OPERATING INSTRUCTION

AMS-FS433

Radio set 433 MHz for AMS-SD

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Content

This operating instruction was produced to the best of knowledge. Errors excepted as well as alterations and additions are subject to change.

1. General

The radio set *AMS-FS433*, consisting of *AMS-TX433* (transmitter) and *AMS-RX433* (receiver with display), is an optional accessory for the *AMS-SD*. It serves the measured value transmission from the *AMS-SD* in a vehicle to service employees for finding RF-leakages in a cable CATV network. The advantage for the technician is the immediate indication of any change in the coaxial home distribution network as field strength readings. Furthermore, the radio transmission of the field strength measurements made possible by disconnecting coaxial cable locating the distinctive line (exclusion method).

2. Scope of delivery

1× *AMS-TX433* for connection to the *AMS-SD*
1× *AMS-RX433* (receiver with display and battery)
1× Charging power supply
1× Car charging cable
1× BNC plug-on antenna
1× Transport case
This operating instruction

3. Funktional requirements

The *AMS-SD* to be transferring data with the *AMS-FS433* (radio set) always remain switched on – even when parking the vehicle. Condition for the correct operation of the *AMS-FS433* is, that the measuring cycle in the *AMS-SD* is maximum 2 seconds. The best setting for this is: »*speed-dependent*«. No unnecessary measurements in the *AMS-SD* can be stored while the vehicle is stopped.

Tip! The *AMS-RX433* (receiver) can be used in the vehicle to determine the highest field strength.

4. Measuring setup

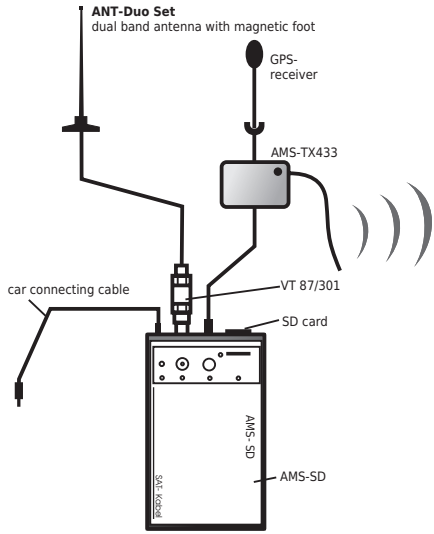

Fig. a: AMS-TX433 (transmitter) between AMS-SD and GPS receiver in the car

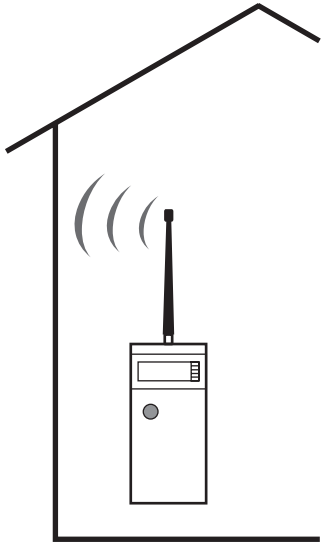

Fig. b: AMS-RX433 (receiver with display) at service technician

5. Operating

5.1 AMS-TX433 (transmitter)

Connect the *AMS-TX433* with the PS/2 connector to the *AMS-SD*. To the PS/2 clutch of the *AMS-TX433* then can be connected GPS receiver or *AMS-LCD* – see Fig. a.

For safe operation, the throw antenna is as possible be positioned so that a line of sight to the object to be measured (building) is given. The transmitter of the radio set does not require further attention. As soon as the *AMS-SD* performs a measurement, the data are automatically sent to the receiver.

5.2 AMS-RX433 (receiver)

5.2.1 Switching on and off

2× briefly **switch on** twice briefly pushing of the button switches on the receiver.

briefly **display change over**

By further pressing the button now, the display readout will be changed over.

3 s **switch off**

By a long press of the button (about 3 s) the device will switch off at any time.

automatically switch off

If 5 minutes no data are received, the device switches off automatically.

5.2.2 LED display

field strength LED | It shines green when a detecting code is present and the measured field strength is below the limit (adjustable in the *AMS-SD*). It blinks red when the detecting code is available, but the measured field strength is over the limit.

The displayed field strength is measured by the *AMS-SD* and transmitted by radio to the *AMS-RX433*.The limits can be changed in the *AMS-SD* and act simultaneously on the attached devices (*AMS-RX433* and also *AMS-LCD*).

receiving LED | Blinking briefly yellow, if new data are received.

battery LED | Shines red if the battery is growing empty.

5.2.3 Display readout (shown schematically)

Mode 1

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12.3 SAT
23.5 S87
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Line 1: Measuring frequency 1 in dB(µ)/m + 3 letters of the detecting code
Line 2: Measuring frequency 2 in dB(µ)/m + 3 letters of the detecting code

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12.3 SAT
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Line 1: If only one frequency from the *AMS-SD* is measured and transmitted

Mode 2

F1: 12.3 SAT

Line 1: measuring frequency 1, level in dB(µV)
Line 2: up to 8 letters of the detecting code

Mode 3 (shown only if two measuring frequencies are measured)

F2: 23.5 S87

Line 1: measuring frequency 2, level in dB(µV)
Line 2: up to 8 letters of the detecting code

Mode 4

AMS-RX 13:58:24

Line 2: displays the current time (transferred by the *AMS-SD*)

Other

kein Empfang

»*no reception*«
display, when three seconds no data are received

5.2.4 Charging the battery

The *AMS-RX433* can be loaded either with the included AC adapter (Input 230 VAC, output 12 VDC/450 mA) or with the included car charger into the port of the cigarette lighter of a car.

After connecting the charging process starts automatically and displays an animation on the display. About 20 seconds after the start of the charge the display backlight is switched off. At a fully charged battery, the backlight turns on again and the five LEDs are shining green.

If the input voltage is out of the allowable range, such as at use of inappropriate power supplies, this will be shown on the display.

Spannung zu klein

»*voltage too small*«
Power supply voltage is not sufficient to charge the battery

Spannung zu hoch!

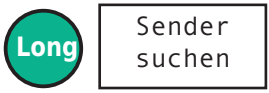
»*voltage too high!*«
Power supply voltage too high! IMMEDIATELY disconnect power supply from the device to avoid damage!

5.3 AMS RX433 teach to AMS-TX433

Each *AMS-TX433* transmitter has its own signature to build a couple connection between *AMS-RX433* and *AMS-TX433*. Thus, the operation of several AMS radio sets in the surrounding area is possible.

To establish the connection, the *AMS-RX433* must be taught once to the transmitter. It is also possible to teach several receiver to an *AMS-TX433*.

1 | *AMS-RX433* and *AMS-TX433* (*AMS-SD*) must be switched off.



2 | Press the button of the *AMS-RX433*, and keep it pressed for several seconds until the message »*Sender suchen*« (»*transmitter search*«) appears on the display. The receiving LED will blink alternately red and green.

3 | Now connect the *AMS-TX433* at the *AMS-SD* and switch on the *AMS-SD* (start measurement). When the transmitter is supplied with electricity, is sent once a registration message.

If this was received by the *AMS-RX433*, the display shows the message »*Sender gefunden*« (»*transmitter found*«). The *AMS-RX433* switches off a few seconds later and is now ready for use.

5.4 Troubleshooting

readout: »Kein Empfang«

possible causes:

1. receiver out of reach of the *AMS-TX433*
2. signal is superimposed by interference from the CATV system
3. antenna detective
4. receiver was not educated to the transmitter

solution:

to 1. move closer to the *AMS-TX433* until data are received.

to 2. move away from the disturbing source, or solve the problem of the CATV system

to 3. Replace the existing antenna by a functional antenna for 433 MHz.

to 4. teach the *AMS-RX433* to *AMS-TX433*, as described in point 5.3.

6. Technial data

transmitter	sending frequency	433.5 MHz
	antenna	throw antenna 17 cm
	connection	PS/2 plug and PS/2 socket
	power supply	over AMS-SD
receiver	receiving frequency	433.5 MHz
	antenna	17 cm plug-on antenna with BNC connector
	power supply	NiMH accumulator 6 V, capacity 300 mAh
	power consumption	max. 60 mA

7. Cleaning and maintenance

The surface of the housing can be cleaned with a dry, soft and lintfree cloth. Do not use aggressive solvents for the cleaning.

Guarantee
State July 2006

For this instrument will be granted a service life (in following called guarantee) to following conditions:

- This guarantee is valid for new instruments purchased in Germany.
- New instruments and their components, which are defective because of production faults and/or material faults, are repaired or are replaced from SAT-Kabel® against a corresponding instrument.
- For wear parts, like accumulators, keyboards, housings, bags, connecting cables this guarantee is valid for 6 month from the purchasing date.
- The guarantee claim expires at matings by the purchaser or third persons.
- At defects, caused by improper handling or operating, by wrong installation or store, by improper connection or mounting, no guarantee is granted.
- For not justified demand of our service we charge for our service the usual payment for material, working hours and forwarding costs.
- Repairs are only made with filled service covering.

(Forms for service coverings and further information are found in the standard form contracts under: www.sat-kabel.de)

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