



# TRAINING & ASSESSMENT STRATEGY

*“Making every conversation a training opportunity”*

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Version 1.0 (FINAL)

December 2024

# DOCUMENT HISTORY

Version	Author	Date	Comments
0.1	G Taylor	1/07/2024	Initial draft
0.2	G Taylor	28/11/2024	Updates following feedback
1.0	G Taylor	09/12/2024	Final for release – Controlled copy

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## 1 EXECUTIVE SUMMARY

Training and education are at the heart of the amateur radio hobby, and all amateur radio enthusiasts are on a lifelong learning journey.

The Club has a responsibility to provide every opportunity to members to learn more about the hobby, regardless of whether they are at the start of their journey or have been an enthusiast for much of their lifetime.

This paper proposes that BDARS adopt a principle of “making every conversation a training opportunity”; consistently utilising existing meetings to incorporate (and normalise) conversations about various aspects of the hobby, or considering introducing facilitation of focussed sessions to assist members achieve a higher-level licence or to have a greater appreciation of practical requirements for building and operating equipment.

Further, it is proposed that BDARS also has a moral responsibility to provide a safe and inclusive environment so that new members and licensees are welcomed and engaged in the Club and the hobby and have every opportunity to continue to learn and grow in experience while contributing towards the ongoing success of the Club.

## 2 PURPOSE

The purpose of this training and assessment strategy is to provide a planned, organised and repeatable approach to the delivery of training and knowledge transfer for both existing members of the club, and prospective members of the club.

## 3 UNDERPINNING PRINCIPLES

The principles that underpin a strategy for effective training and assessment include an expectation that the process is:

- Repeatable.
- Inclusive.
- Useful.
- Professionally delivered.
- Flexible.
- Aligned and delivered to meet the training needs and requirements of individuals.
- Planned and timely.
- Self-perpetuating.
- Helpful in improving and uplifting knowledge and skills of members.
- Helpful in assisting members to uplift their licence class.

## 4 TRAINING ORGANISATION

While BDARS is not of itself a training organisation, it is a club of like-minded individuals where all members are at different stages of their journey in electronics and amateur radio; there are many opportunities for more experienced members to impart knowledge and skills to other members and encourage discussion about the hobby.

Although BDARS is not formally a training organisation, the Club still has a responsibility to ensure that our members have opportunities to learn and increase their knowledge and skills.

## 5 TRAINING STRATEGY GOALS

The goals and objectives of this training and assessment strategy are to ensure that every opportunity is taken to support and educate our people, with the fundamental aim of “*making every conversation a training opportunity*”.

Specifically, we will:

- Provide specific theoretical knowledge and experience that will assist in gaining an amateur radio licence or achieving a higher-level amateur radio licence.
- Provide support for participants who are preparing for assessment.
- Provide practical knowledge, experience and increased competence in real-world amateur radio concepts to be more effective in various operation modes (shack or field, digital, voice or CW).
- Provide practical knowledge and experience in associated amateur radio fields (eg regulations).
- Provide technical and practical hands-on skills and increased competence in various workshop techniques (eg soldering, test equipment, etc).
- Provide practical knowledge and experience in related areas of technology (eg networking, software development).
- Provide practical support in associated educational concepts (eg mathematics, reciprocals, fractions, etc).
- Promote a currency and familiarity with technical concepts related to amateur radio (eg tuned circuits, antennas, radials, operation).
- Normalise discussions about amateur radio and electronics principles.
- Provide opportunities to increase club membership and drive growth.
- Utilise various training delivery mechanisms to suit individual learning needs.

## 6 TRAINING DELIVERY

There are many pathways and opportunities to provide training and knowledge transfer to BDARS members and guests. This training should not be limited exclusively for BDARS members, but anyone with an interest in amateur radio should be given an opportunity to gain further knowledge about the hobby as a part of our ongoing commitment to an inclusive hobby.

Training can be delivered both formally and informally, and could occur in:

- Club general meetings.
- Club training/workshop area.
- Clubhouse.
- Formal and structured Teams or online facilities.
- Contest or event days.
- Pre-assessment (exam) workshops.
- Formal lesson plans.
- Personal study.
- Informal one-on-one mentoring relationships between members, where the “Elmer” is a recognised and endorsed mentor.

Where there is considerable effort or time commitment given to assessable training (eg Standard or Advanced licence or regulations), it may be appropriate for BDARS to ask for a financial contribution to the Club to cover costs or demonstrate value for money.

It is also noted that there is a distinction between training provided for the purpose of passing an examination or demonstrating competence, and informal learning where one member (an “Elmer”) helps a less experienced member to become more familiar with the hobby.

## **7 TRAINING MATERIALS AND SOURCES**

Different training materials should be utilised depending on the nature of the training provided. Some of these will be developed in-house, while it may be more appropriate at other times to use published materials to provide a consistent, logical training approach.

### **7.1 GENERAL THEORETICAL AND PRACTICAL TRAINING MATERIALS**

It is anticipated that most training materials will be developed in-house by the presenter and will be aligned to the topic being presented.

For any topic that contributes to an understanding of concepts for an ACMA assessment, it must obviously align with accepted knowledge of the topics. This knowledge can be packaged and presented as appropriate for the intended venue and audience but should still be sourced from commonly accepted reference books such as those listed below in Section 7.2.

It is expected that standard presentation templates (e.g. PowerPoint templates) will be available for presenters to develop their materials, so that these materials carry a consistent “look and feel” across all BDARS-developed documents.

## 7.2 SPECIFIC TRAINING FOR ALL LICENCE LEVELS

Participants seeking to undertake training for an ACMA licence (Foundation, Standard, Advanced) should ideally be directed to one of the following as a reference guide for all required theoretical knowledge:

- Radio and Electronics School (RES) – see <https://res.net.au/>
- Your Entry Into Amateur Radio (Ron Bertrand) – see <https://www.wia.org.au/licenses/foundation/foundationmanual/>
- Radio Theory Handbook – Beginner to Advanced (Ron Bertrand) – see [https://www.wia.org.au/members/bookshop/page\\_data.php?id=263](https://www.wia.org.au/members/bookshop/page_data.php?id=263)
- Radio Theory Handbook for Amateur Operators (Fred Swainston) – see [https://www.wia.org.au/members/bookshop/page\\_data.php?id=114](https://www.wia.org.au/members/bookshop/page_data.php?id=114)
- [ACMA recognition requirements and examination information:](#)
  - [Foundation syllabus](#)
  - [Standard syllabus](#)
  - [Advanced syllabus](#)

Suitably qualified and experienced members could facilitate structured training sessions using any of the above texts as the course material, leading to participants sitting for an assessment when they feel they have a solid understanding of the topic and material.

## 7.3 REGULATIONS

Passing a regulations examination is an additional requirement for anyone seeking to achieve a standard or advanced licence, although these are separate examinations and can be undertaken at different times. In order for a candidate to receive their standard or advanced licence, they must achieve a satisfactory pass mark in both examinations (licence and regulations) before the Certificate of Proficiency will be issued.

This is another aspect of training that can be provided by the club, and delivered by a suitably qualified and experienced trainer.

The participant is expected to understand the Radiocommunications Licence Conditions – see <https://www.legislation.gov.au/F2015L00210/latest/text>.

Further support for participants seeking to undertake a regulations assessment can refer to support sites such as the joint initiative between Radio Amateur Society of Australia ([RASA](#)) and the Radio and Electronics School ([RES](#)) – see <https://vkregs.info>.

## 8 QUALIFICATIONS FOR TRAINERS AND ASSESSORS

For any member (or anyone who provides training and assessment, regardless of whether they are a member of BDARS or not) should hold an appropriate level of qualification or competence in order to effectively carry out those duties.

## **8.1 TRAINER QUALIFICATIONS**

Anyone who conducts training activities for the purpose of helping members gain a licence or competency should have the following minimum qualifications:

- An Advanced Licence
- A Certificate IV in Assessment and Workplace Training (or equivalent)
- Hobby experience

## **8.2 ASSESSOR QUALIFICATIONS**

Anyone who conducts assessments for an amateur radio licence or competency should have the minimum requirements specified by the ACMA for an assessor, and be accredited by the ACMA.

Anyone who conducts special assessments for an amateur radio licence or competency should have the minimum requirements specified by the ACMA for a specialist assessor, and be accredited by the ACMA.

## **9 TRAINING SCHEDULE**

There are many and varied opportunities to educate and inform our members in various aspects of the amateur radio hobby.

### **9.1 MONTHLY TRAINING AT CLUB MEETINGS (FIRST MONDAY OF THE MONTH)**

It is proposed that every club general meeting should include a discussion on a relevant topic about the hobby. This could be:

- Theory (e.g. a discussion about tuned circuits).
- Practical (e.g. a discussion about different antenna types, or portable operation considerations)

This is anticipated that this is the primary opportunity for most members to have consistent, effective and recurring exposure to amateur radio concepts and knowledge, and it is anticipated that this mechanism will “normalise” conversations about electronics and the hobby.

### **9.2 SCHEDULED FOUNDATION-LEVEL COURSES**

It is proposed that the Club consider facilitating formal, scheduled training sessions over a small number of weeks (e.g. 2-3 weeks) to assist anyone seeking to sit a Foundation-level competency and licence.

These sessions would need to be run by a suitably qualified and experienced facilitator who could then move participants towards assessment.



Logically structured information relevant to Foundation-level requirements could be developed in-house, or a suitable text could be used to take participants through the requisite knowledge requirements.

### **9.3 SCHEDULED STANDARD- AND ADVANCED-LEVEL COURSES**

It is proposed that the Club consider facilitating formal, scheduled training sessions over a longer duration (e.g. 15 weeks) to assist anyone seeking to achieve a Standard-or Advanced-level competency and licence.

These sessions would need to be run by a competent, suitably qualified and experienced facilitator who can effectively lead the participants into a greater understanding and application of the theoretical knowledge required to successfully pass their assessment.

An appropriate text such as those listed in Section 7.2 could be used to take the participants through a logical and structured curriculum.

### **9.4 AD-HOC WORKSHOP “HANDS-ON” TRAINING**

It is proposed that the Club utilise available facilities to provide “hands-on” training sessions in a wide variety of practical topics that are relevant to the hobby.

### **9.5 CONTESTS AND EVENTS**

Contests and events are not just about earning points and winning awards. They are also real-life training opportunities for less experienced members to work alongside more experienced members in setting up equipment, and operating equipment.

### **9.6 ELMERS**

Elmers are an acknowledged method of pairing a less experienced member with a more experienced member for the purpose of guiding and mentoring the “newbie” into the hobby.

BDARS does not seem to take a proactive approach to appointing and assigning Elmers, and this should be considered as a key approach to enabling new members and licensees to feel safe as they navigate the hobby. Giving new members an Elmer will also likely have a positive effect on reducing the risk of new members drifting away from the Club.

## **10 ASSESSMENT**

While there are many opportunities to provide training and education in both theoretical and practical topics, it is also acknowledged that some training opportunities also carry the requirement for a formal assessment.

The formal assessment process covers various types of examination to achieve ACMA requirements and guidelines, and all require the achievement of a “pass” mark. These include:

- Practical exam (must be completed once, normally at Foundation) – 100% pass required
- Licence exams (Foundation, Standard, Advanced) – 70% pass required
- Regulations exam (must be completed once for Standard or Advanced exam) – 70% pass required.

There are two (2) ways that a request for formal assessment can be made:

### **10.1 ASSESSMENT REQUESTS VIA ACMA WEBSITE (DIRECT TO ASSESSORS)**

The ACMA list accredited assessors on their website (<https://www.acma.gov.au/assessors>), which therefore gives anyone seeking to undertake an ACMA licence/regulations assessment the opportunity to make contact directly with the assessor.

There is no connection made on the ACMA website between the assessor and any radio club (e.g. BDARS), so there is no expectation that any assessor that is associated with BDARS should necessarily promote club membership.

Having said that, it is also noted that for anyone applying for a Foundation level licence that is new to the hobby should be given every opportunity to have access to ongoing support and inclusion in amateur radio activities.

ACMA assessors that are also members of BDARS should be encouraged to ensure that taking a request for assessment is not just transactional, but that anyone enquiring about assessment is given the opportunity to become a part of BDARS membership in order to become a part of a like-minded community.

### **10.2 ASSESSMENT REQUESTS VIA BDARS WEBSITE/EMAIL**

Any request for assessment that is made via the BDARS website or BDARS examiners email address ([examiners@bdars.org.au](mailto:examiners@bdars.org.au)) is expected be dealt with as a club activity, and as an opportunity to bring new licensees into the club and give them every opportunity to become a part of the amateur radio community.

This includes advising the BDARS Management Committee of:

- All examination requests received.
- Planned and actual assessment activities conducted.
- Names and call signs of individuals sitting for exams.
- The outcome of the exams (pass/fail).

When requests for exams or training come through the BDARS website or email address, it is incumbent on the club to ensure that applicants are appropriately

followed up and given every chance to participate and succeed. A lack of follow-up could be perceived negatively on the club.

## APPENDIX A: TRAINING & ASSESSMENT STRATEGY APPROVAL

The undersigned acknowledge they have reviewed the **Training & Assessment Strategy** and agree with the approach it presents. Changes to this **Training & Assessment Strategy** will be coordinated with and approved by the undersigned or their designated representatives.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name:           GEOFF TAYLOR          

Role:                   PRESIDENT                  

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name:           TRISTAN MERCER          

Role:                   VICE-PRESIDENT                  

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name:           MARTIN ULJEE          


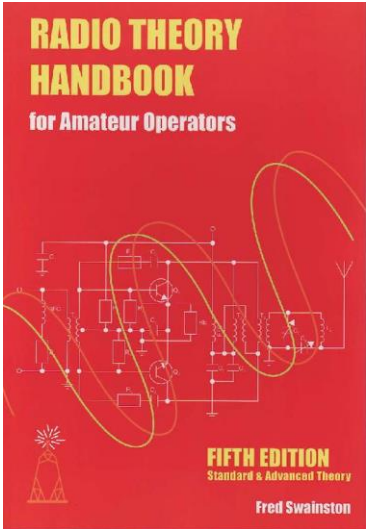
Role:                   SECRETARY

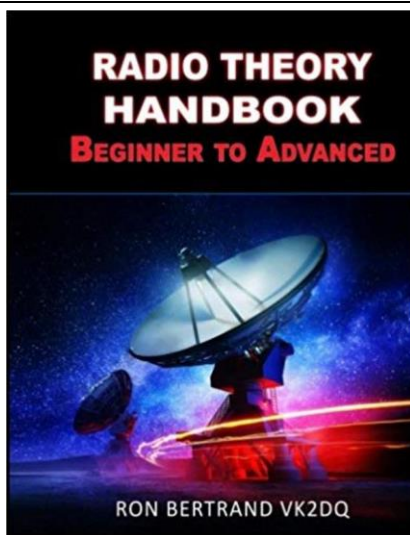
## APPENDIX B: TRAINING CURRICULUM DETAILED DESCRIPTION

TYPE	VENUE	AUDIENCE	FREQUENCY	COMMENTS	EXAMPLE OF CONTENT
Practical	Club meeting, clubhouse, or as required	Prospective trainers	As required	In order for members of BDARS to be effective at presenting any training topics to others, they should have an understanding of the fundamentals of training and presenting to others	Discussion on: <ul style="list-style-type: none"> <li>• Training methodology</li> <li>• Effective knowledge transfer</li> <li>• How to deliver a training course</li> <li>• How to develop training/presentation materials</li> </ul>
Theoretical	Club meetings	All members	Monthly – first Monday	Must be delivered professionally. Presenter must have a knowledge of the topic. Topics should be about some element of the hobby and could include content that is required for achievement of a standard or advanced licence	Discussion on: <ul style="list-style-type: none"> <li>• Tuned circuits</li> <li>• Types of modulation</li> <li>• Block diagrams</li> <li>• Ohm's law</li> </ul>
Practical	Club meetings	All members	Monthly – first Monday	Must be delivered professionally. Presenter must have a knowledge of the topic	Discussion on: <ul style="list-style-type: none"> <li>• Types of antennae.</li> <li>• Setting up an antenna.</li> <li>• Antenna radials.</li> </ul>
Theoretical	Clubhouse or online	Participants seeking to achieve or upgrade their licence	As required, depending on demand	Must be delivered professionally. Presenter must have a knowledge of the topic and be able to answer questions.  This training will have a significant demand on presenter's time, with a Foundation course likely taking 3-4 weeks, and a Standard/Advanced course likely taking 15 weeks or more.  It is expected that participants would: <ul style="list-style-type: none"> <li>• Be expected to purchase their own text</li> <li>• Be expected to contribute some funds to BDARS for the provision of training</li> </ul>	Might include: <ul style="list-style-type: none"> <li>• RES course material</li> <li>• Electronics handbook by Fred Swainson or Ron Bertrand</li> <li>• Other materials as agreed</li> <li>• Tutorials or homework</li> </ul>
Practical	Club meetings or Tech nights	All members	As required	This is the "show and tell" that occurs in meetings, where members have the opportunity to demonstrate and discuss something that they are working on.	Various
Practical	Museum workshop or clubhouse	All members	Ad hoc or scheduled according to interest and demand	One-on-one or small group training in some practical aspect of electronics or the hobby.  This could be sessions run by the makers group to include members.	<ul style="list-style-type: none"> <li>• Soldering skills</li> <li>• Testing practices</li> <li>• Using a RigExpert</li> <li>• Building a balun</li> </ul>

<b>TYPE</b>	<b>VENUE</b>	<b>AUDIENCE</b>	<b>FREQUENCY</b>	<b>COMMENTS</b>	<b>EXAMPLE OF CONTENT</b>
Practical	Clubhouse or on-line	All members	Ad hoc	Practical support for members who require additional support and assistance with formulae, mathematics, etc	<ul style="list-style-type: none"> <li>• Mathematics</li> <li>• Fractions</li> <li>• Equations</li> </ul>
Practical & theoretical	Elmer	Individual member	As required	This is a relationship for a new member to the hobby to be aligned with an Elmer who can provide support and guidance.	<ul style="list-style-type: none"> <li>• As required by the individual</li> </ul>

## APPENDIX C: REFERENCE BOOKS

REFERENCE BOOK	DETAILS
	<p><b>Title:</b> Your Entry Into Amateur Radio  <b>Author:</b> Ron Bertrand  <b>Edition:</b> 4  <b>Licence applicability:</b> Foundation</p>
	<p><b>Title:</b> Radio Theory Handbook for Amateur Operators  <b>Author:</b> Fred Swainston  <b>Edition:</b> 5  <b>Licence applicability:</b> Foundation, Standard, Advanced</p>



**Title:** Radio Theory Handbook – Beginner to Advanced

**Author:** Ron Bertrand

**Edition:** ?

**Licence applicability:** Foundation, Standard, Advanced