



# IALA STANDARD

S1020

## MARINE AIDS TO NAVIGATION DESIGN AND DELIVERY

**Edition 2.0**

**May 2023**

# THE GENERAL ASSEMBLY

**BEARING IN MIND** the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on the Safety of Life at Sea (SOLAS),

**RECOGNIZING** that the aim of IALA is to foster the safe, economic and efficient movement of vessels, through improvement and harmonisation of aids to navigation world-wide,

**RECALLING** Article 7 of the IALA Constitution regarding the authority, duties and functions of the General Assembly,

**RECALLING ALSO** that a goal of the work of IALA is that Marine Aids to Navigation are developed and harmonized through international cooperation and the provision of standards as described in the Strategic Vision for the period 2018-2026,

**HAVING CONSIDERED** the advice of the Council provided to General Assembly at its 13<sup>th</sup> Session,

**APPROVES** the IALA Standard 1020 Marine Aids to Navigation Design and Delivery, and

**INVITES** Members and Marine Aids to Navigation Authorities world-wide to undertake to implement the provisions of the Standard.



# CONTENTS

---

1.	INTRODUCTION .....	4
2.	PURPOSE .....	4
3.	APPLICATION .....	4
4.	SCOPE.....	4
5.	REFERENCED DOCUMENTS .....	5
6.	SUPPLEMENTARY ELEMENTS.....	6
7.	ADOPTION OF AND AMENDMENT OF STANDARDS .....	6
8.	DOCUMENT HISTORY .....	6

## 1. INTRODUCTION

The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) is a specialized organization for world-wide improvement and harmonization of Marine Aids to Navigation.

The term “Marine Aid to Navigation” referred to in the Constitution of IALA, should be understood to be device, system or service, external to vessels, designed and operated to enhance safe and efficient navigation of individual vessels and/or vessel traffic. For the purposes of IALA this definition includes Vessel Traffic Services.

IALA publishes Standards, Recommendations, and Guidelines, defined as follows.

Document	Definition
<b>IALA Standard</b>	An IALA Standard is a part of a framework, the implementation of which by all coastal states will harmonise Marine Aids to Navigation worldwide. IALA standards cover technology and services and are non-mandatory.
<b>IALA Recommendation</b>	An IALA Recommendation specifies what practices should be carried out in order to comply with that Recommendation, and may be referenced, in full or in part, in an IALA Standard.
<b>IALA Guideline</b>	An IALA Guideline describes how to implement practices normally specified in a Recommendation.

## 2. PURPOSE

The IALA Strategic Vision for the period 2018-2026, approved by the General Assembly in 2023, includes the Goal to ensure that

“Marine Aids to Navigation are developed and harmonised through international cooperation and the provision of standards.”

IALA Standards are suitable for direct citation by States in the interest of an efficient and harmonised global network of Marine Aids to Navigation and services.

## 3. APPLICATION

This Standard is suitable for implementation by all Marine Aids to Navigation authorities.

## 4. SCOPE

IALA Standards may contain normative and informative provisions.

Normative provisions are those with which it is necessary to conform in order to claim compliance to the Standard.

Informative provisions are those which specify additional desirable practices but with which it is not necessary to conform in order to claim compliance to the Standard.

This Standard references normative and informative provisions, detailed in the listed IALA Recommendations, covering the following scope.

- Technical scope

TS 2.1 AtoN signalling

TS 2.2 Design, implementation, and maintenance

TS 2.3 Floating aids to navigation

TS 2.4 Environment and sustainability

TS 2.5 Power systems

TS 2.6 Heritage and culture

## 5. REFERENCED DOCUMENTS

In this Standard, any reference to a Recommendation is to the most recent version approved by the IALA Council.

In this Standard the word ‘shall’ is used to indicate that a provision is normative and is to be followed in order to comply with the Standard. The word ‘should’ introduces informative provisions.

The following Recommendations are **normative** provisions, and **shall** be observed if compliance with this Standard is claimed.

Scope	Number	Title
TS 2.1 AtoN signalling	R0108	The Surface Colours used as Visual Signals on Marine Aids to Navigation
	R0110	Rhythmic Characters of Lights on Aids to Navigation
	R0201	Marine Signal Lights – Colours
	R0106	The Use of Retroreflecting Material on Marine Aids to Navigation Marks within the IALA Maritime Buoyage System
	R0104	Off Station Signals for Major Floating Aids
	R0201	Marine Signal Lights – colours
	R0202	Marine Signal Lights – Calculation, Definition and Notation of Luminous Range
	R0203	Marine Signal Lights – Measurement
	R0204	Marine Signal Lights – Determination and Calculation of Effective Intensity
	R0112	Leading Lights

<b>TS 2.4 Environment and Sustainability</b>	R1004	Sustainability in the Provision of Marine Aids to Navigation.
--	-------	---

The following Recommendations are Informative provisions and should be observed if compliance with this Standard is claimed.

Scope	Number	Title
<b>TS 2.1 AtoN signalling</b>	R0200	Marine signal lights – overview
	R0205	Marine signal lights – estimation of the performance of optical apparatus
	R0109	The Calculation of the Range of a Sound Signal
	R0126	The use of the Automatic Identification System (AIS) in Marine Aids to Navigation Service
<b>TS 2.2 Design, Implementation &amp; Maintenance</b>	R1018	Responsible design, operation and maintenance in the provision of Marine Aids to Navigation
	R0107	Moorings for Floating Aids to Navigation
<b>TS 2.4 Environment and Sustainability</b>	R1004	Sustainability in the provision of Marine Aids to Navigation
<b>TS 2.6 Heritage and culture</b>	R1005	Conserving the Built Heritage of Lighthouses and other Aids to Navigation

## 6. SUPPLEMENTARY ELEMENTS

There are no supplementary elements to this Standard.

## 7. APPROVAL AND AMENDMENT OF STANDARDS

IALA Standards may be adopted or amended at a General Assembly.

## 8. DOCUMENT HISTORY

Date	Details	Approval
------	---------	----------



2018-05-29	First issue	General Assembly Resolution, Incheon, Republic of Korea, May 2018.
2023-05-xx	Review on the scope and reference documents	General Assembly Resolution, Rio de Janeiro, Brazil, May 2023