

# Tele Radio T50

## Manual



## ENGLISH

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## PRODUCT DESCRIPTION

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### IMPORTANT!

**In order to get the best out of your system it is important you take the time to read through the manual before you start to install and program your equipment.**

**Before the system is used the receiver must be programmed. This is done with the help of the SMS function from a normal mobile phone.**

### AREA OF APPLICATION


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The product's area of application is controlling fixed or mobile applications with a small number of functions.

The product can also be used to automatically send alarm information via SMS.

### SAFETY

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 Ensure that:

- Appropriate personnel receive a review of the system's functions before it is used.
- Only authorized personnel are given the possibility to control the receiver.

## GENERAL INFORMATION

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### Programming and control via GSM

All programming and control of T50-02AGSM takes place using a normal mobile phone.

T50-02AGSM supports the following networks:

- EGSM900
- DCS1800
- PCS1900

### Range

The range of the system is virtually unlimited. Where there is coverage on the GSM network, there is also communication with the receiver.

## PREPARATIONS

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### ASSEMBLY AND INSTALLATION

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1. Select a suitable location for assembly of the receiver.
2. Insert a SIM-card as intended in the receiver.
3. Connect the operating voltage to the receiver.
4. Programming the receiver.
5. Connect the required functions to be controlled via the receiver.
  - Follow the instructions in the chapters "RECEIVER" and "PROGRAMMING THE RECEIVER".

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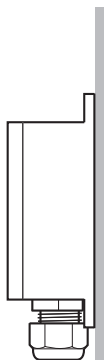
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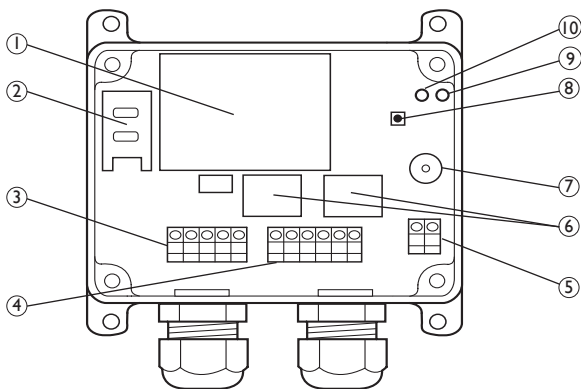
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- Select a location, if possible, that is protected from the wind and weather. Avoid locations where the receiver may be exposed to abnormal moisture conditions, e.g. during high-pressure washing.
- Fit the receiver with the cable couplings facing downwards.

## RECEIVER

Operating voltage:	7.5 – 24 V DC
Power consumption:	50 – 200 mA
Size:	120 x 120 x 45 mm
Protection:	IP 65
Climatic conditions:	Max -30°C to +60°C Humidity 90 %



- |                        |  |
|------------------------|--|
| 1. GSM module          |  |
| 2. SIM card holder     | For placement of the SIM card for the network in question  |
| 3. Connection terminal | Connection terminal for relay inputs (four inputs)         |
| 4. Connection terminal | Connection terminal for relay outputs                      |
| 5. Connection terminal | Connection terminal for operating voltage                  |
| 6. Relays              | Two separate relays 250 V / 8 A, NO/NC                     |
| 7. Buzzer              | Sounds to confirm programming and in the event of an alarm |
| 8. Push-button         | Reset switch   |
| 9. LED 1 (red)         | Indicates operating voltage, programming and alarms        |
| 10. LED 2 (green)      | indicates the receiver has a radio signal                  |

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## VISUAL AND AUDIO INDICATIONS

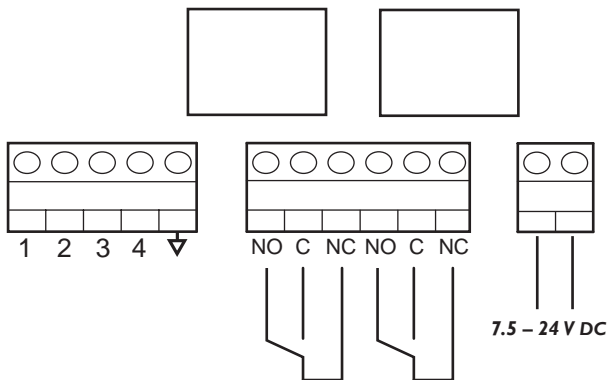
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LED 1 (green)	Flashes slowly	Operating voltage is on.
	Flashes fast for 2 s	Programming successful.
	Flashes fast for 10 s	Alarm
LED 2 (red)	Flashing	The receiver has a radio signal.
Buzzer	Continuous sound for 2 s	Programming successful.
	Sound pulses for 2 s	Programming unsuccessful.
	Sound pulses for 10 s	Alarm

## INSERTING THE SIM CARD

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In order for the product to be used it requires a SIM-card with associated telephone number. Insert the SIM-card in the intended place in the receiver (see position 2 in the diagram in chapter “Receiver”).



### Connecting the operating voltage

1. Connect the operating voltage to the voltage connection terminal. (Polarity insensitive). It takes approximately 15 seconds for the receiver to find the radio signal.

### Connecting the relay

2. Connect the control signal (control voltage) to C.
3. Each individual relay can be used to either close or break a circuit.
  - Closing function: When the relay is actuated, a control signal is received at relay output NO.
  - Breaking function: When the relay switches, the circuit is broken at relay output NC (control signal disappears).

### Connection of alarm inputs

4. Connect the required supervised functions between each alarm input (pin 1 - 4 on the alarm terminal) and the output (pin 5).

## PROGRAMMING THE RECEIVER

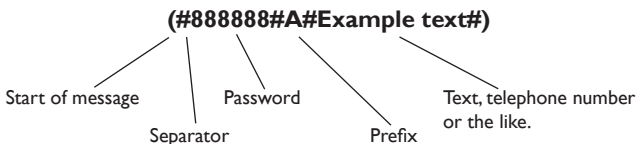
The receiver is programmed by sending SMS messages from a normal mobile phone.

The SMS messages are sent to the receiver's telephone number, i.e. the telephone number linked to the SIM-card installed in the receiver.

To avoid entering the receiver's telephone number for every SMS to be sent, we recommend that you save the number in the address book in the telephones used to control the receiver.

A message must always be opened and closed using brackets. The message must always include a password. On delivery the password is 888888. In addition, the message always has a prefix, in the form of an uppercase letter, which tells the receiver which function you wish to perform. Remember that the prefix must always be an uppercase letter (Capital letter) so that the receiver understands the message. The different parts of the message are delimited by #.

Example of a text message:



*Note! All SMS messages shown in the following chapters are to be sent to the receiver's telephone number to perform the function described. To avoid repetition this is not repeated for each function.*

For general information about how to write SMS messages, insert special characters and send messages, see the User Guide for your mobile phone.



## PROGRAMMING THE MESSAGE CENTRE NUMBER

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Prefix: A

When you insert a new SIM card in the receiver, you must set the number for the message centre for the network in question.

*Note! Only necessary if the message centre number is not preprogrammed on the SIM-card.*

SMS text:

**(#888888#A#1234567890#)**

1234567890 = Message centre number

More information about how this is done can be found in the User Guide for your mobile phone or in the information booklet supplied with the SIM card.

## STORE A GSM-TELEPHONE USER IN THE RECEIVER

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Prefix: C

This is how you state from which GSM telephone number it will be possible to control and program the receiver. Up to 256 telephones can be programmed on one and the same receiver. You must send an SMS for each telephone you wish to program on the receiver.

SMS text:

**(#888888#C#1234567890#Y#)**

or

**(#888888#C#1234567890#N#)**

1234567890 = The GSM telephone number from which it will be possible to control and program the receiver

Y = Time limitation for this user (only authorised to control the receiver at certain times of the day)

N = No time limitation for this user

*Note! If one or more users are to have time limited access for control, you also need to state between which times they should be permitted access and set the clock as set out below.*

*Note! You must program in your own GSM telephone number as above before you can continue to program the receiver.*

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## REMOVE A GSM USER FROM THE TRANSMITTER

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Prefix: D

This is how you remove a GSM telephone number, which should no longer be used to program or control the receiver.

SMS text:

**(#888888#D#1234567890#)**

1234567890 =            The GSM telephone number to be removed

## SETTING A TIME LIMIT FOR CONTROL

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Prefix: S

This is how you state the time that a user with time limited access is able to control and program the receiver. The same time limitation will apply to all users with a time limit.

SMS text:

**(#888888#M#18:00#07:00#)**

18:00 =            Start time

07:00 =            End time

## SETTING THE CLOCK

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Prefix: N

SMS text:

**(#888888#N#15:30#)**

15:30 =            Current time

## ACTIVATION OF PROGRAMMING CONFIRMATION

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Prefix: B

The function “programming confirmation” means that after each successful programming action, that is, after each SMS you have sent to the receiver which has been understood and accepted, you receive an SMS with the text “SUCCEED” sent to your mobile phone. If the programming action fails you receive an SMS with the text “FAILED” instead. The function is activated with the following SMS.

SMS text:

**(#888888#K#)**

## DEACTIVATION OF PROGRAMMING CONFIRMATION

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Prefix: P

The function “programming confirmation” is deactivated with the following SMS.

SMS text:

**(#888888#L#)**

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## CHANGE THE PASSWORD

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### Password 1

Prefix: B

All SMS messages sent to the receiver must include a six digit password. On delivery the password is 888888. The password can be changed to your own six digit code. We recommend that you do this.

SMS text:

**(#888888#B#777777#)**

888888 = The old password

777777 = The new password

*Note! The SMS-messages shown in this manual always contain the standard password 888888. If you have changed the password you will need to replace 888888 with the new password you have chosen.*

### Password 2 (for activation of relay 1 via SMS)

Prefix: A

When relay 1 is activated via SMS (see chapter "Control of relay outputs") a separate password is used. On delivery this password is 666666. The password can be changed to your own six digit code. We recommend that you do this.

SMS text:

**(#666666#A#555555#)**

666666 = The old password

555555 = The new password

## RESETTING THE PASSWORD (SYSTEM RESET)

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If you have replaced one or both passwords and then forgotten the new password, you can restore the passwords to 888888 and 666666 by pressing the reset switch (see position 8 in the diagram in the chapter "Receiver"). If you press the reset switch, both passwords are reset.

**NOTE! All settings in the receiver are lost.**

## STATE THE GSM TELEPHONE USER FOR ALARMS

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Prefix: E

This is how you state the GSM telephone number to which alarm information should be sent via SMS when one of the receiver's four alarm inputs is activated. A maximum of four telephone numbers can be programmed for alarm information. If you add a fifth number the first number programmed is overwritten.

SMS text:

**(#888888#E#1234567890#)**

1234567890 = The GSM telephone number to receive alarm messages

## REMOVE THE GSM TELEPHONE USER FOR ALARMS

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Prefix: H

This is how you remove a GSM telephone number that should no longer receive alarm information via SMS.

SMS text:

**(#888888#H#1234567890#)**

1234567890 = The GSM telephone number that should no longer receive alarm messages

## STATE ALARM TEXTS FOR ALARMS 1 – 4

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Prefix: O, P, Q, S

You can decide yourself which alarm text should be sent via SMS when one of the alarm inputs 1 to 4 is activated. This is how you program appropriate alarm text for each one of the alarm inputs. You must send one SMS to the receiver per alarm text/alarm input that you wish to program.

SMS text alarm 1:

**(#888888#O#Text...#)**

SMS text alarm 2:

**(#888888#P#Text...#)**

SMS text alarm 3:

**(#888888#Q#Text...#)**

SMS text alarm 4:

**(#888888#S#Text...#)**

Text... = Own optional text (max 47 characters)

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## ACTIVATION OF SMS ALARM FUNCTION

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Prefix: F

In order for alarms to be sent to the telephone number you have stated according to section "State the GSM telephone user for alarms", the alarm function must be activated according to the following. If you have programmed several telephone numbers to receive alarm information, the alarm function for all numbers is activated simultaneously.

SMS text:

**(#888888#F#)**

## DEACTIVATION OF SMS ALARM FUNCTION

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Prefix: G

The alarm function is deactivated according to the following. If you have programmed several telephone numbers to receive alarm information, the alarm function for all numbers is deactivated simultaneously.

SMS text:

**(#888888#G#)**

The receiver remembers the telephone numbers for alarm information that have been programmed even after deactivation of the alarm function, so you do not need to add them again when you activate the alarm function again.

## CONTROL OF RELAY OUTPUTS:

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### RELAY 1

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#### Activation via SMS

Prefix: J

Relay 1 can be activated via SMS from an optional mobile phone with the help of a special password. The telephone number does not need to be programmed in advance in the receiver. This password on delivery is 666666 (also see the section "Change the password").

1. Send an SMS with the format below to the receiver's telephone number.

SMS text:

**(#666666#J#)**

- Relay 1 is activated and is active for 30 seconds.

666666 = Password 2 (for activation of relay 1 via SMS)

#### Activation by calling the receiver

*Note! In order to activate relay output 1 by calling the receiver, your mobile phone must first be programmed in the receiver according to the section "Store a GSM-telephone user in the receiver".*

1. Call the receiver's telephone number.
  2. Replace the handset when the call is connected.
- Relay 1 is activated when the call is connected and is active for 30 seconds from when you replace the handset.

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## RELAY 2

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*Note! In order to activate and deactivate relay output 2 your mobile phone must first be programmed in the receiver according to the section “Store a GSM-telephone user in the receiver”.*

### Activation of relay 2

Prefix: T

1. Send an SMS with the format below to the receiver's telephone number.

SMS text:

**(#888888#T#)**

- Relay 2 is activated and an SMS with the text “DEVICE ON” is sent to your mobile phone.

### Deactivating of relay 2

Prefix: U

1. Send an SMS with the format below to the receiver's telephone number.

SMS text:

**(#888888#U#)**

- Relay 2 is deactivated and an SMS with the text “DEVICE OFF” is sent to your mobile phone.

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## TROUBLESHOOTING CHART

If the equipment does not work as it should, please check the points set out below.

MALFUNCTION	POSSIBLE CAUSES	ACTION
Nothing happens when I start the receiver.	The receiver is connected incorrectly.	Check the connection of the receiver.
	Incorrect supply voltage to the receiver.	Check the supply voltage to the receiver.
The receiver's relays are not activated when I try to activate a function.	The telephone you are using is not programmed in the receiver.	Program the telephone in the receiver.
	The receiver has no coverage.	Check whether there is coverage.

**NOTE!** Please contact your dealer if you have followed these instructions but have not managed to get the wireless remote control system to work.

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## SERVICING AND MAINTENANCE

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### SERVICING

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If your system requires servicing or support, or if you need to return an item or make a complaint, please contact your dealer.

When contacting a dealer regarding a servicing or support matter, please have the following information to hand: System, model and a description of the problem.

If you subsequently need to return an item or make a complaint, it would make matters easier if you could please include information regarding invoice number and delivery date.

**NOTE!** *The warranty does not apply to faults that have arisen due to modifications to products, incorrect installation or abnormal use.*

### RECYCLING, SCRAPPING

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T50-02AGSM systems and any accessories and spare parts no longer in use should be scrapped and recycled according to local environmental regulations.

CE1313①

CE Declaration of conformity for Tele Radio AB radio-controlled systems can be downloaded from <http://www.tele-radio.com>.

### **TELE RADIO AB**

Sweden, Main office

Tel. +46 (0)31-748 54 60

e-mail: [info@tele-radio.com](mailto:info@tele-radio.com)

[www.tele-radio.com](http://www.tele-radio.com)

### **TELE RADIO SVERIGE**

Sweden

Tel. +46 (0)31-724 98 00

e-mail: [sverige@tele-radio.com](mailto:sverige@tele-radio.com)

### **TELE RADIO OÜ**

Estonia

Tel. +372 44 511 55

e-mail: [m.jyrissoo@tele-radio.com](mailto:m.jyrissoo@tele-radio.com)

### **TELE RADIO BV**

Benelux

Tel. +31-(0)70-419 41 20

e-mail: [info@teleradio.nl](mailto:info@teleradio.nl)

### **TELE RADIO LTD**

England

Tel. +44 (0) 1625 509 125

e-mail: [sales@teleradiouk.com](mailto:sales@teleradiouk.com)

### **TELE RADIO LLC**

North America & Latin America

Tel. +1 (305) 459 0763

e-mail: [america@tele-radio.com](mailto:america@tele-radio.com)

### **TELE RADIO ASIA**

China

Tel. +86-(0)592-3111168

e-mail: [b.sun@tele-radio.cn](mailto:b.sun@tele-radio.cn)

### **TELE RADIO TURKEY**

Turkey

Tel. +90-532 292 4448

e-mail: [c.mevlevioglu@tele-radio.com](mailto:c.mevlevioglu@tele-radio.com)

### **TELE RADIO AS**

Norway

Tel. +47-6933 4900

e-mail: [norway@tele-radio.com](mailto:norway@tele-radio.com)

### **TELE RADIO GmbH**

Germany

Tel. +49 (0)94 51-944 8 550

e-mail: [kontakt@tele-radio-gmbh.de](mailto:kontakt@tele-radio-gmbh.de)

