INSTRUCTIONS FOR USE

ALC (Antenna Line Configurator)

MOBILE COMMUNICATION

Configuration and control of AISG antenna line products
Version 4.0

KATHREIN

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1 General

1.1 General safety instructions

WARNING

Risk of electric shock!

- Make sure that the mains cable (power supply cable) for the device (ALC) is not damaged. Replace the damaged mains cable immediately.
- Do not use the device with a damaged mains cable.
- Use only the supplied power supply unit to supply the device with power.
- Connect the power supply unit only to the voltages specified on the type label/ data sheet.
- Refrain from performing any work on the installation in stormy conditions. In particular, do not connect any cables and do not disconnect any cable connections.
- The plug connection between the device and the installation serves as the main mains cut-off fixture. Make sure it is accessible at all times.
- There are voltages of up to 30 V present at the device outputs.
- Familiarise yourself with the methods of accident prevention required during the installation of antennas.

NOTICE

Risk of damage or destruction of devices!

- Read the ALC product documentation[1)] in full before connecting the system to the power supply.
- Retain the ALC product documentation[1)] and pass it on to the next owner.

[1)] See data supplied in the memory of the ALC. To display the data on a PC, connect the ALC to the PC via USB and export the data.

1.2 Identification

Feature	Description
Type	Antenna Line Configurator (ALC), Version 86010158
Address of manufacturer	See last page

1.3 Scope of Delivery

- 1 x Antenna Line Configurator (ALC) with cover for the connections
- 1 x 24 V/3 A charger, can also be used as external power supply
- 1 x display guard
- 1 x transport case
- 1 x USB cable, 1 m, for connection to a PC/notebook
- 1 x RET cable, 1 m, order number 86010007, for connection to the components to be configured
- 1 x HF cable SMB/7-16, 1.8 m

1.4 Intended Use

The Antenna Line Configurator (ALC) must be used only to configure the RET system.
The ALC offers the following functions:

- Configuration of AISG-compatible antennas (ALDs), such as RET and TMA
- First installation and service
- First installation of Kathrein ALDs using the installation wizard
- Configuration of the Kathrein site-sharing adapter

Other features of the ALC:

- Battery operated (stand-alone)
- Touch-screen graphical display
- Sturdy aluminium housing
- No need to install software on a laptop or PC
- Generate and save report files
- WLAN interface for control using a laptop, tablet PC or smartphone via a web browser
- Parallel operation of display and web browser
- Inclination sensor for mechanical alignment of the antenna
- Display of power and voltage on the AISG bus

2 About These Instructions

2.1 Overview

These instructions for use contain all the information necessary to install and operate the Antenna Line Configurator (ALC).

> **Tip** Keep these instructions for further reference, and if the unit passes to another owner, pass them on to the new owner.

2.2 Target Group

Unless otherwise indicated, the target group of these instructions is experts. Experts refers to individuals that, among other things:

- Are professionally trained as electricians, technicians etc.
- Possess knowledge of all the applicable terms and skills relating to the installation and operation of mobile communication systems
- Are familiar with the applicable national safety regulations

2.3 Markings

2.3.1 Symbols and Signal Words

Signal words

Warning	Possible risk of death or serious physical injury
Caution	Possible risk of slight or moderately severe physical injury
Notice	Risk of material damage
Note	Note regarding the operation or use of the instructions
Tip	Usefu tips and recommendations

Warning Symbols

	General risk of physical injury
	Risk of physical injury from electric voltage
	Risk of material damage

Symbols for Operation

	Save button; saves changes
	Download button; downloads files from the ALC onto a USB stick
	Delete button; deletes a file
	Upload button; uploads a file from a USB stick onto the ALC
	Upload button; confirms, selects or deselects a setting
	Scan button; starts a scan
	Connect button; connects to an ALD
	Rescan button; starts a rescan
	changes the ALC mode from ***Devices*** to ***Sharing*** and visa versa
	cancels the ALC mode change

2.3.2 Markings in the Text

Error	Controls and commands of the ALC, the ALC software and the devices connected to it
✓	Condition for the execution of an operating instruction
►	Operating instruction
1., 2., 3. etc.	Operating instructions in a fixed order
⇨	Result of an operating instruction
⇛	Reference to further information
•	List/list entry
<*Variable*>	Variable (placeholder)

2.3.3 Abbreviations and Technical Terms

3GPP	3rd Generation Partnership Project
ACS	Antenna Clock Sensor
ALC	Antenna Line Configurator
ALD	Antenna Line Device
AISG	Antenna Interface Standards Group; RET systems are controlled using the AISG protocol.
ASD	ALD Sensor
ATS	ALD Temperature Sensor
GLS	Geographic Location Sensor
GUI	Graphical User Interface
RET	Remote Electrical Tilt: System for the remote control of the electrical tilt of an antenna
RFID	Radio Frequency Identification: System for automatic and contactless identification and localisation using radio waves
RCU	Remote Control Unit
TMA	Tower Mounted Amplifier

3 Preconditions for Operation

- Make sure that the RCUs and ALDs that are configured with the ALC are correctly installed and connected to the AISG bus.
- Make sure that each RCU is calibrated before the initial configuration of the inclination angle, after each manual adjustment to the inclination angle and each time the RCU is removed.

  ⇨ Failure to observe the above instructions can result in an imprecise configuration of the inclination angle.
- Correct calibration requires the RCU to be installed at the antenna interface provided.
- Makee sure that the PC/notebook has Microsoft® Windows® 2000, XP, Vista (Ultimate/ Home Premium), 7, 8 or 10 installed.
- Make sure that the USB stick has ≥ 512 MB of storage space and is formatted with FAT 32.

4 Controls and Connections

Fig. 1: Structure of the ALC

① Touch screen

② LED is lit: Data is being transmitted to the AISG bus

③ LED for the DC charging
- DC is lit in blue: ALC is in the stand-by mode
- DC is lit in yellow: ALC is turned on/off and the battery is being charged
- DC is lit in green: the battery is fully charged

④ HF connection for the AISG bus

⑤ Connection for the AISG bus

⑥ Protective cap for the WLAN antenna

⑦ ***On/off*** button

⑧ Mini USB port to connect to a PC/to establish a network connection*

⑨ USB port to use a USB stick
- to update the ALC software, see ⇛ 11.5.2, p. 33
- to update the software of the ALDs
- to export the data from the ALDs

⑩ DC charger connection

⑪ Protective clip

⑫ Cover for connections ⑧⑨⑩

⑬ Hook and loop fasteners for attaching the display guard

*

NOTE

Before establishing a network connection by means of the mini USB, it is necessary to install a Windows driver, see ⇛ 9, p. 18.

5 Performing the Initial Set-Up

When the ALC is switched on for the first time, the display shows the ***First Start Up***:

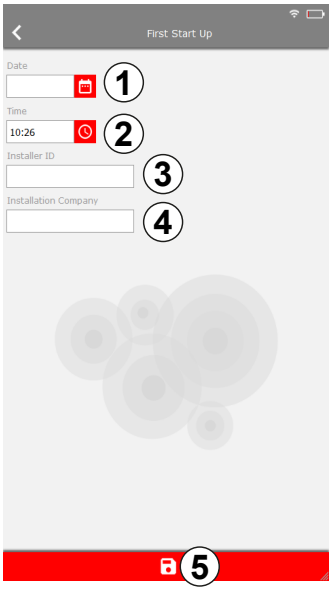


Fig. 2: First start-up screen when switching on for the first time

1. Adjust the ***Date*** ① and ***Time*** ② as required.
2. Enter ***Installer ID*** ③ and ***Installation Company*** ④ (optional).
3. Press ***Save*** ⑤ to confirm the settings.
   ⇨ The settings are saved and it is possible to use the ALC straight away.

6 Operating the ALC

6.1 Turning the ALC On and OFF

6.1.1 Turning the ALC ON

► Press the *On/off* button to turn on the ALC.

⇨ The ALC turns on and the start-up screen appears:

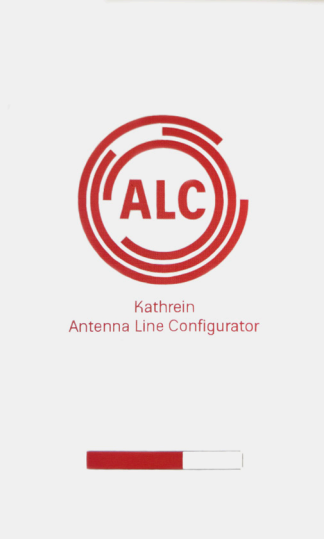


Fig. 3: Start-up screen

6.1.2 Turning the ALC Off

► Press the *On/off* button for 3 seconds to turn off the ALC.

⇨ The ALC turns off.

6.2 Putting the ALC into the Stand-by Mode

✓ The ALC is on.

► Press the *On/off* button to put the ALC into the stand-by mode.

⇨ The ALC screen turns off and the LED for the DC charaging is blue.

To turn on the ALC from the stand-by mode:

► Press the *On/off* button to end the stand-by mode.

⇨ The ALC screen turns on and the menu that has been opened last appears.

6.3 Forcing a Hard Shutdown of the ALC

✓ The ALC is on.

► Press the ***On/off*** button for 20 seconds to force a hard shutdown of the device.

⇨ The ALC shuts down.

7 Charging the Battery

NOTICE

Risk of malfunction!

Low battery charge (< 15%) can affect the functions of the device. The battery symbol (④ in Fig. 8) is lit red.

► Immediately charge the battery.

► To save the battery, turn off the ALC when not using it for a longer time.

✓ The ALC is on.

► Press the ***On/off*** button for 20 seconds to force a hard shutdown of the device.

⇨ The ALC shuts down.

The battery is integrated in the ALC. For optimum battery performance and battery life, follow the instructions below:

- Fully charge the battery before using the device for the first time.
- If the battery is fully charged, disconnect the device from the mains.
- It is recommended to charge the battery in due time. The charging process can be interrupted. Frequent recharging improves the battery performance and life.
- Depending on the application of the device, it is recommended to store the device with the battery charge at 80 % and to regularly recharge it up to 80 %. The correct storage plays a decisive part in the battery life.
- When the battery is being charged, the LED for the DC charging (③ in Fig. 1) is lit yellow.
- After the battery has been fully charged, the LED is lit green.
- If the battery charge is less than 15%, the following warning message appears:

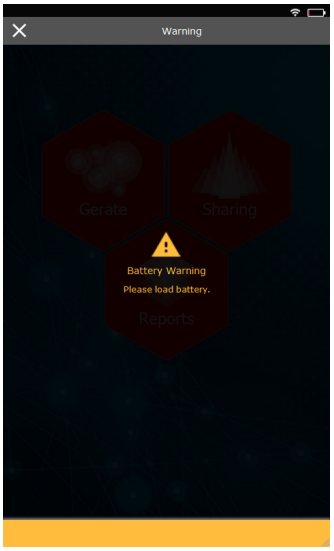


Fig. 4: Battery warning

- If there is too much last connected to the ALC, the following warning message appears:

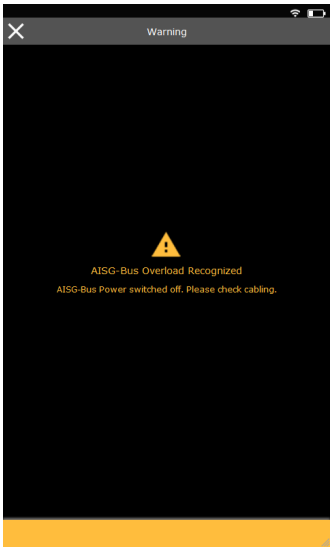


Fig. 5: Short circuit warning message

- If case of a short circuit, the following warning message appears:

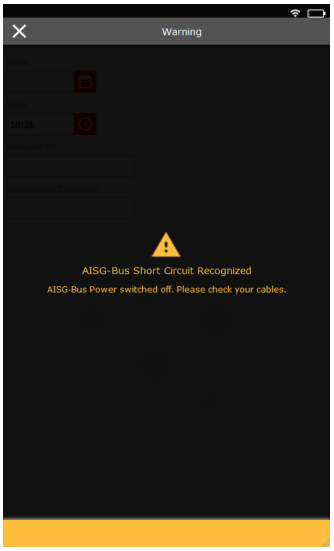


Fig. 6: Short circuit warning message

8 Connecting a PC to the ALC

NOTE

It is possibe to connect various devices with a Wi-Fi module to the ALC using Wi-Fi, e.g. a PC, laptop, tablet, phone etc. It is also possible to connect the ALC to a PC or laptop using a a micro USB cable.

The word *PC* will be used throughout the document. However, it can be any device that can be connected to the ALC.

✓ The PC is on.

✓ The ALC is on and the Wi-Fi is activated, see ⇛ 11.3.1, p. 26.

1. Go to the Wi-Fi settings of the PC you want to connect the ALC to.
2. If your PC is connected to a Wi-Fi, disconnect it from it.
3. Find the Wi-Fi ***alc***.
4. Click on ***connect***.
   ⇨ A window appears where a password is required.
5. Enter the default password ***kathreinalc***.
6. Open a browser on your PC.
7. Enter ***192.168.0.1*** or ***alc.kathrein.de*** for Windows operating systems.
   For all other operating systems, only enter 192.168.0.1.
   ⇨ The user interface of the ALC appears in the browser.

NOTE

The ALC user interface in the browser looks similar but not the same to that on the ALC, e.g. a ***Save*** button in the browser might contain additional text etc.

The screenshots used in this manual are the screenshots from the ALC device and not the browser.

It is possible to operate the ALC both using the ALC or via a browser.

✓ The connection to the ALC has been lost.

If the connection to the ALC has been lost, the following message appears:

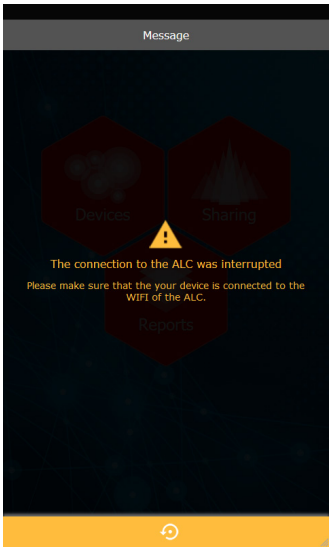


Fig. 7: Battery warning

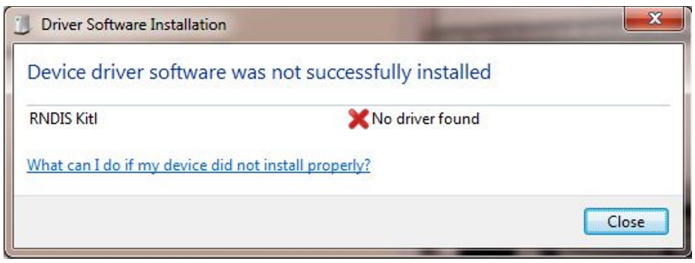
1. Make sure the Wi-Fi on the ALC is active.
2. Make sure the PC is connected to the ALC Wi-Fi hotspot.

9 Installing Microsoft RNDIS Driver for Windows 7, 8, 10

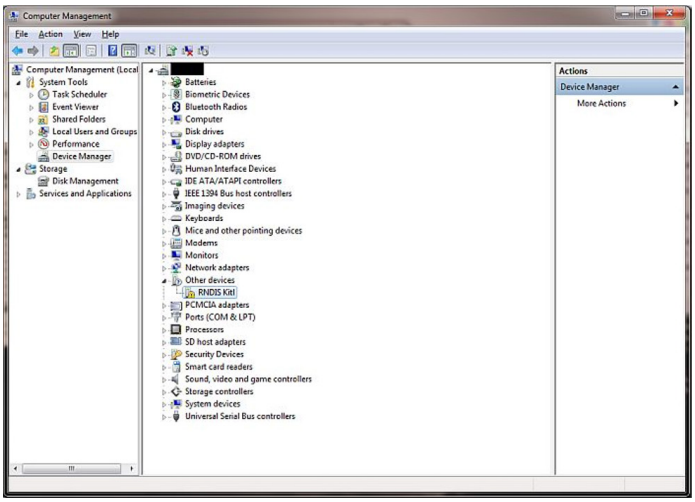
A Remote Network Driver Interface Specification (RNDIS) is a Microsoft proprietary protocol. Devices using a USB connection for downloading and debugging an OS image from Platform Builder use this driver to emulate a network connection. RNDIS driver is required for this purpose.

An RNDIS driver is a part of the Windows operating system, but the OS fails to detect it automatically. The following steps will help the user to install the RNDIS driver.

1. Connect the ALC to a device using the mini USB cable.
   ⇨ The operating system automatically searches for the RNDIS driver. After the system fails to find the driver, the following message is shown:

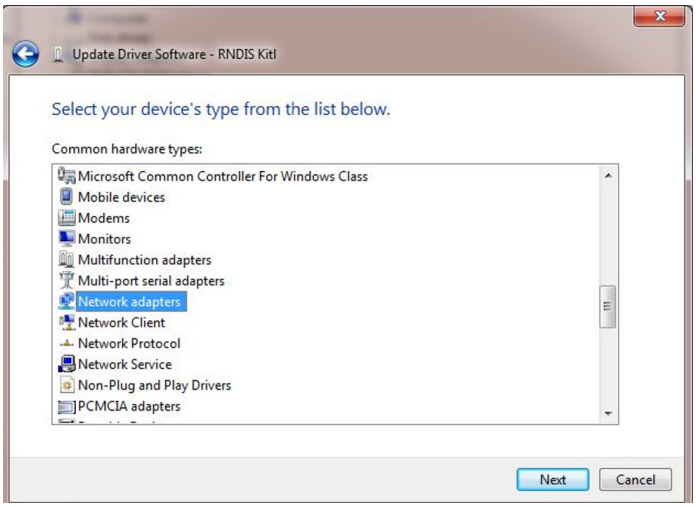


2. Click on ***Close***.
3. On the PC, click ***Start***.
4. Right-click ***Computer***.
5. Select ***Manage***.
6. Under ***System Tools***, select ***Device Manager***.
   ⇨ A list of the devices currently connected to the PC is shown.
7. Open ***Other Devices***.
   ⇨ Another list is shown. In the list, RNDIS KItl is displayed with an exclamation mark, which means that the driver has not been installed yet:

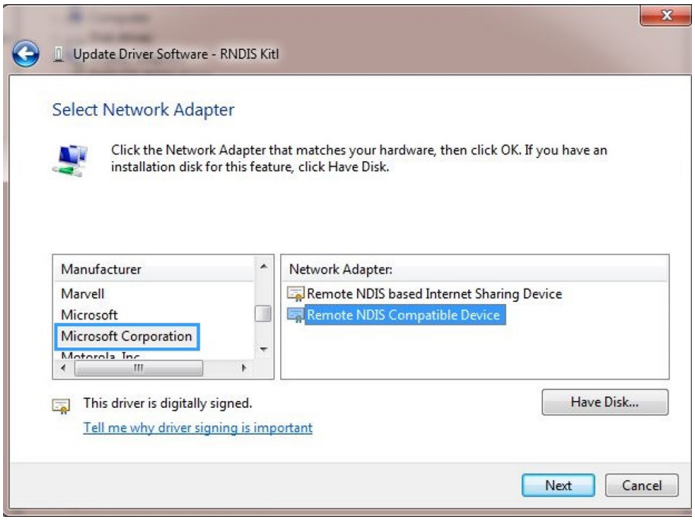


8. Right-click on RNDIS Kitl.
9. Select ***Update Driver software***.
10. When prompted to choose how to search for the device driver software. select ***Browse my computer for driver software***.
    ⇨ ***Browse for driver software on your computer*** will appear.

11. Select ***Let me pick from a list of device drivers on my computer***.
    ⇨ A window will appear asking to select the device type.
12. Select ***Network adapters***, as the RNDIS emulater a network connection:

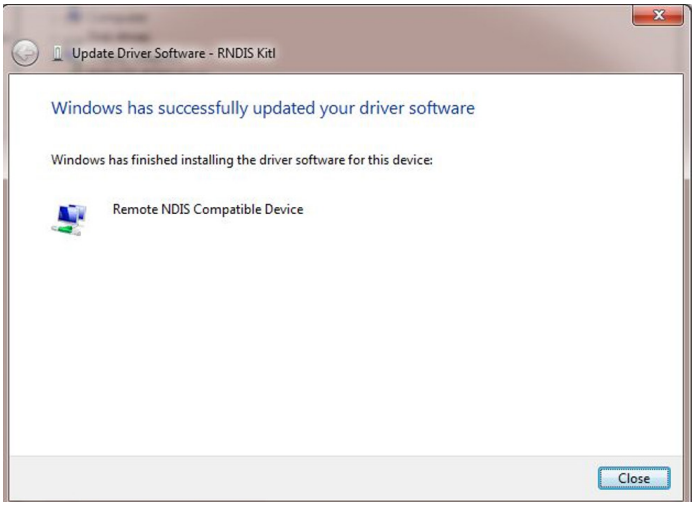


13. Click ***Next***.
    ⇨ The following window appears:



14. Select ***Microsoft Corporation*** from the ***Manufacturer*** list.
15. Select ***Remote NDIS Compatible Device*** unter ***Network Adapter***.
16. Click ***Next***.
    ⇨ A warning message appears.

17. Click *Yes*.
    ⇨ The following window appears:



    ⇨ The RNDIS Kitl device is now installed and is ready to be used.
18. Click *Close* to finish the triber installation.

10 Graphical User Interface

10.1 General Operation

The graphical user interface (GUI) of the ALC has the following properties:

- The GUI is operated via the ALC touch screen.
- All GUI content can be accessed from the main menu. Chapter 10.3, p. 23 provides an overview of the GUI menu structure and contains cross-references to the corresponding sections in these instructions.
- Example descriptions of the displays and controls of the GUI are given below.

NOTE

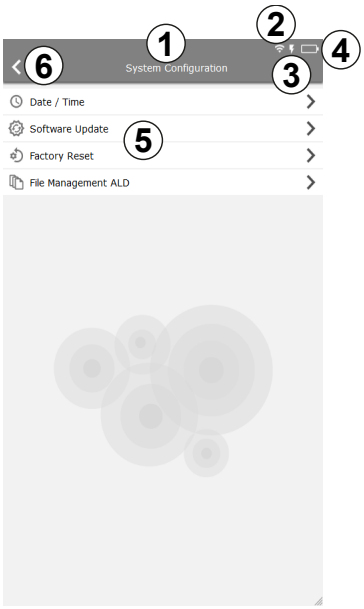
It is possibe to connect various devices with a Wi-Fi module to the ALC using Wi-Fi, e.g. a PC, laptop, tablet, phone etc. It is also possible to connect the ALC to a PC or laptop using a a micro USB cable.

The word *PC* will be used throughout the document. However, it can be any device that can be connected to the ALC.

Note

The displays and controls in this section marked * will be applied for the rest of this document.

10.1.1 Navigating within a Sub-Menu



① Title of the page*

② Shows whether Wi-Fi is connected or not (***on***/***off***)

③ Shows whether the DC charger is connected or not

④ Charge status of the ALC rechargeable battery*

⑤ Push buttons for opening sub-menus

⑥ Switches to the last page;*

Fig. 8: Navigating within a sub-menu

10.1.2 Entering Values

In some cases, it is necessary to enter numbers or a combination of the letters and numbers. When the user presses on the corresponding field, a numerical or an alphanumerical keyboard appears.

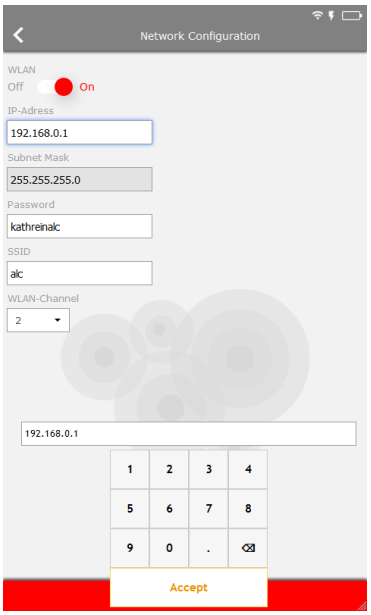


Fig. 9: Numerical keypad for entering a number

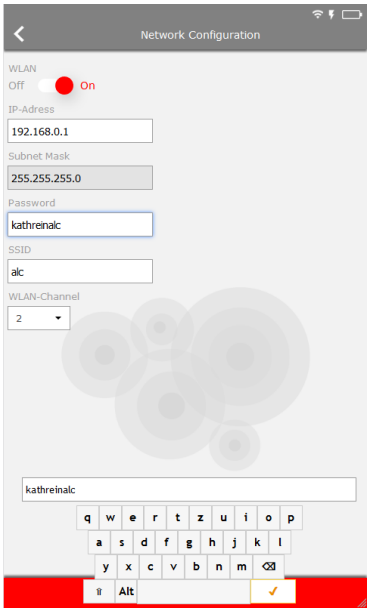


Fig. 10: Alphanumerical keypad for entering a number/letter

10.2 Main Menu

When the device is switched on, the main menu is displayed. All functions of the ALC can be accessed from here.

① Opens the menu for the general ALC settings, see ⇛ 11, p. 24 et seqq

② Configures individual ALDs, see ⇛ 12, p. 48 et seqq

③ Configures the site-sharing adapter, see ⇛ 13, p. 71 et seq

④ Opens menu for ALD and site-sharing reports, see ⇛ 14, p. 79 et seqq

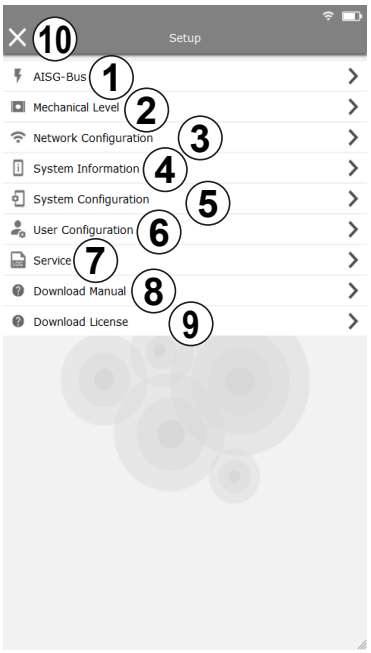
Fig. 11: Main menu

10.3 Menu Structure

ALC Setup	Devices	Sharing	Reports
AISG Bus, see ⇛ 11.1, p. 24			ALD Reports
Mechanical Level, see ⇛ 11.2, p. 25			Site Sharing reports
Network Configuration, see ⇛ 11.3, p. 26 et seq			
System Information, see ⇛ 11.4, p. 30			
System Configuration, see ⇛ 11.5, p. 30			
User Configuration, see ⇛ 11.6, p. 41			
Service, see ⇛ 11.7, p. 42			
Download Manual, see ⇛ 11.8, p. 46			
Download License, see ⇛ 11.9, p. 47			

The four main menu elements will be described in separate chapters.

11 Showing and Changing the ALD Setup



① displays the voltage, current and power of the feeder cable and the AISG bus, see ⇛ 11.1, p. 24

② measures the mechanical downtilt of an antenna ⇛ 11.2, p. 25

③ modifies the network configuration, see ⇛ 11.3, p. 26

④ displays system information, see ⇛ 11.4, p. 30

⑤ changes system configuration, see ⇛ 11.5, p. 30

⑥ changes user configuration, see ⇛ 11.6, p. 41

⑦ performing service, see ⇛ 11.7, p. 42

⑧
- downloads the manual on a USB stick if opened on the ALC, see ⇛ 11.8, p. 46
- opens the manual as a PDF file in a browser if opened on the PC

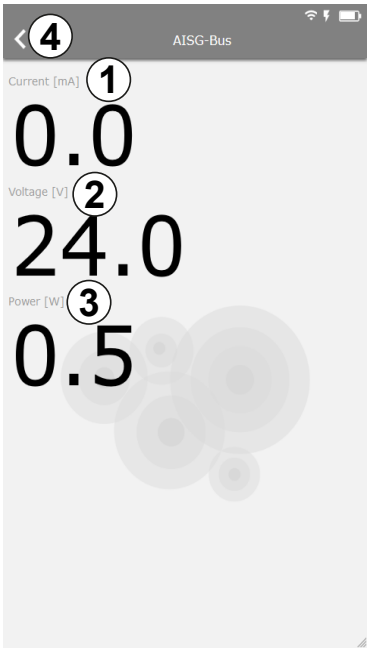
⑨
- saves the license on a USB stick if opened on the ALC, see ⇛ 11.7, p. 42
- opens the license as a PDF file in a browser if opened on the PC

⑩ closes the submenu and returns to the previous menu

Fig. 12: Setup

11.1 AISG Bus (Current, Voltage)

The submenu AISG Bus shows how much current, voltage and power the device connected to the ALD consumes.



① shows the current of the connected ALD

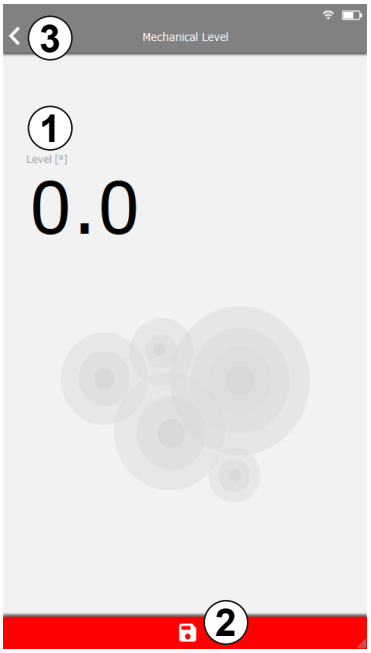
② shows the voltage of the connected ALD

③ shows the power of the connected ALD

Fig. 13: AISG Bus (Current, voltage)

11.2 Mechanical Level

In this submenu it is possible to measure and set the mechanical downtilt of an ALD.



① shows the measured value of the mechanical downtilt in degrees

② calibrates the internal inclination sensor of the ALC

> **NOTE**
> Depending on the device and the operation system of the device which is connected to the ALC via Wi-Fi, the word ***Calibrate*** might be shown next to the ***Save*** button.

③ closes the submenu and returns to the previous menu

Fig. 14: Mechanical Level

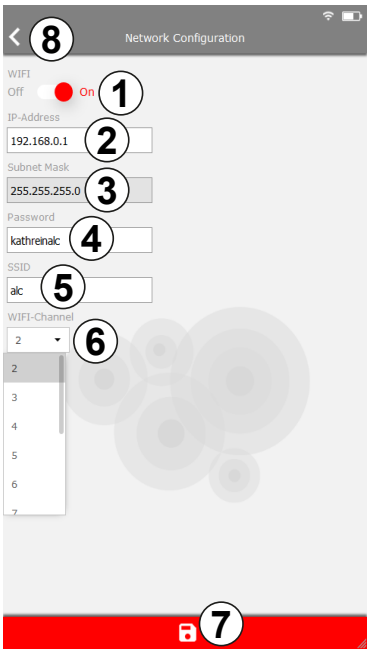
To calibrate the mechanical downtilt:

✓ The ALC lies with its rear panel against an ALD, its level, vertical surface.

1. Tilt the ALC until the required downtilt is achieved.
2. Press the ***Save*** button to calibrate the internal inclination sensor of the ALC.

11.3 Network Configuration

In the ***Network Configuration*** submenu it is possible to change the settings of the network configuration.



① turns the Wi-Fi on and off, see ⇛ 11.3.1, p. 26
② changes the IP address, see ⇛ 11.3.2, p. 27
③ shows the subnet mask
④ changes the password, see ⇛ 11.3.3, p. 28
⑤ changes the SSID, see ⇛ 11.3.4, p. 28
⑥ selects a Wi-Fi channel from 2–11,see ⇛ 11.3.4, p. 28
⑦ saves the changes made in ① – ⑥
⑧ closes the submenu and returns to the previous menu

Fig. 15: Network configuration

11.3.1 Turning the Wi-Fi on and off

► Move the Wi-Fi control (① in Fig. 15) to the right to turn on the Wi-Fi.

► Move the Wi-Fi control (① in Fig. 15) to the left to turn off the Wi-Fi .

11.3.2 Changing the IP Address

1. Tap the ***IP address*** value field (① in Fig. 16).
   ⇨ The numerical keyboard for entering numbers (② in Fig. 16) appears:

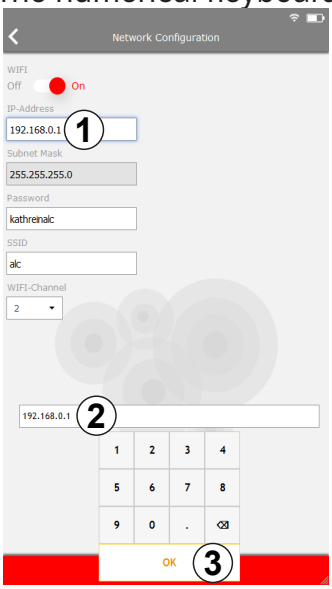


Fig. 16: Network configuration: Changing the IP address

2. Either type in the new IP address or enter it using the numerical keyboard.
3. Press ***Accept*** (③ in Fig. 16).
4. At the end of all the changes made in the ***Numerical Configuration*** submenu, press the ***Save*** button to save the changes (⑦ in Fig. 15).

11.3.3 Changing the Password

1. Tap the ***Password*** value field (① in Fig. 17).
   ⇨ The alphanumerical keyboard for entering a new password (② in Fig. 17) appears:

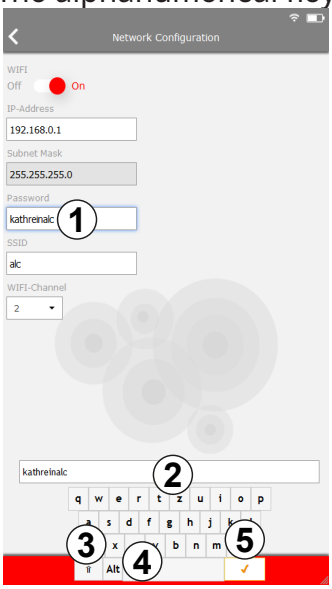


Fig. 17: Network configuration: Changing the password

2. Either type in the new password or enter it using the numerical keyboard.
3. Press ③ to change the keyboard to caps lock, if required.
4. Press ④ to change the keyboard to special characters, if required.
5. Press ***Accept*** (⑤ in Fig. 17) (shown here as a tick).
6. At the end of all the changes made in the ***Numerical Configuration*** submenu, press the ***Save*** button to save the changes (⑦ in Fig. 15).

11.3.4 Changing the SSID

1. Tap the ***SSID*** value field (① in Fig. 17).
   ⇨ The alphanumerical keyboard for entering a new SSID (② in Fig. 17) appears.
2. Follow steps 1–6 in Chapter 11.3.3, p. 28.

11.3.5 Selecting a Wi-Fi Channel

1. Tap the ***Wi-Fi Channel*** field (⑥ in Fig. 16).
   ⇨ The drop-down menu with channels from 2–11 appears:

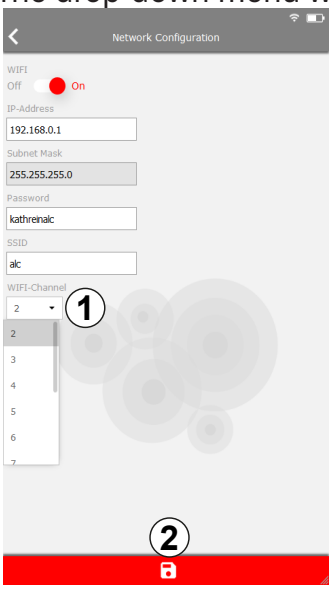
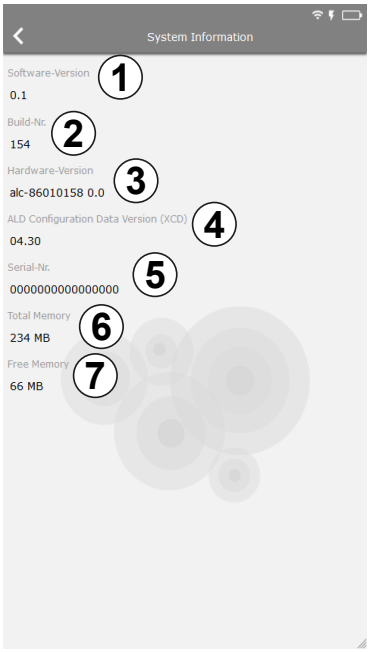


Fig. 18: Network configuration: Selecting a Wi-Fi channel

2. Select a Wi-Fi channel from the drop-down menu (① in Fig. 18).
3. Press the ***Save*** button to save the changes (② in Fig. 18).

11.4 System Information

This submenu displays all ALC key system information.

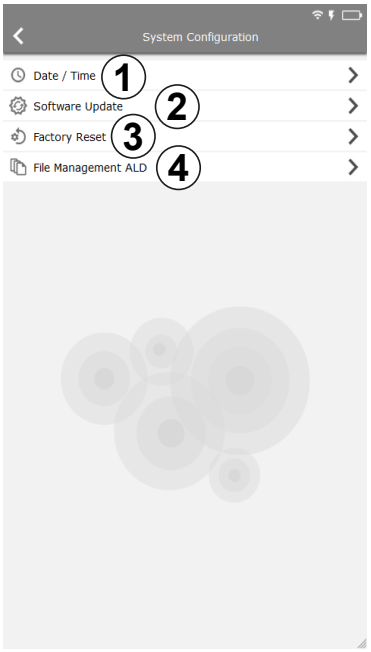


① shows the ALC software version
② shows the ALC build number
③ shows the ALC hardware version
④ shows the ALD configuration data version
⑤ shows the ALC serial number
⑥ shows the ALC total memory
⑦ shows the free memory

Fig. 19: System information

11.5 Changing System Configuration

In this submenu it is possible to change key system settings.



① changes date and time, see ⇛ 11.3.1, p. 26
② updates the ALC firmware, see ⇛ 11.5.2, p. 33
③ resets the ALC to factory settings, see ⇛ 11.5.3, p. 35
④ manages the ALD files, see ⇛ 11.5.4, p. 36

Fig. 20: System configuration

11.5.1 Changing Date and Time

1. Tap the ***Date/Time*** submenu (① in Fig. 20).
   ⇨ The following submenu opens:

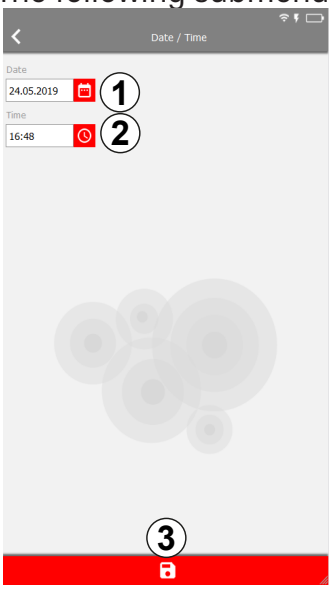
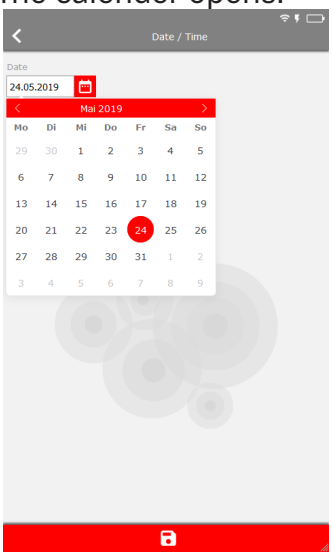


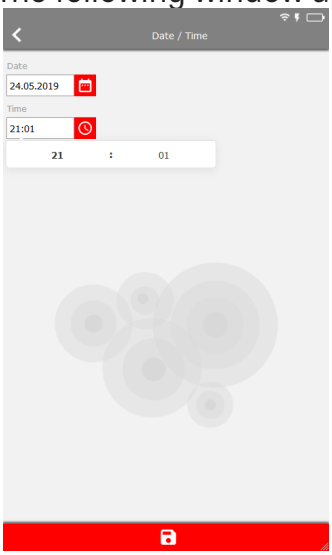
Fig. 21: System configuration: Changing the date and time

2. Tap the ***Date*** value field.
   ⇨ The calender opens:



3. Select a date in the calender.

4. Tap the ***Time*** value field.
   ⇨ The following window appears:



5. Change the time (hours and minutes) pressing the down or up arrow.
6. At the end of all the changes made in the ***Date/Time*** submenu, press the ***Save*** button to save the changes (③ in Fig. 21).

11.5.2 Updating the ALC Firmware

> **NOTE**
> Before updating the ALC firmware, make sure to load the firmware update onto the USB stick. It is recommended that the firmware file is stored in the ***/alc-update*** directory of the USB stick for easier handling.

✓ A USB stick is plugged into the USB port on the ALC.
✓ An update file in the *.swu format has been loaded in the ***/alc-update*** directory.
✓ The ALC battery charge is more than 50%.

1. Tap the ***Software update*** submenu (② in Fig. 20).
   ⇨ The following message is displayed:

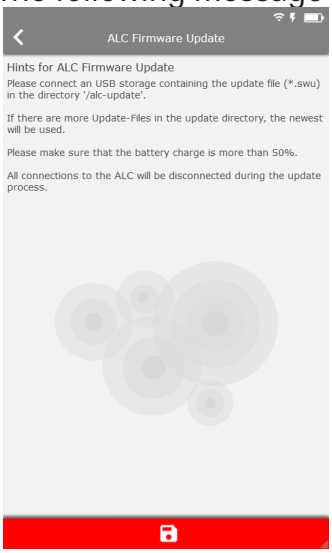


Fig. 22: System configuration: Software update

2. Press the ***Save*** button to proceed with the firmware update.
   ⇨ The following message is displayed:

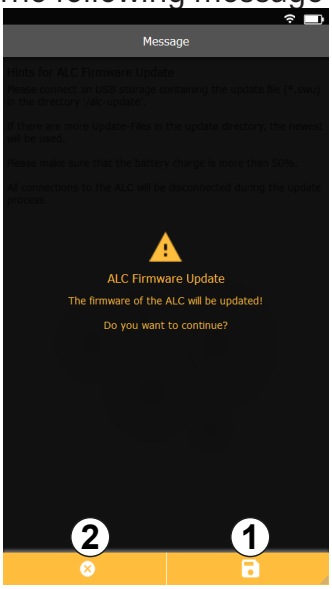


Fig. 23: Firmware update: warning message

3. Press the ***Save*** button (① in Fig. 23) to proceed with the firmware update.
   Press the ***Cancel*** button (② in Fig. 23) to cancel the update.
   ⇨ If you have pressed the ***Save*** button, the ALC automatically searches the USB and selects the firmware update file.
   ⇨ During the update, the ALC turns off.
   ⇨ If there is more than one update file in the update directory, the ALC will use the latest one.
   ⇨ All connections to the ALC are lost during the update process.
   ⇨ After the update process, the ALC turns on automatically.

11.5.3 Resetting the ALC to Factory Settings

It is necessary to reset the ALC to factory settings if:

- you forgot Wi-Fi settings, e.g. password,
- the ALC must be reset to factory settings.

NOTE

Before setting the ALC to the factory settings, keep in mind that the following settings will be reset to the factory default settings:

- network settings,
- user settings,
- ALD configuration file (XCD).

Keep in mind that the following files will be deleted:

- ALD Config/FW/Info/Log Files,
- ALD/SSA report files,
- AISG Bus logging files.

1. Tap the ***Factory Reset*** submenu (③ in Fig. 20).
   ⇨ The following submenu opens:

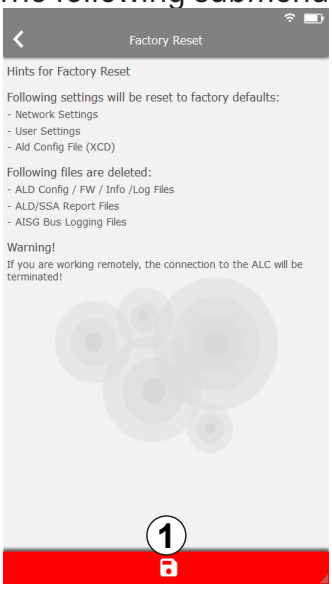


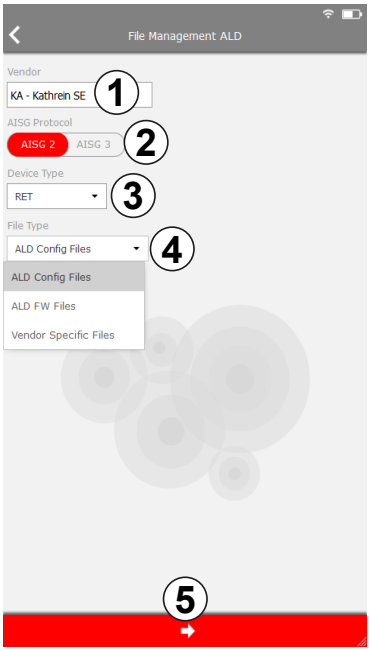
Fig. 24: System configuration: Factory reset

2. Press the ***Save*** button to reset the ALC to the factory settings.
   ⇨ The ALC turns off.
   ⇨ The connection to the ALC is terminated.
   ⇨ The ALC restarts automatically after it has been reset to factory settings.

11.5.4 Managing ALD Files

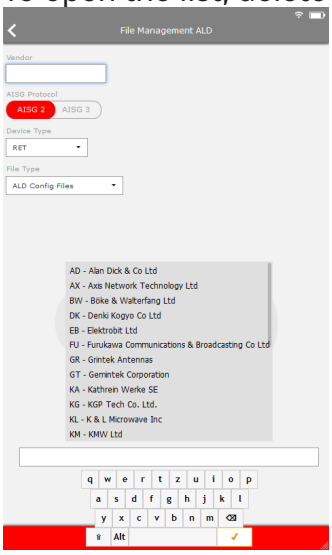
> **NOTE**
> Before uploading or downloading ALD files onto/from a USB stick, make sure to connect a USB stick with the corresponding files to the ALC.

1. Tap the ***File Management ALD*** submenu (④ in Fig. 20).
   ⇨ The following submenu opens:



① selects the vendor from the list

► To open the list, delete the existing entry:



② selects the AISG protocol between ***AISG 2*** and ***AISG 3***

③ selects the device type from the drop-down menu

- between ***ASD***, ***GLS***, ***RET***, ***TMA***, ***FlexRET*** for the ***AISG 2*** protocol and
- between ***SALD*** and ***MALD*** for the ***AISG 3*** protocol

④ selects the file type from the drop-down menu between ***ALD Config Files***, ***ALD FW Files*** and ***Vendor Specific Files***

⑤ goes to the selected file type to perform further actions, see ⇛ *Uploading/Downloading/Deleting ALD Files*, p. 37

► To upload new files, make sure a USB stick is inserted into the ALC.

Fig. 25: System configuration: File management ALD

Uploading/Downloading/Deleting ALD Files

1. After having made all the selections in 11.5.4, p. 36, press ④ in Fig. 25.
   ⇨ The following page appears (on the example of the ***AISG 2*** protocol, ***RET*** antenna and ***ALD Config Files***):

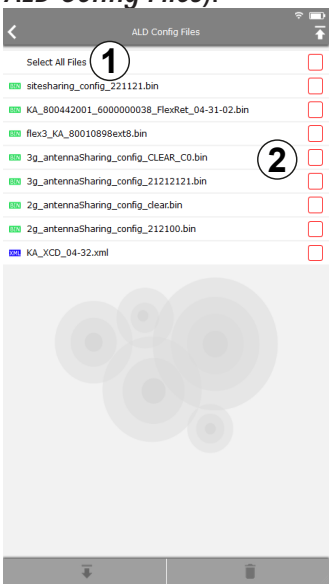


Fig. 26: System configuration: File Management ALD, ALD Config Files

2. To select all files, set a tick at ***Select All Files*** (① in Fig. 26).
   To select one or several files, tick the boxes next to the corresponding files (② in Fig. 26).
   ⇨ The file/files have been selected and the buttons ***Upload***, ***Download*** and ***Delete*** are active:

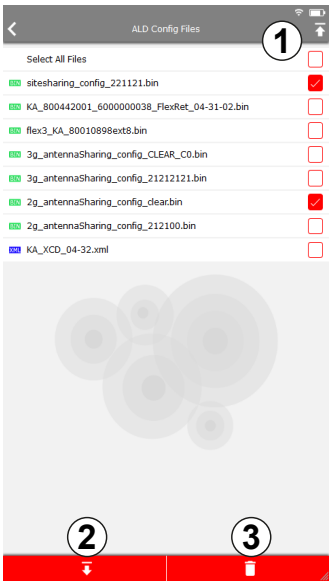


Fig. 27: System configuration: File Management ALD, ALD Config Files

Uploading an ALD File

✓ ALD files have been selected on the ALC, see *Uploading/Downloading/Deleting ALD Files*, p. 37.

1. Press ***Upload*** (① in Fig. 27) to upload an ALD Config File from the USB stick onto the ALC.
   ⇨ If there is no USB stick connected, the following warning message appears:

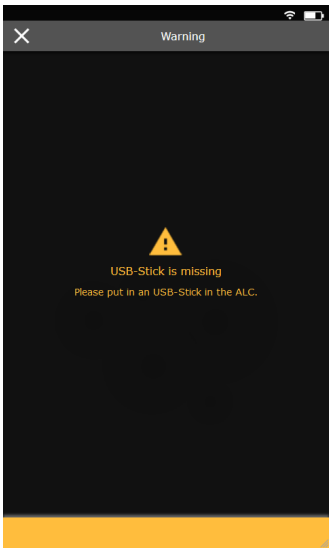


Fig. 28: No USB connected message

   ⇨ If a USB stick is connected, the folders on the connected USB stick are shown:

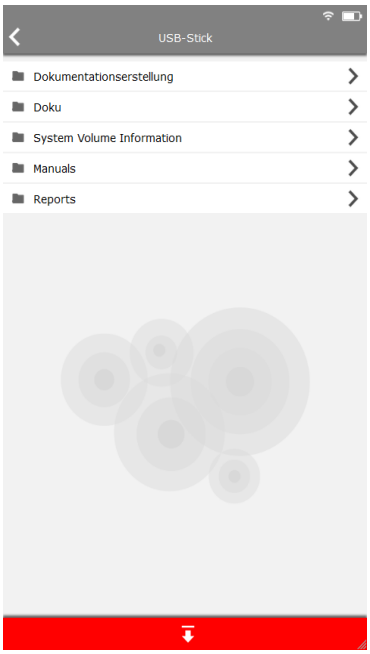


Fig. 29: Upload an ALD file: Folders

2. Select a folder in which an ALD file is stored.
3. Select an ALD file/files in a folder.
4. Press the ***Upload*** button.
   ⇨ The selected file is uploaded onto the ALC from the USB stick.

Downloading an ALD File

✓ ALD files have been selected on the ALC, see *Uploading/Downloading/Deleting ALD Files*, p. 37.

1. Press ***Download*** (② in Fig. 27) to download an ALD Config File onto the USB stick from the ALC.

   ⇨ If there is no USB stick connected, the following warning message appears:

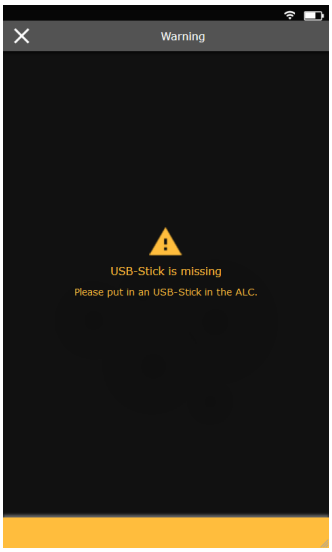


Fig. 30: No USB connected message

   ⇨ If a USB stick is connected, the folders on the connected USB stick are shown:

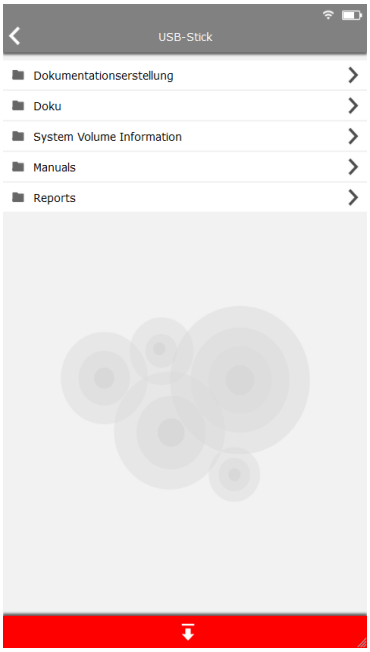


Fig. 31: Download an ALD file: Folders

2. Select a folder to download an ALD file into.
3. Press the ***Download*** button.

   ⇨ The selected file is downloaded onto the USB stick from the ALC.

Deleting an ALD File

✓ ALD files have been selected on the ALC, see *Uploading/Downloading/Deleting ALD Files*, p. 37.

1. Press ***Delete*** to delete the selected file from the ALC.
   ⇨ The selected file is deleted from the ALC.

11.6 Changing User Configuration

In this submenu it is possible to change the user settings.

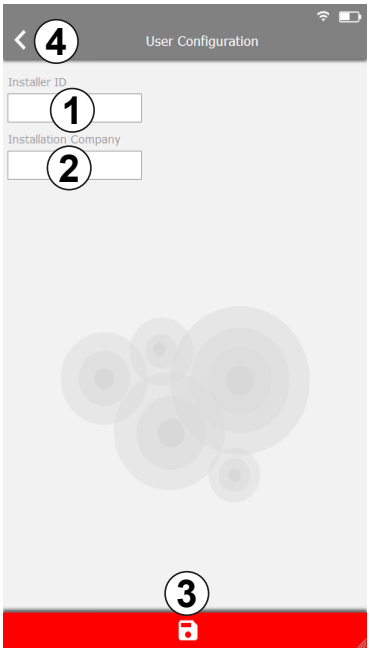


Fig. 32: User configuration

① enters the installer ID by means of the alphanumeric keyboard

② enters the installation company by means of the alphanumeric keyboard

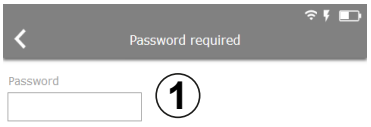
③ save changes made in ① and ②

④ closes the submenu and returns to the previous menu

11.7 Performing Service

> **NOTE**
> The submenu ***Service*** is password protected for security reasons. To obtain the password, it is necessary to contact Kathrein. #gibt es eine Telefonnummer dafür?

In this submenu it is possible to access tge AISG Bus logging.

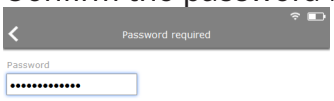


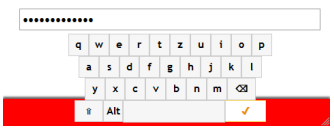
① enters the password to access the service via the alphanumerical keyboard

② confirms the entered password

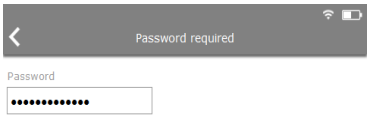
Fig. 33: Service: Enter password

1. Click on the ***Password*** field (① in Fig. 33).
   ⇨ The alphanumerical keyboard appears.
2. Enter the password.
3. Confirm the password by pressing the tick on the alphanumerical keyboard:





⇨ The following page appears:

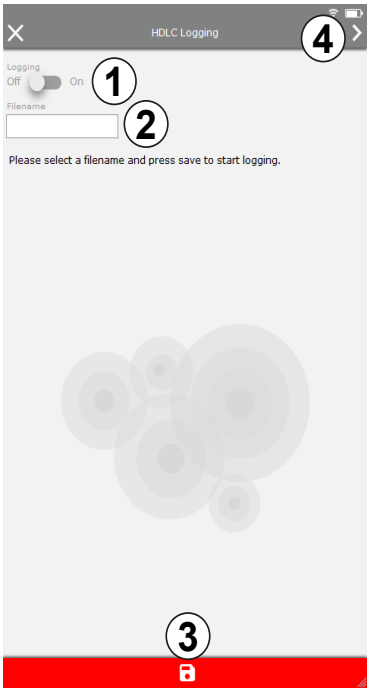


① confirms the entered password

Fig. 34: Service: Confirm password

4. Press the ***Confirm*** button (① in Fig. 34) to confirm the entered password.

⇨ The following page appears:



① turns logging on and off

② enters a filename by means of the alphanumerical keyboard

It is only possible to enter a filename if the logging has been turned on.

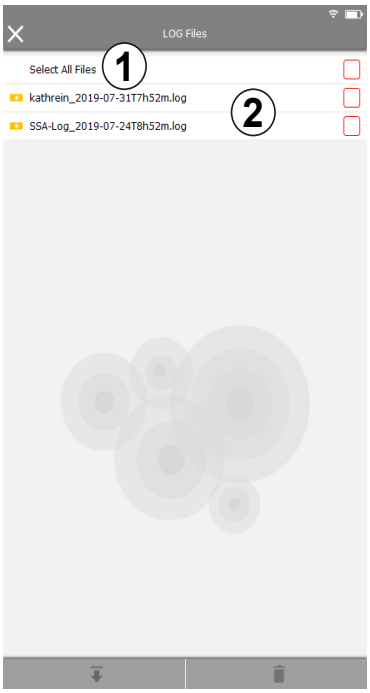
③ save changes made in ① and ②

④ shows the log files

Fig. 35: Service: HDLC logging

5. Tun on the logging.
6. Tap the ***Filename*** field.
7. Enter a filename by means of the alphanumerical keyboard.

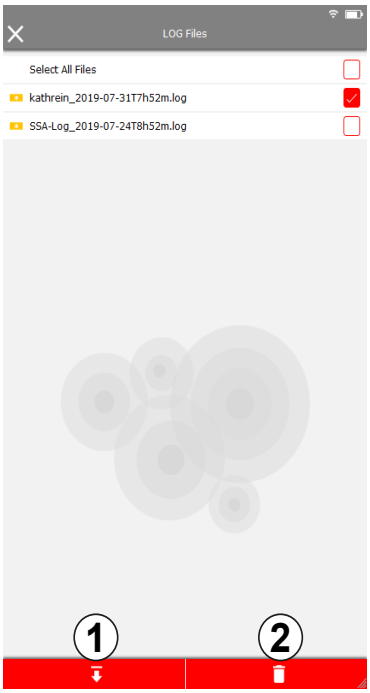
8. Confirm the file name by pressing the ***Save*** button on the alphanumerical keyboard.
   ⇨ The HDLC logging starts automatically. All activities performed on the AISG bus are saved into a file.
9. Press ① in Fig. 35 to show the log files.
   ⇨ The following page appears:



① selects all files
② selects one or several files

Fig. 36: Service: HDLC logging – selecting log files

10. Select the log files.
    ⇨ The following page appears:



① downloads the selected file/files onto a USB stick
② deletes the selected file/files

Fig. 37: Service: HDLC logging – download or delete log files

11. To download the selected log files, press the ***Download*** button (① in Fig. 37).
    ⇨ The the folders on the connected USB stick are shown.
12. Proceed as described in *Downloading an ALD File*, p. 39.
13. To delete the selected log files, press the ***Delete*** button (② in Fig. 37).

11.8 Download Manual

✓ A USB stick is plugged into the USB port on the ALC.

1. Tap ***Download Manual*** (⑧ in Fig. 12).
   ⇨ The folders on the connected USB stick are shown:

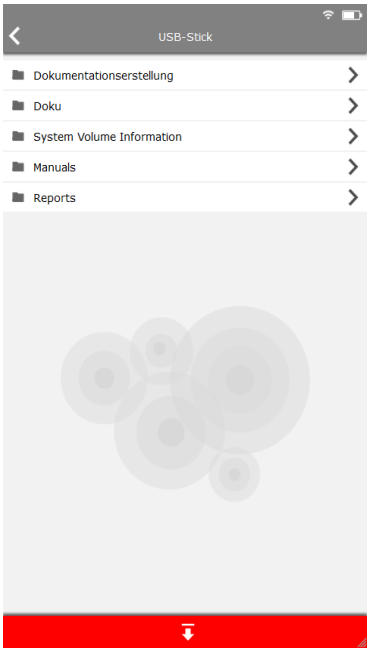
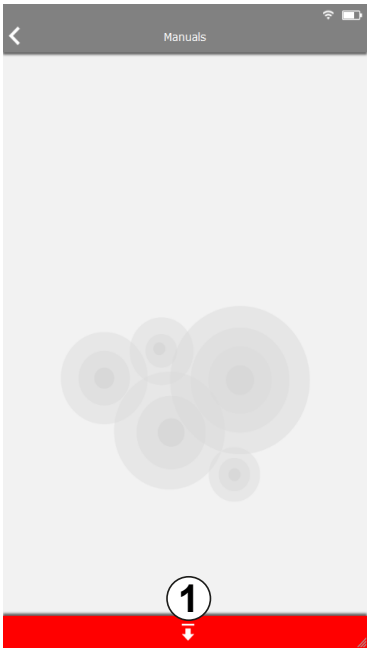


Fig. 38: Download manual: Folders

2. Select a folder to save the manual into.
   ⇨ The following page opens:



① downloads the file onto the USB stick

Fig. 39: Download manual: Folder selected

3. Press the download button (① in Fig. 39)..
   ⇨ The manual is downloaded onto the USB stick.

11.9 Download License

Downloading the licenses onto a USB stick is carried out the same way as described in *Download Manual*, p. 46 .

12 Operating the ALC in the *Devices* Mode

In this menu, it is possible to access and operate the ALDs connected to the ALC.

12.1 Searching for an ALD

✓ An ALD is connected to the ALC via the AISG port connector (HF or RS 485).

1. Tap ***Devices*** in the main menu, see ② in Fig. 11.
   ⇨ The following page appears (on the example of the ***AISG 2*** and ***AISG 3.0.0*** protocol):

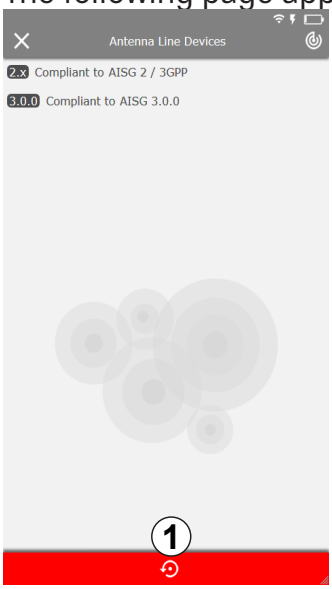


Fig. 40: Devices: Initial screen

2. Tap ***Scan*** button (① in Fig. 40) to start scanning for ALDs.
   ⇨ The scanning process starts:

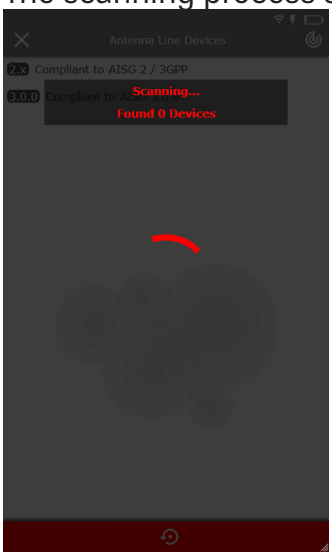
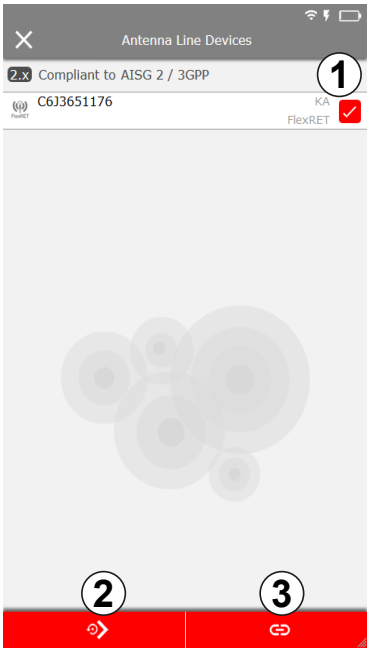


Fig. 41: Devices: Scanning

⇨ If an ALD or several ALDs have been found in the scanning process, the page looks as follows:



① selects or deselects an ALD

> **NOTE**
> If no ALD is found when scanning the AISG bus, ① is not available.

② selects the AISG protocol scanning options, see ⇛ 12.1.1, p. 50

③ connects to the selected ALD

Fig. 42: Devices: ALD found

If the connection is not possible for some reason, the following warning message appears:

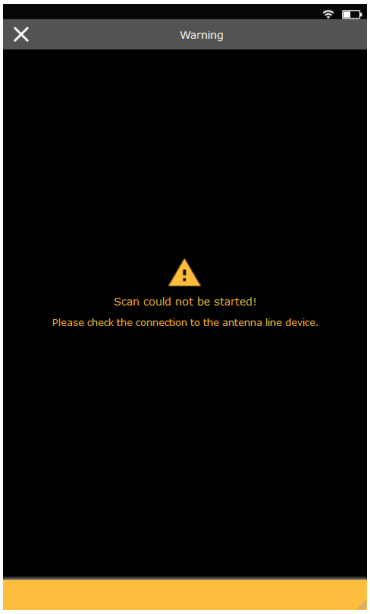


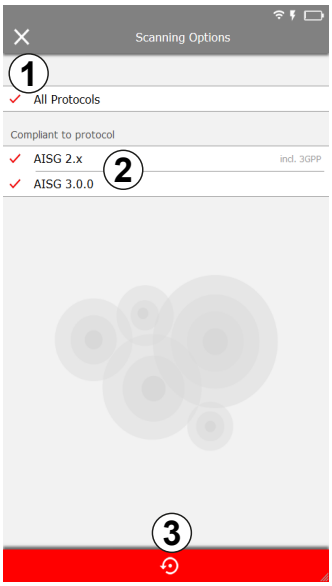
Fig. 43: Devices: Warning message “Scan could not be started“

3. To select one or several ALDs, tick the boxes next to them (① in Fig. 42).
4. Press ② to open the protocol menu and change the protocol.
5. Press ③ to connect the ALC to the selected ALD.

12.1.1 Selecting the AISG Protocol Scanning Options

► Tap ② in Fig. 42 to open the AISG protocol scanning options.

⇨ The following page appears:



① selects or deselects all scanning options

② selects or deselects individual scanning options

③ saves the protocol selection and starts the scan

Fig. 44: Devices: Scanning options

12.2 Connecting to an ALD

► Tap ③ in Fig. 42 to connect the ALC to the selected ALD.

⇨ The ALC is connecting to the ALD, the tick from ① in Fig. 42 changes to the loader circle, the bottom button dispays ***Connecting***:

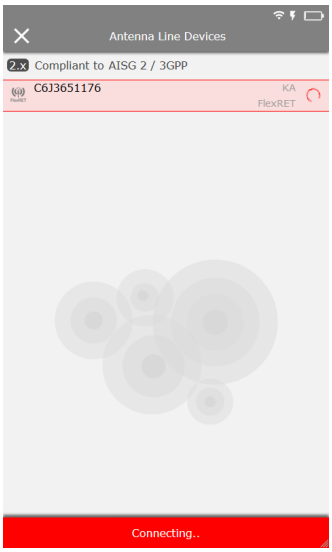
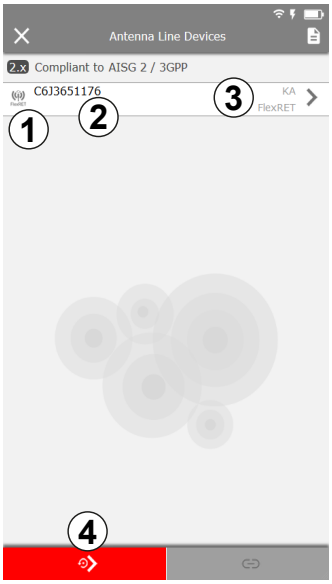


Fig. 45: Devices: Connecting to an ALD

⇨ After the ALC has established a connection to the ALD, the ***Connect*** button is grey and it is possible to see the properties of the ALD and change some settings.
The following page appears:



① shows the ALD icon

② shows the ALD serial number

③ shows the vendor code and the device type

④ opens the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 46: Devices: Connected to an ALD

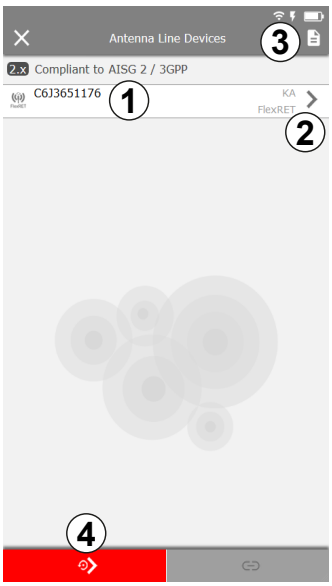
12.3 Operating the Kathrein FlexRET

Antennas with Kathrein FlexRET are factory-installed with an RFID tag. The tag contains key configuration data for the antenna. The configuration data

- is exported by the FlexRET
- is read by the ALC when scanning the AISG bus when connected to a FlexRET.

✓ The ALC has found the ALD and the ALD has been connected to the ALC, see 12.1, p. 48 and 12.2, p. 51.

✓ The following is displayed:



① opens the list with the individual subunits, see 12.3.1, p. 53

② opens the FlexRet properties, see 12.3.2, p. 57

③ generates ALD reports, see ⇛ 12.3.3, p. 58

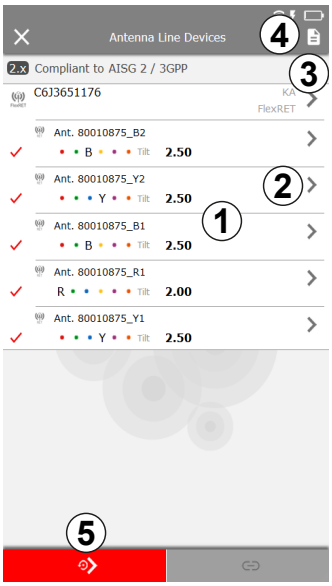
④ selects the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 47: Devices: Connected to a FlexRET

12.3.1 Configuring the FlexRET Subunits

► Tap ① in Fig. 47 to open the list with the individual subunits.

⇨ The following page appears:



① shows the list of the individual subunits

② opens the properties of the selected subunit, see ⇛ *Showing Properties of the Selected Subunit*, p. 54

③ opens the FlexRet properties, see ⇛ 12.3.2, p. 57

④ generates ALD reports, see ⇛ 12.3.3, p. 58

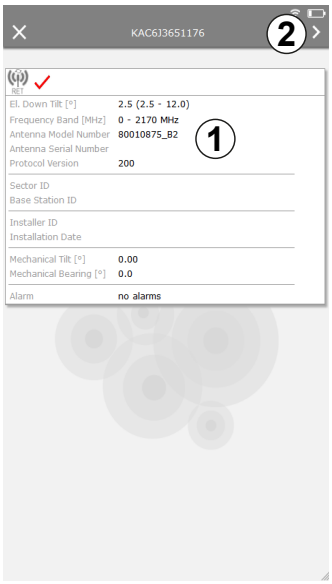
⑤ selects the AISG protocol scanning options, see ⇛ 12.1.1, p. 50

Fig. 48: Devices: Configuring the individual FlexRET subunits

Showing Properties of the Selected Subunit

► Tap ② in Fig. 48 to open the properties of the selected subunits.

⇨ The following page appears:



① shows the subunit properties

The values of the following fields are displayed and cannot be changed:

- *Tilt Range*
- *Frequency Band*
- *Antenna Model Number*
- *Antenna Serial Number*
- *Protocol Version*

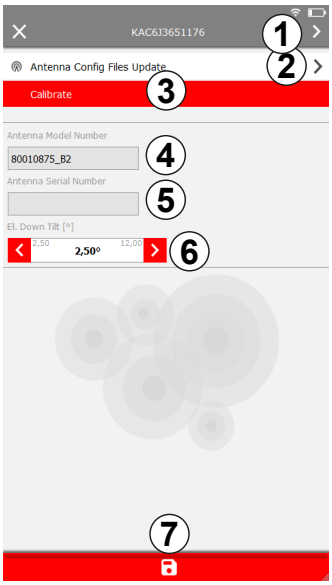
② opens the settings of the selected subunit, see ⇛ 12.1.1, p. 50

Fig. 49: Devices: Properties of the selected subunit

Changing the Settings of the Selected Subunit

► Tap ② in Fig. 49 to open the properties of the selected subunits.

⇨ The following page appears:



① opens the submenu to enter the values for the selected subunit, see ⇛ *Adding the Subunit Properties*, p. 56

② updates the antenna Config file, see ⇛ *Updating the Antenna Config File*, p. 56

③ calibrates the subunit

► To calibrate the subunit, tap ***Calibrate***.

⇨ The calibration process is carried out.

④ selects the antenna model number to which the ALD is configured for from the list; the list is only valid for Kathrein RETs

► To open the list, delete almost all the characters in the current angenna model number.

⇨ The list with antenna model numbers is opened.

> **NOTE**
> For pre-configured RETs and FLEXRets, this option is deactivated.

⑤ shows the antenna serial number; it is possible to change the antenna serial number for RETs without an RFID tag or manufacturers other than Kathrein

⑥ changes the electrical downtilt

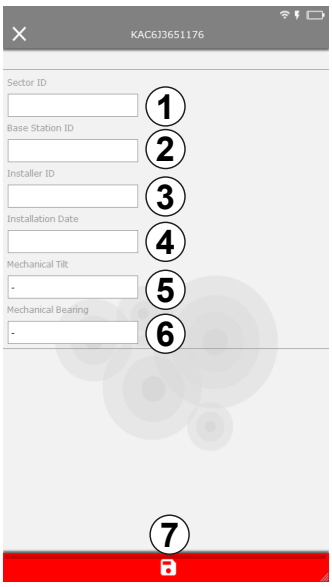
⑦ saves the changes

Fig. 50: Devices: Changing settings of the selected subunit

Adding the Subunit Properties

► Tap ① in Fig. 50 to open the list with the individual subunits.

⇨ The following page appears:



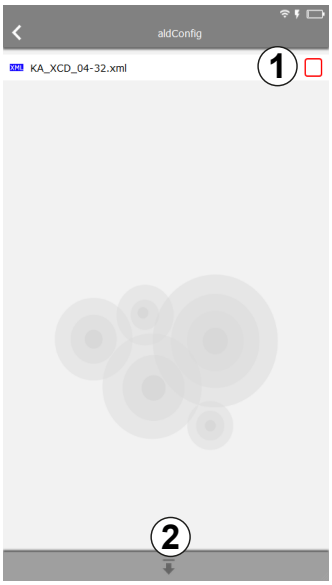
① enters the sector ID
② enters the base station ID
③ enters the installer ID
④ enters the installation date
⑤ enters the value for the mechanical tilt
⑥ enters the value for the mechanical bearing
⑦ saves the changes

Fig. 51: Devices: Adding subunit properties

Updating the Antenna Config File

► Tap ② in Fig. 50 to update the antenna Config file.

⇨ The following page appears:

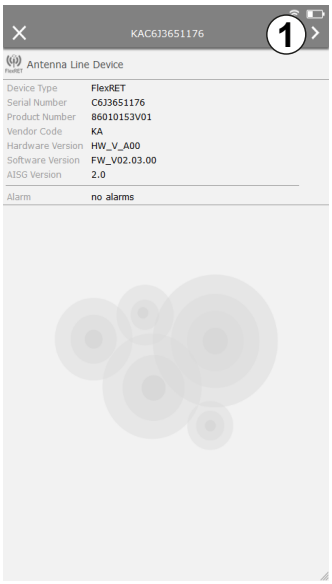


① selects the file
② downloads the file from the ALC onto the subunit
is only active (the panel and the icon change from grey to red) if a file has been selected in ①

Fig. 52: Devices: Updating the Antenan Config File

12.3.2 Changing the FlexRET Settings

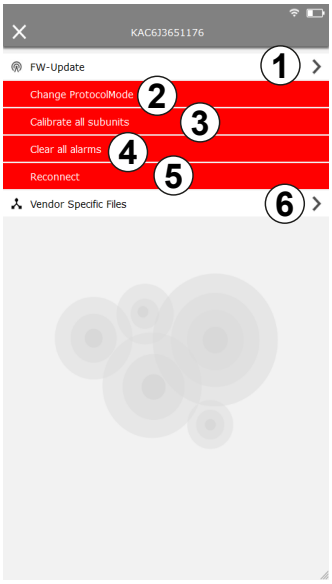
1. Tap ③ in Fig. 48 to show the FlexRET properties.
   ⇨ The following page appears:



① opens the submenu to change the FlexRET properties

Fig. 53: Devices: FlexRET properties

2. Tap ① in Fig. 53.
   ⇨ The following page appears:



① opens the page to update the FlexRET firmware; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

② opens the submenu to change the protocol mode, see ⇛ *Changing the FlexRET Protocol Mode*, p. 58

③ calibrates all subunits, cf. ③ in Fig. 50

④ clears all alarms

⑤ reconnects to the FlexRET

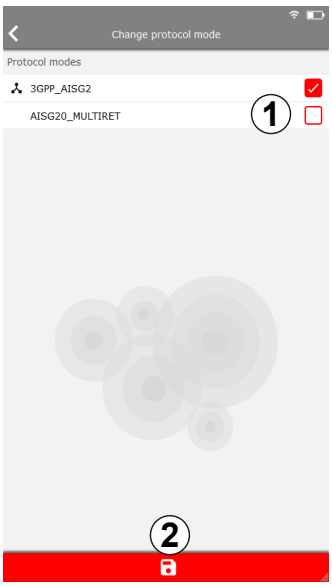
⑥ opens the page with the vendor specific files; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

Fig. 54: Devices: Changing FlexRET properties

Changing the FlexRET Protocol Mode

► Tap ② in Fig. 54 to change the FlexRET protocol mode.

⇨ The following page appears:



① selects or deselects the protocol mode between

- 3GPP_AISG: AISG 2.0 and 3GPP protocol (for single antenna/SingleRET mode) and
- AISG20_MULTIRET: 3GPP protocol (for multi-band antenna/MultiRET mode)

In SingleRET mode (factory default setting), all frequency bands are given colour coding.

In MultiRET mode, the serial number of the FlexRET module is given the extension MM and the individual frequency bands are shown as a subdevice (figure on the left). #stimmt dies noch? Ist noch aktuell?

② saves the settings

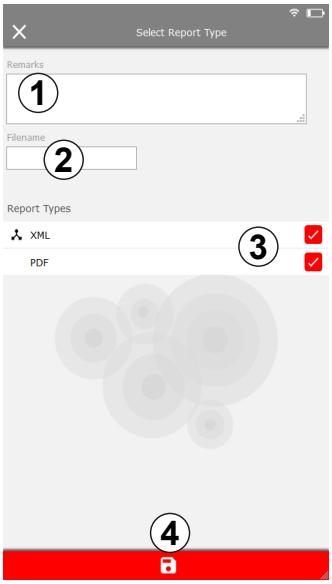
Fig. 55: Devices: FlexRET: Changing the FlexRET protocol mode

12.3.3 Selecting the Report Type

ALD reports is where the device data for the ALDs connected to the AISG bus is saved in the form of report files in the ALC internal memory.

► Tap ④ in Fig. 48.

⇨ The following page appears:



① enters remarks

② enters a a file name

③ selects between report types, ***XML*** or ***PDF***

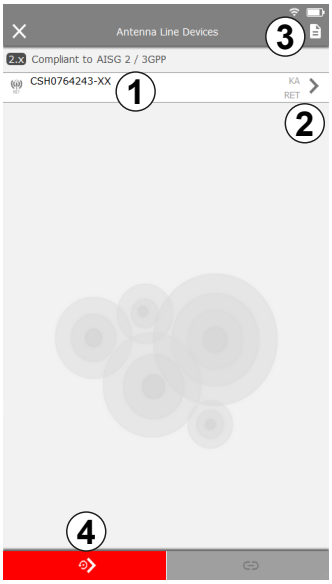
④ saves the changes

Fig. 56: Devices: FlexRET – selecting a report type

12.4 Operating the Kathrein RET

✓ The ALC has found the ALD and the ALD has been connected to the ALC, see 12.1, p. 48 and 12.2, p. 51.

✓ The following is displayed:



① opens the list with the individual subunits, see 12.4.1, p. 60

② opens the RET properties, see 12.4.2, p. 63

③ generates ALD reports, see ⇛ 12.3.3, p. 58

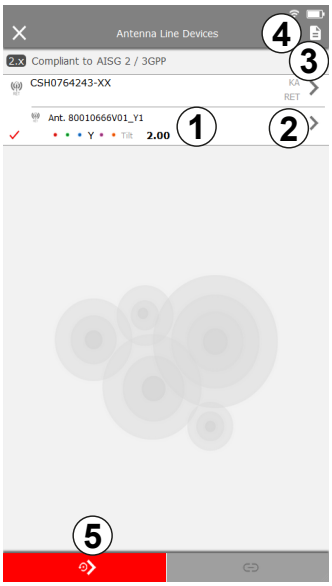
④ selects the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 57: Devices: Connected to a RET

12.4.1 Configuring the Kathrein RET

► Tap ① in Fig. 57 to open the list with the subunits.

⇨ The following page appears:



① shows the list of the subunits

② opens the subunit properties, see *Showing Properties of the RET Subunits*, p. 61

③ opens the RET properties, see ⇛ 12.3.2, p. 57

④ selects report types and generates reports, see ⇛ 12.3.3, p. 58

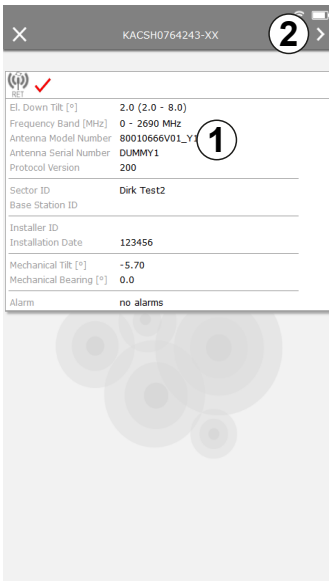
⑤ selects the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 58: Devices: Configuring the RET antenna

Showing Properties of the RET Subunits

► Tap ② in Fig. 58 to open the subunit properties.

⇨ The following page appears:



① shows the subunit properties

The values of the following fields are displayed and cannot be changed:

- ***Electric Downtilt, Tilt Range***
- ***Frequency Band***
- ***Antenna Model Number***
- ***Antenna Serial Number***
- ***Protocol Version***
- Information about the ***Sector ID*** or the ***Base Station ID***

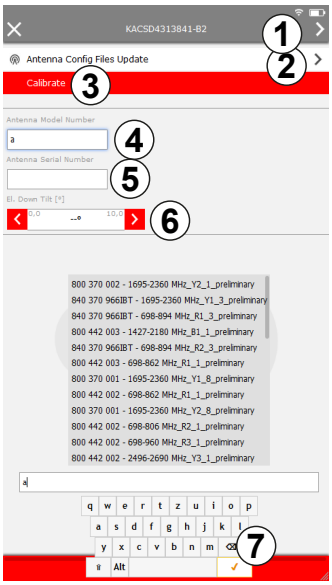
② opens the settings of the subunit, see ⇛ *Changing the Subunit Settings*, p. 62

Fig. 59: Devices: Properties of the RET subunit

Changing the Subunit Settings

► Tap ② in Fig. 59 to open the settings of the subunit.

⇨ The following page appears:



① opens the submenu to enter the values for some RET properties, see ⇛ *Adding the Antenna Properties*, p. 63

② updates the antenna Config file, see ⇛ *Updating the Antenna Config File*, p. 56

③ calibrates the subunit

► To calibrate the subunit, tap ***Calibrate***.

⇨ The calibration process is carried out.

④ selects the antenna model number to which the ALD is configured for from the list; the list is only valid for Kathrein RETs

► To open the list, delete almost all the characters in the current angenna model number.

⇨ The list with antenna model numbers is opened.

> **NOTE**
> For pre-configured RETs and FLEXRets, this option is deactivated.

⑤ shows the antenna serial number; it is possible to change the antenna serial number for RETs without an RFID tag or manufacturers other than Kathrein

⑥ changes the electrical downtilt

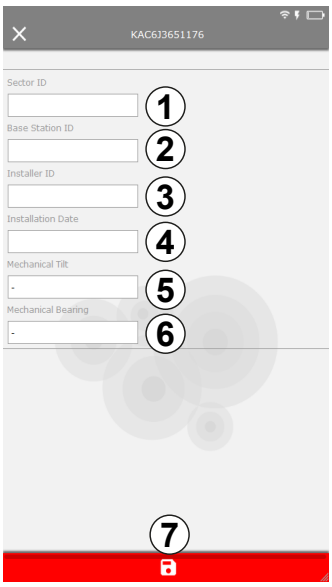
⑦ saves the changes

Fig. 60: Devices: Changing the subunit settings

Adding the Antenna Properties

► Tap ① in Fig. 60 to open the list with the individual subunits.

⇨ The following page appears:



① enters the sector ID

② enters the base station ID

③ enters the installer ID

④ enters the installation date

⑤ enters the value for the mechanical tilt

⑥ enters the value for the mechanical bearing

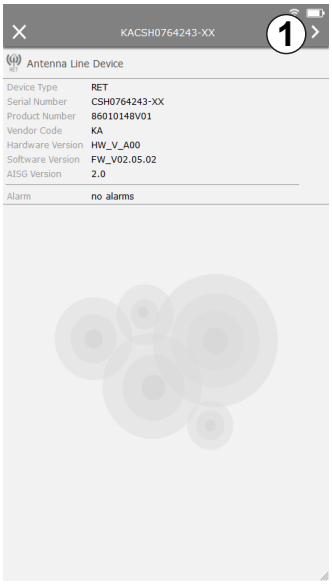
⑦ saves the changes

Fig. 61: Devices: Adding antenna properties

12.4.2 Changing the RET Settings

1. Tap ② in Fig. 57 to show the RET properties.

   ⇨ The following page appears:

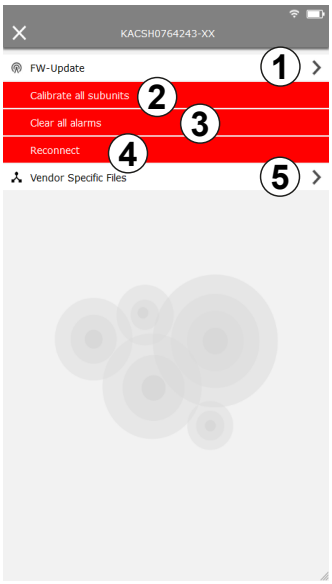


① opens the submenu to change the RET properties

Fig. 62: Devices: RET properties

2. Tap ① in Fig. 62.

   ⇨ The following page appears:



① opens the page to update the RET firmware; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

② calibrates all subunits, cf. ③ in Fig. 59

③ clears all alarms

④ reconnects to the RET

⑤ opens the page with the vendor specific files; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

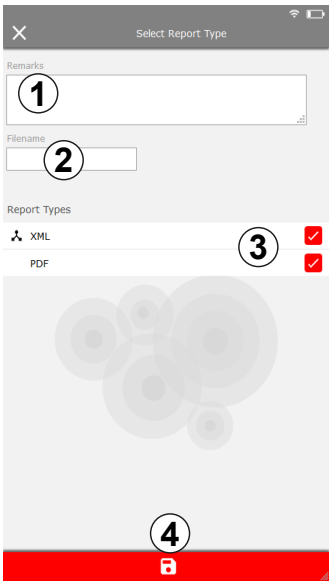
Fig. 63: Devices: Changing RET properties

12.4.3 Selecting the Report Type

ALD reports is where the device data for the ALDs connected to the AISG bus is saved in the form of report files in the ALC internal memory.

► Tap ③ in Fig. 57 or ④ in Fig. 58.

⇨ The following page appears:



① enters remarks

② enters a a file name

③ selects between report types, ***XML*** or ***PDF***

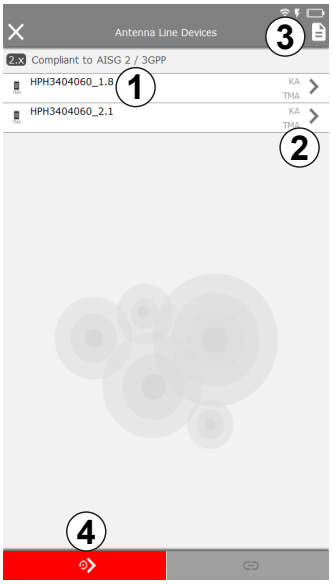
④ saves the changes

Fig. 64: Devices: RET – Selecting a report type

12.5 Operating the Kathrein TMA

✓ The ALC has found the ALD and the ALD has been connected to the ALC, see 12.1, p. 48 and 12.2, p. 51.

✓ The following is displayed:



① opens the list with the individual subunits, see 12.5.1, p. 66

② opens the TMA properties, see 12.4.2, p. 63

③ generates ALD reports, see ⇛ 12.3.3, p. 58

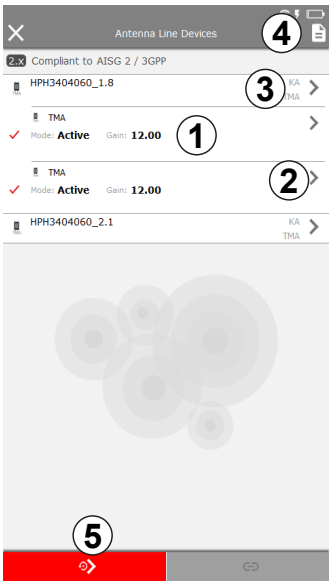
④ selects the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 65: Devices: Connected to a TMA

12.5.1 Configuring the Kathrein TMA

► Tap ① in Fig. 65 to open the list with the subunits.

⇨ The following page appears:



① shows the list of the subunits

② opens the subunit properties, see *Showing Properties of the TMA Subunits*, p. 67

③ opens the TMA properties, see ⇛ 12.5.2, p. 69

④ selects report types and generates reports, see ⇛ 12.5.3, p. 70

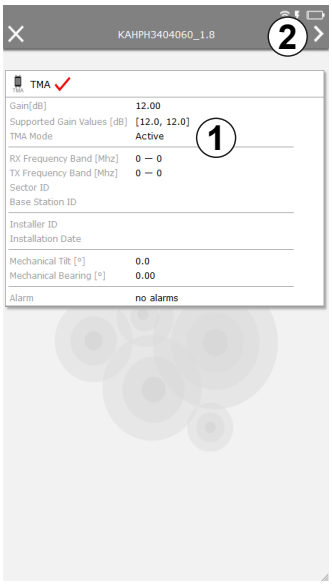
⑤ selects the AISG protocol options for reports, see ⇛ 12.1.1, p. 50

Fig. 66: Devices: Configuring the TMA

Showing Properties of the TMA Subunits

► Tap ② in Fig. 66 to open the subunit properties.

⇨ The following page appears:



① shows the subunit properties

The values of the following fields are displayed and cannot be changed:

- ***RX Frequency Band***
- ***TX Frequency Band***

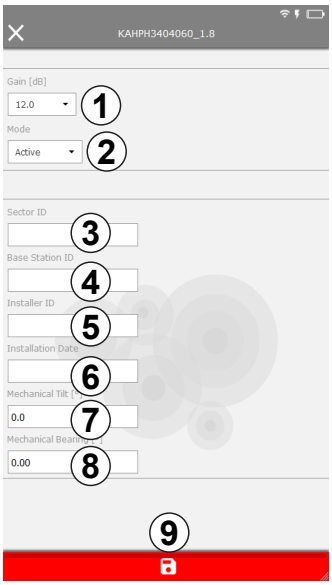
② opens the settings of the subunit, see ⇛ *Changing the TMA Subunit Settings*, p. 68

Fig. 67: Devices: Properties of the TMA subunit

Changing the TMA Subunit Settings

► Tap ② in Fig. 67 to open the settings of the subunit.

⇨ The following page appears:

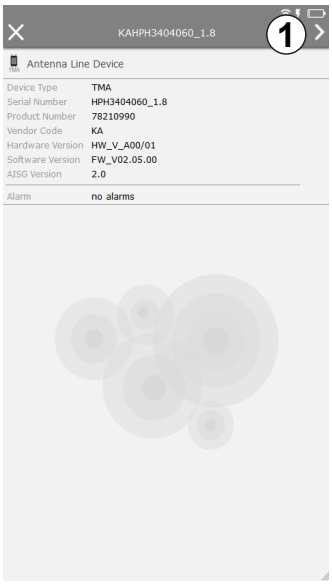


① changing the gain
② changing the mode between ***Active*** and ***Bypass***
③ enters the sector ID
④ enters the base station ID
⑤ enters the installer ID
⑥ enters the installation date
⑦ enters the mechanical tilt
⑧ enters the mechanical bearing
⑨ saves the changes made in ①-⑧

Fig. 68: Devices: Changing the TMA subunit settings

12.5.2 Changing the TMA Settings

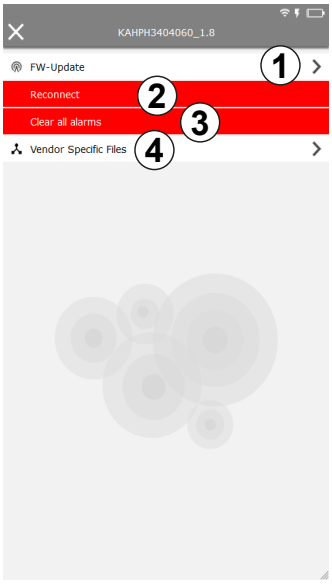
1. Tap ③ in Fig. 66 to show the TMA properties.
   ⇨ The following page appears:



① opens the submenu to change the TMA properties

Fig. 69: Devices: TMA properties

2. Tap ① in Fig. 69.
   ⇨ The following page appears:



① opens the page to update the RET firmware; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

② reconnects to the TMA

③ clears all alarms

④ opens the page with the vendor specific files; it is only possible if a file has been uploaded onto the ALC in ***System Configuration/File Management ALD***, see ⇛ *Managing ALD Files*, p. 36

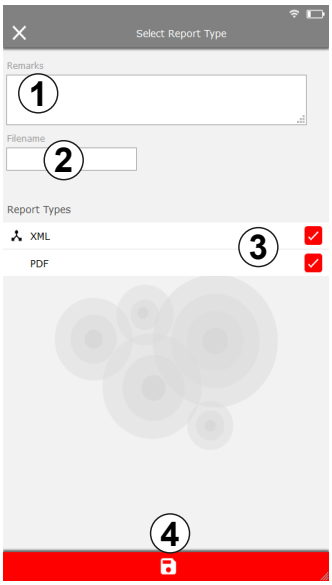
Fig. 70: Devices: Changing TMA properties

12.5.3 Selecting the Report Type

ALD reports is where the device data for the ALDs connected to the AISG bus is saved in the form of report files in the ALC internal memory.

► Tap ③ in Fig. 57 or ④ in Fig. 66.

⇨ The following page appears:



① enters remarks

② enters a a filename

③ selects between report types, ***XML*** or ***PDF***

④ saves the changes

Fig. 71: Devices: TMA – Selecting a report type

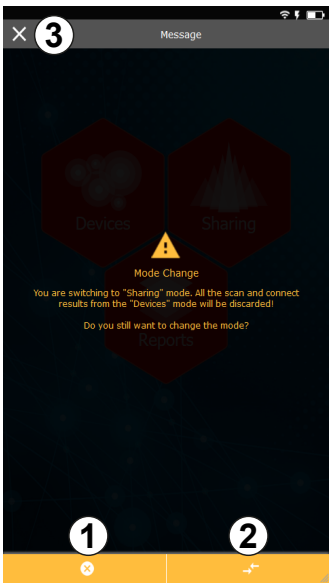
13 Operating the ALC in the *Sharing* Mode

In this menu, it is possible to access and operate the site-sharing adapter connected to the ALC.

13.1 Searching for an Site-Sharing Adapter

✓ An site-sharing adapter is connected to the ALC.

1. Tap ***Sharing*** in the main menu, see ③ in Fig. 11.
   ⇨ The following page with a warning message appears:



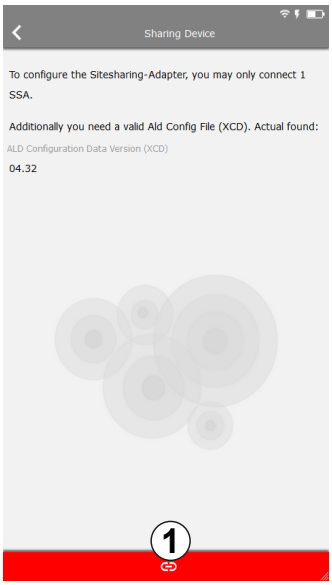
① cancels the mode change and returns to the main menu

② changes the ALC mode to the ***Sharing*** mode

③ closes the warning message and returns to the main menu

Fig. 72: Sharing: Warning message

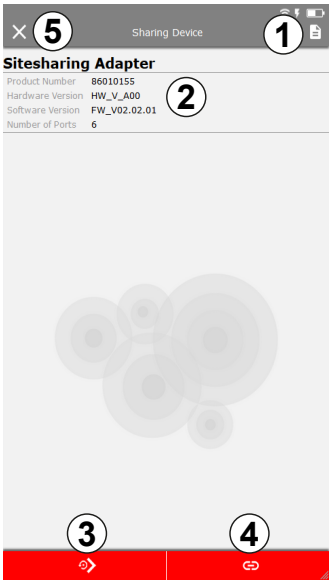
2. Tap ***Mode Change*** button (② in Fig. 72) to change the ALC mode.
   ⇨ The following information is displayed:



① changes the ALC mode to the ***Sharing*** mode

Fig. 73: Sharing: Site-sharing adapter configuration information

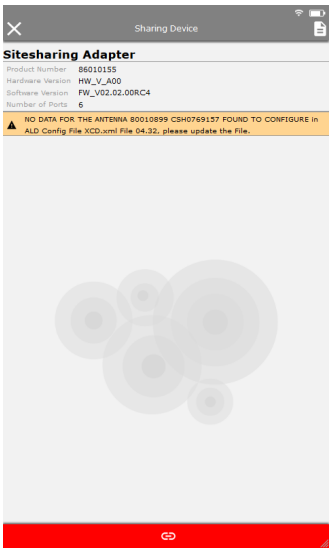
3. Tap the ***Connect*** button (① in Fig. 73).
   ⇨ The scanning process starts. After a site-sharing adapter has been found, the following page appears:



① selects a report type, see ⇛ 12.5.3, p. 70
② shows the site-sharing adapter information
③ re-scans the site-sharing adapter
④ opens the site-sharing adapter settings menu, see ⇛ 13.3, p. 74
⑤ closes the page and returns to the main menu

Fig. 74: Sharing: Site-sharing adapter information

   ⇨ The following error mesage appears if there is no data for the connected ALD:



① selects a report type, see ⇛ 12.5.3, p. 70
② shows the site-sharing adapter information
③ re-scans the site-sharing adapter
④ opens the site-sharing adapter settings menu, see ⇛ 13.3, p. 74
⑤ closes the page and returns to the main menu

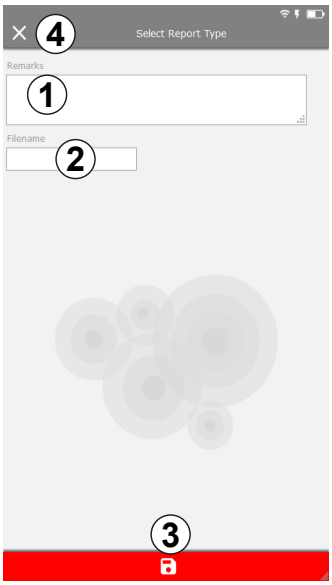
Fig. 75: Sharing: Site-sharing adapter information - error

4. Contact Kathrein to receive a new XCD.xml file.

13.2 Creating a Site-Sharing Report

► Tap ① in Fig. 74.

⇨ The following page appears:



① enters remarks

② enters a a file name; the date and the installer ID is added to the file name automatically if the installer ID has been added in ***User Configuration/ Installer ID***; see ⇛ 11.6, p. 41

③ saves the changes

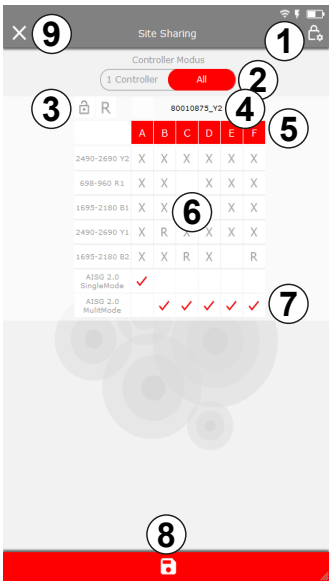
④ closes the page

Fig. 76: Sharing: Selecting a report type

13.3 Configuring the Site-Sharing Adapter Settings

► Tap ④ in Fig. 74 to open the site-sharing adapter settings.

⇨ The following page appears:



① opens the ***Password Options***, see ⇛ 13.3.1, p. 75

② changes the controller mode between ***1 Controller*** and ***All***

③ shows whether the password has been activated in the ***Password Options***

- the lock is open if no password has been set
- the lock is closed if a password has been set

④ displayes the model number of the connected FlexRet

⑤ selects the antenna array

► Tap a box to change the antenna array setting:

- ***X*** = array is selected (full access)
- ***R*** = *read only* (display of the array only; modification not possible)
- <*blank*> = array is not selected (no access)

⑥ selects the AISG protocol

► Tap a box to change the AISG protocol and betwee MultiMode and Singlemode.

⑦ saves changes

⑧ closes the ***Controller Mode*** and returns to the previous page

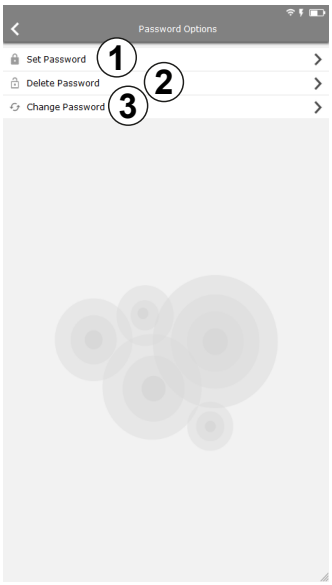
⑨ list of base stations; the number of base stations depends on the type of site-sharing adapter

Fig. 77: Sharing: Operating the site-sharing adapter settings

13.3.1 Operating *Password Options*

► Tap ① in Fig. 77 to opend the ***Password Options***.

⇨ The following page appears:



① sets a password, see ⇛ 13.3.1, p. 75

② deletes the password, see ⇛ 13.3.1, p. 75

③ changes the password, see ⇛ 13.3.1, p. 75

shows whether the password has been activated in the ***Password Options***

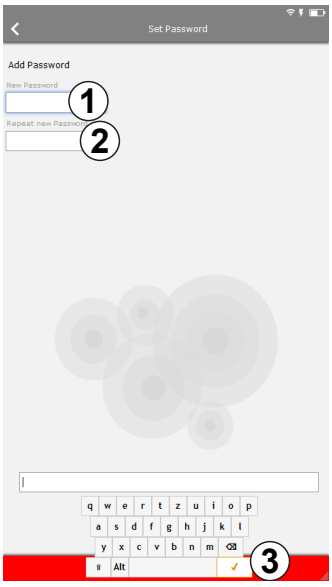
- the lock is open if no password has been set
- the lock is closed if a password has been set

Fig. 78: Sharing: Password options

Setting a Password

1. Tap ① in Fig. 78.

⇨ The following page appears:



① enters a new password

② repeats the new password

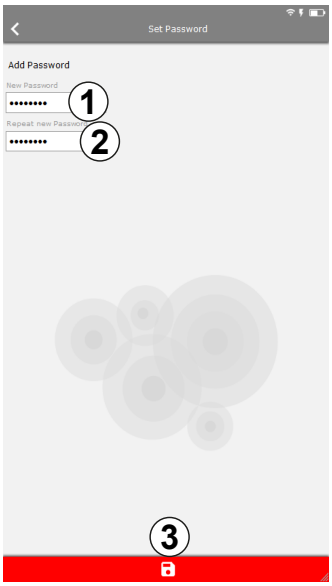
③ confirms the password

Fig. 79: Sharing: Password options - setting a new password

2. Tap the ***New Password*** field.
3. Enter the password by means of the alphanumeric keyboard.
4. Confirm the password by pressing the tick (③ in Fig. 79).

5. Tap the ***Repeat New Password*** field.
6. Enter the password again by means of the alphanumeric keyboard.
7. Confirm the password by pressing the tick (③ in Fig. 79).

⇨ The page looks as follows:



① shows that a new password has been entered

② shows that a new password has been re-entered

③ saves the password

Fig. 80: Sharing: Password options - saving a new password

8. Tap the ***Save*** button to save the entered password.

⇨ The lock on the page with the site-sharing adapter settings is locked showing that a password has been set:

① shows that a password has been set

Fig. 81: Sharing: Password options - a new password has been set

⇨ To make any changes, the user now needs to enter the password:

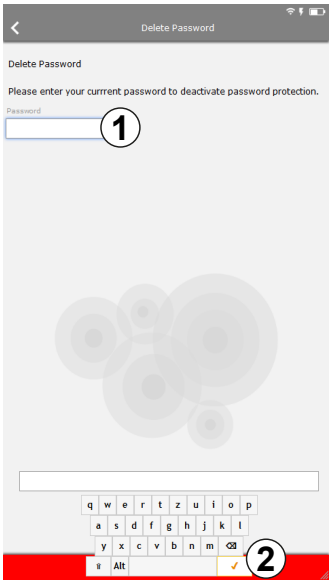
① enteres the password

② confirms that the password has been entered correctly

Fig. 82: Sharing: Password options - a new password has been set

Deleting the Password

1. Tap ② in Fig. 78.
   ⇨ The following page appears:



① enters the current password

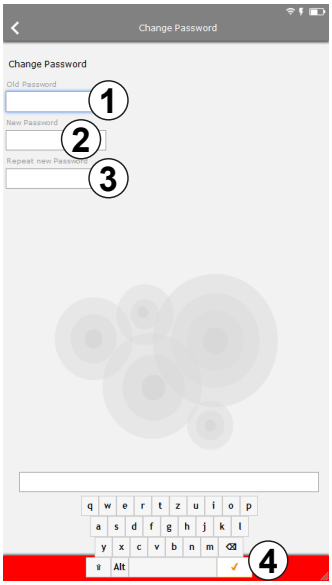
② confirms that the password has been entered correctly

Fig. 83: Sharing: Password options - setting a new password

2. Tap the ***Password*** field.
3. Enter the current password by means of the alphanumeric keyboard.
4. Confirm the password by pressing the tick (② in Fig. 83).
5. Tap the ***Save*** button to delete the password.
   ⇨ The password has been deleted:

Changing the Password

1. Tap ③ in Fig. 78.
   ⇨ The following page appears:



① enters the old password
② enters the new password
③ re-enters the new password
④ confirms that the password has been entered corectly

Fig. 84: Sharing: Password options - setting a new password

2. Tap the ***Old Password*** field.
3. Enter the old password.
4. Tap the ***New Password*** field.
5. Enter the new password.
6. Tap the ***Repeat New Password*** field.
7. Re-enter the new password.
8. Tap the ***Save*** button to confirm the change of the password.
   ⇨ The password has been saved:

14 Creating ALD and Site-Sharing Reports

In this menu, it is possible to access and the ALD and site-sharing reports. The filing structure for the report files is as follows:

Folder	Subfolder	File
reports	*ald_reports*	ALD report
	site_configuration_reports	Site configuration report

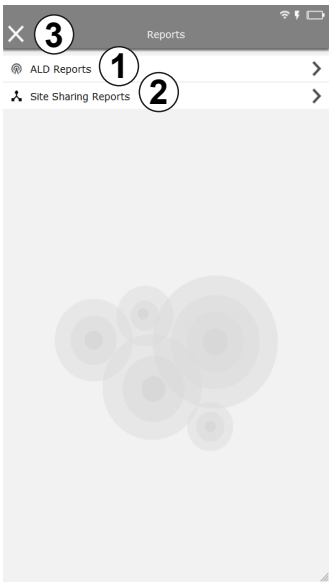
- The file name uses the following format: <***File Name***>_yyyy-mm-dd_hh-mm-ss.<suffix>, e.g. TEST_2015-10-14_08-30-23.txt.
- The date ant time at which the report has been created are determined automatically by the ALC.
- The Filename is part of the ALD report. It is possible to enter 56 characters for the filename. If the installer ID has been set in ***Setup*** ▸ ***User Configuration*** ▸ ***Installer ID***, it is set as a filename
- It is possible to choose the format of the report file.
- For security reasons, the files have the following properties:

Printing: Allowed
Copying/editing contents: Not allowed
Commenting: Not allowed

14.1 Opening the Reports Submenu

✓ The options for the reports have been selected in the ***Select Report Type*** submenus for the corresponding ALDs.

1. Tap ***Reports*** in the main menu, see ④ in Fig. 11.
   ⇨ The following page appears:



① opens options for ***ALD Reports***, see
② opens options for ***Site-Sharing Reports***, see
③ closes the page and returns to the main menu

Fig. 85: Reports

14.1.1 Managing ALD Reports

NOTE

The filenames of the report files will display the *installer ID* if it has been previously set in ***Setup*** ▸ ***User Configuration*** ▸ ***Installer ID***. For instance, in the example below, the installer ID has been set to *LAD*.

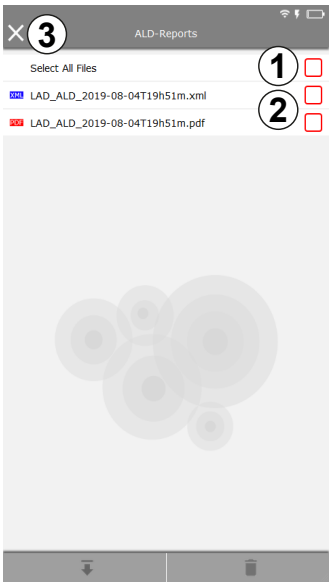
If the ***installer ID*** has been entered, the reports files have the following name structure: *Installer ID_Type of the report (ALD or Sitesharing)_Date_Timestamp*.

The filenames of the report files will display the *filename* if it has been previously set in ***Devices*** ▸ ***Select Report Types*** or ***Sharing*** ▸ ***Select Report Types***. For instance, in the example below, the filename has been set to *flexret site sharing*.

If the ***Filename*** has been entered, the reports files have the following name structure: *Filename_Type of the report (ALD or Sitesharing)_Date_Timestamp*.

If neither an installer ID or a filename have been previously set, the report files will have the following structure:
_Type of the report (ALD or Sitesharing)_Date_Timestamp.

1. Tap ***ALD Reports*** (① in Fig. 85) to open ALD reports.
   ⇨ A list with the reports is displayed:



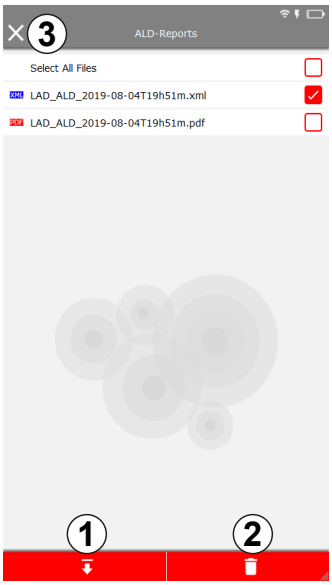
① selects all files

② selects one or several files

③ closes the page and returns to the previous menu

Fig. 86: Reports: ALD reports

2. Select the required files.
   ⇨ The ***Download*** and ***Delete*** button are activated:

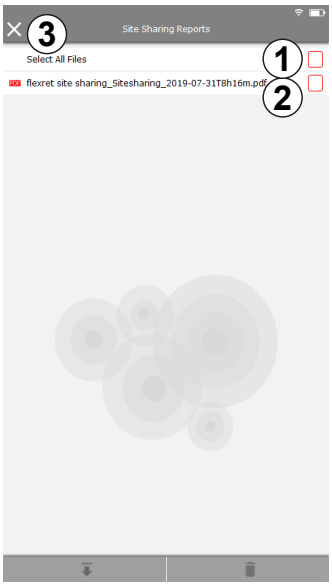


① downloads the selected files onto a USB stick
② deletes the selected files
③ closes the page and returns to the previous menu

Fig. 87: Reports: ALD reports

14.1.2 Managing Site-Sharing Reports

1. Tap ***Site-Sharing Reports*** (② in Fig. 85) to open ALD reports.
   ⇨ A list with the reports is displayed:



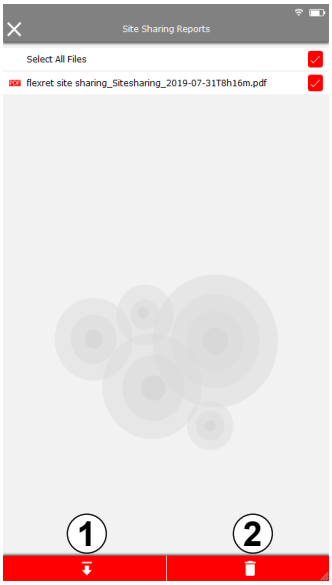
① selects all files

② selects one or several files

③ closes the page and returns to the previous menu

Fig. 88: Reports: Site-sharing reports

2. Select the required files.
   ⇨ The ***Download*** and ***Delete*** button are activated:



① downloads the selected files onto a USB stick

② deletes the selected files

③ closes the page and returns to the previous menu

Fig. 89: Reports: ALD reports

15 Disposal

Dispose of this product in accordance with all national legislation and regulations.

Electronic equipment is not domestic waste – in accordance with directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL dated 27 January 2003 on waste electrical and electronic equipment – and it must be disposed of properly.
At the end of its service life, take this unit for disposal at a designated public collection point.

16 Appendix

16.1 Disclaimer

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Kathrein SE; Anton Kathrein Strasse 1 – 3; 83022 Rosenheim (hereinafter referenced as 'Kathrein') agrees to grant to Customer, and Customer accepts, a license to the identified Licensed Software to the terms and conditions of this agreement.

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3.3 Customer acknowledges its responsibility to use all reasonable methods to prove out and thoroughly test the operation of and output from Licensed Software prior to its use in Customer's operations.

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3.5 In the event that any unauthorized modifications are made to Licensed Software by Customer, any and all warranty and other obligations of Kathrein shall immediately cease with respect to such software.

4. INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS AND INDEMNIFICATION

4.1 Subject to the conditions and limitations set forth in this section 4, Kathrein shall pay all costs and damages finally awarded against Customer or its employees to the extent based upon a claim that Licensed Software, as supplied, infringes a patent, copyright or any other intellectual property right of a third party (except infringement occurring as a direct result of incorporating features, operations or algorithms which are specifically required by Customer), provided that Kathrein is notified promptly in writing of any allegation of such infringement and given full cooperation, information, and authority to settle such claim and to defend or control the defense of any suit, action or proceeding based upon such claim.

4.2 If, as a result of an infringement claim as specified under section 4.1 above, Licensee becomes enjoined or is likely to become enjoined from using Licensed Software, Kathrein shall, at its option and expense, procure for Customer the right to continue using Licensed Software; or, modify Licensed Software to make it non-infringing but functionally equivalent; or, substitute other software of similar capabilities. If Kathrein determines that none of these alternatives is reasonably available, Customer shall, upon written request from Kathrein, return the Licensed Software that is the subject of the infringement claim, and Kathrein shall refund to Customer the license fee paid by Customer therefore, less twenty percent (20%) for each elapsed year or portion thereof since the date of this Agreement. However, Kathrein has no obligation of indemnity for any claim of infringement arising from Customer's modification of the Licensed Software, data, or its combination, operation, or use with any software, data, or equipment not specified by Kathrein, or use of a superseded or altered release of the Licensed Software. In no event shall Kathrein's liability under this Paragraph 4 exceed the total amount of all license fees paid by Customer hereunder for the Licensed Software that is the subject of the infringement claim. This section 4 states Kathrein's entire obligation and customer's exclusive remedy with respect to any claim of infringement of any third party intellectual property rights, including but not limited to any patent rights, copy rights, utility models, design patents, trademarks, trade names, trade secRETs, know how and any other similar rights or intangible assets recognized under any law.

5. LIMITATION OF LIABILITY

5.1 Customer and Kathrein agree that the license fees for licensed Software would not adequately compensate Kathrein for assuming all risk associated with performance, breach or non-performance of this agreement, and that to avoid having to increase its license fees to adequately protect against such unlimited risk Customer and Kathrein agree to the limitation of Kathrein's liability as set forth in this article 5.

5.2 Kathrein's liability is not limited for damages caused by the lack of properties expressly guaranteed by Kathrein, for damages out of bodily injuries or for damages caused by fraud or gross negligence.

5.3 Except for the cases expressly set forth in section 5.2, Kathrein's liability shall be limited to a maximum amount of two (2) license fee per single event and to an aggregate amount of four (4) license fees for the entire term of the agreement. Moreover Kathrein shall not be liable for any incidental, indirect, consequential, untypical, unpredictable or punitive damages, including but not limited to lost profits or revenues, costs of delay, business interruption, costs of lost or damaged data or documentation of liabilities of Customer to third parties arising from any source, even if Kathrein has been advised of the possibility of such damages. Especially, Kathrein shall not be liable for any damage resulting from an interruption of the operation of any mobile communication network.

5.4 The liability according to the German 'Produkthaftungsgesetz' remains unaffected (§ 14 ProdHaftG).

5.5 The limitation of liability according to this section 5 applies to any kind of liability regardless whether based on contract, tort or any other legal theory.

5.6 This article 5 shall survive any termination or expiration of this agreement.

6. TERM AND TERMINATION

This Agreement shall continue indefinitely unless terminated by one of the parties. This Agreement may be terminated by Customer upon thirty (30) days notice to Kathrein and by Kathrein upon breach of any term of this Agreement, which breach is not cured within thirty (30) days after written notice by Kathrein, or should Customer cease business operations, be adjudged a bankrupt or become a party to a similar proceeding for the benefit of its creditors. Immediately after such termination, Customer will cease use of Licensed Software, delete all parts of Licensed Software from its Hardware and deliver any and all copies and modifications of Licensed Software to Kathrein and, if requested, provide Kathrein with its written certification that no copies have been retained.

7. TAXES

Except for taxes based on Kathrein's income, Kathrein shall not be responsible for any federal, state or local taxes based upon Customer's purchase, possession or use of Licensed Software or upon any charges payable or services performed hereunder.

8. APPLICABLE LAW, INTEGRATION AND MODIFICATION

8.1 This agreement shall be governed, interpreted and enforced according to the laws of Germany, not including any conflict of law provisions thereof and not including the CISG (UN-Convention on the International Sale of Good/ UN-Kaufrecht). Place of jurisdiction shall be Traunstein, Germany.

8.2 This Agreement comprises the full and final understanding between Kathrein and Customer, and merges and supersedes any and all other agreements, understandings or representations, written or oral, with respect to the subject matter hereof. It may not be modified except by a writing signed by authorized representatives of both Kathrein and Customer, and referring specifically to this Agreement.

8.3 Waiver by any party of the breach of a provision of this Agreement by the other party shall not be construed as a continuing waiver of such provision or waiver of any other breach of any other provision of this Agreement.

8.4 Severability

If any provision of this agreement is invalid or unforceable under any applicable law or regarded as invalid or unforceable by any applicable court decision, the parties agree that such invalidity or unenforceability shall not affect the validity or enforceability of the remaining provisions and further agree to substitute for the invalid or unenforceable provision a valid and enforceable provision which most closely approximates the intent and economic effect of the invalid provision within the limits of applicable court decisions.

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16.2 FCC Statements

Warning Statements FCC § 15.21

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Statement FCC § 15.19

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

16.3 IC Statements

Canada CNR-Gen Section 7.1.3

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

17 Adresses

For questions about markerting, contact:

Fax: +49 8031 184-820
E-mail: central.sales@kathrein.de

RET hotline for technical information:

Fax: +49 8031 184-973
E-mail: antennas.mobilcom@kathrein.de

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