 2006, for comparison. This year, as in 2014, the number of candidates is shown as enrolments minus absentees. The first figure is directly comparable with previous figures. The pass rate is based on the number actually sitting where known.

		Foundation	Intermediate	Advanced
Number of Examination sessions	2015	638	263	189
	2014	591	268	195
	2013	594	274	183
	2012	606	261	199
	2011	581	235	152
	2010	605	239	121
	2009	643	260	155
	2008	614	265	169
	2007	616	206	95
	2006	640	230	154
Number of Candidates	2015	1806 – 68	707 – 24	456 – 16
	2014	1818 – 62	730 – 9	513 – 25
	2013	1759	736	473
	2012	1874	756	497
	2011	1837	694	408
	2010	1896	652	321
	2009	2021	704	426
	2008	2003	733	397
	2007	1965	646	289
	2006	2034	625	446

		Foundation	Intermediate	Advanced
Number of Passes	2015	1475	632	300
	2014	1481	682	303
	2013	1508	664	332
	2012	1599	702	350
	2011	1570	632	279
	2010	1605	596	222
	2009	1704	662	289
	2008	1678	677	263
	2007	1718	603	185
	2006	1719	604	326
Pass rate %	2015	84.9	92.5	68.2
	2014	84.3	94.6	62.1
	2013	85.7	90.2	70.2
	2012	85.3	92.9	70.4
	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	64.0
	2006	84.5	96.6	73.1

The number of Foundation candidates sitting exams in 2015 is effectively unchanged from 2014, as is the pass rate. The ESC noted that the need to hold 638 exam sessions, with an average of 2.8 candidates per exam, is inefficient and represents an extra workload for the Examination Department. Of the 1475 passes, 707 or 47.9% enrolled for Intermediate exams.

The number of Intermediate candidates is 3% down on 2014 and surprisingly 24 of the 707 enrolling failed to turn up for their exam. 72.2% of the 632 that passed went on to enrol for Advanced. The pass rate, at 92.5%, remains high but it is expected that this will be reduced when the new syllabus enters force sometime in 2018.

The pass rates at Foundation and Intermediate are largely unchanged and that at Advanced has recovered from the drop in 2014.

Progression from Foundation to Intermediate is stable at just below 50%, as is that from Intermediate to Advanced, at just over 70%.

Pass Marks

There are no proposed changes to the pass marks set for all the examinations.

It was agreed that the boundaries between distinction, merit and pass should also remain unchanged.

The facility for Chief Examiner's Commendations for those achieving 60, 61 or 62 marks at Advanced was endorsed by the ESC.

Feedback for Advanced Candidates

The EG had previously agreed to provide feedback to candidates on Advanced exam results and this was provided to those candidates that requested it during this last year. This has been quite an administrative load but has been welcomed by the candidates.

Access Arrangements and Special Consideration

Fifty one candidates requested reasonable access arrangements in the last year:

- 32 required a reader
- 9 required an amanuensis
- 23 required large print
- 7 required no images
- 1 had other special needs

Some candidates had provision of more than one facility.

There were no requests for a signer or interpreter and 2998 candidates had no special requests.

The EG does not have authority for Special Consideration (post-exam adjustments) since resits are readily available.

Review of the Report from the Examination Quality Assurance Manager (EQAM)

Five additional independent examination inspectors were recruited during the year. The Regional Team continued to carry out the bulk of the inspections. The short notice for many exams, together with holidays and other commitments means that it is still proving difficult to achieve the desired aim of 10% of all exams to be inspected each year.

The EQAM is now responsible for handling the response to irregularities (apart from those relating to examination items, which are still handled by the EG). Inspections raised several irregularities during the year, with appropriate actions taken by the EQAM. These are reported below.

One of the issues discussed by the ESC as result of inspections by the EQAM's team was the training and registration of examination invigilators. Many of the irregularities found during inspections could be avoided if the examination officials understood better their roles and responsibilities. It was agreed by the ESC that the Examination Dept. should seriously consider developing a scheme for registering and training (possibly by an on-line training package) all invigilators. Such persons would then also be available to assist in exam centres where no trained invigilators were available.

Review of the Report from the Examination Standards Manager (ESM)

Conduct of Examination booklet, EX500

A revised version of this booklet has been prepared during 2015 by the ESM, working in conjunction with the EG. It will be available later this year in web format and also as a printed booklet.

Handling of Irregularities and Appeals

Following an extensive review by the ESM, supported by the EQAM and EG chairman, a new set of procedures covering the handling of irregularities and appeals has been agreed by ESC members. These will now be published on the ESC webpage.

Practical Assessment Guide and Candidate Logbook

A new practical assessment guide for tutors and assessors has been prepared by the ESM will be published in PDF form on the website. The purpose of this guide is to help tutors and assessors ensure a fair assessment of candidates.

Examination Software (EMAS)

The ESM has undertaken a considerable amount of work putting the current EMAS development into a more commercial arrangement with the developer. Regular discussions are held with the developer to progress the various updates or refinements that are still outstanding.

Review of the Report from RSGB HQ Examination Department (ED)

Despite the problems with some aspects of the EMAS software, mainly relating to the extraction of statistics, the ED reported it is proving reliable in day-to-day use. Candidates are also getting better at using the optical marks sheets, with fewer completion errors than in previous years.

The ED reported that the new procedure for having readers authorised prior to an exam being processed has led to many reader requests being dropped by the candidate or exam centre.

The level of Registered Assessor applications was 114 in 2015. The department is currently considering a new system for training and registering examination secretaries and assessors.

Review of the Report from the Air Cadet Organisation (ACO)

With the agreement of the RSGB and Ofcom, candidates achieving a pass in the ACO Foundation Equivalent Examination may apply to the RSGB for a candidate number, enabling them to apply to Ofcom for a Foundation Licence. The ESC is responsible for monitoring the performance of the ACO examinations to provide assurance that they continue to meet the requirements set down by Ofcom.

A total of 123 candidates sat the ACO examination in 2015, with 88 passes. It is believed that 62 of these subsequently applied to Ofcom for a licence. It is expected that the number of candidates in 2016 will be greater than in 2014 or 2015, due to changes in the examination structure and timing (but not content) within the ACO which has resulted in a temporary reduction in numbers of candidates taking the Foundation exam.

The Army Cadet Force (ACF) is now fully engaged with the ACO, with their candidates sitting the ACO examination. The Sea Cadet Corps (SCC), Combined Cadet Force (CCF) and the Marine Cadets are keen to participate and the ACO is currently evaluating their operator procedure training to see if it matches to requirements of the ACO examination. This was welcomed by the ESC.

The ACO have not progressed the incorporation of the Intermediate Exams into their cadet training schedule. This remains a long-term aim and the ACO already has in place suitable practical assessments for this level. If these plans do progress, the equivalence of the ACO Intermediate Equivalent Examination syllabus and the RCE Intermediate Examination syllabus would need to be agreed.

Complaints on Questions Received by the Examination Group

Eleven Foundation questions were queried, of which three were correct and the others required editing. Two questions were invalidated and the pass marks recalculated and one question was regarded as having two answers that were correct.

Thirteen Intermediate questions were queried of which five were correct. The others all required editing to resolve or improve clarity. The exam results were unaffected.

Thirteen Advanced questions were challenged. Five were in-house queries prior to production of the printed exam papers, of which four were edited and one suspended and substituted due to potential ambiguity in the revised Licence. In one case a typographical error rendered a question invalid and the pass mark was changed. In the other cases the questions were either correct or the queries resulted in minor editing.

Examination Irregularities

Responsibility for dealing with irregularities was passed to the Examination Quality Assurance manager on 1 June 2015.

Five irregularities were dealt with by the EG during the first 5 months of 2015:

- One, continuing from 2014, involved a local mismarking and a subsequent exchange of solicitors' letters. No further activity has occurred and the matter is assumed closed.
- An unauthorised reader incident was resolved with advice to those concerned. Unfortunately the candidate had failed.
- An inspection noted that an Advanced exam had started 2 hours early, there were posters on view allegedly of potential help to candidates and the start and finish times were not displayed. The timing does potentially compromise all other Advanced exams although there is no evidence it actually did. Strong words of advice were issued.
- A returned examination envelope contained only the OMS, Exam Booklet and Register. The Exam Papers, Answer Key, Invigilator Checklist and Reference Data Booklets were missing (the reference data booklets can be destroyed locally). The assistant invigilator, who had not previously undertaken this role, had taken the exam papers and answer key home in the claimed belief they should be destroyed. They were nonetheless returned to the RSGB several days later. The Examination Standards Manager visited the club, who were apologetic and formally resolved to ensure the assistant invigilator was appropriately trained before being allowed to invigilate again. The club received a written warning and words of advice.
- The final case dealt with by the EG involved a fire alarm, fortunately a false alarm, which nonetheless involved evacuation of the building. One young candidate who was expected to pass showed a pattern of wrong answers for a few questions on resuming the exam. The RSGB does not have the authority to take any 'Special Consideration' into account, and re-sits are readily available. A re-sit paper was recommended, free of charge. In this instance it was anticipated that the hall owners, who caused the false alarm, would not charge for the hall.

Following 1 June 2015, responsibility for investigating and dealing with irregularities was transferred from the EG to the EQAM.

The outcome from inspections organised by the EQAM were generally in line with previous findings, highlighting minor infringements such as a missing clock, failing to display warning notices on doors, failure to display start, middle and end times of the exams, and failure to read out exam rules.

However there were a number of inspections that raised concern:

- The possible use of an unauthorised reader – a reader had been requested but due to the request being made too late the use of a reader was declined and the exam venue advised accordingly. When the exam was subsequently inspected, an additional person was in the room, who was asked to leave. It was decided that the result should stand but a warning letter was issued and subsequent exams have been inspected, with no further issues.
- Intermediate exam – during an unannounced inspection it became evident that a candidate didn't have a completed CPAR; in any event the candidate failed. The Invigilators and Lead Assessor were accordingly advised of the exam regulations.
- An advanced exam that started at 20:10 rather than 19:00 – a warning letter was sent. It transpired that the first-named invigilator had a family emergency and the second invigilator was held up at work. The inspector was with the candidate at all times. Exam paperwork was intact and due to extenuating circumstances the inspector allowed the exam to start.

- There was an issue with an inspection involving an exam with a large number of candidates who did not present CPARs prior to the exam starting. In fact many did not have any CPAR forms at all. Discussion with a number of candidates indicated that few of the 12 assessments were actually carried out. There were other issues including no seating plan, use of a reader and marking of papers with candidates in the room. In addition, ID checks indicated that while a number of candidates had used the usual driving licence or passport, at least 2 candidates presented shotgun/firearms licences, which were not noted in the paperwork. The exam was invalidated and the candidates were all offered a free re-sit.

There were other issues which have come to light but not as a result of an inspection:

- A club changed the date of the exam. A letter was sent advising that the exam was invalidated and offering the candidate a free re-sit.
- An OMS was used in photo of successful candidate in RadCom
- Questions and concerns were raised by others regarding the use of invigilator with a criminal record.
- Missing exam question papers.
- Mistakes transferring answers from question paper to OMS
- Using the question paper rather than the OMS to obtain candidates' results – the venue voluntarily de-registered itself.

International Amateur Radio Examination (IARE)

The IARE is offered by the RSGB to countries that are not signatories to CEPT T/R 61-01 or T/R 61-02, as a service to international amateur radio. The exam covers the technical topics set out in the CEPT HAREC syllabus. It is totally independent of the UK RCE, with a separate question bank. The examinations are currently administered by the Board Liaison Member of the ESC.

The ESC acknowledges the desire of the RSGB to continue offering this examination, which is strongly supported by the IARU Region 1, who would like to see it use extended. The ESC agreed that it would make sense for the EG to take over responsibility for running this exam but at present it is not practicable for this to occur, due to the currently reduced number of EG members. Adoption of the IARE by the examination team will be kept under review.

Practical Assessments

The current examination regulations state that before the beginning of Foundation and Intermediate Examinations each candidate must present their completed Candidate Practical Assessment Record (CPAR). This requirement had been queried, with the suggestion that CPARs might be completed after the completion of the written examination.

The ESC confirms that completing the CPAR is meant to be an integral part of the learning experience in preparation for the exam and it is highly desirable that it be completed as part of the training before the exam. This does not rule out the practical assessments being undertaken immediately before an exam but the ESC do not wish to see CPARs completed after the exam except in very exceptional circumstances.

Failure to present a CPAR will prevent a candidate taking the exam. A candidate presenting an incomplete or otherwise faulty CPAR should be allowed to complete the exam but the event will be recorded as an irregularity and dealt with according to the new procedures for handling irregularities.

Recommendations

The RCE Standards Committee made the following main recommendations for action during 2016:

- Continuing effort should be put into recruiting Examination Group members.
- Advanced Examinations should be made available on demand, subject to a minimum 4 week notice period.
- The examination question bank for Advanced Items should be increased in size as soon as possible to meet the requirement for examinations on demand.
- New versions of the Conduct of Examinations Handbook, EX500, and the Procedures for Handling Irregularities and Appeals should be published.
- The revised practical assessment guide for tutors and assessors should be published,
- The syllabus review remains a high priority for the EG and TEC.
- Online examinations remain an aim and investigations into suitably secure methods should continue.
- Provision of examination software and statistical analysis of examination results will continue to be developed.