



IALA MODEL COURSE

V-103/4

VESSEL TRAFFIC SERVICES ON-THE-JOB TRAINING INSTRUCTOR

Edition 2.0

December 2009



DOCUMENT REVISION

Revisions to this IALA Document are to be noted in the table prior to the issue of a revised document.

Date	Page / Section Revised	Requirement for Revision
December 2001	1 st issue	
December 2005	Ed.1.1 Entire document	Reformatting to comply with IALA document hierarchy
December 2009	Ed.2 Total revision of document	General updating in light of 10 years' experience and evolving technology



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FOREWORD

The International Association of Marine Aids to Navigation and Lighthouse Authorities has been associated with Vessel Traffic Services since 1955 and recognises the importance of human resources to the development of efficient Vessel Traffic Services worldwide.

Taking into account the International Convention on Standards of Training, Certification and Watchkeeping of Seafarers, 1978, as amended in 1995 (STCW Convention), the Seafarer's Training, Certification and Watchkeeping Code (STCW Code) and STCW 95 Resolution 10, IALA has adopted Recommendation V-103 on Standards of Training and Certification of VTS personnel.

The model training courses developed, or being developed, by IALA for VTS personnel are:

- Model Course V-103/1 - VTS Operator;
- Model Course V-103/2 - VTS Supervisor;
- Model Course V-103/3 - On-the-Job Training;
- Model Course V-103/4 - On-the-Job Training Instructor.

These model courses are intended to provide national members and other appropriate authorities charged with the provision of Vessel Traffic Services with specific guidance on the training of VTS Operators and VTS Supervisors. They may be used by maritime training organisations, and assistance in implementing any course may be obtained through IALA at the following address:

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PART A COURSE OVERVIEW

1 OVERVIEW

IALA recommends that training providers utilise accredited training courses as per IALA Guideline 1014 on the Accreditation of VTS Training Courses.

2 PURPOSE OF THE MODEL COURSE

The purpose of the model course is to assist VTS centres and their instructors in delivering On-the-Job Training (OJT) programme, and in enhancing and complementing existing training material where the quality and effectiveness of the training courses may thereby be improved to fully meet the intent of IALA Recommendation V-103.

The course should provide a standardised tool for the practical delivery of V-103/3 On-the-Job Training through the provision of tools to facilitate the:

- creation and validation of training programmes;
- practical delivery of training programmes in a variety of circumstances:
 - Presentation techniques;
 - Demonstration and practice techniques;
 - One-to-one training.
- provision of guidance on the assessment of VTS personnel;
- development of instructional, coaching and mentoring skills.

The required standard of competence is considered to be the level of proficiency that should be achieved for the supervision and delivery of training by OJT Instructors in a consistent manner. The training should take into account the level of competence already acquired and build on this to meet the needs of the trainee and the VTS centre.

It is not the intention of the model course to present instructors with a rigid teaching package. The knowledge, skills and dedication of instructors are key components in the transfer of knowledge and skills to those being trained through this model course material.

3 USE OF THE MODEL COURSE

This course is intended to cover the knowledge and practical competence required by an On-the-Job Training Instructor (OJTI) for VTS personnel.

The course is designed to ensure trainees are provided with realistic exercises on their role as On-the-Job Training Instructors for VTS. The training programme should include both practical and theoretical elements to prepare VTS personnel for the delivery of OJT (V-103/3).

Adjustment of the training objectives, scope and content for each subject may also be necessary if the trainees completing the course are to undertake duties which differ from the objectives specified. Additionally, consideration should also be given to the past experience of VTS personnel, which may necessitate an adjustment in the subject areas delivered.



PART B DELIVERY OF THE MODEL COURSE

1 LESSON PLANS

The instructor should draw up lesson plans based on each section of the syllabus and include references to textbooks and teaching material suggested for the course. Where no adjustment has been found necessary in the subject areas, the lesson plans may simply consist of the syllabus with keywords or other reminders added to assist the instructor in making his presentation of the material. Lesson plans should emphasise the unique aspects of training methodology and coaching skills required by On-the-Job Training Instructors.

In preparing a teaching scheme and lesson plans, the instructor is free to use any teaching method or combination of methods that will ensure trainees can meet the stated objectives. However, it is essential that trainees attain all objectives set out in each syllabus.

2 PRESENTATION

Competent authorities should ensure that OJT Instructors are appropriately qualified and experienced to meet the required standards. In addition to this, the OJT Instructor course should ensure that instructors have an appropriate balance of professional training experience and where a competent authority deems necessary professional VTS knowledge.

The presentation of concepts and methodologies may be repeated in various ways until the OJT Instructor is satisfied that the trainee has attained each specific learning objective. The syllabus in each subject should be laid out in learning-objective format so that each objective specifies what the trainee must be able to do as the learning outcome.

3 IMPLEMENTATION

The competent authority should ensure that as a minimum the following standards and requirements are met in any development of model course V-103/4:

- OJT Instructors meet the standards set by the competent authority;
- support staff;
- rooms and other spaces suitable for the provision of training;
- equipment / tools, including the use of camcorders, to facilitate the effective delivery of training;
- textbooks, technical papers, workbooks, equipment manuals;
- opportunities to practice training techniques;
- other reference material.

Thorough preparation is key to successful implementation of the course.

4 VALIDATION

The information contained in this document has been validated by a group of technical advisers, consultants and experts on training of VTS personnel for use in the training and certification of VTS Operators, VTS Supervisors and instructors, so that the minimum standards implemented may be as uniform as possible. The technical advisers were drawn from the IALA VTS Committee, training organisations of IALA members and experienced VTS personnel. Validation in the context of this document means that the group has found no grounds to object to its contents.



PART C COURSE FRAMEWORK

1 SCOPE

This course is intended to provide the training and practical guidance required to become an effective instructor of model course V-103/3 On-the-Job Training. Successful completion of this training must be indicated by an endorsement in their VTS certification log issued in accordance with IALA Recommendation V-103 on Standards for Training and Certification of VTS Personnel.

2 OBJECTIVE

Upon completion of the V-103/4 course the newly qualified On-the-Job Training Instructor should have a thorough understanding of the specific On-the-Job Training objectives and:

- have a thorough understanding of adult learning techniques taking into account the specific needs of the trainees;
- have the tools to develop a detailed VTS centre On-the-Job Training programme;
- are qualified in the task for which training is being conducted and assessment is being made;
- have an appropriate level of knowledge & understanding of the competence to be assessed;
- be able to develop, create and maintain an OJT task book;
- be able to effectively manage the training process to meet the specific needs of individual trainees;
- be able to continually review the effectiveness of the training programme;
- be able to maintain accurate records of training and progress to facilitate effective assessment;
- be able to develop and apply OJT assessment methods;
- where a simulator is used, be able to gain practical operational simulator experience; and able to gain practical assessment experience on the particular simulator, under supervision and to satisfaction of an experienced assessor; and
- be able to review and adapt training programmes to meet new and emerging techniques, technologies and procedures.

3 SELECTION OF OJTI TRAINEES

The competent or VTS authority should ensure that candidates for OJTI demonstrate the relevant experience and aptitude to deliver effective On-the-Job Training (model course V-103/3).

3.4 V-103/4 endorsement in the VTS certification log

Every candidate for gaining an endorsement in the VTS certification log should satisfy the requirements of the competent authority by successfully completing the training for OJT Instructor.

The form and timing of examinations for the issue of an endorsement in the VTS certification log is a matter for the competent authority concerned.

An adequate period of time should be allowed at the end of the course for revision and review of the course content.

4 COURSE OUTLINE

The phased process below describes the essential components of a V-103/4 course that must be present to ensure that effective On-the-Job training can be delivered within VTS centres. The phased approach detailed below allows for continuous development of a training process to enable a V-103/3 OJT instructor to meet the individual needs of trainees within VTS centres.

When developing or selecting a V-103/4 course, competent authorities should ensure that the following phases are included in the training process:

4.1 Module 1 - Development of a VTS centre specific training programme

Develop a programme of V-103/3 training to meet the individual needs of the VTS authority/VTS centre. This should include the development of measurable learning objectives that meet the requirements of model course V-103/3.

Consider the:

- desired outcome of the training programme;
- expectations of training staff; and
- diversity of the audience/cultural expectations.

4.2 Module 2 - Preparation of a trainee specific programme

Select appropriately qualified staff to conduct the elements of the V-103/3 training programme and assemble all necessary resources to enable the effective delivery of training.

Consider:

- adult learning concepts and models;
- instructional techniques relevant to the audience; and
- communication skills.

4.3 Module 3 - Delivery of On-the-Job Training

Deliver training in the form of:

- instruction/presentations;
- one-on-one coaching; and
- continuous mentoring.

4.4 Module 4 - Evaluation/assessment/examination of trainees

Review and conduct appropriate feedback, review and assessment/examination of trainees to ensure compliance with model course V-103/3 objectives.

Validate the trainee's compliance with the V-103/3 model course and provide feedback to the trainee and VTS Management with regards to the suitability to assume operational duties.

Methods utilised may include, but not be limited to:

- written/oral examination;
- practical demonstration; and
- On-the-Job delivery under close one-on-one supervision.

4.5 Module 5 - Completion of OJT leading to authorisation to operate

Review training processes to enable continuous improvement and development of V-103/3 training programmes.



Methods utilised may include, but not be limited to:

- obtaining feedback from trainees;
- obtaining feedback from instructors; and
- sharing expertise with the wider VTS industry.

5 GUIDANCE FOR INSTRUCTORS

5.1 Introduction

Courses should be designed to enable VTS personnel to obtain an endorsement in their certification log to permit provision of training to VTS Operators and/or Supervisors in an On-the-Job Training environment.

5.2 Curriculum

The course outline is not set out in a teaching order and On-the-Job Training Instructors are not obliged to follow the order in which they appear but should treat them in the order that is considered to be the most effective for the trainees. Equally elements may be added or removed by the VTS authority to meet their specific needs. This recognises the diversity of VTS operations with regard to level of service provided and the complexity of VTS areas and infrastructures.

The success of the course will depend, to a large extent, upon detailed co-ordination of the individual subjects into a coherent teaching scheme. It is important that an experienced On-the-Job Training Instructor acts as course co-ordinator to plan and supervise the implementation of the course.

The teaching schemes should be reviewed carefully to ensure that all of the listed subjects are covered, that repetition is avoided and that essential pre-requisite knowledge at any stage has already been covered. Care should be taken to see that items not included in the syllabus or treatments beyond the depth indicated by the objectives have not been introduced except where necessary to meet additional requirements of the competent authority.

Course providers should hold regular reviews concerning the progress of trainees and any problems that have become apparent. Modifications of the teaching scheme should be made where necessary to ensure that trainees are attaining the required levels of competence.

6 EVALUATION OR ASSESSMENT

To evaluate trainee progress regular assessment must be undertaken. The evaluation criteria will depend on the needs of the particular requirements of the competent authority and the style of training used. Assessors must be able to ascertain the competence of the trainee to carry out the duties of an instructor of model course V-103/3 before the certification log of the trainee is endorsed.

Records should be maintained of the progress made by trainees. All task completed should be recorded by the Instructor, together with any comments which would assist trainees to obtain the OJT endorsement in their certification log.

These assessments are additional to any examination required for the purposes of endorsing the VTS certification log. However, if the competent authority does not require an examination at the end of the V-103/4 training process the assessments should be taken into account during the evaluation of trainees.



ANNEX 1 REFERENCES

References relevant to the planning of VTS training:

- [1] SOLAS' 74 Regulation V/10 – Ships' routing*
- [2] SOLAS '74 Regulation V/11 - Ship reporting systems*
- [3] SOLAS '74 Regulation V/12 - Vessel traffic services*
- [4] SOLAS '74 Regulation V/27 - Nautical charts and nautical publications*
- [5] SOLAS '74 Regulation V/7 – Search and rescue services*
- [6] United Nations Convention on the Law of the Sea (UNCLOS)*
- [7] International Regulations for Preventing Collisions at Sea, 1972 (COLREGS)*
- [8] International Maritime Dangerous Goods Code (IMDG Code)*
- [9] International Convention on Standards of Training, Certification and Watchkeeping of Seafarers, 1978, as amended in 1995 (STCW Convention)*
- [10] Seafarer's Training, Certification and Watchkeeping Code (STCW 95 Code)*
- [11] IMO GMDSS Manual*
- [12] IMO publication on Ships' Routing*
- [13] IMO/ICAO Publication "International Aeronautical and Maritime Search and Rescue (IAMSAR) manual" *- in three volumes:
Vol 1 – Organization and management (IMO 960)
Vol 2 – Mission co-ordination (IMO 961)
Vol 3 – Mobile facilities (IMO 962)
- [14] IMO Assembly resolution A.705(17), Promulgation of Maritime Safety Information (MSI)*
- [15] IMO Assembly resolution A.772(18), Fatigue factors in manning and safety*
- [16] IMO Assembly resolution A.851(20), General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants*
- [17] IMO Assembly resolution A.857(20), Guidelines for Vessel Traffic Services*
- [18] IMO Assembly resolution A.917(22), as amended by resolution A.956(23) on Guidelines for the onboard operational use of shipborne automatic identification systems (AIS)*
- [19] IMO Assembly resolution A.918(22), Standard Marine Communication Phrases*
- [20] IMO Assembly resolution A.950(23), Maritime Assistance Service (MAS)*
- [21] IMO Assembly resolution A.954(23), Proper use of VHF channels at sea*
- [22] IMO Maritime Safety Committee resolution MSC.232(82), Revised performance standards for Electronic Chart Display and Information Systems (ECDIS)*
- [23] IMO COMSAR/Circ.15 - Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI)*
- [24] IMO MSC/Circ.1014, Guidelines on fatigue mitigation and management*
- [25] IMO SN/Circ.244, Guidance on the use of the UN/LOCODE in the destination field in AIS messages*
- [26] International Code of Signals*



- [27] IHO approved documents of charts and publications
- [28] TU Radio Regulations, including Appendices
- [29] ITU-R Recommendation M.493, DSC for use in the maritime mobile services
- [30] ITU-R Recommendation M.541, Operational procedures for the use of DSC equipment in the maritime mobile services
- [31] ITU-R Recommendation M.1371, Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile band
- [32] IELTS Handbook - British Council, or equivalent
- [33] Marine Communications Handbook - Lloyds of London
- [34] Equipment and system operating manuals
- [35] National, regional and local legislation and regulations on VTS, ports, harbours, pilotage and allied services
- [36] National Notices to Mariners pertaining to VTS
- [37] National procedures and standards for operation of VTS
- [38] National procedures and standards for operation of International Convention for the Prevention of Pollution from Ships (MARPOL)
- [39] National arrangements for intervention, pollution and salvage
- [40] Local/regional contingency and emergency requirements
- [41] IALA Vessel Traffic Services Manual
- [42] IALA Aids to Navigation Guide (NAVGUIDE)
- [43] International Maritime Buoyage System (MBS), published by IALA
- [44] IALA Recommendation V-103, Standards of training and certification of VTS Personnel
- [45] IALA Recommendation V-119, Implementation of Vessel Traffic Services
- [46] IALA Recommendation V-120, Vessel Traffic Services in Inland Waters
- [47] IALA Recommendation V-125, The Use and Presentation of Symbology at a VTS Centre (including AIS)
- [48] IALA Recommendation V-127, Operational procedures for Vessel Traffic Services
- [49] IALA Recommendation V-128, Operational and technical performance requirements for VTS equipment
- [50] IALA Guideline 1017, Assessment of Training Requirements for Existing VTS Personnel, Candidate VTS Operators and Revalidation of VTS Operator Certificates
- [51] IALA Guideline 1026, AIS as a VTS tool
- [52] IALA Guideline 1027, Designing and implementing simulation in VTS Training at Training Institutes/VTS Centres
- [53] IALA Guidelines 1028, The Automatic Identification System (AIS) Volume 1, Part I Operational Issues
- [54] IALA Guideline 1032, Aspects of Training of VTS Personnel relevant to the introduction of the Automatic Identification System
- [55] IALA Guideline 1045, Staffing levels at VTS centres
- [56] IALA Guideline 1050, Management and Monitoring of AIS Information
- [57] IALA Guideline 1056, Establishment of VTS Radar Services (Ed 1)
- [58] IALA Guideline 1068, Provision of a Navigational Assistance Service by Vessel Traffic Services



[59] IALA Guideline 1070, VTS role in managing Restricted or Limited Access Areas

[60] IALA Guideline 1071, Establishment of a Vessel Traffic Service beyond territorial seas

* There is an annual catalogue of IMO Publications, many of which are printed in languages other than English. The catalogue provides ISBN and IMO references to these publications and the price, together with order forms which may be faxed. Additionally, training organisations and course co-ordinators should note that groups of publications are also made available online, and may be a more convenient method of obtaining some of the data that they require.

The catalogue contains a list of national distributors who maintain stocks of IMO Publications.

The IMO Publications catalogue is available free of charge from:

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