# **Clarifications concerning**

# the obligation of equipment with an Inland AIS device and an Inland ECDIS device

or a comparable electronic device for displaying electronic charts for inland navigation



# Introduction

The CCNR has made it compulsory to possess and use an Inland AIS device connected to an Inland ECDIS device in information mode or to a comparable electronic device for displaying electronic charts for inland navigation. This obligation applies to the Rhine with effect from 1st December 2014. This document, intended for crew members, aims to clarify this decision by answering concrete questions raised by users in everyday working life.

'To improve clarity, henceforward the term "an Inland ECDIS or a comparable electronic device for displaying electronic charts for inland navigation" will be replaced in most cases by "electronic chart display system".



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# I. The AIS device

## I.I Advantage for a boatmaster in using an AIS device

The information displayed by the AIS device on electronic chart display systems is useful additional information. It does not, however, exempt the boatmaster from monitoring traffic by means of the radar image and by looking out of the wheelhouse window. Indeed, only vessels equipped with an AIS device are visible on the electronic chart display device screen. However, not all vessels are equipped with an AIS device.

An Inland AIS device connected to an Inland ECDIS device or to a comparable electronic device for displaying electronic charts for inland navigation thus enables the boatmaster to display the position of nearby vessels and their course clearly and accurately on an electronic chart for inland navigation. This information enables the boatmaster to modify his driving of the vessel.

For the safety of navigation, the use of radiocommunication (voice over VHF) always provides the boatmaster with the possibility to check the navigation conditions in the area at any time. By same logic, the use of an AIS device will never replace the boatmaster's direct view of the wheelhouse.

Although the radar also enables other surrounding vessels to be located, and more accurately than by means of the AIS device, the radar's range is nonetheless limited compared with that of the AIS device, especially in inland waters. Indeed, an Inland AIS device has a far greater range and enables vessels on the other side of an obstacle, such as a mountain, to be displayed.

The AIS device even in combination with electronic chart display system therefore provides the boatmaster with a navigational aid, but one which is not a navigation system in the same way as radar. In other words, the AIS device is a navigation aid tool to provide information on other vessels.

The boatmaster should acquaint himself with the information provided by the AIS device and should use it to ensure safe navigation and good order. He should correctly use this additional information in a way consistent with his "duty of vigilance".



## 1.2 The different types of AIS device

There are three types of AIS devices that can be used:

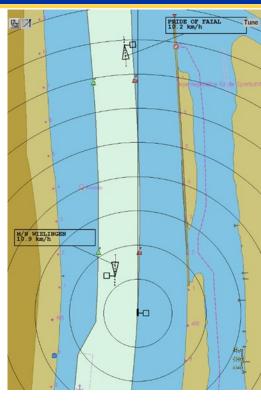
- Inland AIS devices
- Class A AIS devices
- Class B AIS devices

#### 1.2.1 Inland AIS devices

A vessel navigating on the Rhine falling under the carriage requirement of Inland AIS device (see item 1.3) must be equipped with a type approved Inland AIS device.

Type approved means that the Inland AIS device must comply with the requirements of the Test Standard for Inland AIS, Compliance is certified by an examination of type approval by a competent authority.

Following rules apply regarding the edition of the Test standard inland AIS to comply with:



- Inland AIS devices certified prior to 19 October 2012 must comply with the requirements of the CCNR's Test Standard Edition 1.0 or 1.01 and devices certified after this date must comply with the requirements of the CCNR's Test Standard Edition 2.0. Type approved Inland AIS devices according to Edition 1.0 and 1.01 are labelled with a **type approved number** assigned by the Central Commission for the Navigation of the Rhine (CCNR) in the following format: R-4-2XX (X represents a digit).
- It was allowed to install Inland AIS device with a type approval according to Edition 1.0 and 1.01 until November 2015. They may be used after this date.
- With effect from December 2015, only Inland AIS devices with type-approval complying with the requirements of Test Standard Inland AIS 2017, Edition 2.0 may be installed. Type approved Inland AIS devices according to Edition 2.0 are labelled with a type approval number assigned by the Central Commission for the Navigation of the Rhine (CCNR) in the following formal: R-4-3XX (X represents a digit).
- From I January 2024, only Inland AIS devices with a type-approval in line with Edition 3.0 of the Test Standard Inland AIS, namely part III of the ES-RIS 2021/I, may be installed. The already installed Inland AIS devices may be used after this date. Indeed, after the 1st of January 2022 (date of the entry into force of the ES-TRIN 2021/I), the Test Standard for Inland AIS 2021, Edition 3.0 shall be used.

#### 1.2.2 Class A AIS devices

Class A AIS devices must satisfy IMO (International Maritime Organization) requirements. For information, according to the SOLAS convention, they are required for all seagoing vessels with a gross tonnage greater than 300 tons sailing in maritime shipping lanes. Class A AIS device is widely used in maritime navigation. A vessel navigating on the Rhine falling under the carriage requirement of Inland AIS device (see item 1.3) cannot be equipped only with a Class A AIS device.

#### 1.2.3 Class B AIS devices

Class B AIS devices have limited functionality in comparison to Inland AIS devices and class A AIS devices. Class B AIS devices can be used by e.g. small recreational crafts. Class B AIS devices must comply with:

- the relevant requirements of Recommendation ITU-R.M 1371 and of Directive 2014/53/EU (RED),
- the international standard IEC 62287-1 or 2 (including DSC channel management).

## 1.3 Obligation of equipment with an Inland AIS device

#### 1.3.1 Vessels obliged to be equipped with an Inland AIS device

The obligation of possession of an Inland AIS device is described in detail in Article 4.07 of the Rhine Police Regulations (RPR).

This obligation of equipment with an Inland AIS device applies to all vessels, including seagoing vessels, ferries, small police crafts equipped with a radar and small crafts<sup>1</sup> in possession of an inspection certificate in accordance with the Rhine Vessel Inspection Regulations (RVIR) or a certificate deemed to be the equivalent of these regulations.

Only the vessels referred to in 1.3.2 below are not subject to this requirement.

#### 1.3.2 Exempt vessels

The following vessels are not subject to an obligation of equipment with an Inland AIS device:

- a) pusher tugs in pushed convoys or side-by-side formations, except for the vessel providing the main means of propulsion,
- b) small crafts<sup>1</sup>, except:
  - police crafts with radar equipment,
  - vessels in possession of an inspection certificate in accordance with the Rhine Vessel Inspection
     Regulations or a certificate deemed to be the equivalent of these regulations,
- c) barges without their own means of propulsion,
- d) floating equipment without their own means of propulsion.

Mandatory use of the Inland AIS device is explained in 1.5 of this document.

According to Article 1.01, (m) of the Rhine Police Regulations (RPR), a small craft is a vessel whose maximum hull length, excluding rudder and bowsprit, is less than 20 m, unless it is:

a vessel authorised to tow, push or propel side-by-side vessels that are not small crafts,

a vessel authorised to carry more than 12 passengers,

a ferry,

a barge.

#### 1.3.3 Installation of an Inland AIS device without obligation

For the vessels not subject to mandatory possession, it is recommended to use an approved Inland AIS device (and not a Class A or B device) as specified in the RVIR, as the Inland AIS device is designed to receive reports specifically intended for inland navigation.

However, for small recreational crafts, the Central Commission for the Navigation of the Rhine (CCNR) recommends installing a class B AIS device.

Small crafts (and in particular recreational crafts) that are not subject to mandatory possession of an Inland AIS device and which decide to acquire a class B AIS device are not obliged to use an approved specialised firm to install this device. However, the CCNR recommends using an approved specialised firm to reduce the risk of malfunction.

#### 1.3.4 The specificity of certain vessels

Like commercial navigation vessels, police vessels equipped with a radar also have to be in possession of an Inland AIS device although they are frequently "small crafts".

Vessels belonging to the authorities usually possess an inspection certificate as required by the RVIR or a certificate deemed by these regulations to be equivalent. As such, they must also be equipped with an Inland AIS device. Small crafts exempt from mandatory possession of an Inland AIS device must also, if they wish to install an AIS device, possess a radio-telephone system in good working order and switched to listening mode on the vessel-to-vessel network.

### 1.3.5 "Frequency allocation certificate(s)" or "Ship station licence"

All vessels in possession of an Inland AIS device or radar equipment or radio-telephone installation must carry on board the "frequency allocation certificate(s)" or "ship station licence" pursuant to Article I.10 (I) of the Rhine Police Regulations (RPR).

This request for a certificate or licence is to be made to the competent authorities as soon as the AIS device has been acquired. The boatmaster must ensure that the vessel's owner or operator has made this request. In all cases it is the responsibility of the boatmaster to check that this certificate or licence is on board the vessel.



## 1.4 Requirements for the installation of the Inland AIS device

#### 1.4.1 Installing an Inland AIS device

In accordance with Annex 5 of the European Standard laying down Technical Requirements for Inland Navigation vessels (ES-TRIN), Inland AIS devices may only be installed by a specialised firm approved by the competent authority.

The list of specialised firms certified to install Inland AIS devices can be found on the European Committee for drawing up Standards in the field of Inland Navigation (CESNI) website (https://listes.cesni.eu).

Correct installation carried out by an approved specialised firm includes installing and configuring the Inland AIS device, testing its proper operation, documenting all the settings and training the boatmaster.

An operator's manual, preferably in the boatmaster's mother tongue, must be provided with the device to be kept on board. The installing company must also provide a certificate of installation as soon as it has been completed. This certificate must be kept on board.

The installation and functional testing requirements can be found in Annex 5 of ES-TRIN published by CESNI (documents can be downloaded from www.cesni.eu/en/).

Vessels<sup>1</sup> that are not subject to mandatory possession of an Inland AIS device are obliged, should they decide to acquire an Inland AIS device, to use an approved specialised firm to install this Inland AIS device.

Small crafts (and in particular recreational crafts) that are not subject to mandatory possession of an AIS device and which decide to acquire a class B AIS device are not obliged to use an approved specialised firm to install this device. However, the CCNR recommends using an approved specialised firm to reduce the risk of malfunction.

#### 1.4.2 Installation on board vessels carrying dangerous goods and subject to the ADN

#### Tank vessels carrying dangerous goods and subject to the ADN

Inland AIS devices must be installed in the accommodation or in the wheelhouse. In addition, no part of an antenna for an electronic device must be situated above the cargo area and no part

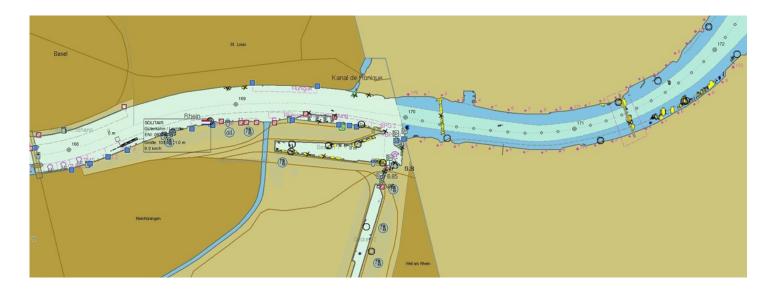
of a VHF antenna for an Inland AIS device is permitted to be within 2 m of the cargo area. These requirements are explained in the  $ADN^2$ .

#### Other vessels carrying dangerous goods and subject to the ADN

Unlike tank vessels, there are no particular requirements for installation of the AIS device antenna.

<sup>&</sup>lt;sup>1</sup> Inland AIS devices and Class A AIS devices reserve slots in the communication bandwidth. Care must be taken to ensure that this process proceeds correctly, failing which there is a real risk of jeopardising the correct operation of the entire AIS system, including the neighbouring vessels and shore stations. This problem cannot occur with Class B AIS devices, which do not make such reservations within the communication bandwidth.

<sup>&</sup>lt;sup>2</sup> The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) contains regulations in an annex. These regulations explain all the technical requirements applicable to the carriage of dangerous goods.



#### 1.4.3 Installation of a second hand Inland AIS device

A specialised firm approved by a competent authority can also install second hand Inland AIS devices.

The installation of Inland AIS devices by approved specialised firms ensures that all the relevant data are correctly updated.

The Inland AIS device's MMSI number is linked to the vessel. The competent authorities assign a new MMSI number when the Inland AIS device is installed in another vessel.

It is the boatmaster's responsibility to check that the Inland AIS device possesses a new MMSI number assigned by the competent authorities and that this new MMSI number is correctly entered in the device.

#### 1.4.4 Testing the AIS device after its installation

The correct installation of the Inland AIS device is ensured by the final test. The test checks the reception and transmission by the Inland AIS device of the required data detailed in section I.6. The proper functioning of the Inland AIS device is ensured by a functionality test explained in the "Guidelines on the Installation of the Inland Automatic Identification System", which can be downloaded from www.ccr-zkr.org.

This test makes it possible to check both the accuracy of the information transmitted by the newly installed Inland AIS device as well as the correct transmission of the data.

#### 1.4.5 Transmitting of incorrect data by the Inland AIS device

The boatmaster should regularly check if the transmitted data by the Inland AIS device are correct. This can be done by reviewing the settings in the appropriate menus of the Inland AIS device (refer to the user manual of the Inland AIS device). In rare cases the Inland AIS device can transmit incorrect data without the boatmaster being aware of it. Consequently, the CCNR recommends that

other boatmasters take the initiative in contacting the boatmaster of the vessel whose Inland AIS device is transmitting incorrect data to alert him.

The boatmaster must immediately correct the data or initiate a correction by the approved specialised firm. Failure to act on this request shall render him liable to prosecution.



# 1.5 Mandatory use of the Inland AIS device

#### 1.5.1 Principle: the Inland AIS device must be permanently switched on

Within the scope of the Rhine Police Regulations (RPR), the Inland AIS device must be **permanently in operation**. However, this obligation does not apply in a certain number of cases mentioned in 1.5.2. By the same token, particular regulations described in 1.5.3 apply for convoys.

VHF antennas, including AIS antennas, only operate correctly when vertical. Indeed, the longer transmission distances are obtained when the AIS antennas are vertical. They are occasionally fitted on a retractable mast owing to the limited clearance when passing under bridges.

Care must be taken to ensure the antenna mast is raised immediately after clearing the obstacle imposing a height restriction (a bridge for example). Indeed, the range of the antenna is lower when the antennas are folded or retracted.

Indeed, a horizontal position of the antenna causes VHF communication to be lost and prevents AIS data transmitted by other vessels from being received.

If a boatmaster refuses to operate the Inland AIS device, he is committing an offence and is liable to prosecution.

Vessels carrying dangerous goods and subject to the ADN must also keep their Inland AIS device switched on at all times, including when stationary or during loading, unloading or degassing operations.

#### 1.5.2 Derogations

The obligation to keep the Inland AIS device switched on at all times does not apply:

- to vessels and convoys in the overnight mooring ports of Haaften, IJzendoorn and Lobith;
- if the competent authority has granted a derogation for the bodies of water separated from the navigable channel by infrastructure;
- to police vessels, if the transmission of AIS data is likely to compromise policing tasks.

Vessels that are not subject to mandatory possession of an AIS device are not obliged, if they are in possession of one, to keep it permanently switched on. The CCNR does however recommend keeping the AIS device switched on permanently and not to switch it off while the vessel is underway.

Moreover, if the AIS device is switched on, the data entered in the device must at all times match the vessel's actual data.

#### 1.5.3 Convoys

#### Pushed convoys and side-by-side formations

The vessel providing the main propulsion must have its Inland AIS device working and have the convoy data correctly entered in it. The other vessels belonging to the convoy must switch off their on- board Inland AIS devices.

#### **Towed convoys**

In accordance with Article 4.07 of the Rhine Police Regulations (RPR), all vessels in towed convoys must possess functioning Inland AIS devices.

The "vessel or convoy type" code to be entered in the case of the tug depends on the situation:

- when a tug is proceeding on its own, it uses the vessel type code 8400 (tug single);
- when the tug is towing another vessel it typically uses code 8410 (tug, one or more tows)or 8420 (tug assisting a vessel or linked combination);
- the dimensions the tug's boatmaster enters in the Inland AIS device are those of his tug and not those of the convoy.

The vessel type code used by the towed vessel is 8470 (Object, towed, not otherwise specified). The dimensions its boatmaster enters in the Inland AIS device are those of the towed vessel and not those of the convoy.

#### 1.5.4 What to do if the Inland AIS device is defective

When in use the Inland AIS device must operate reliably and be in good working order. When the vessel is moored, it is good practice to switch the Inland AIS equipment off regularly and on again immediately.

A defective Inland AIS device may cause misunderstandings and insecurity on the waterways.

This is why defective Inland AIS devices must be repaired immediately or replaced by devices in good working order. No voyage may be started without an Inland AIS device in good working order and switched on.

Should a vessel not subject to mandatory possession of an Inland AIS device be equipped with one that is defective, it is recommended the device be switched off and repaired as soon as possible.

In case of malfunction, switching off and restarting (reboot) the Inland AIS device could help recover the good working order.

Once restarted the Inland AIS device must not show any alarm signal.

As a defective Inland AIS device should be the exception to the rule, the CCNR recommends that the riparian states of the Rhine apply the following flexibility rules:

- Navigation may be continued for a maximum period of 48 hours with an Inland AIS device not transmitting data. This flexibility enables the next port of loading or unloading to be reached or, failing that, if this port is too far away, a place where the defective devices can be repaired or replaced.
- No voyage may be started without an Inland AIS device in good working order and operating, failing which the 48 hour grace period would lapse.
- Given the special nature of voyages undertaken by ferries and day-trip vessels, the two preceding paragraphs do not apply to these two types of vessel. For a ferry, navigation may be continued for a maximum period of 24 hours with an Inland AIS device not transmitting data. For a day- trip vessel, navigation may be continued for a maximum period of 48 hours with an Inland AIS device not transmitting data.
- If the Inland AIS device is no longer transmitting data, the vessel's boatmaster will immediately notify the sector traffic centre and will provide regular reports on the vessel-tovessel channel until the Inland AIS device is working again.

# 1.6 Data transmitted by the Inland AIS device

According to Article 4.07 (2) of the Rhine Police Regulations, the data entered must at all times match the vessel's or convoy's actual data.

The boatmaster of a vessel not subject to mandatory possession of an AIS device but which is voluntarily equipped with an Inland AIS device must also ensure that the data entered in the device is consistent at all times with the vessel's actual data.

Regular checks of the transmitted data of the Inland AIS device are recommended by asking another boatmaster in the area or communicating with the sector traffic centre.

#### 1.6.1 List of data that must be transmitted by the Inland AIS device

According to Article 4.07 (4) of the Rhine Police Re-gulations, the AIS device must at a minimum transmit the following data in accordance with Part II of ES-RIS 2021/I (European Standard for River Information Services):

- a) User identity (Maritime Mobile Service Identity, MMSI);
- b) vessel name;
- c) vessel or convoy type;
- d) unique European vessel Identification Number (ENI) or, for seagoing vessels that have not been given an ENI number, the IMO number;
- e) length overall of the vessel or convoy accurate to 0.1 m;
- f) breadth overall of the vessel or convoy accurate to 0.1 m;
- g) position (using the WGS 84 coordinate system);
- h) speed over ground;
- i) course;
- j) time of the electronic location device;

- k) navigational status in accordance with Annex I;
- I) reference point for the positional information aboard the vessel accurate to I m, in accordance with Annex 2;
- m) call sign.

These various data items are either entered by an approved specialised firm, or updated by the boatmaster, or automatically transmitted by an Inland AIS device. § 1.6.2 explains these various scenarios.

As transmitting additional data has often proved to be a source of confusion, it is recommended that only the mandatory data listed above be transmitted and not to transmit additional data such as information on the vessel's voyage.

A very useful check list containing tasks to be performed before, during and after the voyage can be found in Annex 3, ensuring that the Inland AIS device transmits data that is at all times consistent with the vessel's or convoy's actual data.

### 1.6.2 Entering data in the Inland AIS device

# Data entry during installation of the Inland AIS device (mainly done by the approved specialized firm)

The data listed below is initially entered when the Inland AIS device is installed. This initial entry (and any subsequent amendment of the data listed below) must be carried out by an approved specialised firm. However, the boatmaster must ensure that the approved specialised firm enters the data correctly.

These are the data associated with the vessel in question and with the Inland AIS device installed on it:

- user identity (MMSI),
- vessel name,
- unique European vessel Identification Number (ENI) or, failing that, for seagoing vessels, the IMO number.

#### Data that the skipper must check and amend at least partially prior to each voyage

The boatmaster is responsible for entering the following data, which must at all times match the vessel's or convoy's actual data:

- length overall of the vessel or convoy accurate to 0.1 m, in accordance with Annex 2,
- breadth overall of the vessel or convoy accurate to 0.1 m, in accordance with Annex 2,
- vessel or convoy type,
- navigational status in accordance with Annex I,
- reference point for the positional information aboard the vessel or convoy (typically the GPS antenna) accurate to I m, in accordance with the sketch in Annex I.

By way of an example, for a convoy with a breadth of 12.54 m, the boatmaster enters 12.6 m or 126 dm in the Inland AIS device, depending on the unit required by the device.

For vessels that never sail in a convoy, all the data listed above, except for "navigational status", can be entered by the approved specialised firm when installing the device and do not need to be amended by the boatmaster.

In all cases the boatmaster must always update the navigational status according to Article 4.07 (2) of the Rhine Police Regulations (See Annex I for more details).

#### Data automatically determined and transmitted by the Inland AIS device

The boatmaster does not need to make any adjustments to the Inland AIS device for the data that are determined and transmitted automatically. These data are as follows:

- position (WGS 84 coordinates) of the vessel or convoy on which the Inland AIS device is installed,
- speed over ground,
- heading relative to the ground,
- time indicated by the electronic position location device.

#### Amendment of the data following a modification of the vessel (example: lengthening of the

The Inland AIS vessel must transmit up-to-date data, which means that the AIS data must be amended in the event the vessel is modified (for example if its length is increased).

The responsibility for the amendment of the data lies with the boatmaster, but the data referred to in 1.6.2 has to be modified by an approved specialised firm.

#### 1.6.3 Entry of incorrect data in the Inland AIS device

An Inland AIS device can transmit incorrect data without the boatmaster being aware of it. Consequently the CCNR recommends that other boatmasters take the initiative in contacting the boatmaster of the vessel whose Inland AIS device is transmitting incorrect data to alert him to the fact.

The boatmaster must immediately enter the correct data. Failure to act on this request shall render him liable to prosecution.

## 1.7 Use of AIS data by third parties and data protection

#### 1.7.1 Use of the data by the administrative authorities

The authorities appointed by the law / responsible for the waterways, use the AIS data with care and abide by national and European data protection provisions.

These authorities use and occasionally store AIS data solely in connection with the performance of their duties.

These authorities use the AIS data to:

- gain an up-to-the-second snapshot of the traffic situation;
- improve traffic management (especially journey planning) and ensure traffic safety;
- improve incident management and accident prevention;
- improve more efficient lock planning;
- generate statistics to improve the performance of legal tasks.

#### 1.7.2 Passing of AIS data to third parties

The passing of AIS data to third parties is fundamentally subject to rigorous conditions.

Indeed, under the prevailing national legislation in the Rhine states, the passing of data attributable to physical persons (for example by reference to the vessel's name or ENI number) to third parties is forbidden, unless the vessel operator has expressly consented to the transmitted data being passed on or unless this is permitted under the applicable legislation.

#### 1.7.3 Data protection

#### **Regulatory information**

A compilation of the various national regulations governing the protection of personal data when using AIS devices is available for download from the CCNR website www.ccr-zkr.org. To summarise, arrangements for protecting the data transmitted by the AIS device exist in all CCNR member states even if they are very different and depend on individual states.

The CCNR also disapproves of the freely accessible publication of AIS data without the approval of the parties concerned.

#### To whom can one turn if one suspects that AIS data are being misused?

The boatmaster or any other individual concerned who suspects AIS data are being misused can turn to the following data protection authorities.

In the riparian states of the Rhine, these authorities are:



#### **GERMANY**

Responsible for complaints about activities by the Federal authorities (for example Federal Waterways and Shipping Administration):

Die Bundesbeauftragte für den Datenschutz und die Informationsfreiheit

Husarenstraße 30 - 53117 Bonn

Responsible for complaints about the activities of companies or individuals in Baden-Württemberg

Der Landesbeauftragte für den Datenschutz Baden-Württemberg

Königstraße 10a - 70173 Stuttgart

Responsible for complaints about the activities of companies or individuals in Rhineland-Palatinate

Der Landesbeauftragte für den Datenschutz und die Informationsfreiheit Rheinland-Pfalz

Hintere Bleiche 34 - 55116 Mainz

Responsible for complaints about the activities of companies or individuals in Hesse

Der Hessische Datenschutzbeauftragte

Gustav-Stresemann-Ring I - 65189 Wiesbaden

Responsible for complaints about the activities of companies or individuals in North Rhine Westphalia

Landesbeauftragter für Datenschutz und Informationsfreiheit Nordrhein-Westfalen

Kavalleriestr. 2-4 - 40213 Düsseldorf

The contact details for other data protection authorities in the Länder are available from the following address: https://www.ldi.nrw.de/mainmenu\_Service/submenu\_Links/Inhalt2/ Aufsichtsbehoerden/Aufsichtsbehoerden.php

#### **NETHERLANDS**

#### College bescherming persoonsgegevens

Postbus 93374 - 2509 A| DEN HAAG

Tel. +31 0900-2001 201

Web: http://www.mijnprivacy.nl/Contact CBP/Pages/Contact+CBP.aspx

The "College bescherming persoonsgegevens" (Dutch Agency for Personal Data Protection) is the organisation that ensures personal data are handled in a careful and secure way.

A complaint about the disclosure of personal data must in the first instance always be made by the individual concerned to the organisation which disclosed this individual's data. If the solution proposed by the organisation is not acceptable to the complainant, he or she may seek a remedy from the competent courts under personal data protection law.

#### **SWITZERLAND**

#### **Aufsichtsstelle Datenschutz**

Rathausstrasse 45 - 44 10 Liestal

Tel. + 41 61 552 64 30 / Fax + 41 61 552 64 31

datenschutz@bl.ch

Web: http://www.edoeb.admin.ch/org/00146/00147/index.html?lang=

The federal data protection and information commissioner (FDPIC) has authority over the processing of data by the federal authorities and private individuals. The processing of data by the cantonal and communal administrative authorities is governed by cantonal laws and thus falls under the authority of cantonal and communal officials. The latter have come together within the association "Privatim - the Swiss data protection commissioners".

As the Swiss Rhine ports operate the AIS system in their capacity as an authority belonging to the canton of Basel-Country, responsibility resides with the competent data protection authority of the canton of Basel-Country.

#### **FRANCE**

Commission Nationale de l'Informatique et des Libertés

8, rue Vivienne - CS 30223 75083 Paris CEDEX 02

Tel. +33 | 53 73 22 22 / Fax +33 | 53 73 22 00

Web: http://www.cnil.fr

# 2. The Inland ECDIS device or comparable electronic device for displaying electronic charts for inland navigation

# 2.1 Advantage for a boatmaster in using electronic chart display systems in association with an Inland AIS device

The Inland AIS device improves navigational safety and good order. Using the Inland AIS device and appropriate electronic chart display systems enables the boatmaster to have an accurate picture of traffic conditions in the sector in which he is operating. The shore repeater stations enable him to extend the sector of coverage beyond the normal range of the onboard AIS device. The boatmaster has an extended view of the traffic. This is important, especially in mountainous sectors.

This is only possible by using the AIS device in conjunction with an electronic chart display system, enabling the boatmaster to see other vessels' position and movements in the navigable channel. Indeed, the screen, occasionally integrated into the AIS device, is not large enough.

# 2.2 Obligation of equipment with an Inland ECDIS device or a comparable electronic device for displaying electronic charts for inland navigation

Vessels that are subject to the obligation of equipment with an Inland AIS device, pursuant to Article 4.07 (I). of the Rhine Police Regulations (RPR), must also be equipped with an Inland ECDIS device in information mode or a comparable electronic device for displaying electronic charts for inland navigation, connected with the Inland AIS device. They are required to use it in conjunction with an up-to-date electronic chart for inland navigation.

This mandatory possession of the equipment does not apply to:

- vessels that are not subject to mandatory possession of an AIS device (see 1.3.1 and 1.3.2),
- ferries<sup>1</sup>.

## 2.3 Applicable requirements for electronic chart display systems

Minimum requirements to be complied with have been defined so as to ensure correct operation of the Inland ECDIS device in information mode or a comparable electronic device for displaying electronic charts for inland navigation. With effect from 25 April 2022, an inland ECDIS device in information mode used on the Rhine shall comply with the requirements of part I of ES-RIS 2021/I.

Moreover, comparable inland navigation electronic chart display devices shall comply with the requirements referred to below. Recommendations have been draw up by way of addition. It is also important to recall the importance of regularly updating the electronic chart for inland navigation and the software used.

According to Article 1.01 (I) of the Rhine Police Regulations (RPR), a ferry is a vessel providing a service crossing the waterway and which is classified as a ferry by the competent authority.

# 2.3.1 Minimum requirements and recommendations for electronic charts for inland navigation in use

#### **Minimum requirements:**

- Electronic charts for inland navigation must accurately replicate the contours of the river and the navigable channel and must be based on the official inland navigation electronic charts.
- Electronic charts for inland navigation must be saved in the device for displaying electronic charts for inland navigation on board on board the vessel.

#### **Recommendation:**

 It is recommended that the most recent iENCs (Inland Electronic Navigational Charts) be used.

# 2.3.2 Minimum requirements and recommendations for devices displaying electronic charts for inland navigation

#### **Minimum requirements:**

- Electronic devices for displaying electronic charts for inland navigation must be connected to the Inland AIS device by a reliable cable connection.
- When the vessel is underway, devices must be exclusively dedicated to displaying electronic inland navigation charts.
- The information displayed must be readily visible from the conning position.

#### **Recommendation:**

- The electronic device for displaying electronic charts for inland navigation should comply with the navigation mode requirements of the Inland ECDIS standard in Part I of the ES-RIS.
- If the vessel is equipped with an Inland ECDIS device in navigation mode<sup>1</sup> it is recommended that an additional and separate device be used for displaying electronic charts for inland navigation.

# 2.3.3 Minimum requirements and recommendations for electronic chart display software for inland navigation

#### **Minimum requirements:**

- The software must display the vessel's current and correct position on the electronic chart for inland navigation.
- The software must display on the electronic chart for inland navigation the other vessel's current and correct position.
- For a given vessel, the software must display the detailed list of AIS information in accordance with Article 4.07(4) of the Rhine Police Regulations.

#### **Recommendation:**

- The electronic chart display software for inland navigation should comply with the Inland ECDIS navigation mode requirements in Part I of the ES-RIS.
- When no heading is available, the electronic chart display software for inland navigation should orientate the chart such that the vessel follows the axis of the waterway.

<sup>&</sup>lt;sup>1</sup> Inland ECDIS in navigation mode means that the device is connected to a radar system, which limits the range, unless one continuously switches over while navigating, which is not desirable either.

# 2.4 Use of the blue sign

Connecting the blue sign to the AIS device is not prescribed.

The connection of the blue panel to the AIS device is handled very differently. When going about their navigational duties, boatmasters must be aware that certain vessels have connected the blue sign to the Inland AIS device and others not, with the result that the situation displayed on the electronic chart does not necessarily correspond to the actual situation.

# 2.5 What to do in the event of an electronic chart display system no longer able to display AIS device information

The electronic chart display system must operate reliably and be in good working order. It is good practice to switch the electronic chart display system off regularly and on again immediately.

If the electronic chart display system is malfunctioning, this may cause misunderstandings and uncertainty on the waterway.

As a defective electronic chart display system should be the exception to the rule, the CCNR recommends that the riparian states of the Rhine apply the following flexibility rules:

- Navigation may be continued for a maximum period of 48 hours with an electronic chart display system that does not allow AIS device data to be displayed. This flexibility enables the next port of loading or unloading to be reached or, failing that, if this port is too far away, a place where repair or replacement of the defective devices can be affected.
- No voyage may be commenced without an electronic chart display system in good working order and operating, failing which the 48hour grace period would lapse.
- Given the special nature of voyages undertaken by day-trip vessels, the two preceding paragraphs do not
  apply to these vessels. For a day-trip vessel, navigation may be continued for a maximum period of
  48 hours with an electronic chart display system that does not allow Inland AIS device data to be
  displayed.

Switching off and restarting the electronic chart display system and the Inland AIS device could help resolve a malfunction.



### **Sources**

- I. Rhine Police Regulations, Article 4.07, 25/04/2022 Edition
- 2. Rhine Vessel Inspection Regulations
- 3. ES-TRIN 2021/I, Article 7.06 and Annex V
- 4. ES-RIS 2021/I, Parts I, II and III
- 5. Guidelines for the installation of the automatic identification system in inland navigation (Inland AIS guidelines for installation), Central Commission for the Navigation of the Rhine 2014 Edition

# **Explanation of abbreviations**

AIS	Automatic Identification System	
Inland ECDIS	Electronic Chart Display and Information System for Inland navigation	
ENC	Electronic Navigational Chart is a database used for the ECDIS	
ENI	The "unique European vessel Identification Number" is an identification number allocated once only to each vessel.	
ES-TRIN	European Standard laying down Technical Requirements for Inland Navigation vessels	
ES-RIS	European Standard for River Information Services	
GPS	The "Global Positioning System" is a satellite system enabling you to determine your own position.	
ІМО	International Maritime Organization	
ITU	International Telecommunication Union	
MKD	The "Minimum Keyboard and Display" is the standard Inland AIS display and entry device.	
MMSI	The "Maritime Mobile Service Identity" is a number assigned by the authorities to a vessel and its Inland AIS device.	
WGS 84	The "World Geodetic System of 1984" is a geodesic reference system used in particular with GPS.	

# Annex I: Navigational status

The navigational status - as part of mandatory data element - must always be up to date, according to Article 4.07 (2) of the Rhine Police Regulations.

The navigational status set in the Inland AIS device shall represent the current status of navigation of a vessel. Frequently used navigational status are "under way using engine (no. 0)", "moored (no. 5)" or "at anchor (no. 1)".

The navigational statuses "restricted manoeuvrability", "not under command", "aground" and "constrained by draught" are used when those specific navigation situations are met. Other navigational statuses are not used in inland navigation but are commonly known in maritime navigation.

Code	Navigational status
0	under way using engine
I	at anchor
2	not under command
3	restricted manoeuvrability
4	constrained by her draught
5	moored
6	aground
7	engaged in fishing
8	under way sailing
9 bis 13	reserved for future uses
14	AIS-SART (active)
15	Not defined (also used by AIS SART during the test)

The navigational status is sent to other vessels but has also influence on the reporting interval of your own AIS device. That is the reason why the navigational status needs to be kept up to date all the time.

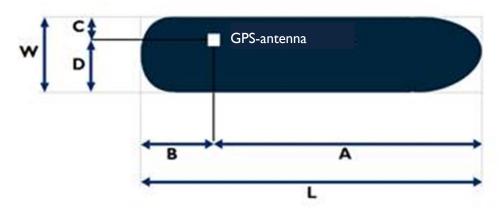
For example, the transmission interval with navigational status set to "moored (no. 5)" and "at anchor (no. 1)" is 3 minutes but with navigational status set to "under way using engine (no. 0)" it is 10 seconds.

# Annex 2: Reference point for the positional information aboard the vessel

- 1. If the Inland AIS device was installed on board before 1 December 2015:
  - a) In the case of a vessel

The boatmaster must enter the values A, B, C and D with an accuracy of I m.

The dimension A is pointing towards the bow.

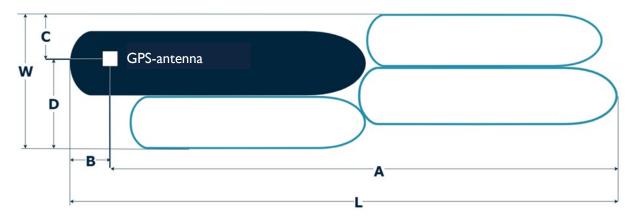


Information on the values W, L, A, B, C and D of a vessel

#### b) In the case of a convoy

The boatmaster must enter the values A, B, C and D with an accuracy of I m and the values W and L with an accuracy of 0.1 m.

The dimension A is pointing towards the bow.

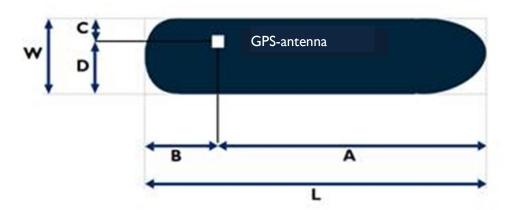


Information on the values W, L, A, B, C and D of a convoy

- 2. If the Inland AIS device was installed on board from 1 December 2015 onward:
  - a) In the case of a vessel

The boatmaster must enter the values A, B, C and D with an accuracy of 0.1 m.

The dimension A is pointing towards the bow.

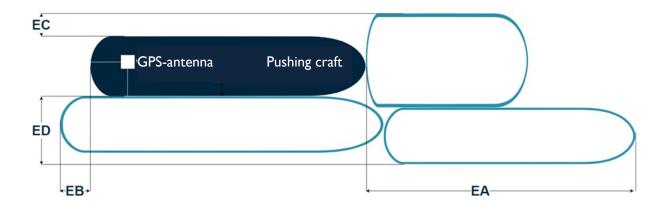


Information on the values W, L, A, B, C and D of a vessel

#### b) In the case of a convoy

The boatmaster must enter the values EA, EB, EC and ED with an accuracy of 0.1 m.

The dimension EA is pointing towards the bow.



Information on the values EA, EB, EC and ED of a convoy

#### Annex 3: Inland AIS device checklist

The checklist should help the boatmaster operate the Inland AIS device on board the vessel. The purpose is to give a short overview of what kind of data should be input and kept up to date during the voyage of the inland vessel.

Before starting the voyage, check that the Inland AIS device is switched on and working:

#### **B**efore the voyage

Usual procedure, i.e. for a vessel not sailing in a convoy, or for a convoy the composition of which is unchanged, check the data on one's vessel (or one's convoy) and transmitted periodically by the Inland AIS device in accordance with the Rhine Police Regulations (RPR):

- user identity (Maritime Mobile Service Identity, MMSI),
- name of the vessel or convoy,
- unique European vessel Identification Number (ENI) or, for seagoing vessels that have not been given an ENI number, the IMO number,
- length and breadth overall of the vessel or convoy accurate to 0.1 m in accordance with Annex 2,
- reference point for the positional information (location of the GPS antenna) in accordance with Annex 2,
- if blue sign is connected, check that blue sign status is correct.
- Check whether data from other vessels (likely to be within direct line of sight) are displayed on the Inland ECDIS device or comparable device for displaying charts.

#### Just before the voyage begins

Amend your own vessel's data for the planned voyage according to the Rhine police regulations:

- If the vessel becomes part of a convoy:
  - ♦ length,
  - breadth of convoy and the reference point of the GPS antenna. Also, if the previous voyage was a convoy it should be adjusted accordingly and
  - ♦ vessel or convoy type.
- Set the navigational status information of the vessel to "under way using engine" with respect to the navigational status that is applicable.

#### **During the voyage**

- Keep the information on the vessel's navigational status up-to-date.
- Check whether the data from other vessels (likely to be within direct line of sight) have been received.

#### After the voyage

- Set the navigational status information to "moored" or "at anchor".
- Amend the other voyage-related data if required.
- Use the Inland AIS device in accordance with the RPR and the regulations of the port in which the vessel is located.



Palais du Rhin
2 place de la République
CS 10023
F-67082 Strasbourg CEDEX – France
+33 3 88 52 20 10
www.ccr-zkr.org
ccnr@ccr-zkr.org