TELE RADIO

INDUSTRIAL RADIO REMOTE CONTROLS

PANTHER

Installation instructions

PN-RX-MX9 (PN-R8-3), PN-RX-MXX14 (PN-R8-13), PN-RX-MXX19 (PN-R8-7), PN-TX-MX8 (PN-T7-2)

Language: English (original)

TELE RADIO®
REMOTE CONTROL

CONTENTS

CHAPTER 2: 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 are directed to installers. There are separate instructions directed towards 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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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.
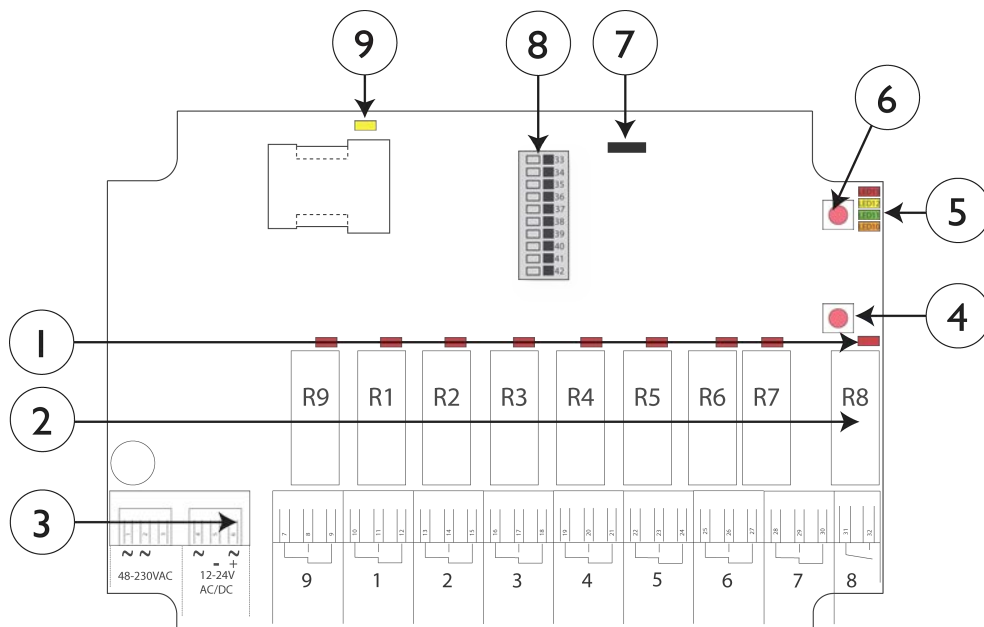- Make sure that the user keeps a good overview of the work area.

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/ ID codes 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 3: PRODUCT PAGES
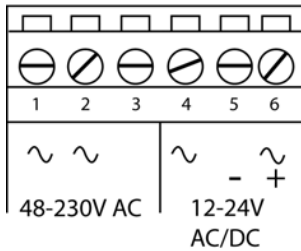
PN-RX-MX9 BASE BOARD RECEIVER

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.

Base board:

|	
1.Relay LEDs (red)	6. Function button (Cancel)
2. Function relays 1-9	7. Programming connector
3. Terminal block for input power	8. Terminal block for digital inputs
4. Select button (OK)	9. Power LED (yellow)
5. Function LEDs (10=orange, 11=green, 12=-yellow, 13=red)	

Terminal block for input power

1. 48-230 V AC	4. ~12-24 V AC/DC
2. 48-230 V AC	5. negative terminal DC voltage*
3. (not used)	6. ~+12-24 V AC/DC

*use when digital inputs are connected to receiver

Terminal block for the digital inputs on the base board
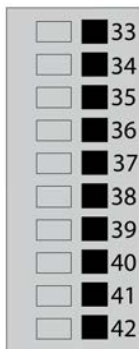
33. GND	38. Digital input 5
34. Digital input 1	39. Digital input 6
35. Digital input 2	40. Digital input 7
36. Digital input 3	41. Digital input 8
37. Digital input 4	42. GND

Technical data

Function relays	9 (potential free*, 8A, 250V AC)
Digital inputs	8
Operating frequency	2405-2480 MHz
Channels	16 (channel 11-26)
Channel separation	5 MHz
Duplex communication	No
Antenna	1 internal PCB antenna
IP class	66
Operating temperature	-20 - +50°C / -4 - +130°F
Size	176 x 127 x 75 mm/6.9 x 5 x 2.9"
Weight	800 g / 1.8 lbs

*potential free means that you have to supply voltage to get voltage out of a relay.

PN-RX-MXX19 RELAY EXPANSION BOARD RECEIVER

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.

Base board:

1. Relay LEDs (red)	6. Function button (Cancel)
2. Function relays 1-9	7. Programming connector
3. Terminal block for input power	8. Terminal block for digital inputs
4. Select button (OK)	9. Power LED (yellow)
5. Function LEDs (10=orange, 11=green, 12=-yellow, 13=red)	

Relay expansion board:

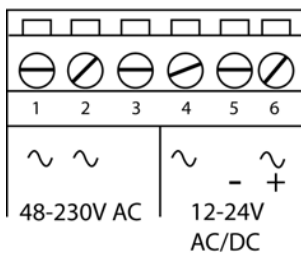| 10. Relay LEDs (red)	14. Function button (Cancel)
11. LEDs 1-9 representing the function relays on the base board	15. Programming connector
12. Function relays 10-19	16. Power LED (yellow)
13. Select button (OK)	17. Terminal block for digital inputs

Terminal block for input power

1. 48-230 V AC	4. ~12-24 V AC/DC
2. 48-230 V AC	5. negative terminal DC voltage*
3. (not used)	6. ~+12-24 V AC/DC

*use when digital inputs are connected to receiver

Terminal block for the digital inputs on the base board

- 9 -
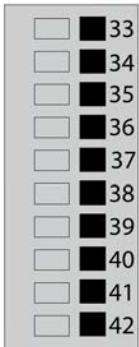
33. GND	38. Digital input 5
34. Digital input 1	39. Digital input 6
35. Digital input 2	40. Digital input 7
36. Digital input 3	41. Digital input 8
37. Digital input 4	42. GND

Terminal block for the digital inputs on the relay expansion board

81 82 83 84 85 86 87 88 89 90 91 92

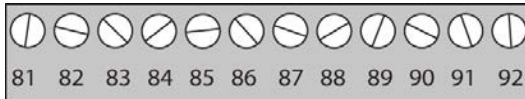NOTE! For assistance with the digital inputs on the relay expansion board, please contact your representative.

81. GND	87. Digital input 11
82. GND	88. Digital input 12
83. GND	89. Digital input 13
84. GND	90. Digital input 14
85. Digital input 9	91. Digital input 15
86. Digital input 10	92. Digital input 16

Function relay LEDs on the relay expansion board

LED1
LED2
LED3
LED4
LED5
LED6
LED7
LED8
LED9

LED 1= function relay 1
LED 2= function relay 2
LED 3= function relay 3
LED 4= function relay 4
LED 5= function relay 5
LED 6= function relay 6
LED 7= function relay 7
LED 8= function relay 8
LED 9= function relay 9

These LEDs represent the function relays on the base board. They light when the corresponding function relay on the base board is activated.

Technical data

Function relays	19 (potential free*, 8A, 250V AC)
Digital inputs	16
Operating frequency	2405-2480 MHz
Channels	16 (channel 11-26)
Channel separation	5 MHz
Duplex communication	No
Antenna	1 internal PCB antenna
IP class	66
Operating temperature	-20 - +50°C / -4 - +130°F
Size	176 x 127 x 75 mm/6.9 x 5 x 2.9"
Weight	800 g / 1.8 lbs

*potential free means that you have to supply voltage to get voltage out of a relay.

PN-RX-MXX14 RELAY EXPANSION BOARD RECEIVER

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.

Base board:

1. Relay LEDs (red)	6. Function button (Cancel)
2. Function relays 1-9	7. Programming connector
3. Terminal block for input power	8. Terminal block for digital inputs
4. Select button (OK)	9. Power LED (yellow)
5. Function LEDs (10=orange, 11=green, 12=yellow, 13=red)	

Relay expansion board:

10. Relay LEDs (red)	14. Function button (Cancel)
11. LEDs 1-9 representing the function relays on the base board	15. Programming connector
12. Function relays 10-14	16. Power LED (yellow)
13. Select button (OK)	

Terminal block for input power

1. 48-230 V AC	4. ~12-24 V AC/DC
2. 48-230 V AC	5. negative terminal DC voltage*
3. (not used)	6. ~+12-24 V AC/DC

*use when digital inputs are connected to receiver

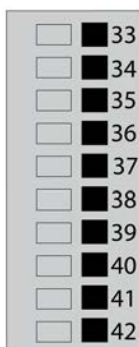# Terminal block for the digital inputs on the base board

33. GND	38. Digital input 5
34. Digital input 1	39. Digital input 6
35. Digital input 2	40. Digital input 7
36. Digital input 3	41. Digital input 8
37. Digital input 4	42. GND

Technical data

Function relays	14 (potential free*, 8A, 250V AC)
Digital inputs	8
Operating frequency	2405-2480 MHz
Channels	16 (channel 11-26)
Channel separation	5 MHz
Duplex communication	No
Antenna	1 internal PCB antenna
IP class	66
Operating temperature	-20 - +50°C / -4 - +130°F
Size	176 x 127 x 75 mm/6.9 x 5 x 2.9"
Weight	800 g / 1.8 lbs

*potential free means that you have to supply voltage to get voltage out of a relay.

Current consumption

Input power	Min.*	Max.**
12V AC	0.02A	0.6A
24V AC	0.02A	0.3A
48V AC	0.008A	0.2A
115V AC	0.004A	0.07A
230V AC	0.003A	0.04A
12V DC	0.03A	0.5A
24V DC	0.02A	0.3A

*Minimum current consumption= Receiver powered, no radio session established, nothing else activated on the receiver.

**Maximum current consumption= All relays activated on the receiver.

PN-TX-MX8 TRANSMITTER
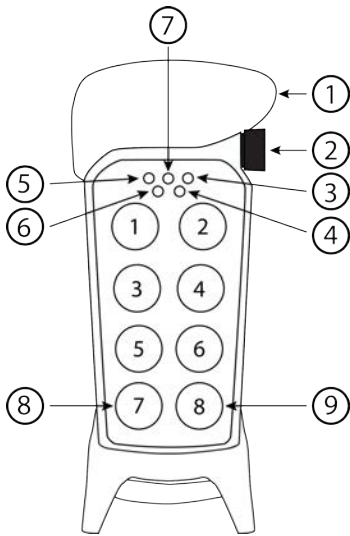
1. Rubber cover	6. LED 3 (red)
2. Stop button	7. Top LED (red, green)
3. LED 2 (red)	8. Button 7 - left start button
4. LED 4 (red)	9. Button 8 - right start (shift) button
5. LED 1 (red)	

Technical data

NO. OF BUTTONS	
PN-TX-MX8	8 x 2-step buttons

BATTERY	
PN-TX-MX8	3 x 1.5V AA

ON/OFF SWITCH	
PN-TX-MX8	No

DUPLEX COMMUNICATION	
PN-TX-MX8	No

SIZE	
PN-TX-MX8	80 x 185 x 44 mm / 3.1 x 7.3 x 1.7 in.

WEIGHT	
PN-TX-MX8	300 g./ 0.7 lbs.

OPERATING FREQUENCY	
PN-TX-MX8	2405-2480 MHz

NO. OF CHANNELS/FREQUENCY BANKS	
PN-TX-MX8	16 (channel 11-26)

CHANNEL SEPARATION	
PN-TX-MX8	5 MHz

OPERATING TIME (WITH CONTINUOUS USAGE)	
PN-TX-MX8	Approx. 200 h.(depending on settings)

IP CLASS	
PN-TX-MX8	65

OPERATING TEMPERATURE	
PN-TX-MX8	-20 - +55°C/ -4 - +130°F

NO. OF PIN CODES POSSIBLE	
PN-TX-MX8	1

RADIOTYPE	
PN-TX-MX8	Low IF topology

Remove the rubber cover

The transmitter comes with a removable rubber cover that protects the transmitter from bumps, dirt and dust. The rubber cover can be removed and cleaned.

To remove the rubber cover:

1. Loosen the rubber cover, start at the top.

2. Lift the transmitter out of the rubber cover.
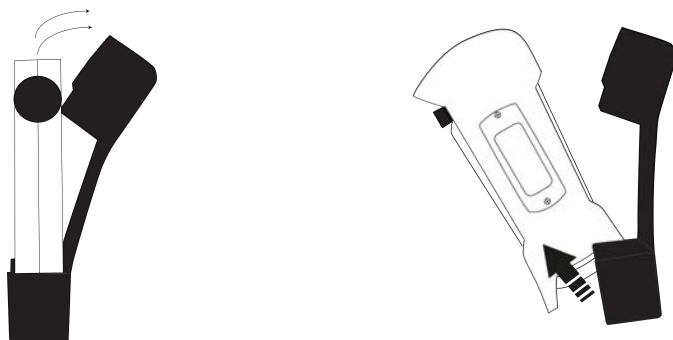
CHAPTER 4: INSTALLERS GUIDE

DISCONTINUOUS / CONTINUOUS RADIO MODE

This transmitter is set to continuous radio mode by default. The transmitter starts to transmit continuously as soon as it has been started up. The radio transmission ends when the stop button is pressed. When the system is in continuous radio mode, button 7 + 8 are used as start buttons. When the system is in discontinuous radio mode, no start buttons are used.

To establish a radio link between the transmitter and the receiver, both units need to be set to the same radio mode. If you want to switch to discontinuous radio mode:
1. Set the receiver to an Operating mode that supports discontinuous radio mode.
2. Switch to discontinuous radio mode in the transmitter.

Note that some settings can only be made when the products are transmitting continuously. Those sections are marked with the text: "Only for continuous radio mode".

When selecting Operating mode you have to know if the products are transmitting continuously or discontinuously. Therefore you will find information on the Operating modes pages.

SWITCH RADIO MODE IN THE TRANSMITTER

NOTE! For discontinuous radio mode in the transmitter, the receiver must be set to an Operating mode that supports discontinuous radio mode.

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Twist and pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE: Press button 1.
The top LED lights (green). LED 2 flashes (red).

7. Press a button to select radio mode:
Button 1 = continuous radio mode
Button 2 = discontinuous radio mode

8. The top LED flashes (green) 3 times. The transmitter turns off.

START THE TRANSMITTER

1. Make sure that the stop button is pressed.

2. Twist and pull out the stop button.
The top LED lights (green when the battery capacity is good, red when the battery capacity is poor),
LEDs 3 + 4 flash (red).

3. Press the start buttons (buttons 7 + 8) at the same time for at least 1 second.
LEDs 3 + 4 light (red).

4. Release the start buttons.
LEDs 3 + 4 go out.
The top LED flashes green.

START THE TRANSMITTER IN MENU MODE

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Twist and pull out the stop button.

4. Release button 8.
Top LED flashes (green).

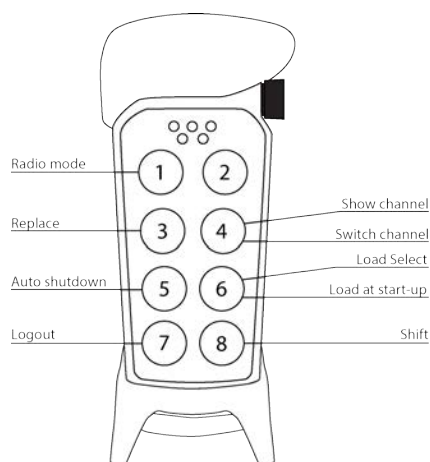5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is
accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE: Enter a menu by pressing the buttons according
to the table below:

Press button	To enter the menu
1	Radio mode
3	Replace
4	Show channel
8 (shift) + 4	Change channel
5	Auto shutdown
6	Load select mode
8 (shift) + 6	Load at start-up
7	Logout
8	Shift

If no buttons are pressed within 1 minute, or if the stop button is pressed, the transmitter will turn off.

Radio mode — 1
Replace — 3
Auto shutdown — 5
Logout — 7

2 — Show channel
4 — Switch channel
6 — Load Select
8 — Load at start-up

Show channel
Switch channel
Load Select
Load at start-up
Shift

Button 8 = shift

To use the shift function:
1. Press button 8. Keep pressed.
2. Press button 1-7
3. Release button 1-7
4. Release button 8

REGISTER THE TRANSMITTER IN THE RECEIVER

Register in continuous radio mode

NOTE! Only for continuous radio mode.

1. Make sure that the stop button is pressed.

2. Twist and pull out the stop button.
The top LED lights (green when the battery capacity is good, red when the battery capacity is poor),
LEDs 3 + 4 flash (red).

3. Press the start buttons (buttons 7 + 8) at the same time for at least 1 second.
LEDs 3 + 4 light (red).

4. Release the start buttons.
LEDs 3 + 4 go out.
The top LED flashes green.

5. Press the receiver Function button.
The function LED lights red.

6. Press the receiver Select button.
All relay LEDs light red.

7. Press transmitter button 1 and 2. Keep pressed.
All relay LEDs light red.

8. The relay LEDs flash 2 times.

9. Release transmitter button 1 and 2.
The relay LEDs flash 1 time.
The transmitter is registered.

REGISTER IN DISCONTINUOUS RADIO MODE

1. Press the receiver Function button.
The function LED lights red.

2. Press the receiver Select button.
All relay LEDs light red.

3. Press transmitter button 1 and 2. Keep pressed.
All relay LEDs light red.

4. The relay LEDs flash 2 times.

5. Release transmitter button 1 and 2.
The relay LEDs flash 1 time.
The transmitter is registered.
Delete this text and replace it with your own content.

ERASE THE TRANSMITTER FROM THE RECEIVER

1. Press the Function button in the receiver. The red function LED lights.

2. Press the receiver Select button. Keep pressed.
All relay LEDs light red.

3. All relay LEDs go out.

4. Release the Select button.
 All transmitters are erased from the receiver.
If the red function LED flashes, one or more transmitters are still registered in the receiver.

TURN THE TRANSMITTER OFF
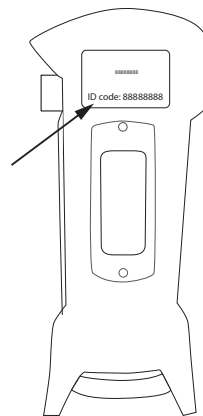
1. Press the stop button.

NOTE! When the transmitter is active and the stop button is pressed, all relays go off.

REPLACE

You can replace a registered transmitter with another transmitter without having access to the receiver. Use the new transmitter that you want to replace the old transmitter with.

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Twist and pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 3.
The top LED lights (green). LED 2 flashes (red).

7. Enter the replacement ID code (a maximum of 11 digits) for the transmitter that you want to replace by pressing the transmitter buttons. IMPORTANT! When entering the last digit in the code, keep that button pressed until you have pressed the stop button.

IMPORTANT! The replacement ID code is placed in the back of the transmitter. Remove the rubber cover. This label is placed above the battery lid. You will find the correct replacement ID code in the bottom of the replacement code label.

8. Transmitter LED 3 lights (red) when one or more digits have been entered. Transmitter LEDs 3 + 4 (red) light when a maximum number of digits (11) have been entered.

9. Press the stop button. You can now release the button.

10. After approx. 10 seconds the transmitter turns off. NOTE! If replacing fails, press the stop button and start over again.

Channel	Frequency
11	2405 MHz
12	2410 MHz
13	2415 MHz
14	2420 MHz
15	2425 MHz
16	2430 MHz
17	2435 MHz
18	2440 MHz
19	2445 MHz
20	2450 MHz
21	2455 MHz
22	2460 MHz
23	2465 MHz
24	2470 MHz
25	2475 MHz
26	2480 MHz

Show channel

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 4.
The top LED lights (green).

7. The selected channel will be indicated in the following way:
LED 1 (red) will flash the number of times corresponding to the first digit. LED 2 (red) will flash the number of times corresponding to the second digit.
E.g. for channel 23: LED 1 (red) will flash 2 times, LED 2 (red) will flash 3 times.

Switch channel

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 8. Keep pressed.

7. Press button 4. Release.

8. Release button 8.
The top LED lights (green). LED 2 (red) flashes.

9. Select channel 11-26.
For example: Press button 2 for the first digit in channel 20. To enter the zero, press button 8. Keep pressed. Press button 4. Release button 4. Release button 8.

Press button	For digit
1	1
2	2
3	3
4	4
5	5
6	6
8 (shift)+1	7
8 (shift)+2	8
8 (shift)+3	9
8 (shift)+4	0

LED 3 (red) lights when a valid digit has been entered.
LEDs 3 and 4 (red) light when two valid digits have been entered.
The top LED flashes (green) 3 times. The transmitter turns off.

AUTOMATIC SHUTDOWN

NOTE! Only for continuous radio mode.

Turning on automatic shutdown can save battery capacity by automatically turning the transmitter off when no function has been activated for a set time.

Set the time for automatic shutdown

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Twist and pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 5.
The top LED lights (green). LED 2 flashes (red).

7. Select the time that you want for automatic shutdown by pressing the buttons according to the table:

Press button	Automatic shutdown time after
1	3 minutes
2	6 minutes
3	12 minutes
7	No automatic shutdown

The top LED flashes green 3 times. The transmitter turns off.

LOGOUT

Quick logout

1. Press button 7. Keep pressed.

2. Press the stop button.

Logout from menu mode

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 7.
The top LED flashes (red).

7. The transmitter is logging out for approx.10 seconds. The transmitter turns off.

Logout from receiver

1. Press the receiver Select button.
LED 10 (orange) lights.

2. Keep pressed (for more than 4 seconds).
LED 10 (orange) goes off.

3. The transmitter is now logged off. Any other registered transmitter can log in.

RELAY FUNCTIONALITY

NOTE! If Operating mode 0 is selected, you can not make these settings. Contact your representative for assistance.

NOTE! Momentary relay functionality is default. That means that the relay will only be activated when you press a button on the transmitter. When the button is released, the relay deactivates. Setting a relay to latching means that the relay gets activated every time that you press a button, but in this case the relay remains active until the button is pressed again.

NOTE! Before starting to perform these settings, make sure that the stop relays are deactivated!

NOTE! The settings options depend on the selected Operating mode.

Momentary or latching relay functionality

1. Press the receiver Function button 2 times.
LED 12 (yellow) lights. The relay LEDs light.

2. Press the receiver Select button to switch relay functionality. The relay LEDs flash to indicate that a latching or momentary functionality can be set to the corresponding relays.

3. Press the receiver Function button to switch between latching or momentary relay functionality:
LED 12 (yellow) off = momentary relay functionality
LED 12 (yellow) on = latching relay functionality

4. Press the receiver Select button to step to the next available relay. When you have stepped through all available relays, the receiver exits the settings menu.

CHAPTER 5: OPERATING MODES

Select Operating mode

NOTE! Go to the Operating modes pages to see what Operating modes that are available when transmitting in continuous/ discontinuous radio mode. Operating modes do not work for both radio modes.

1. Press the receiver Function button 4 times.
LED 10 (orange) lights.

2. Press the receiver Select button to see what Operating mode that is used.
The relay LEDs light according to the table below, LED 10 flashes in orange.

NOTE! The first relay in the row is relay 9. The second relay is relay 1.

When relay LED no. light(s)	The selected Operating mode is
0	0*
1	1
2	2
1+2	3
3	4
1+3	5
2+3	6
1+2+3	7
4	8
1+4	9
2+4	10
1+2+4	11
ALL	255*

3. Press the receiver Function button to step one Operating mode number at the time.
Example: You know that Operating mode 2 is selected, because relay LED 2 lights. When pressing the Function button one time, you would go to Operating mode 3 and LEDs 1+2 light. If you want to go to Operating mode 4, you would press the Function button one more time and LED 3 lights.

4. Press the receiver Select button to select Operating mode. The receiver exits the Operating mode menu and restarts.

*Operating modes that are reserved for specific customer applications can only be set in the PC program Settings manager. Contact your representative for assistance.
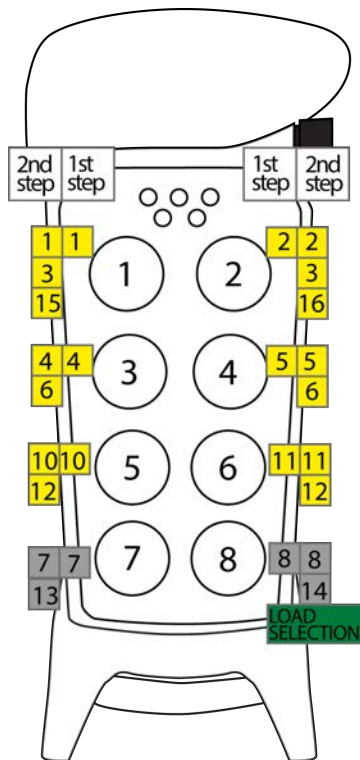
Operating mode 1
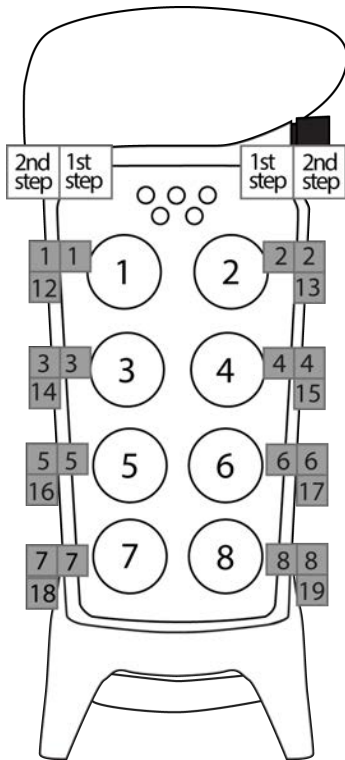
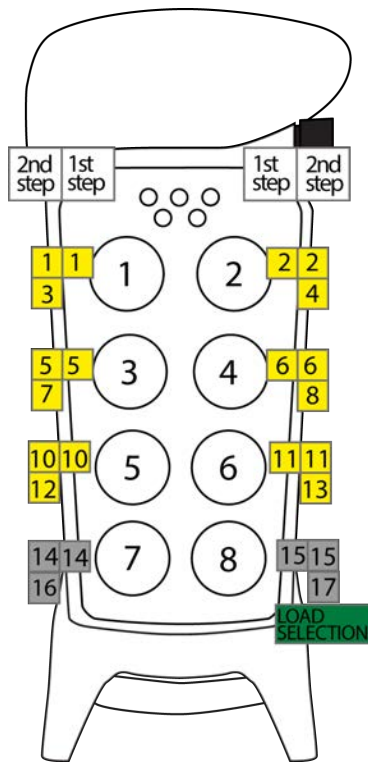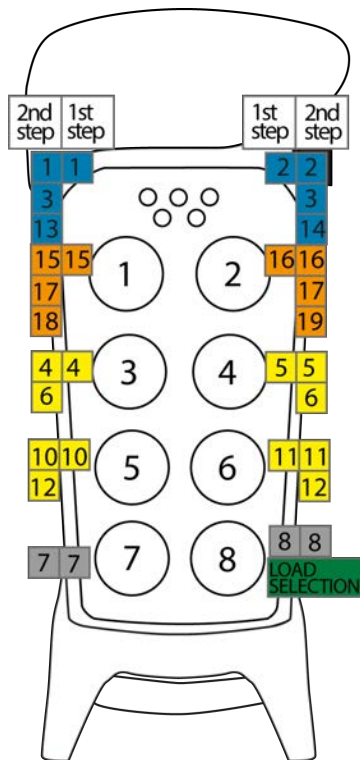| On relays	Relay 9 is active when radio link is up
Work relays	-
Recommended Load select	0
Programmable settings	Relay 1-8, 10-19 can be set to latching
Interlocking	-
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 2

■ Button function
■ Direction functions
■ Load: Load A activates relay 18, Load B activates relay 19

On relays	Relay 9 is active when radio link is up
Work relays	-
Recommended Load select	0, 1, 3
Programmable settings	Relays 7, 8, 13, 14 can be set to latching
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 3

■ Button function
■ Direction functions
■ Load: Load A activates relay 18, Load B activates relay 19

On relays	Relay 9 is active when radio link is up
Work relays	-
Recommended Load select	0, 1, 3
Programmable settings	Relays 14-17 can be set to latching
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 4

■ Button functions
■ Direction functions
■ Direction functions when Load B is selected
■ Direction functions when Load A is selected

On relays	Relay 9 is active when radio link is up
Work relays	-
Recommended Load select	1, 3
Programmable settings	Relays 7-8 can be set to latching
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 5
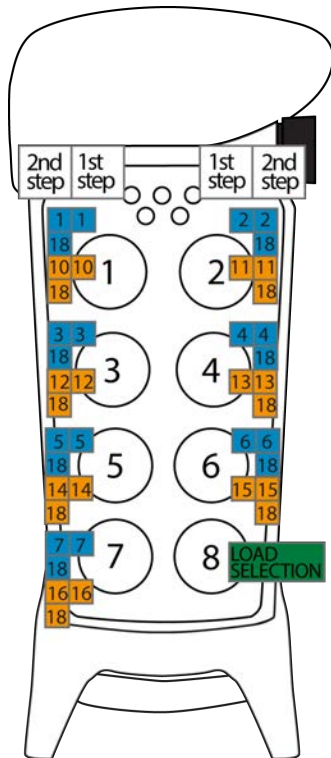
■ Load: Load A activates relay 8, Load B activates relay 17
■ Direction functions when Load B is selected
■ Direction functions when Load A is selected

On relays	Relay 9 is active when radio link is up
Work relays	Relay 19 is active when relay 1-7 or 10-16 is active
Recommended Load select	1, 3
Programmable settings	Relay 1-7, 10-16 can be set to latching
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 6
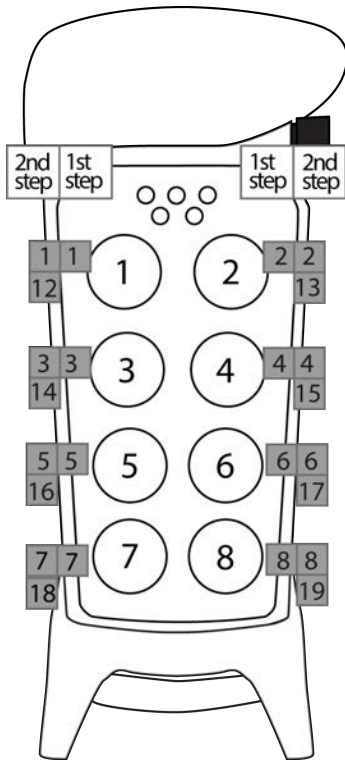
■ Button functions

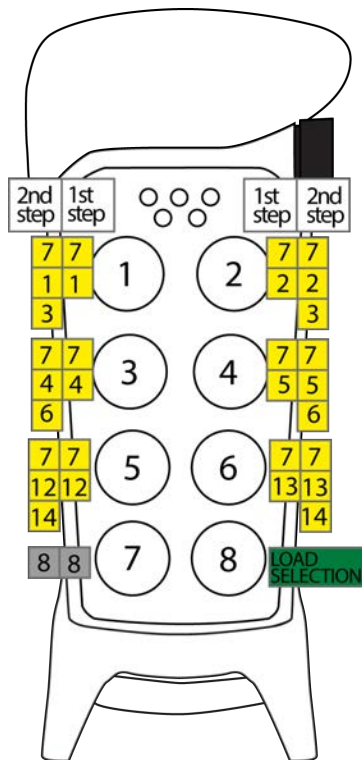| On relays	-
Work relays	Relay 9 is active when relay 1-8 or 10-19 is active
Recommended Load select	0
Programmable settings	Relay 1-8, 10-19 can be set to latching
Interlocking	-
Radio mode	Discontinuous
Zero position check	Disabled

Operating mode 7
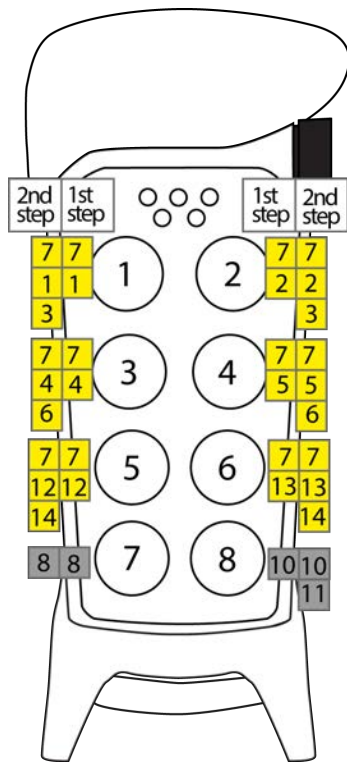
■ Button functions
■ Direction functions

On relays	Relay 9 is active when radio link is up
Work relays	Relay 7 is active when button 1-6 is pressed
Recommended Load select	0
Programmable settings	Relay 10-11 can be set to latching
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 8

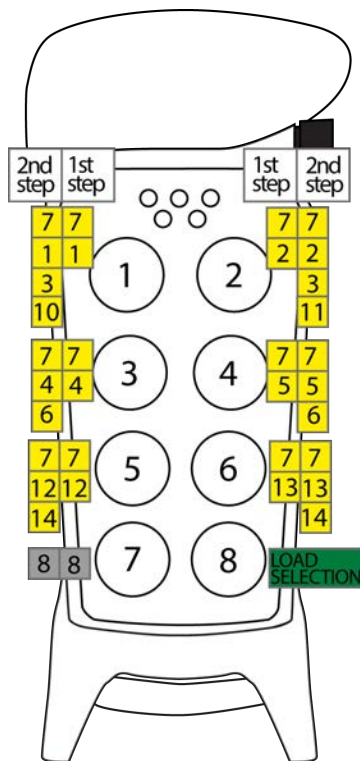■ Button functions
■ Direction functions

On relays	Relay 9 is active when radio link is up
Work relays	Relay 7 is active when button 1-6 is pressed
Recommended Load select	0
Programmable settings	-
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 9

■ Button functions
■ Direction functions
■ Load: Load A activates relay 10, Load B activates relay 11

On relays	Relay 9 is active when radio link is up
Work relays	Relay 7 is active when button 1-6 is pressed
Recommended Load select	1,3
Programmable settings	-
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 10

NOTE! Typical use for this Operating Mode: Control 2 receivers from 1 transmitter (one receiver uses Operating Mode 10. The other receiver uses Operating Mode 11).

NOTE! To activate any relay, Load A must be selected in the transmitter.

▨ Button functions
▨ Direction functions
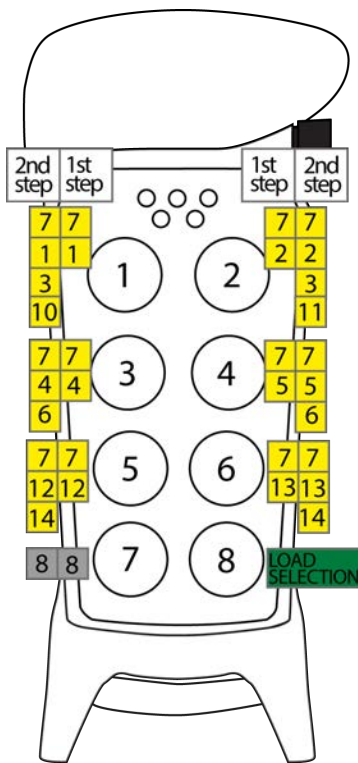▨ To activate any relay, Load A must be selected in the transmitter.

On relays	Relay 9 is active when radio link is up and Load A is selected
Work relays	Relay 7 is active when button 1-6 is pressed and Load A is selected
Recommended Load select	1, 3
Programmable settings	-
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

Operating mode 11

⬜ Button functions
🟨 Direction functions
🟩 To activate any relay, Load B must be selected in the transmitter.

On relays	Relay 9 is active when radio link is up and Load B is selected
Work relays	Relay 7 is active when buttons 1-6 are pressed and Load B is selected
Recommended Load select	1, 3
Programmable settings	-
Interlocking	Between button pairs: 1- 2, 3- 4, 5-6
Radio mode	Continuous
Zero position check	Active on all functions

CHAPTER 6: LOAD

LOAD SELECT MODE

NOTE! Only for continuous radio mode.

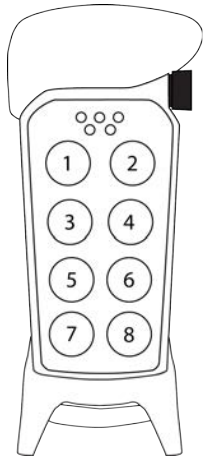NOTE! We recommend starting with Load select mode before selecting load at start-up.

NOTE! Load select mode 0 is default.

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1234 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 6.
The top LED lights (green). LED 2 flashes (red).

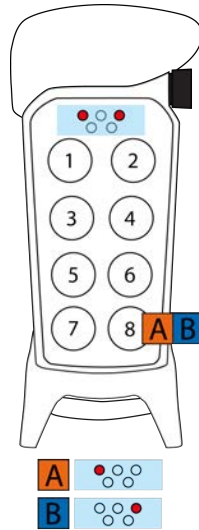7. To select a Load select mode, press a button according to the table:

Press button	For Load select	With this load selected at start-up
7	0	none
1	1	A
2	2	A
3	3	A
4	4	A

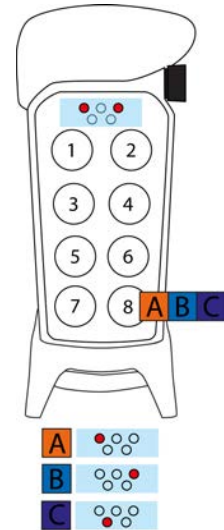The top LED flashes (green) 3 times. The transmitter turns off.
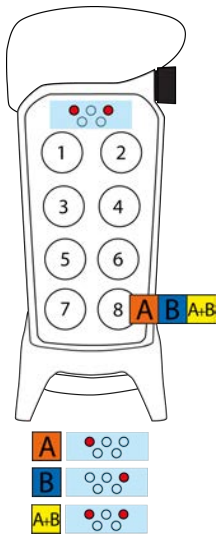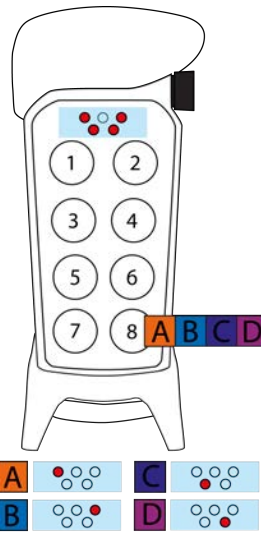
LOAD SELECT MODE

Load select mode 0

Load select mode 1

Load select mode 2

Load select mode

Load select mode 4

LOAD AT START-UP

NOTE! We recommend starting with Load select before selecting load at start-up.

1. Make sure that the stop button is pressed.

2. Press button 8. Keep pressed.

3. Pull out the stop button.

4. Release button 8.
Top LED flashes (green).

5. WITHIN 1 MINUTE FROM PULLING OUT THE STOP BUTTON:
Enter the code: 1-2-3-4 (press the buttons 1, 2, 3, 4).
The transmitter LEDs 1- 4 (red) light up. If the code is invalid, the transmitter turns off. If the code is accepted, the top LED flashes (green), The transmitter LEDs 1-4 (red) starts to flash.

6. WITHIN 1 MINUTE FROM ENTERING THE CODE:
Press button 8. Keep pressed.

7. Press button 6. Release.

8. Release button 8.
The top LED lights (green). LED 2 (red) flashes.

9. To select Load at start-up, press a button according to the table below:

Press button	For Load at start-up
7	none
1	A
2	B
3	A+B

CHAPTER 7: BATTERY AND MAINTENANCE GUIDE

Switch batteries

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.
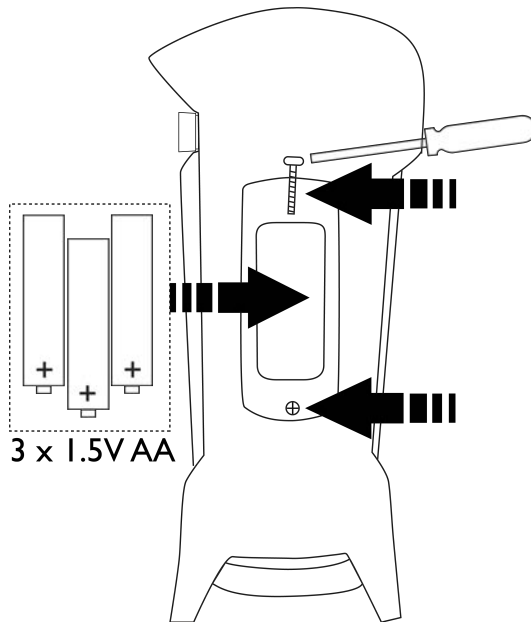
3 x 1.5V AA

1. Take off the transmitter battery lid by unscrewing the 2 screws with a screwdriver.

2. Switch the 3 x 1.5V AA batteries. Use alkaline batteries for optimal performance.

3. Put the transmitter battery lid back on using the screwdriver.

Battery type: 3 x 1.5V AA alkaline batteries/LR6 Alkaline

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, 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 2011/65/EU 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.

CHAPTER 8: FCC/IC

PN-TX-MX8 Product and FCC/ IC LABELS
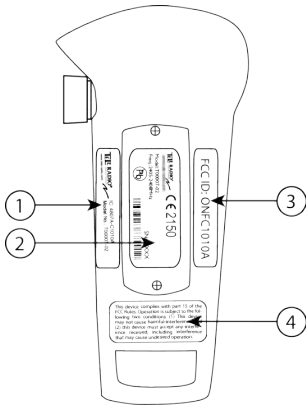
1. IC ID label
2. Product label
3. FCC ID label
4. FCC statement label

FCC statement

Statement for warning:
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.
Toute modification apportée à cet appareil qui ne serait pas approuvée expressément par (applicant name) peut invalider l'habilitation de l'utilisateur à utiliser l'appareil.
This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). 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.
L'appareil est conforme à la réglementation FCC, section 15 et Industrie Canada RSS standard exempts de licence (s). Son utilisation est soumise à deux conditions :
(1) L'appareil ne doit pas provoquer d'interférences nuisibles, et
(2) L'appareil doit supporter les interférences reçues, y compris les interférences empêchant son fonctionnement correct.
This equipment complies with FCC 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. Lesémetteurs ne doivent pas être placées près d'autres antennes ou émetteurs ou fonctionner avec ceux-ci.

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