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International Optimist Dinghy Association
www.optiworld.org



IODA Measurement Manual



World Sailing
Class Association

INTRODUCTION

This manual is designed to be a complementary tool for IODA Members that are bidding to host an IODA Championship. It is also intended to be a key reference for Members already confirmed to host an IODA Championship. The aim of this document is to provide consistency in the organisation of measurement inspections at IODA Championships and Optimist events all over the world.

This manual must be a living document. It needs to be updated constantly to accurately reflect the continual evolution of our sport. The responsibility for the contents of the Measurement Manual and for keeping it current lies with the Technical Committee of IODA. It is by no means perfect, and contributions to improve its contents are always welcome. Any changes will be incorporated and posted on the IODA website as soon as approved by the Executive Committee.

We want to take this opportunity to thank the many experienced organisers, measurers, past and present and the current IODA Technical Committee members and International Measurers: Ale Williman, Curly Morris, and Jurgen Cluytmans, our prototype measurer Conxa Ontiveros, and our International Measurers Jean Luc Gauthier, Alberto Pindozi, Ms Jang for their assistance. We would also like to acknowledge the contributions from many others who have assisted us at our event. Many thanks to Susan Elliot Beatty, IODA Regatta Secretary for her valuable input and guidance and work in editing this version.

Olive Parker
IODA Technical Committee
Chairperson, March 2026

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1. HOSTING AN IODA CHAMPIONSHIP

All IODA championships must abide by:

- The current WS Racing Rules of Sailing
- The current IODA Handbook: Articles of Association and Championship Conditions
- The IODA Regatta Manual
- The IODA Race Management Manual
- The IODA Measurement Manual
- The Bid Form
- The Class Rules
- The Notice of Race
- The Fleet Racing Sailing Instructions
- The Team Racing Sailing Instructions
- The IODA Race Management Guidelines

This document shall be read in conjunction with the Regatta Manual and prior to bidding for an event. Potential hosts shall satisfy themselves they can meet the requirements of this manual (with assistance from IODA where appropriate).

2. THE ROLE OF IODA

All communications with IODA should be through the IODA Regatta Secretary and/or the IODA Secretary General and copied to the relevant regional Vice President for Continental Championships or to the President for the World Championship. All IODA Measurement Officials appointed by IODA shall have full access to the relevant areas and shall be able to work in close proximity with the local volunteers.

IODA shall appoint a Chief Measurer (normally an IM) and a Deputy Measurer to the event, except for the IODA World and European Championships, where more than one Deputy Measurer will normally be appointed. The number of Deputy Measurers appointed to an event shall be at the discretion of IODA. Approximately 6 months prior to the event, the OA shall provide a contact name to IODA for the purpose of coordinating the preparation of the measurement area. The IODA Chief Measurer shall assist the local measurement team and quality assure the local measurers, providing training when appropriate.

Measurement usually starts two or three days before the OAD. Since measurement is the first area that sailors encounter when arriving for an event, it is important to make

it an agreeable experience. To ensure that everything runs smoothly, the IODA measurers normally arrive early to ensure that all areas are prepared appropriately to begin the process.

Refer to IODA Condition 20 for Continental Championships, and Condition 19 for the World Championship (see the IODA Handbook) for complete details regarding the OA's responsibility for transport, accommodation and meals of the IODA Measurer(s).

3. FUNDAMENTALS

The following document will provide details of the measurement process, the physical requirements, and the personnel the organisers will have to provide. Ideally volunteer measurers should be available for the duration of measurement during the entire event, but this is often compatible with undertaking other duties.

3.1 THE MEASUREMENT AREA



The Measurement Area must be located close to the boat park and the perimeter must be free of cars, vans and trolleys in order to allow good access to it.



It is especially important that the circulation of cars with trailers does not cross the perimeter in order to avoid problems with the flow of sailors/teams to be measured. Access to the Measurement Area shall only be permitted to those

directly involved with the measurement process (Team Leaders/Coaches and Sailors) by means of doors or fences, and a control area for inflow organised on the perimeter. The entry and exit of the area shall be separate, to allow a proper flow of the sailors/teams with their equipment to be checked. This is fundamental for a fast and well-controlled process.



The Measurement Area should be indoors if possible, or **at the very least shall be adequately sheltered from the elements (sun, rain, wind)**, with a surface of not less than 200 m². The area must be fully wind proof with a solid flooring.

If rain is possible, a covered area should be available adjacent to the boat entry area to shelter teams from the elements (sun, rain, wind). With a surface of not less than 200 m², this area should allow teams to prepare and dry boats for measurement. Clothes should be available for drying of wet boats and equipment.

The Measurement Area must be closed and secured during lunchtime and especially overnight, when a security guard shall be assigned to prevent theft and damage to valuables.

Electric Light and multiple sources for power for scales and individual computers, and the charging of the IODA tablets shall be provided.

The area can be used for other purposes following measurement, but at least 60m must remain available for the Measurement Committee in order to do the controls (weight of boat, sails, etc.) during race days.

3.2 DURING THE RACE DAYS – INSPECTION ON THE WATER



During the Championship racing days, the Technical Committee will inspect equipment on the water. For this task a rigid inflatable boat (RIB) solely designated for the Technical Committee is required. The most suitable size is 6m length and 40CV with a central helm if possible. It should be capable of towing competitors to the shore for measurement checks. It should be supplied with an anchor and ample warp to hold position 10/15 boat lengths away from the finish boat for each race. A Fixed pole for the Measurement Flag is required. Ideally a VHF should be provided.



The Measurement flag should be white with the letter “M” printed in black on it, with a minimum size of 60cm x 80cm.

A minimum of one flag is required, two if there is a Team Racing Championship with two courses.

If there is a Team Racing Championship, where two race areas are designated, the Technical Committee will require a second RIB, similar to above.

4. EQUIPMENT CONTROL

The stamp and stickers used by the Technical Committee on the equipment confirm successful measurement. Both shall include the official championship logo and be approved by IODA before the event.

4.1 STAMPS

To confirm measurement of the sail, a minimum of two event stamps must be provided and be approximately 10 X 10 cm in size IODA will provide the ink and ink pads.

4.2 STICKERS



Stickers, which are applied when the equipment has been measured successfully, should be circular, with the approved logo over a **white background**. It is important that the sticker is of **good waterproof quality vinyl** so that it doesn't fall off when wet.

Hull: one (1) 10 cm diameter sticker per boat

Equipment: Six (6) 5 cm diameter stickers per boat.

It is recommended that at least 10% extra are ordered to allow replacement of stickers which may become detached during sailing.

IODA Technical Committee will provide waterproof markers.

5. EQUIPMENT INSPECTION STATIONS

There measurement stations will be as described below. Each equipment inspector shall have their own IODA tablet to gain access to the equipment data that they need to inspect. These will be provided by IODA Technical Committee.

The volunteers described below must be willing to undergo some training and be available for all measurement days. Training will usually take place the day before measurement will commence. The person in charge of each station shall be able to communicate in fluent English.

As IODA operates a paperless system it is essential that a dedicated WIFI hub is provided for the Equipment Inspection/Measurement area.

5.1 STATION A: REGISTRATION Check in/ Out

Function Check in: Identify teams awaiting measurement, checking in each time. All teams will have access to an online booking system where they book the slot that works for them during the measurement check days.

Each sailor shall present for verification:

- (a) For boats manufactured before 1st January 2026 a valid measurement book for the hull, except for official charter boats or hulls carrying an RFID label; and
- (b) a valid sail certificate, except for sails carrying a RFID label.

The relevant data will be recorded in the IODA System.

The Team entering will receive a briefing by the Chief Measurer/Deputy Measurer and equipment will be reviewed prior to entry into the Measurement area and checked for:

- boats and equipment are dry,
- buoyancy bags inflated but out of straps,
- mainsheet removed from blocks,
- foils and spars out from covers,
- sail not attached to spars.

Function Check Out:

Before leaving the measurement area the Chief Measurer/Deputy Measurer will check all information for members of each team is recorded. The Team Leader/Coach will be informed what is outstanding. The IODA system automatically connects with the Registration system to enable the team to register for the event. If items are found not to be ok the team will be informed when they can return to the measurement area to be rechecked.

All sailors must pass measurement to be eligible to participate in the championship and this must be done before the close of event registration. Any changes to sail numbers will be noted during the measurement process by the Technical Committee.

REQUIREMENTS

- 1 x Table for computer
- 1 x chair
- 1 x power socket

5.2 STATION B: FOIL CONTROL



Function: To check the shape of foils using the templates, to check the materials, positioning of fittings of the rudder and the centre of gravity of the dagger board, and to verify the weight of foils, serial numbers and manufacturers. Once checks completed to place the stickers on agreed side of all checked equipment over signature.

Volunteer Staff to be Provided by OC:

Total = 2 per table - 1 x Measurer 1 x Volunteer



Equipment Required:

Depending on size of event.

3 x Tables of 1,5 x 1 meters.

2 x Chairs.



- 1 x Dagger board Measurement Template (available from IODA)
- 1 x Rudder Measurement Template (available from IODA)
- 1 x Digital scale for 5kg. (With a precision/error of maximum 5gr).

5.3 STATION C: CONTROL OF SPARS



Function:

To check mast, boom and sprit, to verify that each piece has the sail number but also the serial number or the RFID tag. To check the measurement bands on the mast and boom, which shall be permanently fixed and check the positioning of holes and fittings and also the length of the sprit.

Once checks have been satisfactorily completed to place the control sticker on each piece over the signature

Volunteer Staff to be Provided by OC for each table:

Total = 2

- 1 x Measurer
- 1 x Volunteer



Equipment:

This will vary pending on size of event

- 1 x Spar template (available from IODA)
- 1 x table (length 3 metres x 1 metre width for the template 1 x chair

5.4 STATION D: HULL WEIGHT



Function: to check mould numbers, sail number on the mast thwart and ISAF /WS Plaque Number.

To check that the hull complies with the weighing specifications (dry, no lines, no other items e.g. sponges, buoyancy bags out of the straps, etc...) and weight the hull.



To check the accuracy of the scales. Once the hulls are checked the control sticker and signature is placed on the mast thwart.

It is important to place this station on a level concrete floor (not on wooden or grass floors) and that it is well protected from the wind.

At some events, the Chief Measurer may require fundamental measurement to be carried out on a number of hulls at this station which may include hull shape, materials, positioning of fittings etc.

There should be an area set aside to allow this measurement to be checked as this generally takes longer than the inspection of weight.

This station will be overseen by the IODA Chief or Deputy Measurer.

Volunteer Staff to be provided by OC: Total = 3

1 x Volunteer – measurer

1 x Volunteer assistant to measurer

1 x Volunteer assisting to help in flow of boats ready for hull measurement

EQUIPMENT:



1 x Table

2 x Chairs

1 x Digital scale for 50Kg, (with a precision/error of maximum 50gr).

1 x Certified Weight of 35kg (in various different weights e.g. 20kg, 10kg, 5kg, 2 x 2kg and 1kg).

1 x Master list with all the controlled boats including weights and correctors if needed.

2 x Hull Trestles with foam. Approximate Height: 700mm. (Only if full measurement planned).

Towels to dry hulls if wet/raining.

Various wooden pieces of 300, 200, 100 y 50 gr. approx. (up to 10 Kg) to supply teams as weight correctors for hulls. Suitable adhesive (**quick drying and waterproof**) for attaching corrector weights to hulls.

5.5 STATION E: SAILS



Function:

For events with more than 130 entries: minimum 2 sail tables and 2 templates are required.

For events with over 210 entries: 3 sail tables and 3 templates are required.

Items checked include sail button/RFID Tag, material of the sail and reinforcements, length of leech, luff, foot, diagonals, concavities and convexities at the leech, sail width, sail measurement band, foot midpoint, etc.

Volunteer Staff to be Provided by OA (dependent on number of tables): 4 (6)

2(3) Volunteers – if possible be experienced Optimist sail measurement

2(3) Volunteers to Assist Measurers

Equipment:

2(3) x Tables of 2,3 metres X 2, 9 meters, which must be completely flat and smooth (like melamine i.e.). If possible, the table should be made with one single board with reinforcements underneath. Height of the table should be 90cm.



2(3) x Sail Measurement Templates (see 'Templates', page 20 of this Manual) 1 x Table 4 x Chairs

It is recommended that an additional table of similar dimensions is provided at an adjacent location to enable teams to rectify minor sail errors (numbers, letters etc.)

6. EXTRA EQUIPMENT REQUIRED FOR EVENT MEASUREMENT

- T-shirts to identify the measurement Volunteers
- Fridge containing water
- Wastepaper baskets
- Acetone and cloth
- 1- Table 2 x 2 meters outside the hall for repairs
- Transparent tape (scotch tape)
- Electrical Cables for Charging Tablets

6. PROVIDED BY IODA

7.1 MEASUREMENT TEMPLATES

The following measurement templates are required for an IODA Championship:

- Sail
- Spars
- Dagger Board
- Rudder

IODA will charge for the hire/use of equipment which will be required for the event. This will include the use of all tablets, micrometres, rulers, and all equipment required.

It is mandatory to use an IODA template (as per IODA Condition 13.1 for Continental and 12.1 for World Championships). It is possible to purchase the templates if the organiser does not wish to hire them. Templates can be acquired through IODA by contacting the Secretary General. All costs for the templates including shipping will be provided.

7.2 SAIL MEASUREMENT CERTIFICATE

A sail measurement certificate will be completed for all the sails presented unmeasured. This will be digital.

7.3 ADDITIONAL INFORMATION

Additional information regarding measurement maybe posted on the IODA website (optiworld.org) and the Official Notice Board for the event.

8. NUMBER OF STATIONS REQUIRED

Entry Numbers	Hull Station	Sail Station	Spars Station	Foils Station
<100	1	1 plus extra table for repairs etc	1	1
100-150	1	2 plus extra table for repairs etc	1	1
150-200	1	2 plus extra table for repairs etc	2	2
>200	1	3 tables plus 1 for repairs if possible	2	2