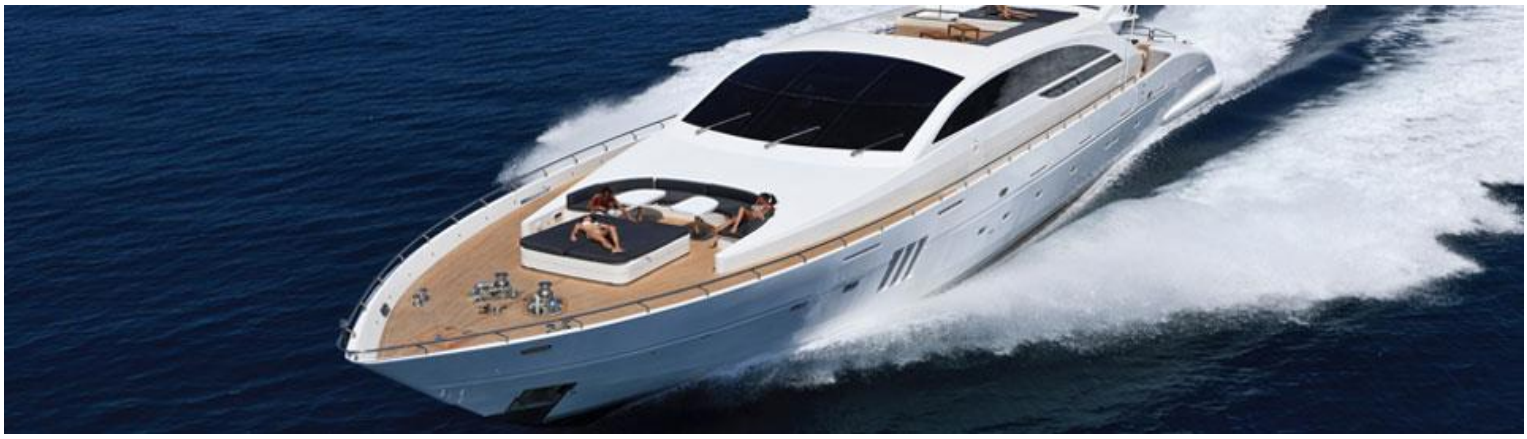

USER MANUAL

MORE INFORMATION AND MANUALS IN FURTHER LANGUAGES ARE AVAILABLE AT HTTP://WWW.SEAANGEL.AT

Model: SA15 AIS FLARE

Maritime distress beacon

FT-TEC Electronics GmbH

Werner von Siemens Str. 5

A-7343 Neutal

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Fax: +43 2618 20455-9010

Email: office@ft-tec.com

Website: www.ft-tec.com

English

Table of contents

Subject to technical changes and printing errors.
All figures are sample images.

1 Legal Notice

1.1 Where to use your SEAANG

This equipment will work all around the world
but it may only be purchased and registered in the following countries:

AT, BA, BG, BE, CH*, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GE, GR, HR, HU, IE, IS, IT, LI*, LT, LU, LV, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, US

* must not be activated within the national borders of CH and LI due to national radio license plans.

1.2 National requirements

This equipment may be subject to national registration and/or licensing requirements. In some countries even a fee may be levied.

Please verify with your national radio authorities!

The use of this equipment requires a license in the following countries:

AT, BA, ES, HR, HU, IE, LU, LV, SI - **This list may not be complete! Check with your local authorities!**

Depending on your product there may be a DSC function implemented. The use thereof is subject to national regulations. The function therefore is disabled by default (see “Enabling DSC” for more information).

1.3 Standards and Norms

This product meets the following requirements:

- **Marine Equipment Directive (MED) 96/98/EC + Directive 2015/559**
- **Directive 99/5/EC (R&TTE)**

For further details, please, refer to http://seaangel.at and go to the page corresponding to your product.

2 Knowing your SEAANGEL

Your new SEAANGEL is an advanced AIS search and rescue transmitter (SART/MOB). When activated, your SEAANGEL will transmit standardized messages containing its exact GPS position and a request for help to any nearby ship or plane hosting an AIS receiving unit within its transmission range. This makes it easy to find a person in distress, and thus significantly increases the chances of survival.

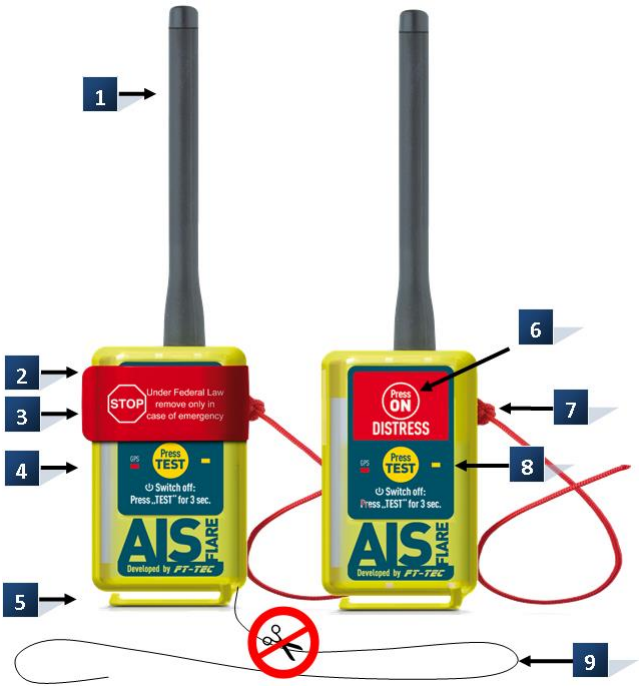


Figure 1: Description of individual components

1. Antenna
2. Flash LED (white)
3. Protective bracket
4. Red LED indicating activation
5. Belt clip
6. *ON* button to activate
7. Ripcord
8. *TEST* button & LED
9. Antenna Extension (increases transmission range)

3 Handling the SEAANGEL

3.1 Activating your SEAANGEL

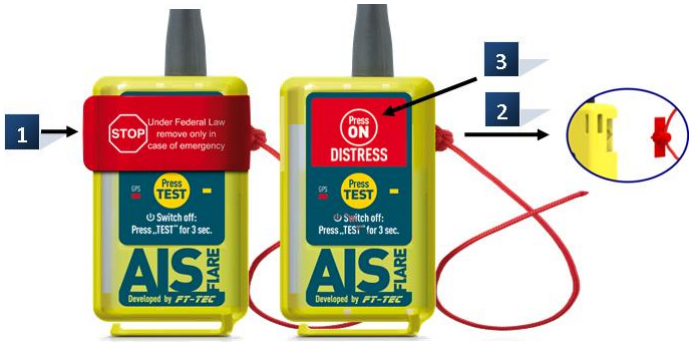


Figure 2: Activating the emergency alarm using the ripcord

1. Remove the protective bracket 1.
2. Pull the ripcord to remove the magnet switch from its position 2
   OR Press the *ON* button 3.
3. The SEAANGEL will remain activated until explicitly deactivated.

Make sure you do not lose the ripcord.
You need it to deactivate the device.

Keep the ripcord magnet away from sensitive components such as compasses and cards with magnetic strips like credit cards.

For proper working please make sure that the antenna is above the water surface!

3.2 Understanding the LEDs

For results of self-test, refer to **Table 2**, page 11.

Table 1: Status LEDs

Which LED	Signal	Meaning
Flash LED	▭ ▭ ▭ ▭	Device activated
Red LED	▬ ▬ ▬ ▬ ▬▬▬▬	GPS position determined GPS position (yet) unknown
Yellow LED		Only active during selftest

Info: A long bar symbolizes continuous glowing, a broken bar a flashing signal.

3.3 Deactivating your SEAANGEL

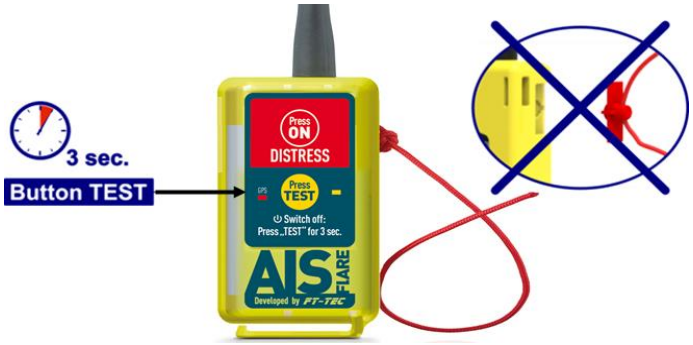


Figure 3: Deactivating the SEAANGEL

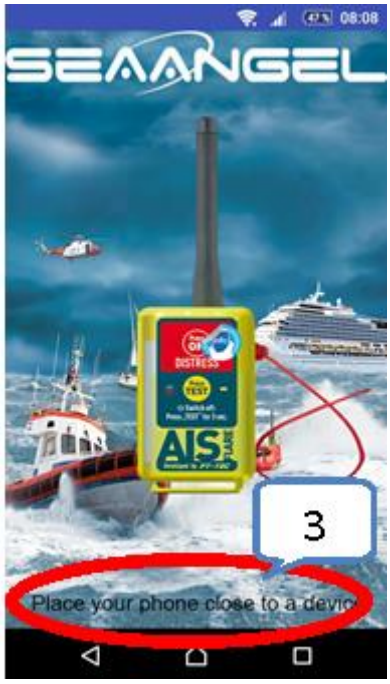
1. Make sure the ripcord is in place.
2. Hold the *Test* button down for more than 3 seconds until both LEDs (red and yellow) light up.
3. Release the *Test* button.
4. All status LEDs will go dark.

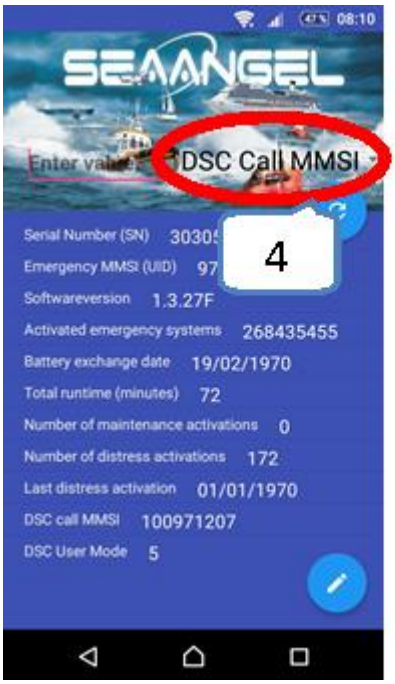
4 Configuring your SEAANGEL

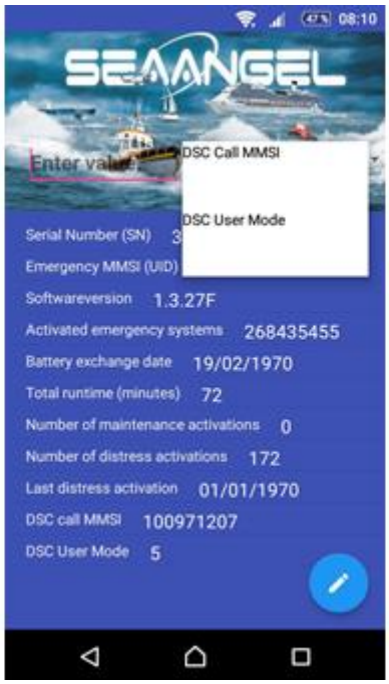
The App is currently available for Android devices (5.0.1 and newer) only.
The mobile device needs to feature a NFC chip, the NFC function needs to be activated in the settings.

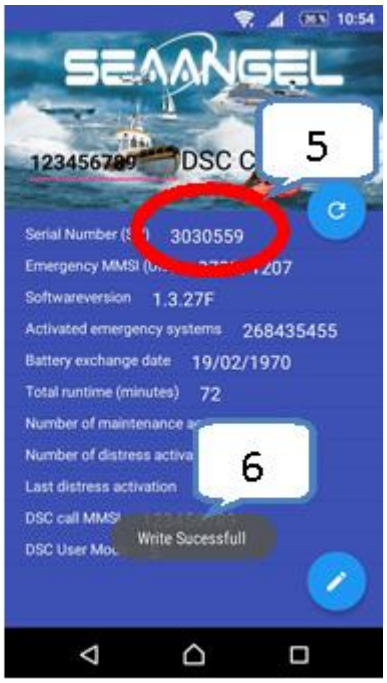
1. Go to the app store and download the “DSC App” by FT-TEC. Alternatively you can get it also from https://seaangel.at/downloads.2792.html

2. Tap on the app’s icon to open the app.
3. Place the mobile above the SEAANGEL to read the current configuration.
4. Select the parameter you want to edit.
5. Then enter the data.
6. The app will inform you whether the writing was successful or not.









4.1 Standard Options

Depending on your model, probably most of the options are locked, but their settings may be looked up for your personal convenience.

Most important parameters
Serial number
Emergency MMSI number
Battery exchange date (also indicated on back of device)
Total runtime (gives a clue to current battery state)
Number of maintenance activations
Number of distress activations
Last distress activation

4.2 DSC Options

DSC calls are subject to national rules and may vary considerably. Please, inquire with the national authorities which DSC functions may be used in your country.

DSC functions are therefore disabled by default.

All DSC calls require a valid MMSI to be set (see section “Configuring your SEAANGEL SA15”).

Table 2: Legal restrictions for DSC functions

Function	Countries concerned
Not allowed	CA FR, DK, LV
Simple calls only	DE, NL, UK
Group calls	USA (after 30 minutes)
All Ship calls	all other European countries

DSC Call MMSI

Enter the MMSI number of the vessel you want to be informed of your distress situation.

DSC User Mode

Valid Modes ⇨	1	3	4	5	7
Distress Call	x	x		x	x
Group Call		x			x
All Ships Call			x	x	x

All other values will be ignored!

5 Testing your SEAANGEL

THE SELF-TEST CANNOT CHECK ALL COMPONENTS. THEREFORE NO GUARANTEE OF THE DEVICE'S FUNCTIONALITY CAN BE PROVIDED.

These components will be checked: battery, GNSS receiver, VHF transmitter

Execute the self-test every year but only once a year.

Ideally, you should run the self-test in good weather with a clear view to the sky, so that a GPS position can definitely be determined.

5.1 Testing the DSC functionality

Do not perform the DSC test more than 3 times per year in order to avoid early depletion of the battery.

1. Make sure your device is correctly configured.
2. Press the *Test* button 1 (see picture below) for 5 seconds until the yellow led glows steadily.
3. The test is successful if your ships radio receives the message.

5.2 Activating the AIS self test

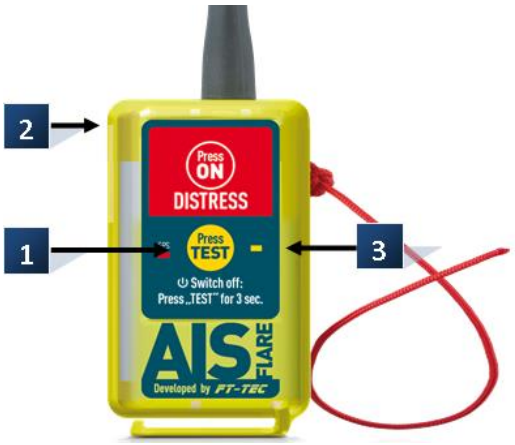


Figure 4: Activating the test operation

4. Press the *Test* button 1.
5. The Flash LED 2 will flash once only to indicate the start of the test.
6. The yellow Status LED 3 will flash during the self-test.
7. **Keep your eyes on the LEDs.** The results will only be displayed for 5 seconds after the test.

Refer to

8. **Table 3:** Status LEDs as part of the self-test to read the results.
9. The device will automatically shut down.

5.3 Interpreting the AIS self-test result

Table 3 lists the possible results which can be issued via the red and yellow Status LEDs respectively at the end of the self-test. If the test is not successful, please contact the FT-TEC Electronics GmbH service center and arrange a suitable maintenance date.

The test result will be displayed for 5 seconds only, immediately after the self-test.

The duration of the self-test depends primarily on the time needed to determine the current GPS position. This can vary and may take as long as 15 minutes. Pay close attention to the device when performing the self-test in order not to miss the status being issued.

Table 3: Status LEDs as part of the self-test

Status LEDs		Test results	Meaning
Yellow LED	RED LED		
	-		Self-test in progress. Keep watching.
		OK	Successful test GPS position was determined
		OK	Successful test No GPS position determined*
		WARNING	Battery almost empty GPS position was determined
		WARNING	Battery almost empty No GPS position determined*
Do not light up		ERROR	No battery life available or device is broken

Info: A long bar symbolizes continuous glowing for approximately 5 seconds, a broken bar a flashing signal.

* If the self-test was performed with clear view to the sky and in absence of interfering frequencies impeding the reception of the GPS signal, please, contact the FT-TEC support team.

5.4 How long does an AIS self-test take?

The device attempts to determine a GPS position for up to 15 minutes. Once the position has been determined, test messages are transmitted by VHF containing the calculated position and the text "SART TEST". A test may take between 2 and 15 minutes.

6 Technical specifications

Product name:	SEAANGEL
Model:	SA15-FLARE
Size (L x W x H):	62 mm x 41 mm x 29 mm
Weight:	90 g
Power supply:	3 V LiMnO2 Industry cells, CR17450
Transmission antenna:	Vertically polarized
Integrated GNSS receiver:	72 channels GPS, QZSS, GLONASS and BeiDou (simultaneous reception possible) Navigation sensitivity: -167 dBm integrated antenna Position information updated once a minute
Self-test:	Required once a year
Maintenance interval:	After emergency activation or after 7 years (at the latest)
Protection class:	Standard devices: IPx7 (= 10m)
Storage temperature:	-30 °C to +70 °C
Operation temperature:	-20 °C to +55 °C
Status LEDs:	Color: red, yellow
Flash LED:	Color: white
Casing: Color:	Material: PC-ABS Yellow and transparent (casing shell) Red (protective bracket)

6.1 Technical specifications of AIS device

Transmission frequency:	AIS channel 1 (161.975 MHz) AIS channel 2 (162,025 MHz) Channel frequency alternating
Transmission power:	approx. 1 W
Transmission range:	More than 5 NM
Supported AIS messages:	Message 1 (position report) Message 14 (safety related broadcast message)
Message interval:	Burst (8 messages a minute)
Minimum Transmission time:	72 hours (Version SART: 96 hours) after emergency activation, in extreme conditions
Battery life:	More than 7 years

6.2 Technical specifications of DSC device

Transmission frequency:	156.525 MHz
Transmission power:	0.5 W
Messages:	Standard call All ships call (where allowed))
Message interval:	Every 5 minutes All ships call once per activation
Baud rate	1200 baud

PLEASE, KEEP IN MIND, THAT THE ACTIVATION OF THE DSC SIGNAL WILL INFLUENCE THE OVERALL RUNTIME OF THE AIS SIGNAL.

6.3 Battery life

This unit uses industrial lithium cells (lithium manganese dioxide) which have a very low self-discharge. This guarantees a long life up to 96 hours (depends on FLARE version) of active emergency operation, provided the device's batteries are replaced after activation or after 7 years – whichever comes first.

You will find the battery expiration date on the back of your SEAANGEL:

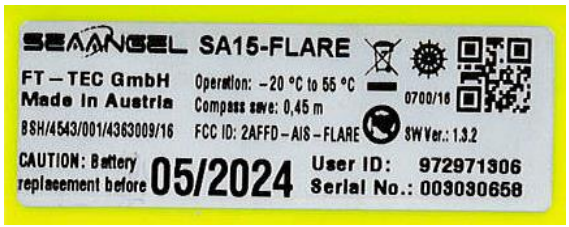


Figure 5: Battery expiration date

7 Maintenance and Support

The SEAANGEL does not feature any components which need to be maintained by the customer himself. For any maintenance work, simply send your device to:

FT-TEC Electronics GmbH
Werner von Siemens Str. 5
A-7343 Neutal
AUSTRIA

Phone: +43 2618 20455-0
Fax: +43 2618 20455-9010
E-mail: office@ft-tec.com
Website: www.ft-tec.com

YOUR DEVICE MAY NOT WORK IF IT IS NOT MAINTAINED PROPERLY. IN AN EMERGENCY SITUATION, THIS COULD HAVE AN IMPACT ON YOUR HEALTH.

To report any problems encountered with the SEAANGEL go to http://seaangel.at/support.2889.html, scroll to the bottom of the page and click "+contact seaangel".

8 Registration

You can register your SEAANGEL at http://register.seaangel.at if you wish to provide essential information about you for rescue teams such as medical restrictions.

Advantages of registered users:

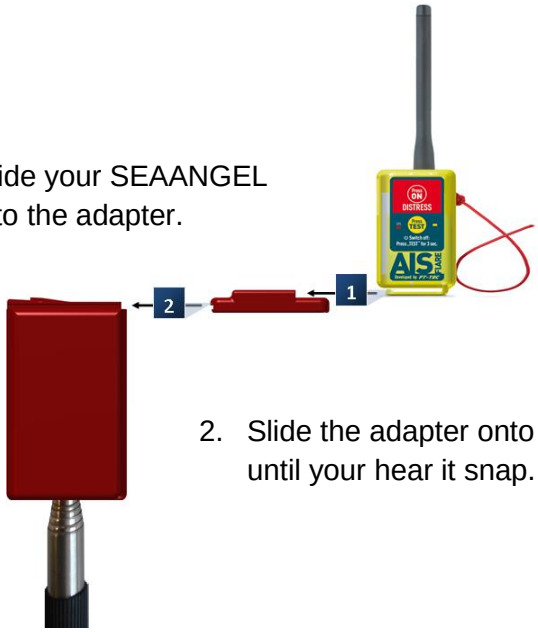
- You will be reminded in time via email that your batteries are going to expire.
- You will be reminded to keep your contact data up to date once a year.
- Rescue teams will have a chance to know about you what they have to know, even when you are unconscious.

9 SART extensions

9.1 The Telescope Pole (SART only)

The telescope pole enables you to keep your SEAANGEL at least 1m above sea-level.

1. Slide your SEAANGEL into the adapter.



2. Slide the adapter onto the floating aid until your hear it snap.

Figure 6: Mounting the SA15 to the prolongation pole

9.2 Adding the Floating Aid (SART only)

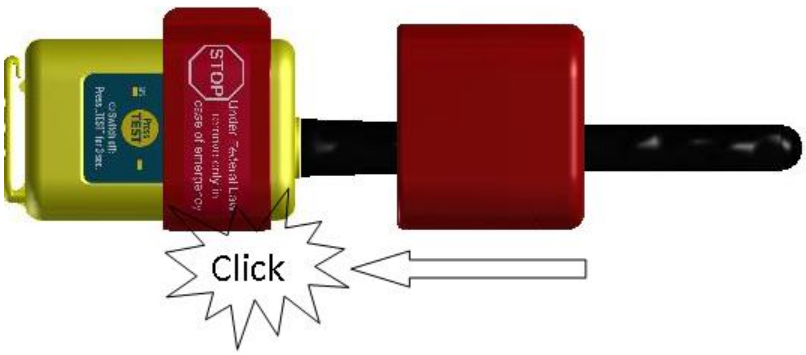


Figure 7: Adding the floating device

9.3 Example: Mounting the SEAANGEL on a Life Raft

There are so many different life raft models, some of them already offering clipping belts, fastening strips or even pockets for SART beacons. If none of that applies to your life raft you can still mount the SEAANGEL using adhesive tapes to fasten down the clip on the SEAANGEL as shown in the figure below.

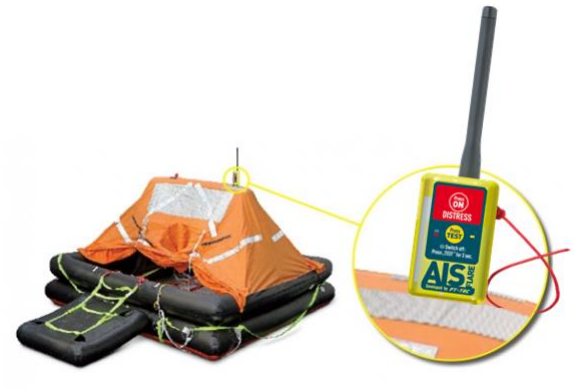


Figure 8: Mounting the SEAANGEL on a life raft

Further examples of how to mount the emergency beacon on various lifesaving equipment, you can find under http:://www.seaangel.at/mounting_systems.2901.html

10 Declaration of conformity

CZ	FT-TEC Electronics GmbH tímto prohlašuje, že tento SA15, je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
DE	FT-TEC Electronics GmbH erklärt, dass der SA15 die grundlegenden und andere relevante Bestimmungen der Direktive 1999/5/EG erfüllt.
DK	FT-TEC Electronics GmbH erklaerer herved, at udstyr SA15 overholder de vaesentlige krav og ovrige relevante krav I direktiv 1999/5/EF.
EE	FT-TEC Electronics GmbH kinnitab seadme SA15 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
EN	FT-TEC Electronics GmbH hereby declares that the SA15 complies with the essential requirements and other relevant provisions of Directive 1999/5/EC.
ES	FT-TEC Electronics GmbH declara que el SA15 cumple con los requisites esenciales y cualquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
FR	FT-TEC Electronics GmbH déclare que l'appareil SA15 est conforme aux exigences essentielles et aux autres dispositions pertinentes à la directive 1999/5/CE.
GR	FT-TEC Electronics GmbH ΔΗΛΩΝΕΙ ΟΤΙ SA15 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ
HU	FT-TEC Electronics GmbH nyilatkozom, hogy az SA15 megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
IS	FT-TEC Electronics GmbH lýsir yfir því að SA15 er samræmi viðgrunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
IT	FT-TEC Electronics GmbH dichiara che questo SA15 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE
LT	FT-TEC Electronics GmbH deklaruoja, kad šis SA15 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
LV	FT-TEC Electronics GmbH deklarē, ka SA15 atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
NL	FT-TEC Electronics GmbH verkllaart dat de SA15 is in overeenstemming met de essentiele eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
NO	FT-TEC Electronics GmbH erklærer herved at utstyret SA15 er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
PT	FT-TEC Electronics GmbH declara que este SA15 está conforme com os requisites essencialis e outras disposicoes de Directiva1999/5/CE.
SE	FT-TEC Electronics GmbH intygar att denna SA15 star l överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgar av direktiv 1999/5/EG.
SF	FT-TEC Electronics GmbH vakuuttaa etta SA15 typpinen laite on direktiivin 1999/5/EY oleelisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
SI	FT-TEC Electronics GmbH týmto vyhlasuje, že SA15 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

CE 0700

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