

TELE RADIO AB PANTHER

INDUSTRIAL RADIO REMOTE CONTROLS

Installation instructions



RECEIVER: R00008-22
TRANSMITTER: T00013-10

LANGUAGE: English (original)

CHAPTER 1: CUSTOMER INFORMATION

Thank you for purchasing a Tele Radio AB product

READ ALL INSTRUCTIONS AND WARNINGS CAREFULLY BEFORE MOUNTING, INSTALLING AND CONFIGURATING THE PRODUCTS.

These instructions are published by Tele Radio AB without any guarantee. The instructions may be removed or revised by Tele Radio AB at any time and without further notice. Corrections and additions will be added to the latest version of the instruction.

IMPORTANT! These instructions contain a separate chapter directed towards end users. The chapter can be printed and handed to end users. The instructions that contain information on the installation and configuration of the radio remote control unit on the machine are not intended to be passed on to the end user. Only such information may be passed on to the end user that is needed to operate the machine correctly by radio remote control.

Tele Radio AB products are covered by a guarantee/ warranty against material, construction or manufacturing faults. During the guarantee/ warranty period, Tele Radio AB may replace the product or faulty parts with new. Work under guarantee/ warranty must be carried out by Tele Radio AB or by an authorized service center specified by Tele Radio AB. Contact your Tele Radio AB representative if you need support or service.

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Warnings & restrictions

IMPORTANT! Tele Radio remote controls are often built into wider applications. We recommend that the system is provided with a wired emergency stop where necessary.

NOTE! We recommend that the functionality of the STOP button is being tested at a regular basis: At a minimum, when used for 200 hours. Test the STOP button by pressing it and pulling it out.

INSTALLING, CONNECTING AND MOUNTING

- Allow only licensed or qualified personnel to install the product.
- Switch the power supply off to the receiver before connecting the equipment.
- Check that you have connected the power supply to the correct connection terminal.
- To utilize the safety of the system, use the stop relays in the safety circuitry of the object that you want to control.
- Use undamaged cables. No cables should hang loose.
- Avoid installing in areas affected by strong vibrations.
- Place the receiver well away from wind, damp and water.
- Cable glands and vent plugs must face down to prevent water from seeping in.

THE USER

- Make sure that the user is following the instructions.
- Make sure that the user has reached the certified age of your country to operate the equipment.
- Make sure that the user is not under the influence of drugs, alcohol and medicines.
- Allow only qualified personnel to have access to the transmitter and operate the equipment.
- Make sure that the user does not leave the transmitter unsupervised.
- Make sure that the user always turns the transmitter off when not in use.
- Make sure that the user keeps a good overview of the work area.

MAINTENANCE

- Use the stop button to start and turn off the transmitter as often as possible.
- When error messages are shown, it is very important to find out what caused them.
- If the stop button is mechanically damaged, contact your representative for service immediately.
- Always contact your representative for service and maintenance work on the product.
- Write down the serial numbers of the receivers and transmitters used. This information should be recorded on the “Settings document” for your product (download from our website).
- Avoid registering transmitters to receivers where it is not being used.
- Keep the safety instruction for future reference. Always download the configurations instruction from our web site for the latest version available.

CHAPTER 2: SYSTEM INFORMATION

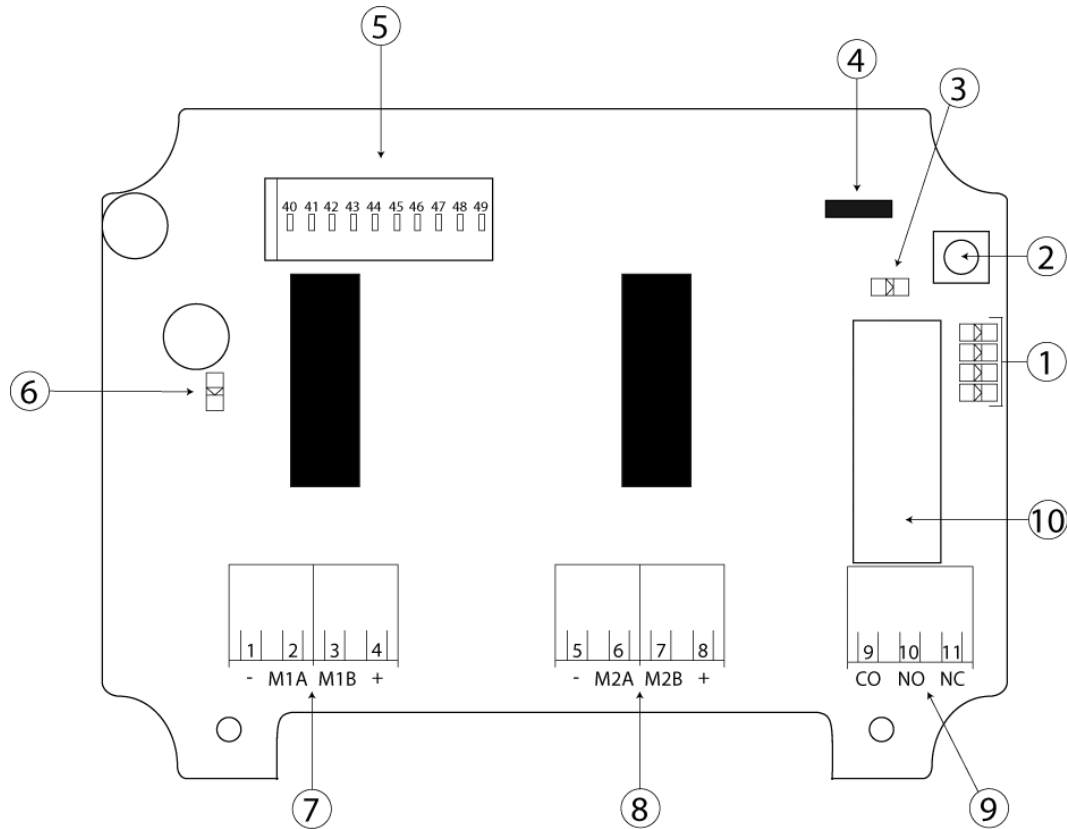
Application area for the Panther system

The Tele Radio AB Panther remote control systems are aimed for remote controlling of industrial equipment where a high flexibility is required.

CHAPTER 3: PRODUCT PAGES

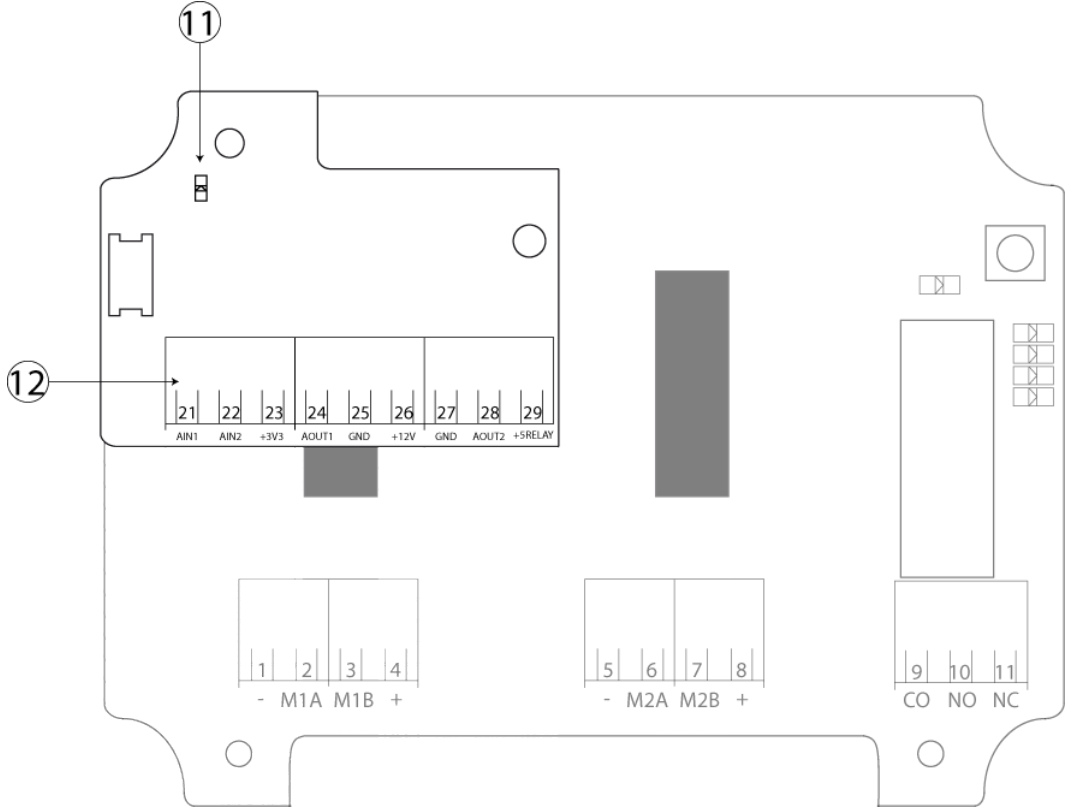
WARNING! The receiver must NOT be opened by any other than a qualified installer. Make sure to turn the electricity off before opening the receiver.

R00008-22 BASE BOARD RECEIVER



1. Function LEDs (1= red, 2= yellow, 3= green, 4= orange)	6. Power LED (yellow)
2. Function button (Cancel)	7. Terminal block for motor 1
3. Function relay LED (red)	8. Terminal block for motor 2
4. Programming connector	9. Terminal block for relay
5. Terminal block for digital inputs	10. Function relay

ANALOGUE EXPANSION BOARD



11. Terminal block for analogue inputs/ outputs	12. Indication LED for communication with the base board (green)
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COMPONENTS DESCRIPTION

TERMINAL BLOCK FOR DIGITAL INPUTS



40	GND
41	Digital input 1
42	Digital input 2
43	Digital input 3
44	Digital input 4
45	Digital input 5
46	Digital input 6
47	Digital input 7
48	Digital input 8
49	GND

TERMINAL BLOCK FOR MOTOR 1



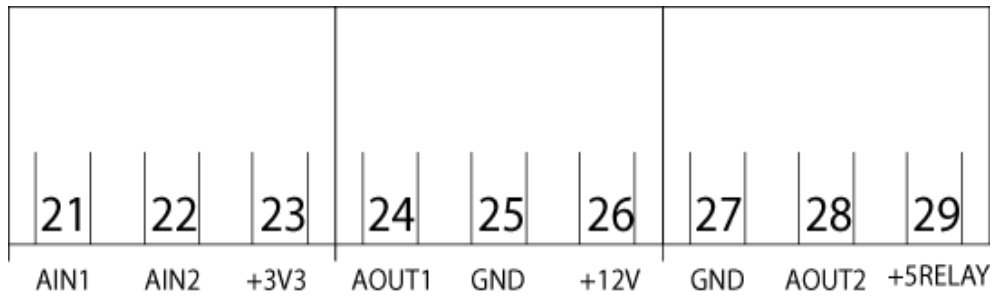
1	Input power GND
2	Motor output M1A
3	Motor output M1B
4	Input power 12-24VDC

TERMINAL BLOCK FOR MOTOR 2



- 5 Input power GND
- 6 Motor output M2A
- 7 Motor output M2B
- 8 Input power 12-24 VDC

TERMINAL BLOCK FOR ANALOGUE INPUTS/ OUTPUTS



- 21 Analogue input 1
- 22 Analogue input 2
- 23 +3.3 VDC
- 24 Analogue output 1
- 25 GND
- 26 +12 VDC
- 27 GND
- 28 Analogue output 2
- 29 +5 VDC

TECHNICAL DATA

Number of function relays	1 (potential free*, 8A)
Digital inputs	8
Number of DC motor controls	2
Number of analogue outputs	2
Number of analogue inputs	2
Duplex communication	No
Min./max. current consumption	12 VDC: Min.** 0.5mA/ Max.*** 20A 24 VDC: Min.** 0.5mA/ Max.*** 20 A
Operating frequency	2405-2480 MHz
Number of radio channels	16 (channel 11-26)
Channel separation	5 MHz
IP class	66
Size	121 x 117 x 51 mm./ 4.75 x 4.6 x 2 in.
Weight	420 g./ 0.926 lbs.
Antenna	1 internal

* potential free means that you have to supply voltage to get voltage out of a relay (e.g. via the included connection comb)

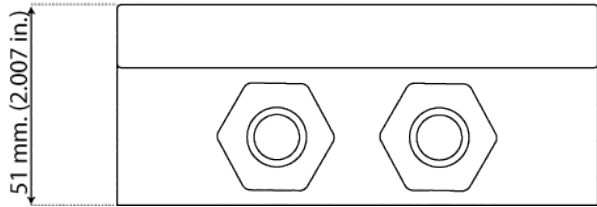
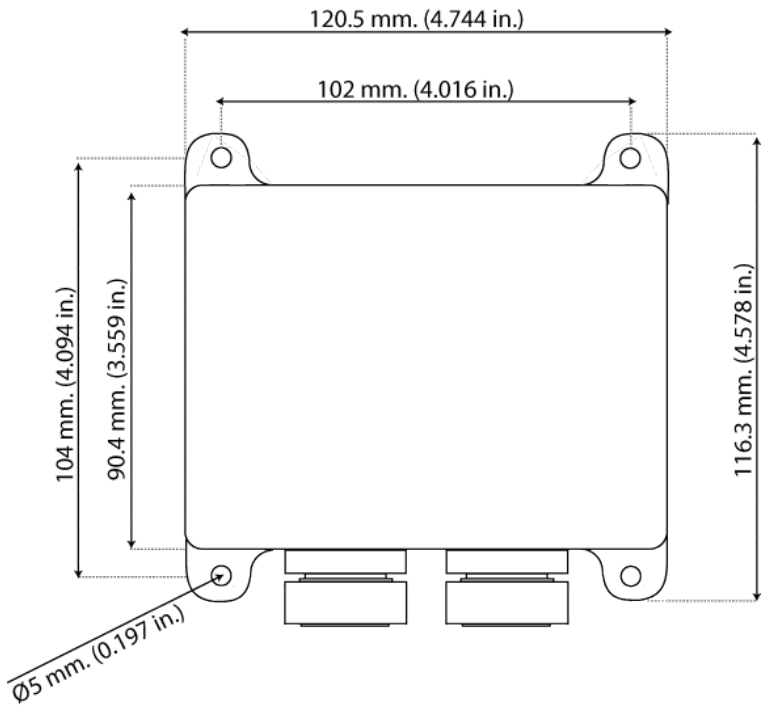
** Minimum current consumption= Receiver on, no radio communication established, sleep mode activated.

*** Maximum current consumption= Maximum output (10A) on motor 1 output and maximum output (10A) on motor 2 output.

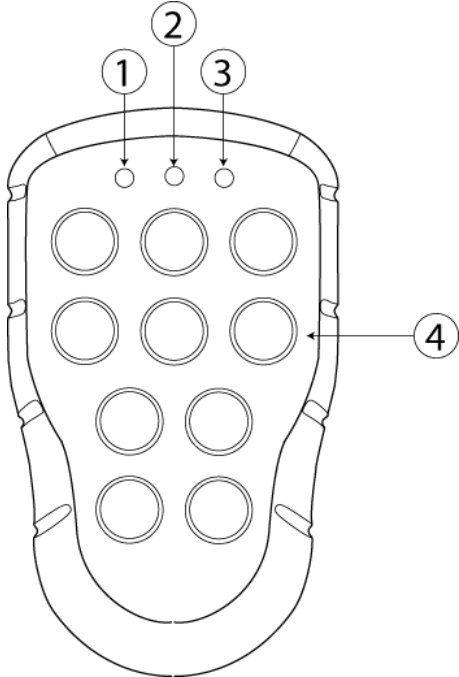
RECEIVER FUNCTIONALITY

PRESS BUTTON:	RESULTS IN:
1	The PWM output between M1A and M1B will be positive and increase to the same voltage level as the input between (+) and (-).
2	The PWM output between M2A and M2B will be positive and increase to the same voltage level as the input between (+) and (-).
3	The relay will be active, and the PWM output between M2A and M2B will be positive and increase to the same voltage level as the input between (+) and (-).
4	The PWM output between M1A and M1B will be negative and increase to the same voltage level as the input between (+) and (-).
5	The PWM output between M2A and M2B will be negative and increase to the same voltage level as the input between (+) and (-).
6	The relay will be active, and the PWM output between M2A and M2B will be negative and increase to the same voltage level as the input between (+) and (-).

MEASUREMENTS FOR MOUNTING OF THE RECEIVER

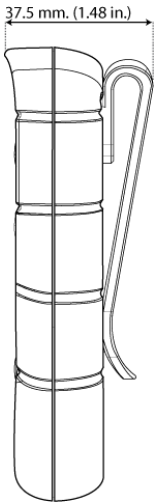
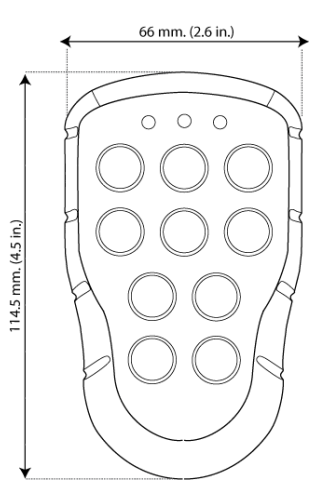


TRANSMITTER T00013-10



1. LED 1	3. LED 2
2. Top LED	4. I-step push buttons I-10

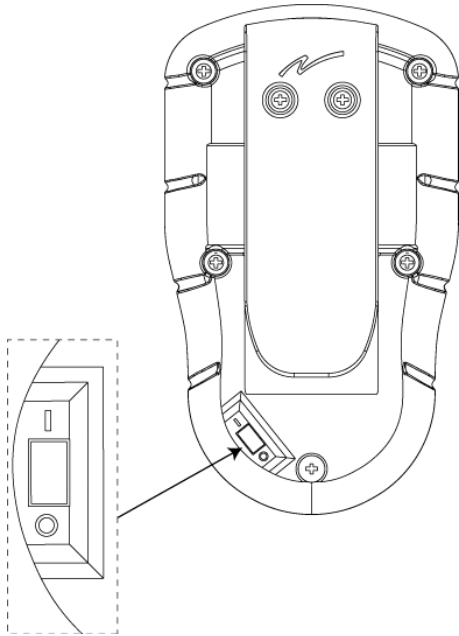
TRANSMITTER MEASUREMENTS



TECHNICAL DATA

No. of buttons	10 x 1-step buttons
On/off switch	Yes
Size	114.5 x 66 x 37.5 mm./ 4.5 x 2.6 x 1.48 in.
Weight	135 g./ 0.3 lbs. (excluding batteries)
Number of channels	16 (channel 11-26)
Operating frequency	2405-2480 MHz.
Radio type	Low IF topology

ON/OFF SWITCH



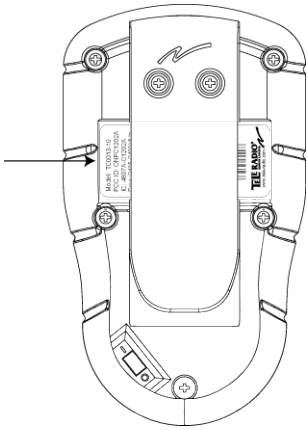
The transmitter has an on/off switch on the backside. The on/off switch has 2 positions:

I = on

0 = off

The on/off switch breaks the power supply from the battery. When in position 0/off, the transmitter can not be started.

FCC/ IC LABEL



The FCC IC label is placed in the back of the transmitter. See picture.

FCC statement

Statement for warning:

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Industry Canada licence-exempt RSS standard(s) and 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence et la partie 15 des Règles FCC. 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.

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil est conforme aux limites d'exposition au rayonnement RF stipulées par la FCC et l'IC pour une utilisation dans un environnement non contrôlé. L'utilisateur final doit suivre les instructions de fonctionnement spécifiques pour le respect d'exposition aux RF. Les émetteurs ne doivent pas être placés près d'autres antennes ou émetteurs ou fonctionner avec ceux-ci.

Note: 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.

CHAPTER 4: INSTALLERS GUIDE

START THE TRANSMITTER

1. Press button 9 (the on button) for at least 1 second.
2. Release button 9 (the on button) when the top LED turns green.
3. The transmitter is started.

TURN THE TRANSMITTER OFF

1. Press button 10 (the off button).
2. The transmitter sends a stop command for 1 second.
3. The transmitter turns off.

REGISTER THE TRANSMITTER IN THE RECEIVER

IMPORTANT! Do not perform this when the receiver is in a session with another transmitter. The radio communication may become disturbed or broken.

1. Press the receiver Function button (LED 1 lights red).
2. Press button 1 + 2 on the transmitter that you want to register.
3. Receiver LED 1 flashes 3 times when the transmitter is registered.
4. If the receiver can not find the transmitter within 10 seconds, the receiver exits registration mode and goes back to normal operation.

ERASE A TRANSMITTER FROM THE RECEIVER

1. Press the receiver Function button (LED 1 lights red).
 2. Keep pressed until LED 1 goes out (approx. 4 seconds).
 3. Release the receiver Function button.
 4. All registered transmitters are erased.
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CHAPTER 5: BATTERY GUIDE

BATTERY INFORMATION

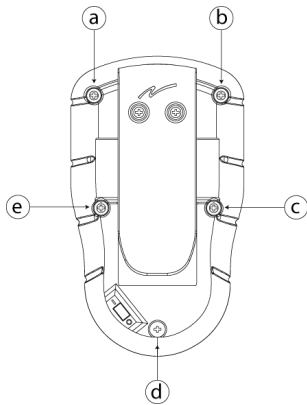
WARNING! Do not recharge the batteries. Attempts to recharge may cause rupture or the leaking of hazardous liquids, which will corrode the equipment.

IMPORTANT! Electronics and batteries must be physically separated before disposal. Make sure that electronics or batteries are not thrown in the household waste.

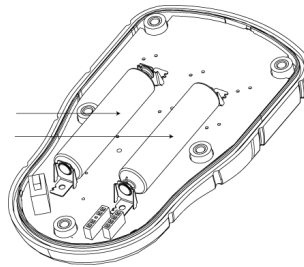
Battery type	2 x 1.5V AAA alkaline batteries
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SWITCH BATTERIES

1.



2.



3.



1. Take off the transmitter backside by unscrewing the 5 screws (a-e).
2. Switch the 2 1.5V AAA batteries. Use alkaline for optimal performance.
3. Put the transmitter backside on again using the screwdriver.

BATTERY PRECAUTIONS

Observe the following general battery warnings:

- As batteries contains flammable substances such as lithium or other organic solvents, they may cause heating, rupture or ignition.
- Risk of explosion if battery is replaced with a battery of an incorrect type.
- Do not short circuit, disassemble, deform or heat batteries.
- Never try to charge a visibly damaged or frozen battery.
- Keep batteries out of reach of small children. Should a child swallow a battery, consult a physician immediately.
- Avoid direct soldering to batteries.
- When discarding batteries, insulate the + and - terminals of batteries with insulating/ masking tape. Do not put multiple batteries in the same plastic bag.
- When improperly disposed, lithium batteries may short circuit, causing them to become hot, burst or ignite.
- Store in a cool location. Keep batteries away from direct sunlight, high temperature, and high humidity.
- Do not throw batteries into fire.

ROHS AND WEEE

In accordance with Directive 2002/95/EC on restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and Directive 2002/96/EC on waste electrical and electronic equipment (WEEE), Tele Radio AB strives to minimize the use of hazardous materials, promotes reuse and recycling, and reduces emissions to air, soil and water. When a commercially viable alternative is available, Tele Radio AB strives to restrict or eliminate substances and materials that pose an environmental, health or safety risk.

GUARANTEE, SERVICE, REPAIRS AND MAINTENANCE

The Tele Radio AB products are covered by a guarantee/warranty against material, construction and manufacturing faults. During the guarantee/warranty period, Tele Radio AB may replace the product or faulty parts. Work under guarantee/warranty must be carried out by Tele Radio AB or by an authorized service centre specified by Tele Radio AB.

This is not covered by the guarantee/ warranty:

- Faults resulting from normal wear and tear
- Parts of a consumable nature
- Products that have been subject to unauthorized modifications
- Faults resulting from incorrect installation and use
- Damp and water damage

Maintenance:

- Repairs and maintenance must be carried out by qualified personnel
- Use spare parts from Tele Radio AB only
- Contact your representative if you require service or other assistance
- Keep the product in a dry, clean place
- Keep contacts and antennas clean
- Wipe off dust using a slightly damp, clean cloth

IMPORTANT! Never use cleaning solutions or high-pressure water.

CE MARKING

This product complies with current European directives and standards.

CE0890



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