



AIS Receiver as coastal station

## User Guide

V1.0

English



# 1 General

## 1.1 Revision Level

Stand 1.0, Author: MK, 02/2022

## 1.2 Restrictions

No national or international restrictions on the use of this device are known at the current revision level.

# 2 Index of Abbreviations

### Abbreviations

LAN	Local area network
NMEA	National Marine Electronics Association
SSID	Service set identifier device
VHF	Very High Frequency
GNSS	global navigation satellite system

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## 4 Scope of Delivery - what is in the box?

1	AIS Receiver easyRX3 (A20011) or easyRX3-LAN (A20010)
2	Connection Cable 18-pins / Power (ca. 200 cm)
3	USB Cable (ca. 180 cm)
4	User Manual

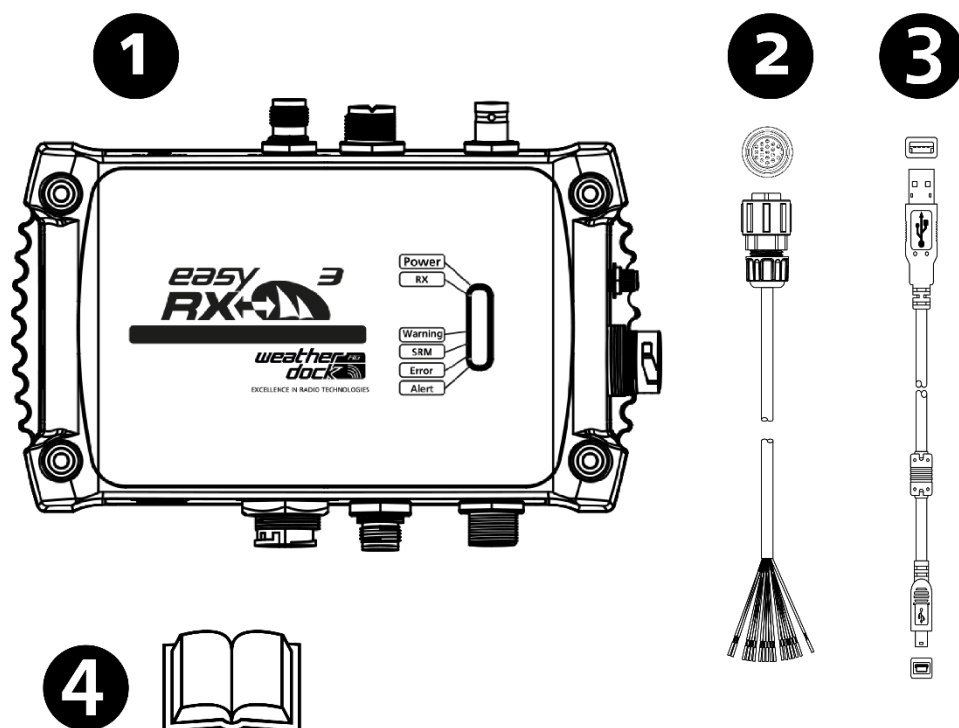


Figure 1 - box content

## 5 Connectors

### 5.1 Standard

- External GPS antenna (BNC)
- USB Port (Mini-B)
- NMEA2000 Output port (Micro C)
- Three equal NMEA0183 ports for IN/OUT
- LAN (RJ45) at A20010

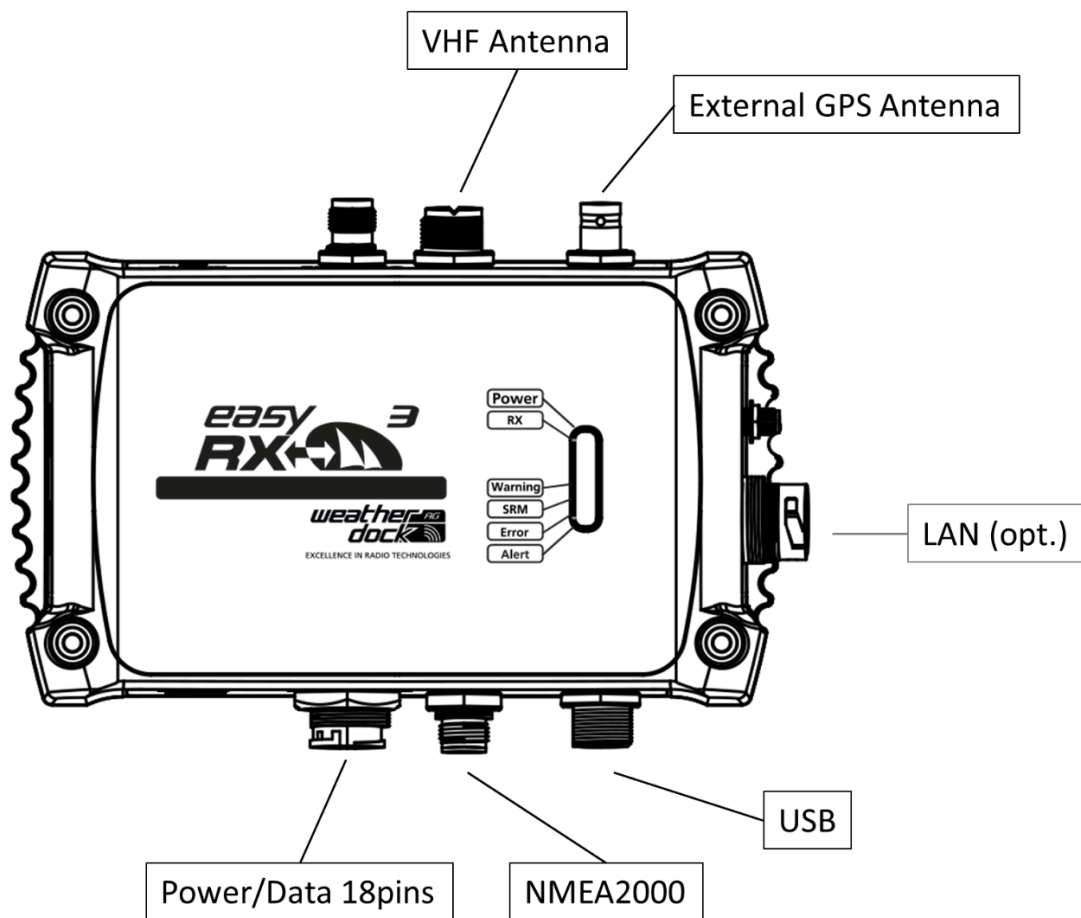


Figure 2 - connectors

## 6 Power Supply

To connect the easyRX3 with a wall socket, you have to use the 18-pin cable harness and take the red and the black cable from this harness.

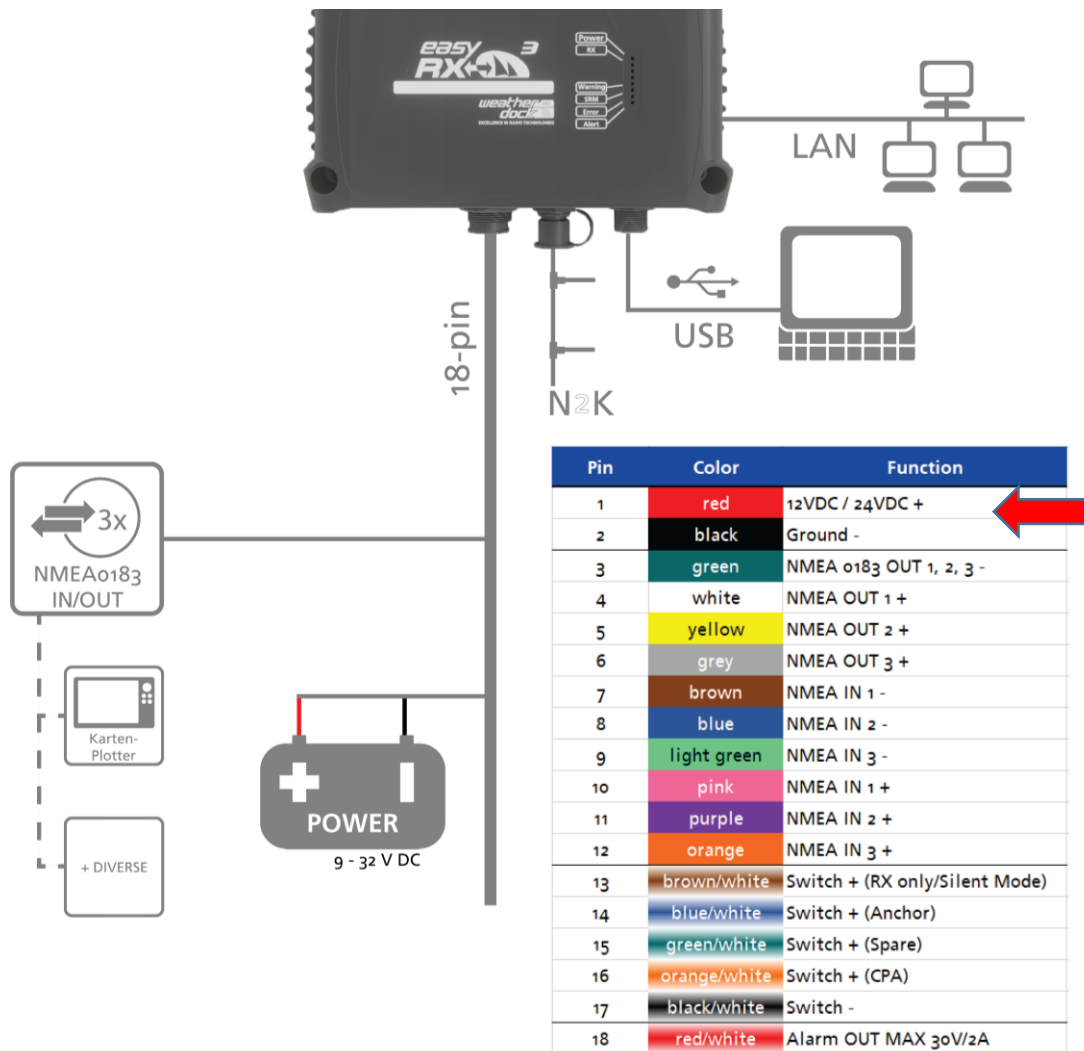


Figure 3 - power supply / cable harness

You need to have a 12-24 V DC power adapter with 1 amp voltage. Just connect the corresponding parts "+" and "-" of the cable harness and the adapter.

## 7 Connections

### 7.1 VHF Antenna for AIS data reception



Figure 4 - VHF antenna connector

The cable coming from VHF roof antenna has to be connected to the VHF antenna connector. The connector is signed with "Ant.".

### 7.2 External GPS Antenna (optional)

In case that it becomes necessary to have GNSS position data, it is possible to connect an external GPS antenna to the easyRX3.

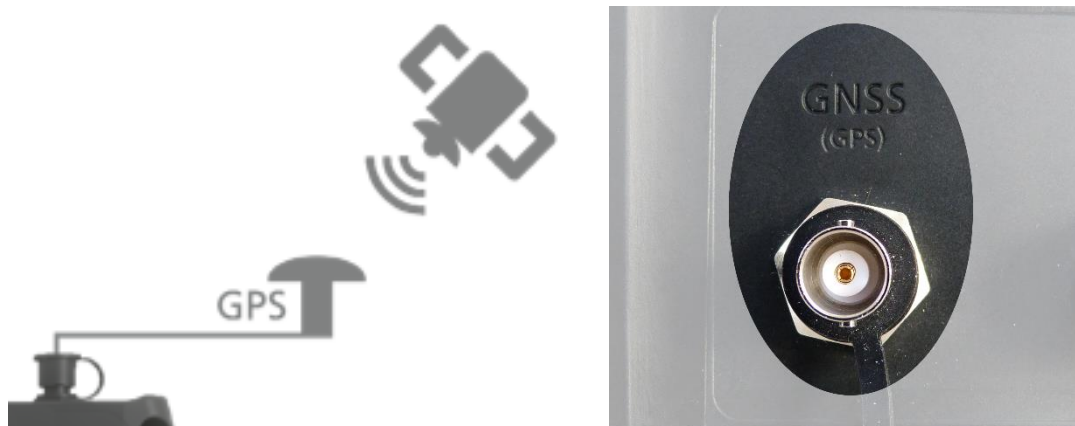


Figure 5 - GPS antenna connector

The connector for an optional external GPS antenna is signed with "GNSS".

### 7.3 LAN RJ45 to router

To forward the received AIS data to a dedicated IP address, you have to configure the settings of the internal LAN module of the easyRX3.

By connecting the easyRX3 via LAN cable with the router, the easyRX3 will get a new IP address from the router. Please check the router menu for this new IP address.

Once you found out the new IP address of the easyRX3, please type in this IP into your browser command line

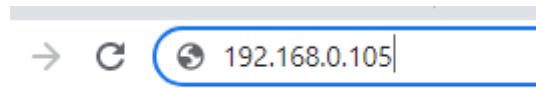


Figure 6 - new IP address (sample) in browser command line

You will be asked to enter the login data of the easyRX3, which are admin/admin.

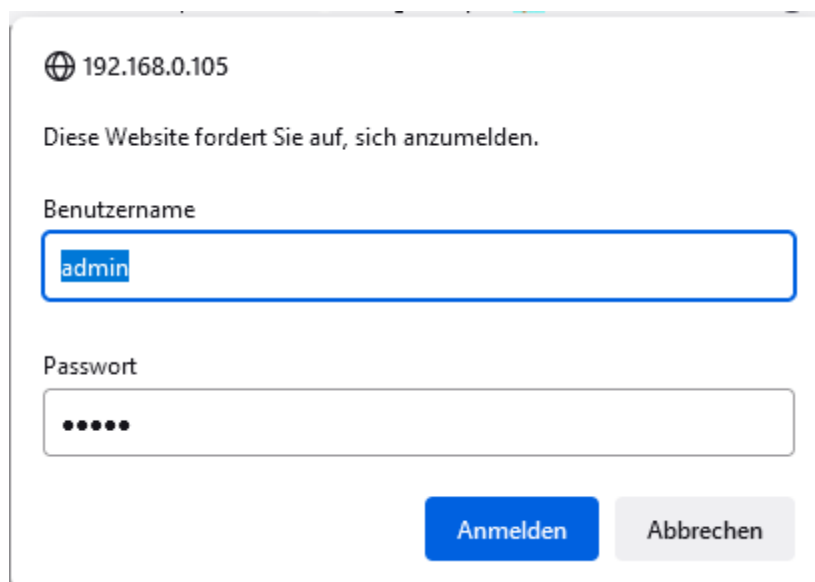
A screenshot of a web browser window displaying a login page for the IP address 192.168.0.105. The page title is '192.168.0.105'. Below the title, it says 'Diese Website fordert Sie auf, sich anzumelden.' (This website asks you to log in). There are two input fields: 'Benutzername' (Username) with the text 'admin' entered, and 'Passwort' (Password) with five dots. At the bottom right, there are two buttons: 'Anmelden' (Login) in blue and 'Abbrechen' (Cancel) in grey.

Figure 7 - Login window of RX3

After apply this form, the next window appears.



	Current	Updated
Serial Configure:	38400,8,n,1	<input type="text" value="38400,8,n,1"/>
Serial Framing Lenth:	64	<input type="text" value="64"/>
Serial Framing Timeout:	10 milliseconds	<input type="text" value="10"/> milliseconds (< 256, 0 for no timeout)
Network Mode:	client	<span>1</span> <input type="button" value="Client"/> ▾
Remote Server Domain/IP:	46.189.78.10	<input type="text" value="46.189.78.10"/> <span>2</span>
Locale/Remote Port Number:	8081	<span>3</span> <input type="text" value="8081"/>
Network Protocol:	tcp	<input type="button" value="TCP"/> ▾
Network Timeout:	0 seconds	<input type="text" value="0"/> seconds (< 256, 0 for no timeout)
		<span>4</span> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>

Figure 8 - settings for dedicated IP adress connection

Please follow these steps:

1. Select 'client' if the dedicated target IP address is in another network.  
If the IP is within the same network, select 'Server'
2. Enter the dedicated IP address
3. Enter the port number of this IP address
4. Apply the new settings

## 8 Technical Data

Description	Value
<b>General</b>	
Dimensions	195mm * 135mm * 60mm (L*B*H)
Weight	700 Gramm
Operating temperature	-15°C to 55°C
Storage temperature	-20°C to 75°C
Safety distance compass	min. 40 cm
<b>Power Specification</b>	
Board voltage	12V DC / 24V DC
Operating voltage range	9,6 to 31,2V DC
Input	2,9W at 12V DC
<b>GNSS Specification</b>	
GPS/GNSS Receiver (internal)	72 Channel GNSS Receiver
	# GPS
	# GLONASS
	# GALILEO
<b>External Connections</b>	
Interfaces	3x NMEA0183 IN
	3x NMEA0183 OUT
	NMEA2000
Connections (standard version)	USB
	18 pin plug
	NMEA2000 socket
	external GPS antenna (BNC)
	VHF antenna connection (SO239)
	VHF connection (TNC)
Data type NMEA output	VDM

AIS Specification	
Receiver	2 Receiver (AIS1/AIS2)
	DSC (AIS Channel Management)
Frequencies	Marine Band: 156,025MHz - 162,025MHz
	AIS1: 161,975MHz
	AIS2: 162,025MHz
Channel width/grid	25kHz
Modulation	GMSK (AIS, TX and RX)
	FSK (DSC, RX only)
	1200b/s (DSC)
Sensitivity	-114dBm 25kHz (<20% PER)
Co-channel rejection	10dB
Adjacent channel rejection	70dB
Intermodulation	65dB
Blocking	84dB
Certifications	
AIS Standards	IEC 62287-2:2017
Environmental	IEC 60945:2002 + Corr.1:2018
GPS Performance	IEC 61108-1:2003
Product Safety	EN 60950-1:2006
	ITU-R M.1371-5
BSH approval	BSH/4542/001/4323246/18

Figure 9 - technical data

## 9 Maintenance

The easyRX3 product line does not contain parts that require maintenance. Avoid using chemical solvents to clean the easyRX3 as some solvents can damage the case material.

Unauthorized opening of the device will invalidate the warranty.

## 10 Contact and support information

Although WEATHERDOCK strives for accuracy in all its publications; this material may contain errors or omissions, and is subject to change without prior notice.

Contact:

Contact your local dealer for WEATHERDOCK AIS support in most cases he can help quickly and straightforwardly.

If he cannot help you we are happy to provide help solving your problem:

**Weatherdock AG**  
**Emmericher Strasse 17**  
**90411 Nürnberg**  
**Tel: +49 911-37 66 38 30**  
[support@weatherdock.de](mailto:support@weatherdock.de)  
[www.easyAIS.de](http://www.easyAIS.de)

Please do not send an apparently defective device to us without prior consultation. In most cases the problem can be solved via telephone or email.

## 11 License agreement

By using the easyRX3 you agree to be bound by the conditions of the following warranty. Please read this carefully.

Weatherdock AG grants you a limited license to use this device in normal operation. Titles, property rights as well as intellectual property rights contained in and of the software remaining Weatherdock AG.

## 12 Warranty

Weatherdock AG grants a warranty of 2 years from the date of purchase for defects in material or workmanship of this product. Within this period Weatherdock will at its sole option repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs. The warranties and remedies contained herein are exclusive and instead of all other warranties express or implied or statutory, including any liability arising under any warranty of merchantability or fitness for a particular purpose, statutory or otherwise. In no event shall Weatherdock be liable for any incidental, special, indirect or consequential damages, whether resulting from the use, misuse or inability to use this product or from defects in the product. Weatherdock retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. Such remedy shall be your sole and exclusive remedy for breach of warranty.

Products purchased in online-auctions do not entitle you to deductions or to the use of Weatherdock's special offers. Furthermore we do not accept purchase confirmations from online auctions as evidence for warranty claims. An original receipt is compulsory for satisfaction of warranty claims. Weatherdock does not replace missing device or accessory parts in products which were purchased in online auctions. In a warranty case please contact your Weatherdock dealer. He will agree on the next steps with you. In the case of dispatch pack up the device properly and send it sufficiently stamped to the address stated by your dealer. For warranty repair always enclose a copy of your original sales receipt for evidence of ownership. The Weatherdock AG easyRX3 does not contain parts which have to be repaired. If you have a problem with your device, please contact your easyRX3 dealer. Any attempt to open, alter or modify the device will invalidate warranty and may damage the device irreparably.

## 13 Notices

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