Instruction Manual

VarioRec6 Radio Receivers

Document Revision Control/ Updating

Revision control/updating

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Intended use

The device must only be used for the applications specified in the catalogue and the technical description and only in combination with devices of a different make and components recommended or authorised by Lehmann Elektronik. The proper and secure operation of the product requires correct transport, storage, installation, and mounting as well as careful handling and maintenance.

Trade marks

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The contents of this document has been checked for compliance with the described products. However, deviations cannot be ruled out, and we cannot guarantee complete compliance. The information in this document is regularly checked and necessary corrections will be included in reprints.

We gratefully accept suggestions for improvement.

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Safety information

This manual contains information that you should observe to ensure your own personal safety as well as to avoid personal injuries and material damage.
The notes referring to your personal safety are highlighted in the manual by a safety alert symbol (warning triangle).
Notes referring to property damage are displayed without a safety alert symbol.
Depending on the hazard level, warnings are displayed in descending order as follows:

Danger

indicates that death or severe personal injury will result if the proper precautions are not taken.

Warning

indicates that death or serious injury could result if the proper precautions are not taken.

Caution

with a safety alert symbol indicates that minor personal injury may result if the proper precautions are not taken.

Caution

without a safety alert symbol means that damage to property may occur if the proper precautions are not taken.

Note

indicates that an undesirable result or state could occur if the corresponding instruction is not followed.

In the event of several levels of danger occurring simultaneously, the warning corresponding to the highest level of danger is always used. A warning by a warning triangle indicating possible personal injury may also include a warning relating to property damage.

Qualified personnel

The associated device/system must only be set up and operated using this documentation. A device/system must only be placed into operation and operated by **qualified personnel**.
With regard to the safety information in this documentation, a “qualified person” is a person who is authorized to put into operation equipment, systems, and circuits in accordance with the standard DIN VDE 0834 for qualified personnel and to provide training on said equipment, systems, and circuits.

Instructed personnel

With regard to the safety information in this documentation, an “instructed person” is a person who is authorized to operate equipment and systems in accordance with the standard DIN VDE 0834 for instructed personnel. Instructed personnel has a duty of supervision within the meaning of VDE 0834. As a rule, instructed personnel has received instruction/training by qualified personnel and obtained the required documentation.

Trained personnel

A “trained person” is a person who has been instructed in usage and monitoring and who has the necessary documents at his or her disposal when needed.

Contents

1 Product

Warning
The use of a call device does not release supervisors from the obligation to supervise the persons supported by such a device. The present product uses a radio link to transmit calls. Read this manual before operating the device and carry out the described measures. This system is radio-based and must therefore not be used for monitoring purposes if life-threatening conditions are foreseeable.

2 Basic Variants of the Product / Scope of Supply

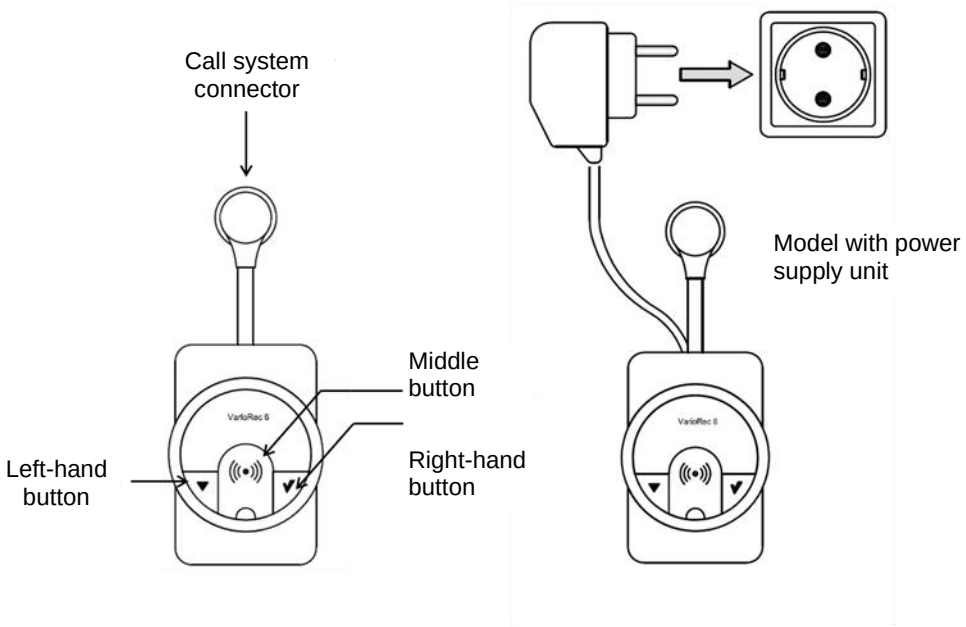
Product variants	
VarioRec6 radio receiver 868 MHz[1]	
VarioRec6 radio receiver 868 MHz[1] with power supply unit	
VarioRec6 radio receiver 869 MHz[1]	
VarioRec6 radio receiver 869 MHz[1] with power supply unit	
Documentation	
• **VarioRec6** quick reference guide (enclosure)	LE235
• **VarioRec6** instruction manual (this document; can be downloaded from our homepage)	LE243

[1]The frequency can be found on the identification decal.

Various connectors are available.
Note: While unpacking, each shipment should be inspected for completeness and damage.
Note: In this manual the "**VarioRec6** radio receiver" is referred to as "radio receiver" or "receiver".

3 Product Information

Figure: VarioRec6 radio receiver with controls



3.1 VarioRec6 Radio Receiver

The **VarioRec6** radio receiver wirelessly receives calls of **VarioRec** transmitters and transmits them to the call system

3.2 Radio Transmitters

The **VarioRec6** radio receiver can receive all matching **VarioMobil** transmitters.

3.3 Call System

Check if the radio receiver variant is suitable for the intended call system.
This information can be found either on the radio receiver identification label or in the call system documentation.

4 Power Supply Variants

The radio receiver range includes variants with or without power supply units.

- The power supply of the variant **without power supply unit** is provided by the call system connector.
  - During a voltage breakdown the call system provides an emergency power supply for the radio receiver.
  - The radio receiver remains operational as long as the emergency power supply is activated.

- The power supply of the variant **with power supply unit** is provided by the 230 V mains to which the respective power outlet is connected.
  - During a voltage breakdown the radio receiver no longer receives calls.
  - Power Failure Message: If the radio receiver is de-energised, the relay releases and indicates the power failure to the call system.

5 Operating Steps

Below, standardised pictograms are used for the various variants.

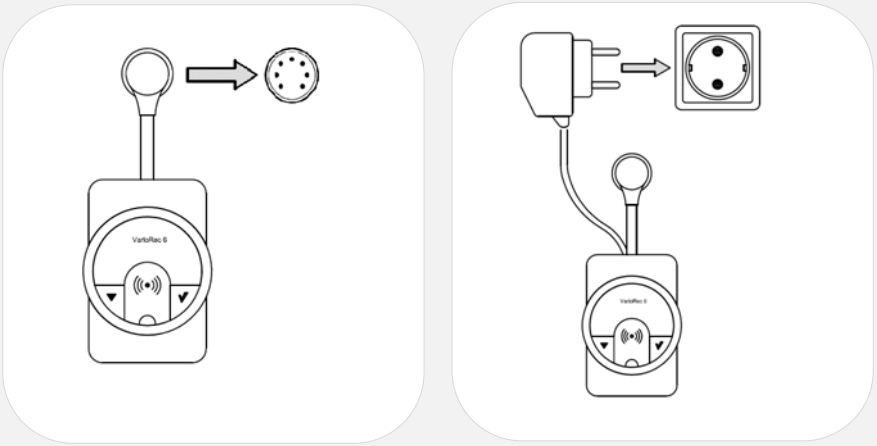
5.1 Connecting the Radio Receiver

“Plug in the receiver” means that the radio receiver must be restarted by connecting the power supply.
Depending on the receiver variants, proceed as follows:

- Receivers **without power supply unit:**
  - Insert the connector into an auxiliary plug contact of the call system.
- Receivers **with power supply unit:**
  - Insert the plug of the power supply unit into a power outlet (the call system connection does not influence the function).
  - In addition, insert the connector into an auxiliary plug contact of the call system.

Figure: “Plug in the receiver”

“Plug in the receiver” instruction



Plug in the receiver

Plug in the power supply unit

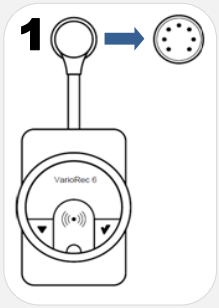
6 Operation

Note: “Operation” means that radio transmitters have already been programmed in the radio receiver.

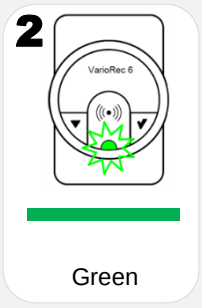
6.1 Putting Radio Receivers into Operation

Insert the connector into a suitable auxiliary plug contact / pear push button plug of the call system. For radio receivers with power supply units, also insert the mains plug.
After a self test, the LED indicator lights up in green to indicate the receiving operating state. The radio receiver is now operational and can receive and transmit radio calls.

Putting the radio receiver in operating mode (standard operation)



Plug in the receiver



Green

Receiver is operational

Note
The operating steps required for operation are listed in the quick reference guide.

6.2 Range of the Radio Link

Important
During initial putting into operation of the radio receiver, adequate reception at the usage site must be checked at regular intervals. More information is provided in the descriptions of the matching receivers.

7 Initial Putting Into Operation

Carry out the following steps before the initial putting into operation:

- Check if the radio receiver connector type is suitable for the call system.
- Check if factory settings or customised settings are to be used.
- Assign radio transmitters by programming.
- Check the range at the usage site.

7.1 Checking if the Radio Receiver Connector Type is Suitable for the Call System

Check on the basis of the documentation of your call system if the **VarioRec6** connector type is suitable for the existing auxiliary plug contacts / pear push button plugs. Also check if special settings are required.

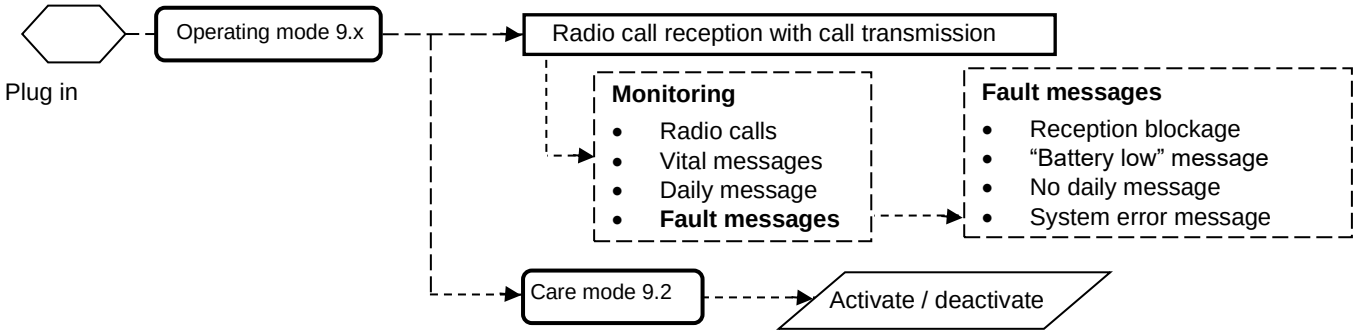
7.2 Setting of Desired Operating Functions

Note: The factory settings allow for a troublefree operation of the radio receiver. If you do not intend to change parameters, you may directly proceed with the step “Programming Radio Receivers”.

8 Overview of the Operating and Parameterisation Functions

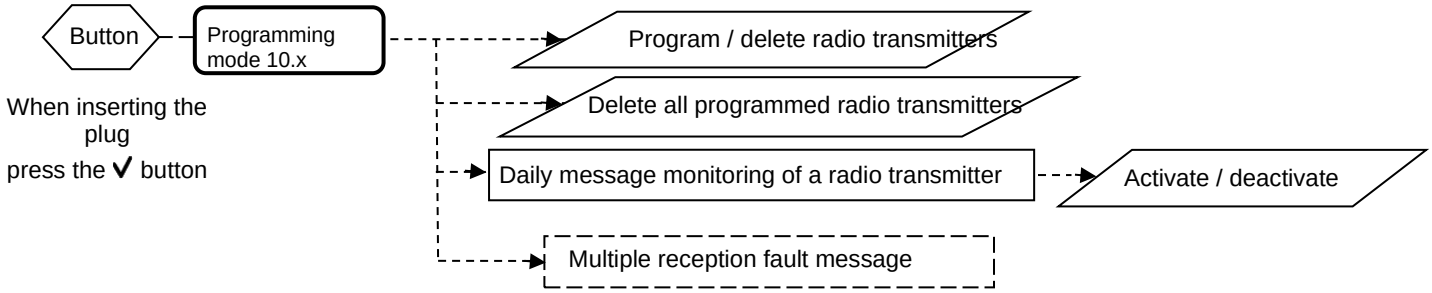
8.1 Operating Mode

This is the operating state after connecting the device. This mode is automatically activated after applying the supply voltage.



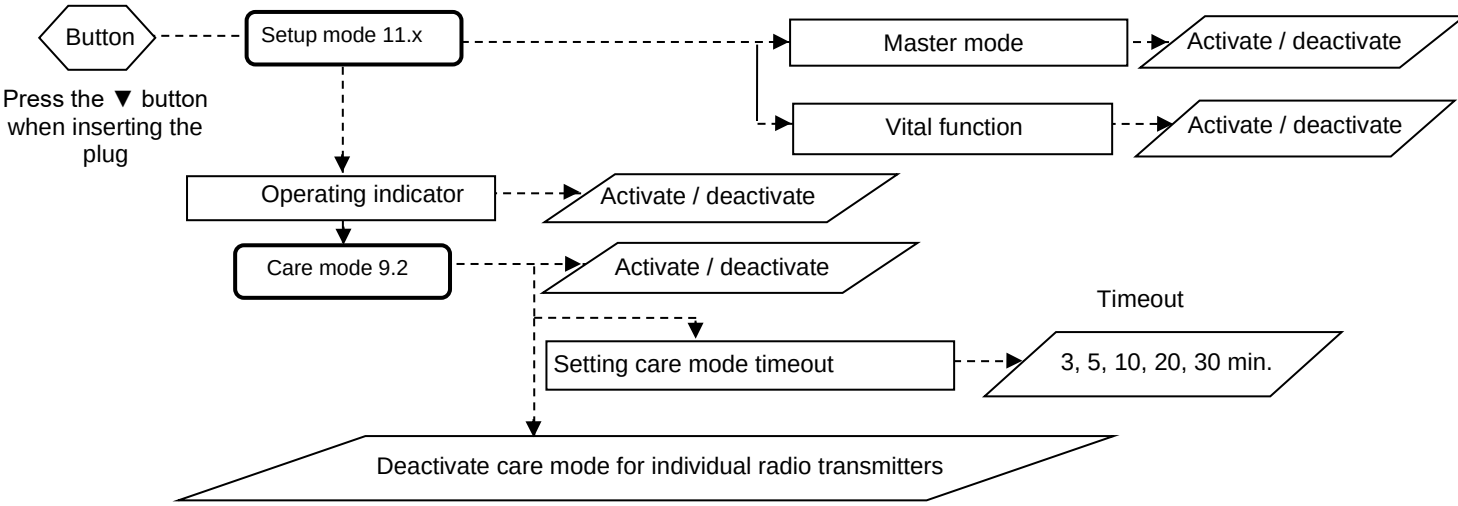
8.2 Programming Mode

Activation by an operating sequence



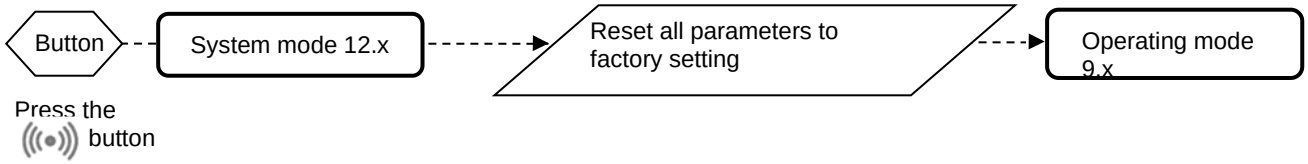
8.3 Setup Mode

Activation by an operating sequence



8.4 System Control

Activation by an operating sequence



9 Operating Radio Receivers During Operation

After plugging, the radio receiver automatically enters the operating mode. In this mode radio calls are received and transmitted to the call system.
In addition, it is possible to activate the care mode which allows the call transmission to be suppressed for the selected time.

- **Functions in operating mode**
  - Reception of radio calls with call transmission to the call system.
    - Indication of fault messages.
  - Care mode activation / deactivation.

Image sequence: Putting the radio receiver in operating mode and receiving radio calls

9.1 Error / Fault Messages in the Operating Mode

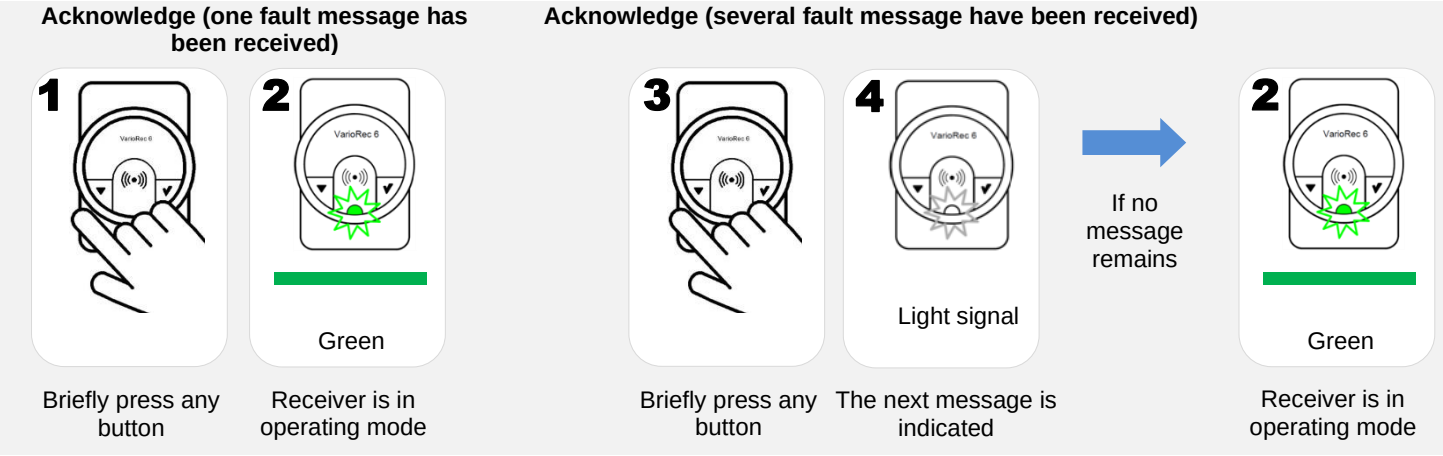
During operation and reception of radio transmitter signals, errors or auxiliary messages may occur. All errors are indicated by the LED light. The settings and the call system determine if and how errors are transmitted to the call system. In systems with a separate fault channel the fault message will always be transmitted. The messages will be displayed until they are acknowledged.
Note: Call messages continue to be received and transmitted even after receipt of a fault message.
The most recent message will be indicated. After acknowledgement of the message, the next message, if any, is indicated.
This sequence can be repeated until the fault memory is empty.

Figure: Possible LED indicator messages in the operating mode

Message	Indication	Measure*
Transmitter battery low	Red flashing light	Replace radio transmitter battery
No daily message	Green flashing light	Red flashing light
No vital message	Green / orange flashing light	Determine why the message was not received
Reception blockage (only with social alarm frequency)	Orange flashing light	Check for sources of radio interference in the environment
System error	Red / green flashing light	Error in radio receiver or in the connection

*Please check for details of these measures in this document

Image sequence: Acknowledging fault messages

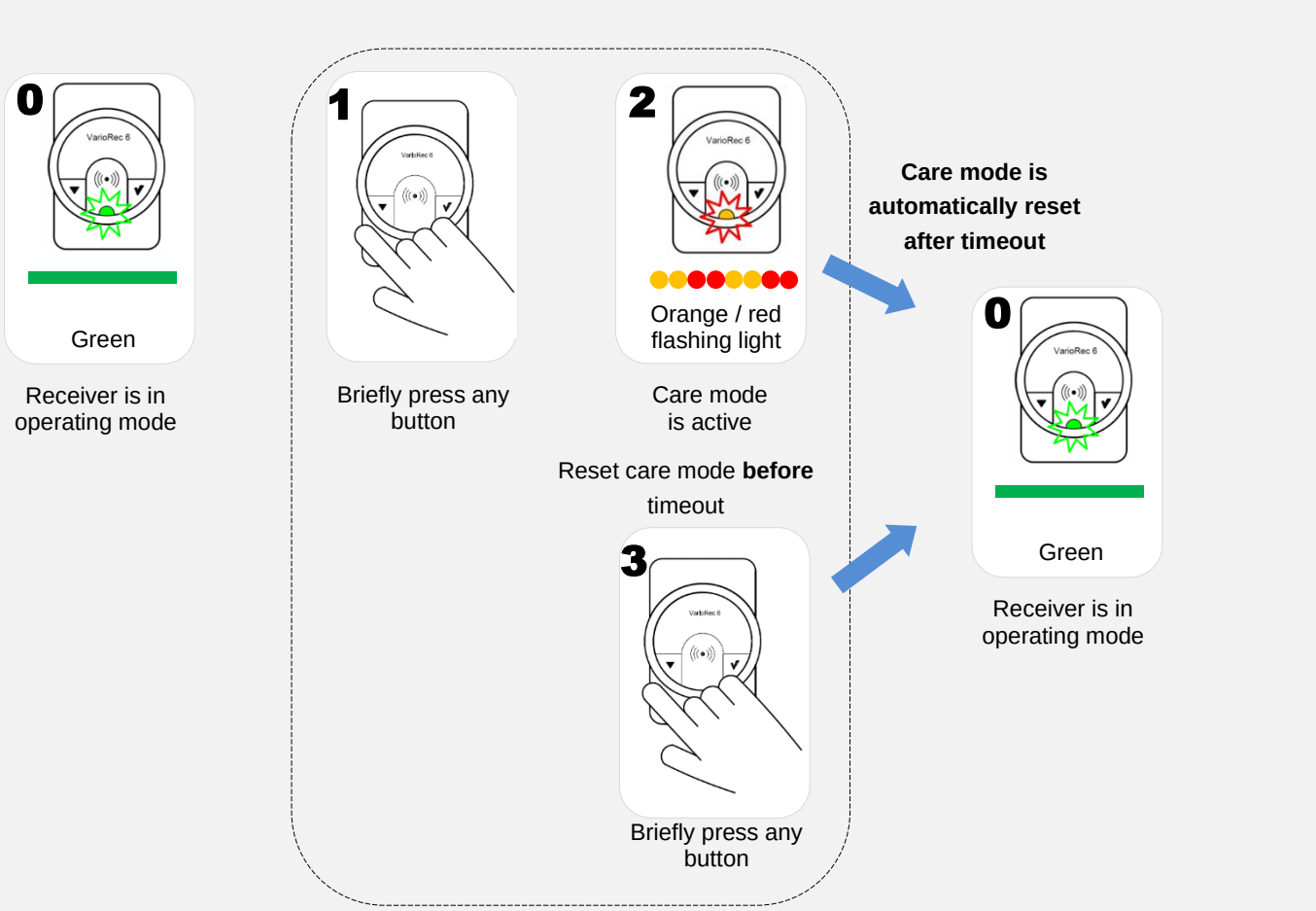


9.2 Care Mode

If this mode has been activated (see chapter 11.x., “setup mode”), call transmission can be suppressed for a set time (e.g., to avoid the triggering of call signals as long as a care measure is carried out) in the operating mode.

- **Functions in care mode**
  - Activating the care mode: The radio call transmission is suppressed during timeout.
    - However, the receiver continues to indicate:
      - Calls
      - Fault messages.
  - Deactivating the care mode:
    - Briefly press any button,
    - otherwise the operating mode is automatically reset after the set timeout.

Image sequence: Activating the care mode during operation / resetting the care mode in advance



10 Programming Mode

This mode is used to program radio transmitters to the receiver, to delete them from the receiver or to set the daily message monitoring.

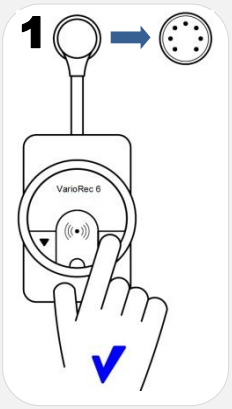
- **Functions in programming mode**
  - Program / delete radio transmitters.
  - Activate / deactivate the daily message.
  - Delete all programmed radio transmitters.

10.1 Navigating in Programming Mode

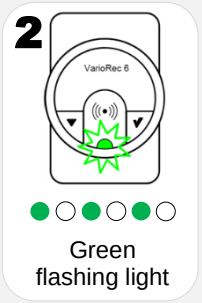
Note: The radio receiver automatically reactivates the operating mode if there is no input for approx. 1 min.

Image sequence: Navigating

Activating the programming mode

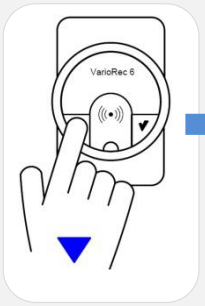


Press and hold the right-hand button when plugging

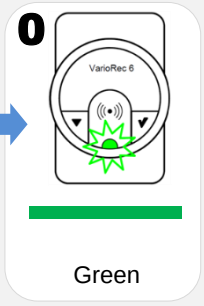


Receiver is in programming mode

From programming mode back to operating mode

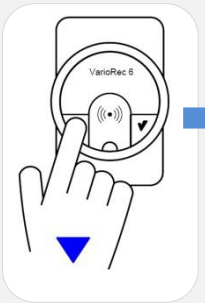


Press and hold left-hand button

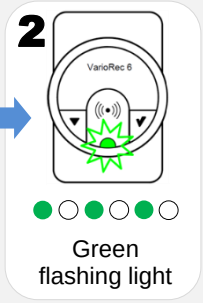


Receiver is back in operating mode

From a submode back to the programming mode



Briefly press left-hand button



From programming mode back to operating mode

10.2 Programming / Deleting Radio Transmitters

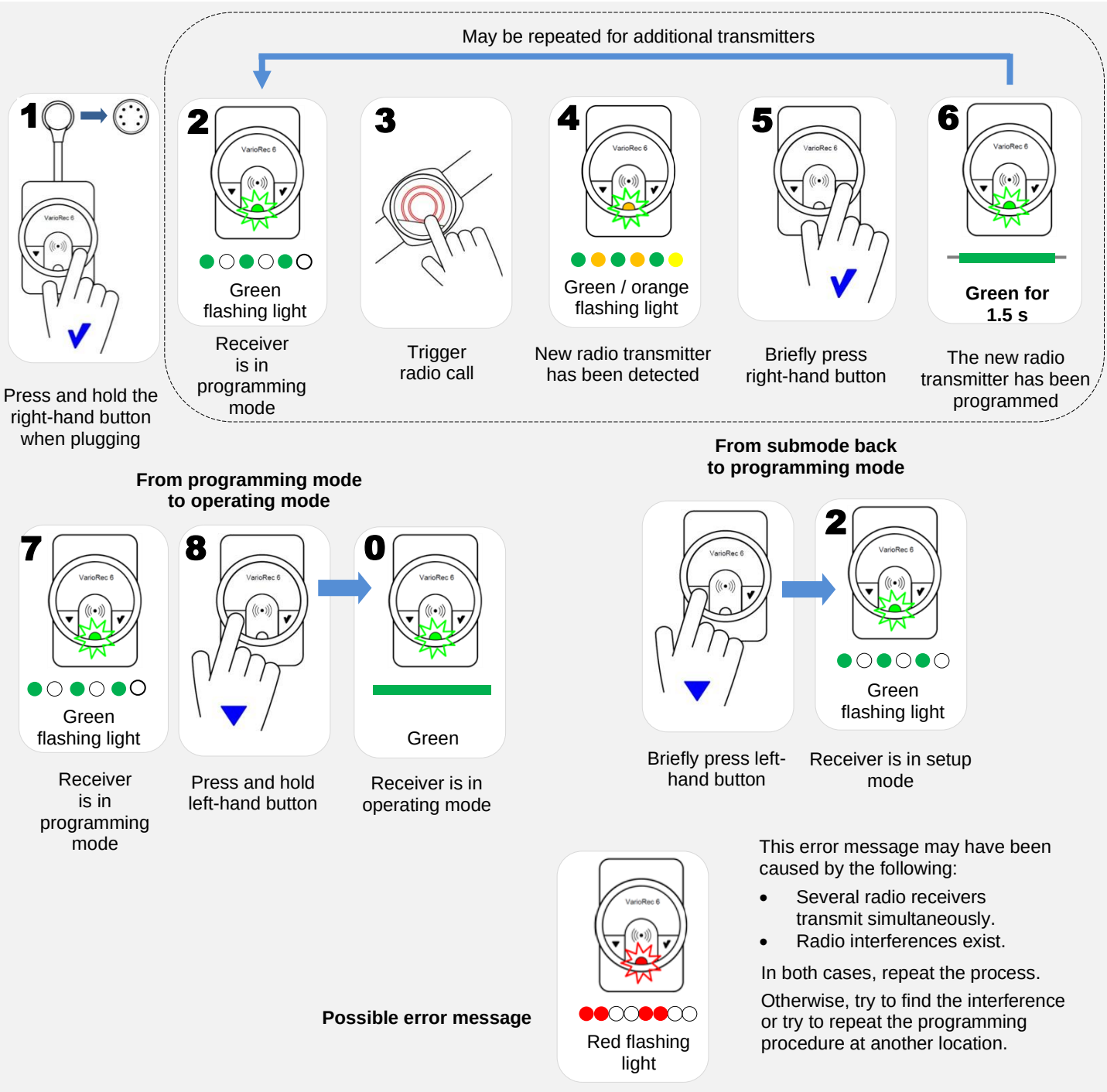
Before a radio receiver can detect a radio transmitter, the latter has to be programmed in the radio receiver. A radio transmitter that is no longer to be used with this radio receiver must be deleted from the transmitter.
Note: A fault message is triggered if unidentifiable transmitters or multiple reception are detected during programming / deletion. In this case the programming step is to be repeated.

10.2.1 Programming Radio Transmitters

The first image sequence shows the programming of current radio transmitters. The second image sequence shows the programming of radio transmitters with special functions such as, e.g., wireless momentary stop switches.
(note: Special functions are transmitted only if the call system supports their transmission by auxiliary plug contacts.)

Warning
Always check the range of new transmitters after programming. The exact procedure is described in the radio transmitter manuals.

Image sequence: Programming radio transmitters

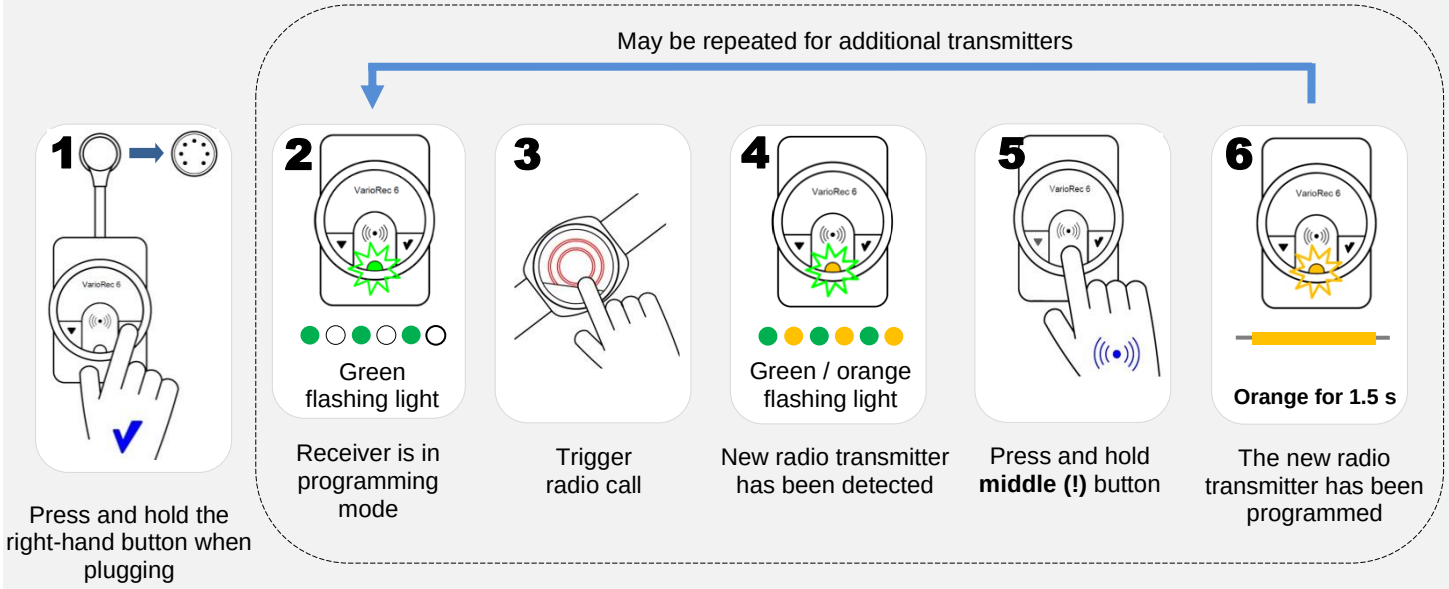


10.2.2 Programming of Radio Receivers Used for Special Functions

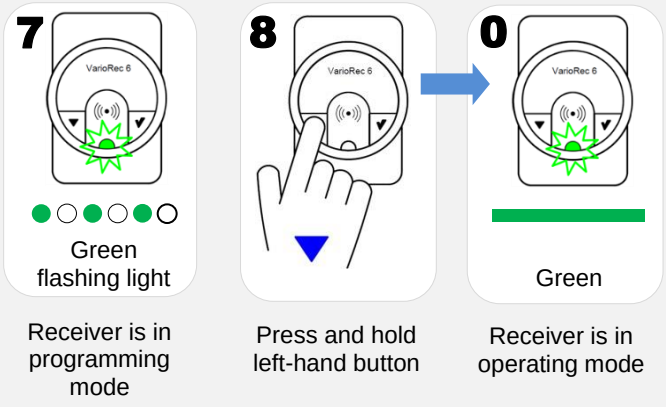
Examples of special functions

- **Wireless Momentary Stop Switch**
- **Wireless light button**

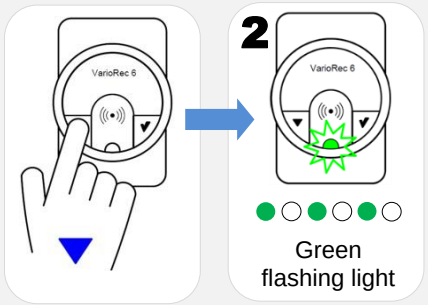
Image sequence: Programming of radio receivers used for special functions.



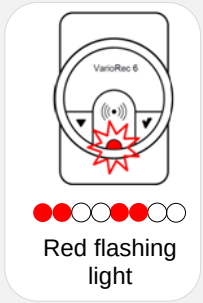
From programming mode to operating mode



From submode back to programming mode



Possible error message



This error message may have been caused by the following:

- Several radio receivers transmit simultaneously.
- Radio interferences exist.

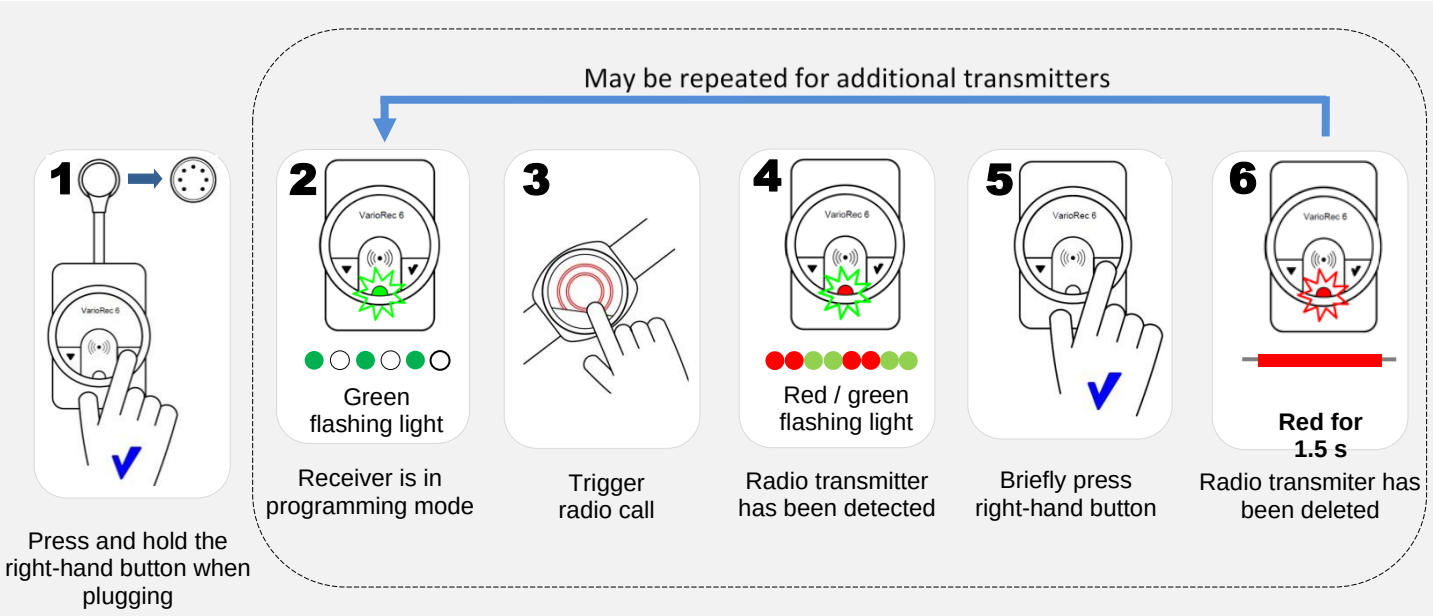
In both cases, repeat the process.

Otherwise, try to find the interference or try to repeat the programming procedure at another location.

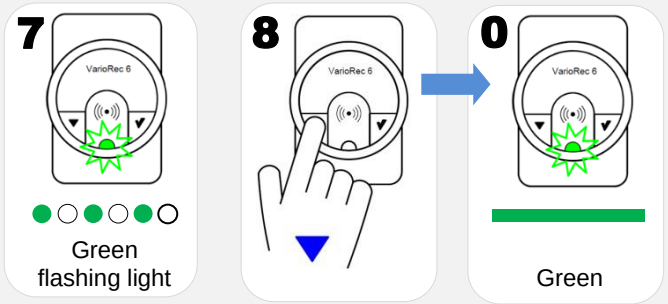
10.2.3 Deleting Radio Transmitters

To avoid multiple reception, always delete radio transmitters from radio receivers that are no longer intended to receive calls from these transmitters.

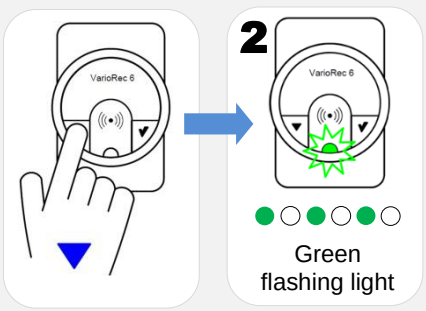
Image sequence: Deleting radio transmitters



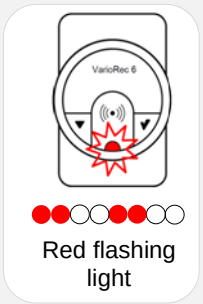
From programming mode to operating mode



From submode back to programming mode



Possible error message



This error message may have been caused by the following:

- Several radio receivers transmit simultaneously.
- Radio interferences exist.

In both cases, repeat the process.

Otherwise, try to find the interference or try to repeat the programming procedure at another location.

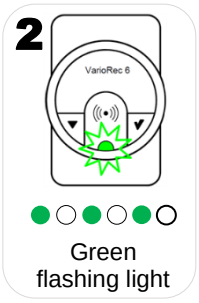
10.2.4 Activating / Deactivating Daily Message Monitoring

Function: If the transmission of daily messages has been activated for a radio transmitter, the radio receiver generates a message whenever the daily test signal of the transmitter is not received. This function is used for the daily functional check of permanently installed wireless momentary switches, for example. Remark: Check if the radio transmitter generates the daily message check signal. Usually, only transmitters using the social alarm frequency (869.2125 MHz) offer this function.
Note: After programming a new radio transmitter, its daily message monitoring is initially deactivated!

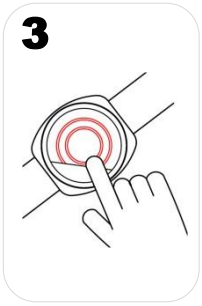
- **Functions**
  - Daily message active: Depending on the call system, a call / fault message is generated if an expected daily message is not received.
  - Daily message deactivated: Missing daily messages are ignored (no monitoring).

Image sequence: Activating / deactivating daily messages for a radio receiver (important: the radio receiver must already have been programmed!)

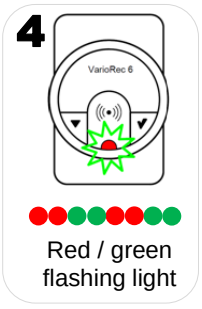
Press and hold the right-hand button when plugging
(only if the programming mode has not already been activated)



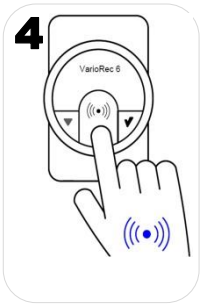
Receiver is in programming mode



Trigger call

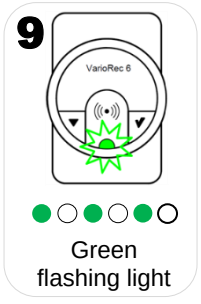


Radio transmitter has been detected

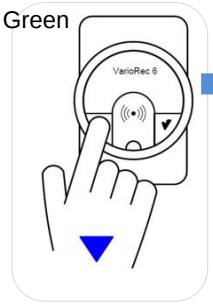


Press and hold middle button

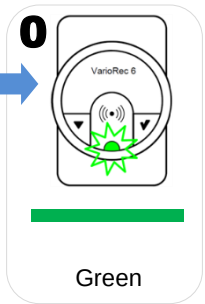
From programming mode to operating mode



Receiver is in programming mode

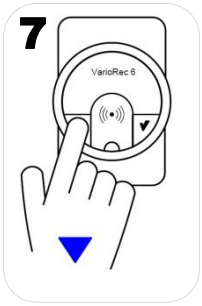


Press and hold left-hand button



Receiver is in operating mode

Abort



Briefly press left-hand button

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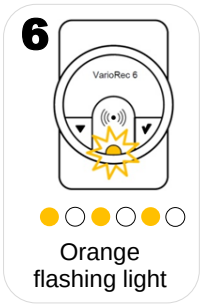
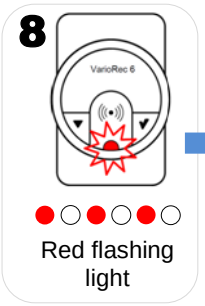
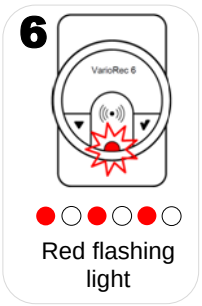


Daily message is active

Press and hold left-hand button

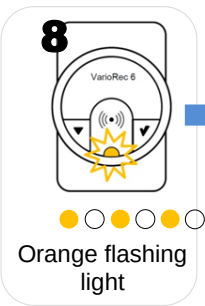


Daily message is deactivated



Daily message is deactivated

Press and hold right-hand button



Daily message is active

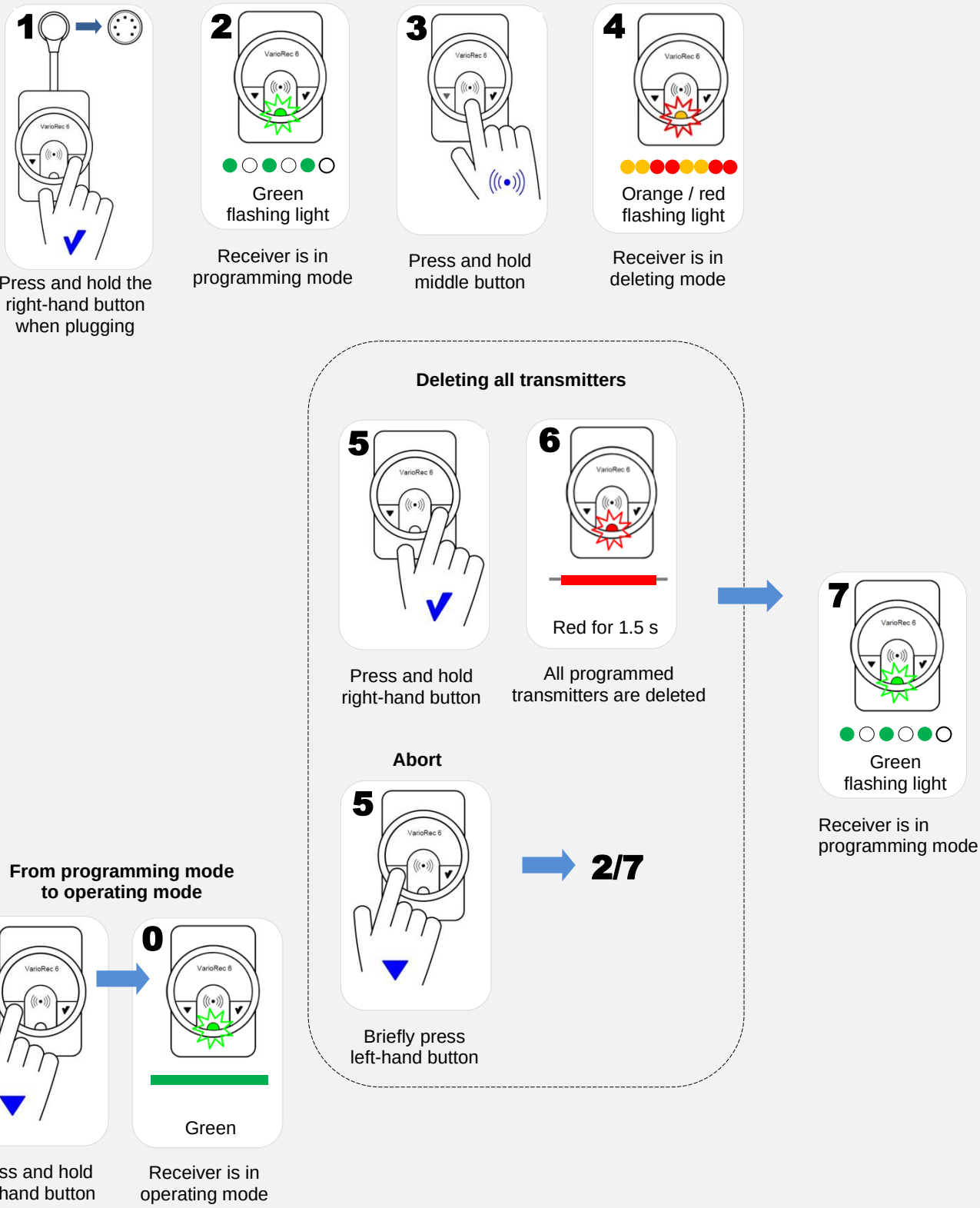
Possible error message:

see the descriptions in previous image sequences

10.2.5 Deleting All Programmed Transmitters

All transmitters programmed in the radio receiver are deleted.

Image sequence: Deleting all programmed transmitters



11 Setup Mode

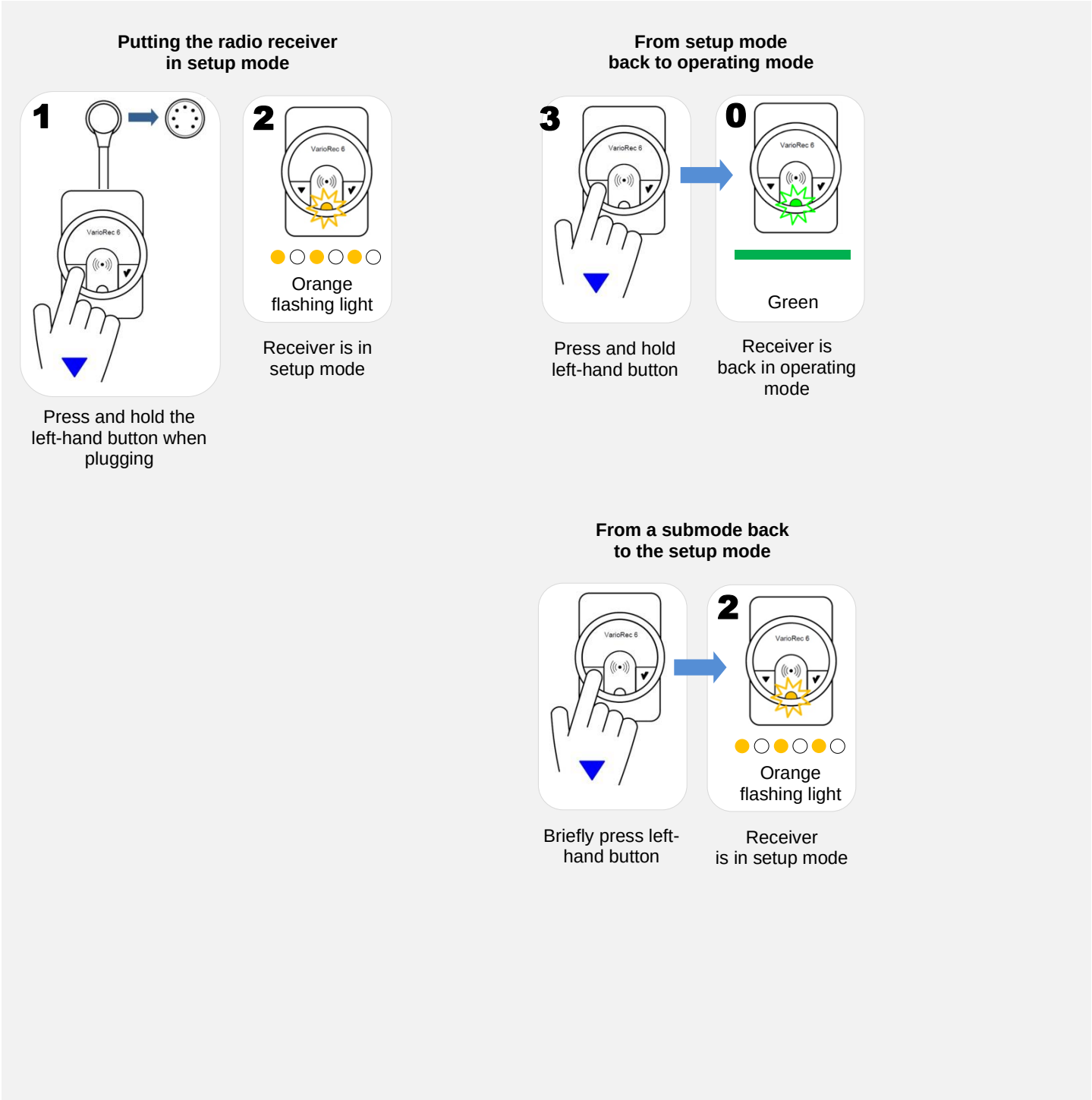
In this mode, the following parameters can be set:

- **Functions in setup mode**
  - Master mode: Activate / deactivate.
    - Vital function: Activate / deactivate.
  - Operating indicator: Normal / inverted.
  - Care Mode: Activate / deactivate.
  - Care Mode: Set timeout.

11.1 Navigating in Setup Mode

Note: The radio receiver automatically reactivates the operating mode if there is no input for approx. 1 min. Otherwise, each actuation of the left-hand button will access the next higher menu level until the operating mode is reached.

Figure: Navigating in setup mode



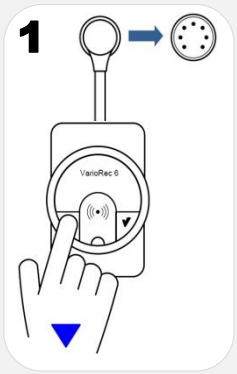
11.2 Activating / Deactivating the Operating Indicator

The operating indicator (steady green light) can be deactivated.

- Operating indicator active: A steady green light is always activated.
- Operating indicator deactivated: There is no indication during operation, only during the reception of a radio call or in the case of errors the appropriate flash sequence is activated.

Image sequence: Activating / deactivating the operating indicator

Important note: The information mentioned above and below pertaining to the operating mode always refers to the **activated** state of the operating indicator! This manual does not contain image sequences applicable to the deactivated operating indicator.



Press and hold the left-hand button when plugging

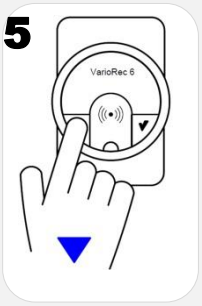
Receiver is in setup mode

Briefly press right-hand button

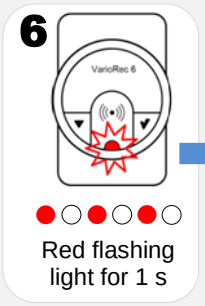
The current state is indicated

Changing the state

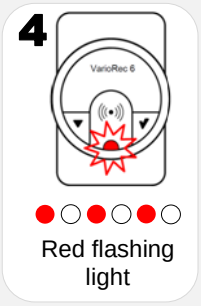
Operating indicator is deactivated



Press and hold left-hand button



State is deactivated



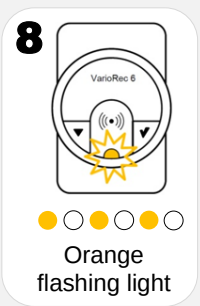
Operating indicator is deactivated

Press and hold right-hand button

State is active

Back to setup mode

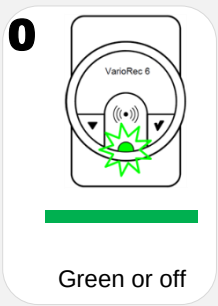
Briefly press left-hand button



Receiver is in setup mode

Back to operating mode

Press and hold left-hand button



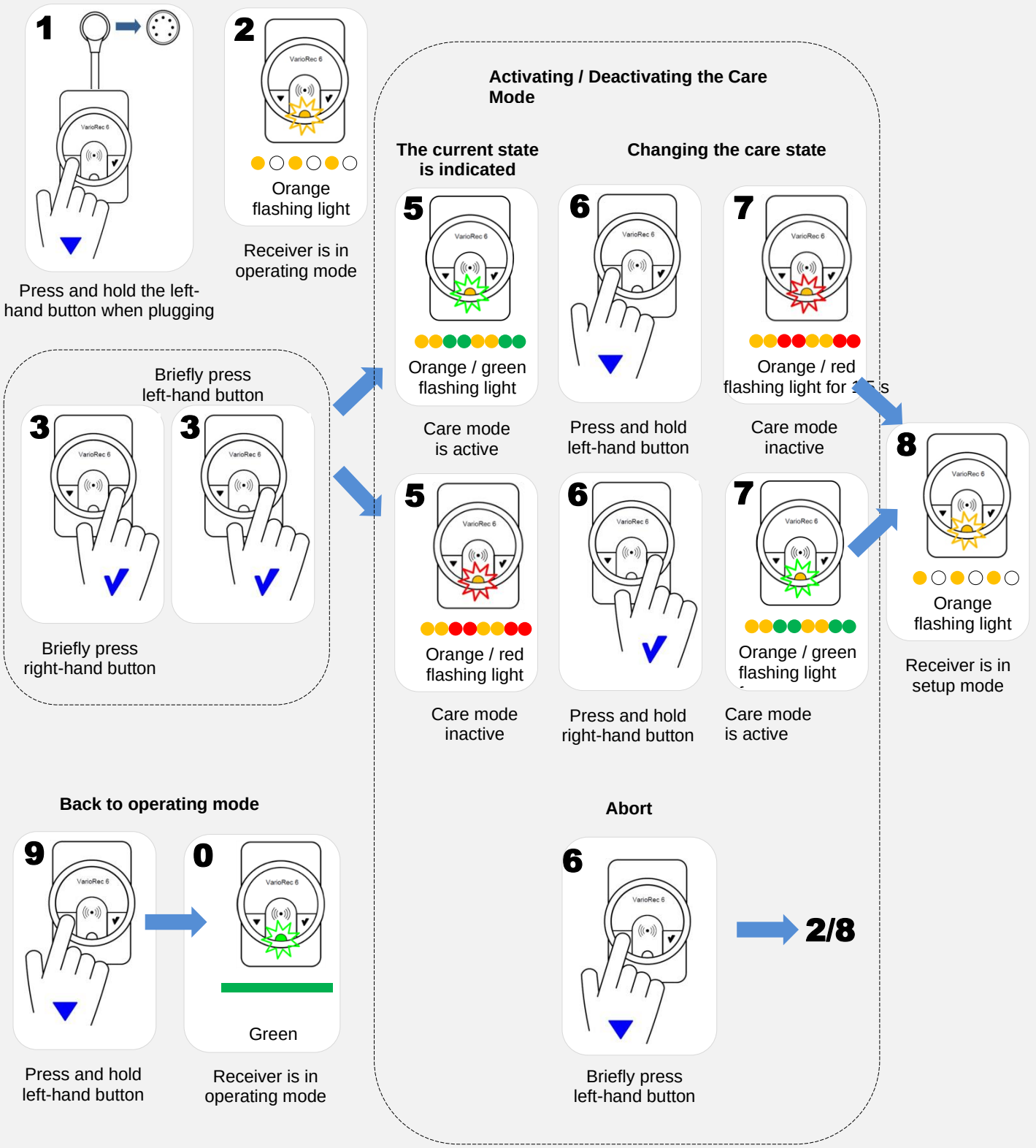
Receiver is back in operating mode

11.3 Activating / Deactivating the Care Mode

Here, the care mode (the optional deactivation of the call transmission for a set timeout) can be permitted (activated) or prohibited (deactivated).

- Care mode is active: During operation, the care mode can be activated by pressing the button.
- Care mode is inactive: The care mode is switched off.

Image sequence: Activating / deactivating the Care Mode

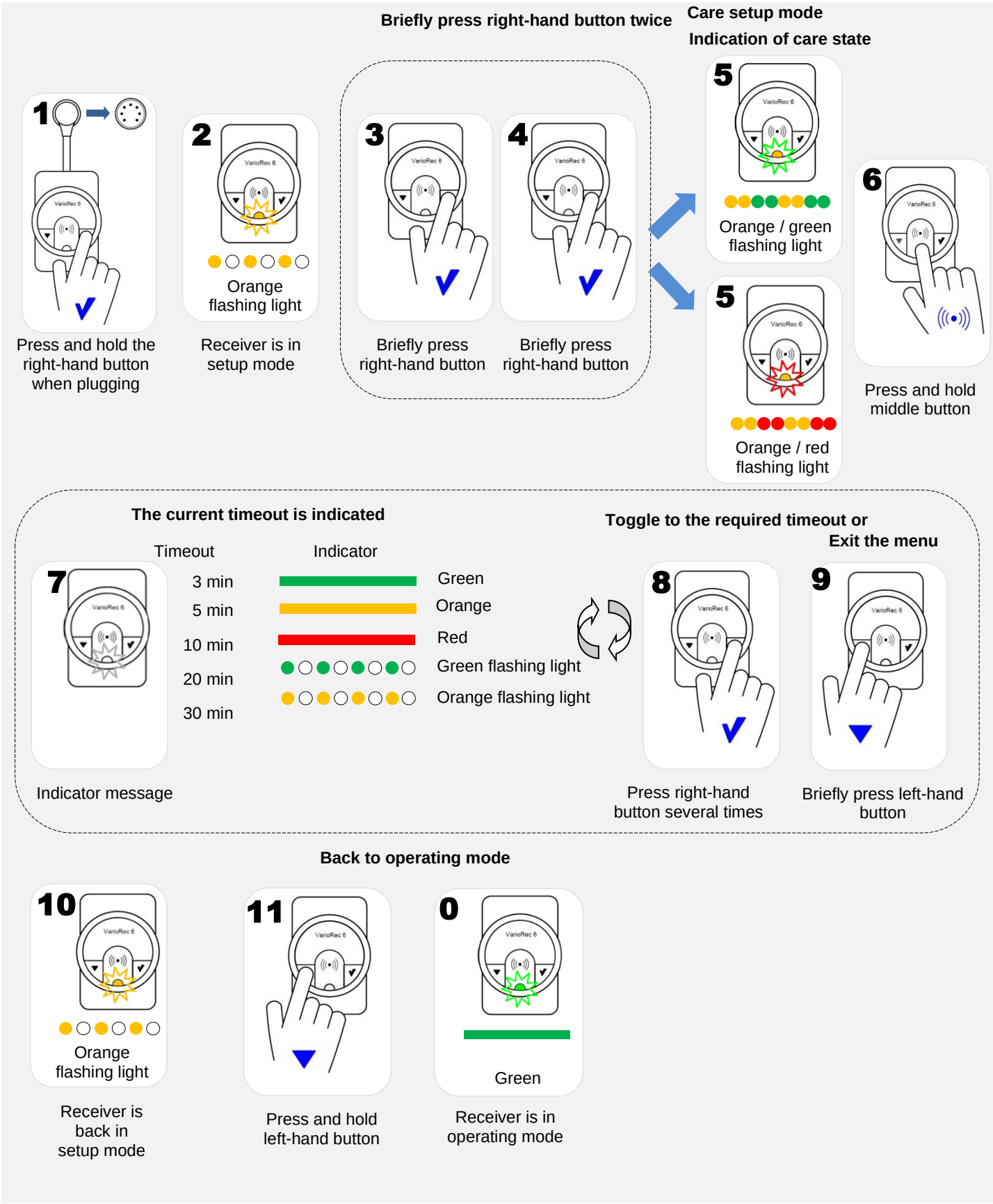


11.3.1 Indicating and Setting of the Care Mode Timeout

The timeout can be adjusted as long as the care mode is activated.

- Possible timeouts
  - **3, 5, 10, 20, 30** minutes (note: The factory setting is **5** minutes).

Image sequence: Indicating and setting of the care mode timeout

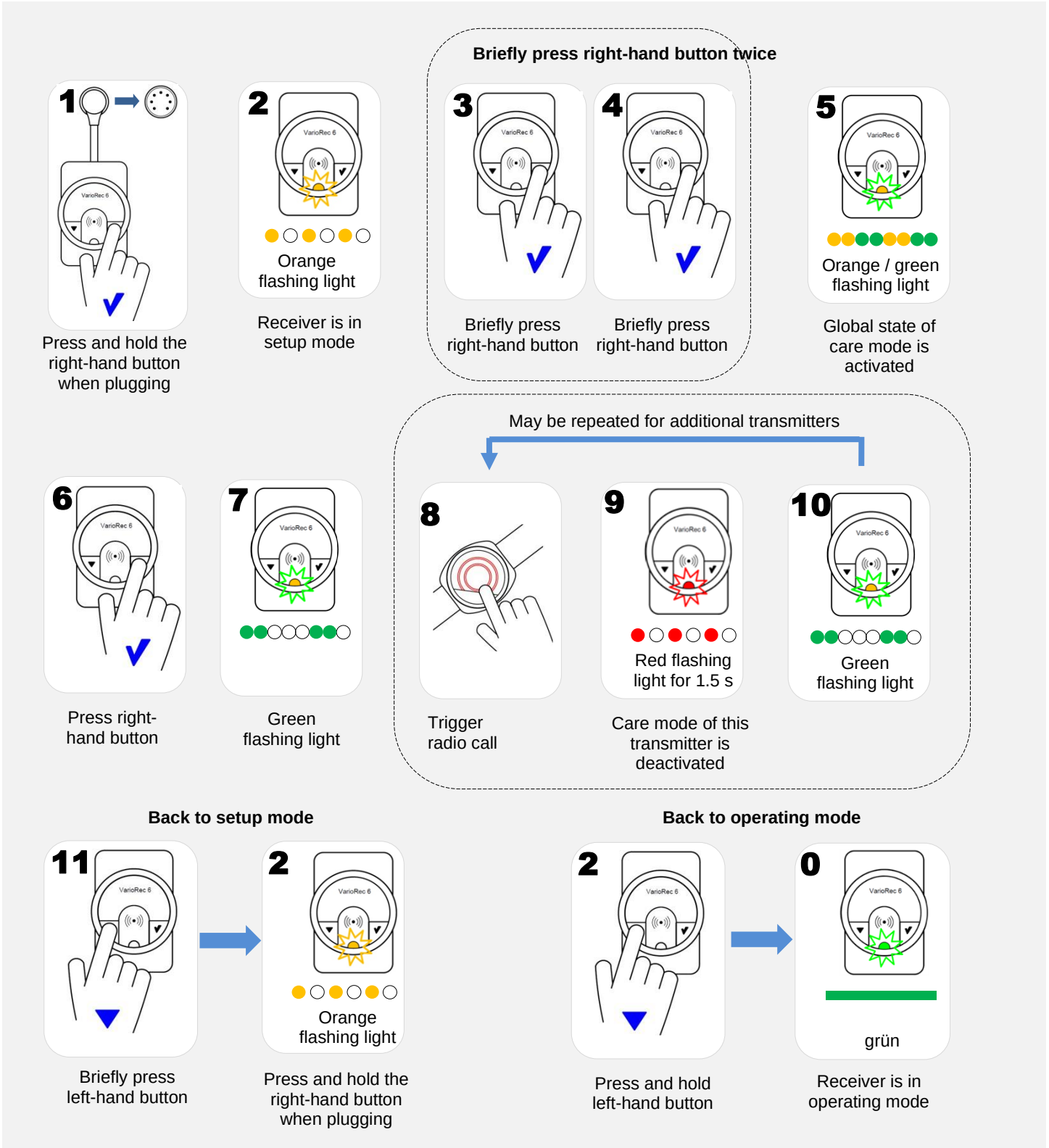


11.3.2 Cancelling Call Suppression in the Care Mode for Individual Transmitters

Generally, in the care mode **all** received radio calls of matching transmitters are ignored during timeout. This setting allows the care mode for **individual** radio transmitters to be **deactivated**. These transmitters are signalled even if the care mode is activated.

- Sequence for cancelling the call suppression of individual transmitters:
  - Activate the care state (global state),
  - then deactivate the care mode for those radio transmitters that are not to be used in care mode.
- Sequence for cancelling the call suppression of all transmitters:
  - Deactivate the care mode. This deletes all assignments of individual transmitters.

Image sequence: Deactivating the call suppression in the care mode for <u>individual</u> transmitters (with activated care mode)

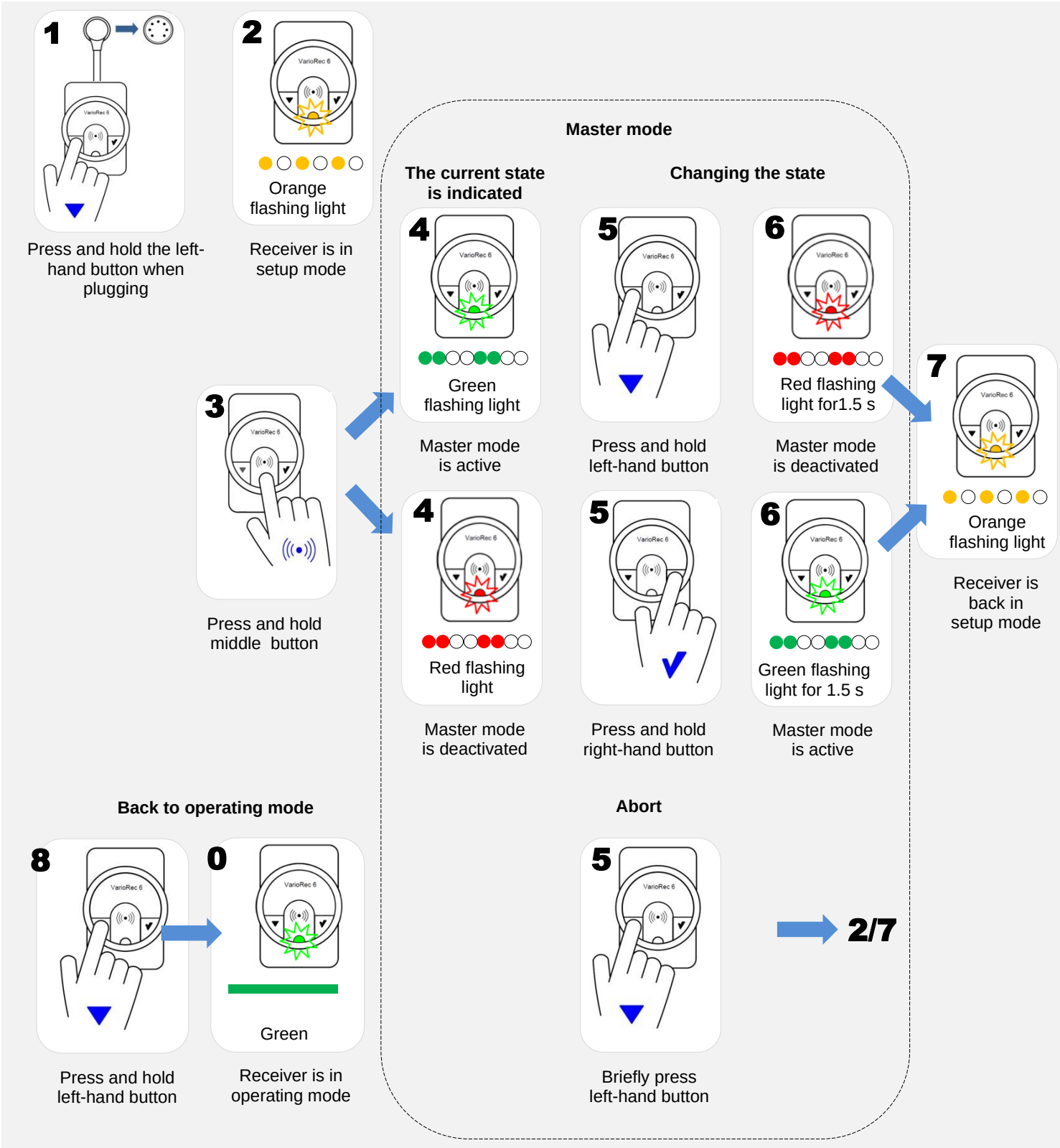


11.4 Setting the Master Mode

In the master mode the radio receiver accepts radio signals of transmitters that **have not been programmed** but belong to the system and indicates appropriate messages (broadcast reception). In this mode, time-dependant monitoring functions (vital functions, 24-h monitoring) are deactivated.

Note: In this mode **programmed** radio receivers are not received. If **all** radio transmitters are to be received, all previously programmed transmitters must be deleted (see “Delete all transmitters”).

Image sequence: Activating / deactivating the master mode

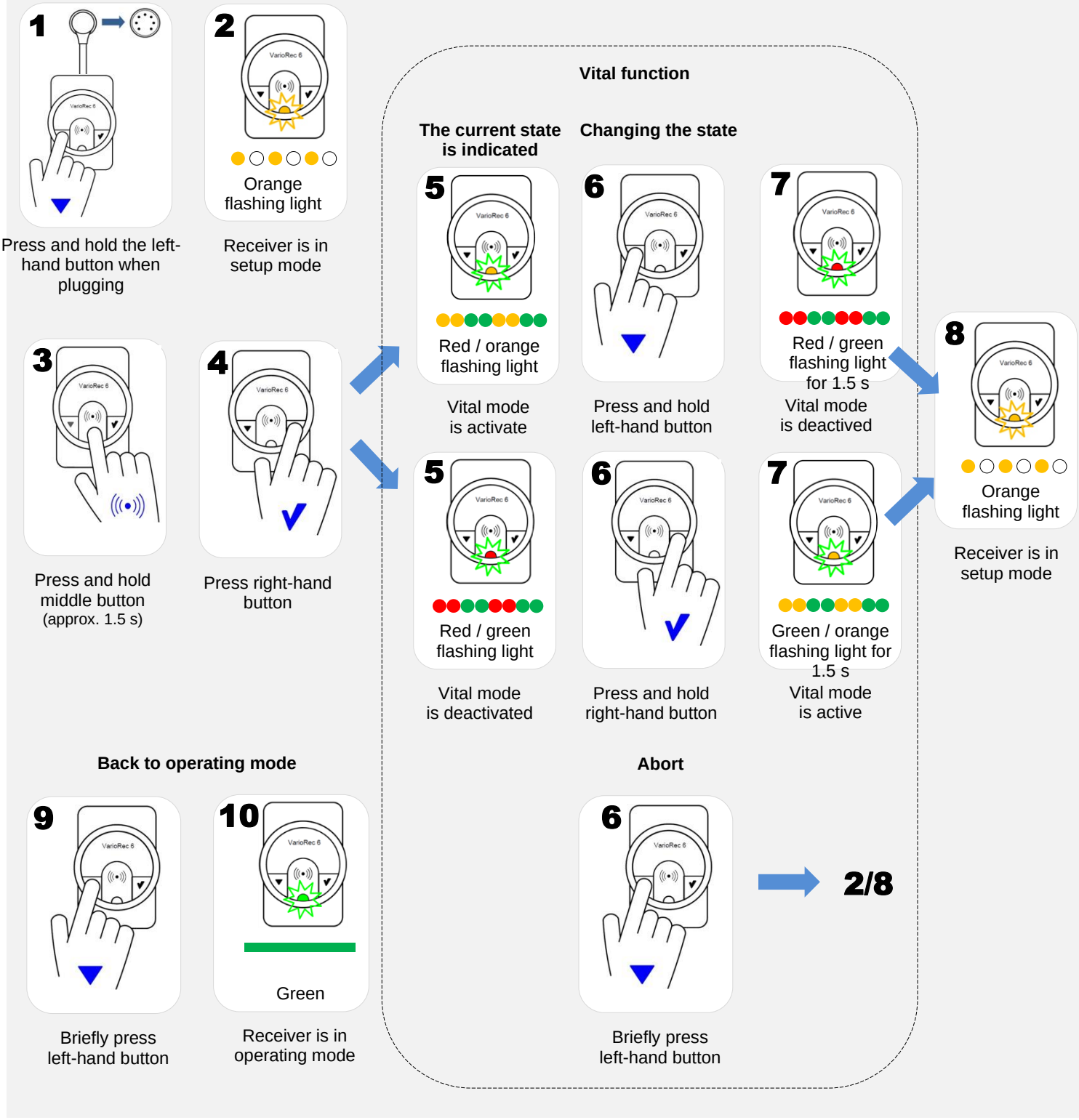


11.5 Activating / Deactivating Vital Monitoring | NOTE: item 11.5.1 must be observed/included!

If vital monitoring is active, **a call message is generated only** if **no radio call** has been received from a matching radio transmitter within 24 hours. With each reception of a corresponding radio call the daily timer is restarted. For example, this allows for monitoring if a person has triggered a vital sign by a radio call, e.g., also via wireless contact mats, motion detectors, bed detectors, etc.
Note: This function cannot be combined with the master mode!
Caution: If vital monitoring is active, all previously programmed transmitters will not trigger normal calls!
For exceptions, see item 11.5.1

- Functions
  - Vital monitoring is active: A call is trigged if no vital call is received within 24 hours.
  - Vital monitoring is deactivated: Vital calls are ignored (a vital message is not generated if no vital call is received).

Image sequence: Activating / deactivating the vital mode

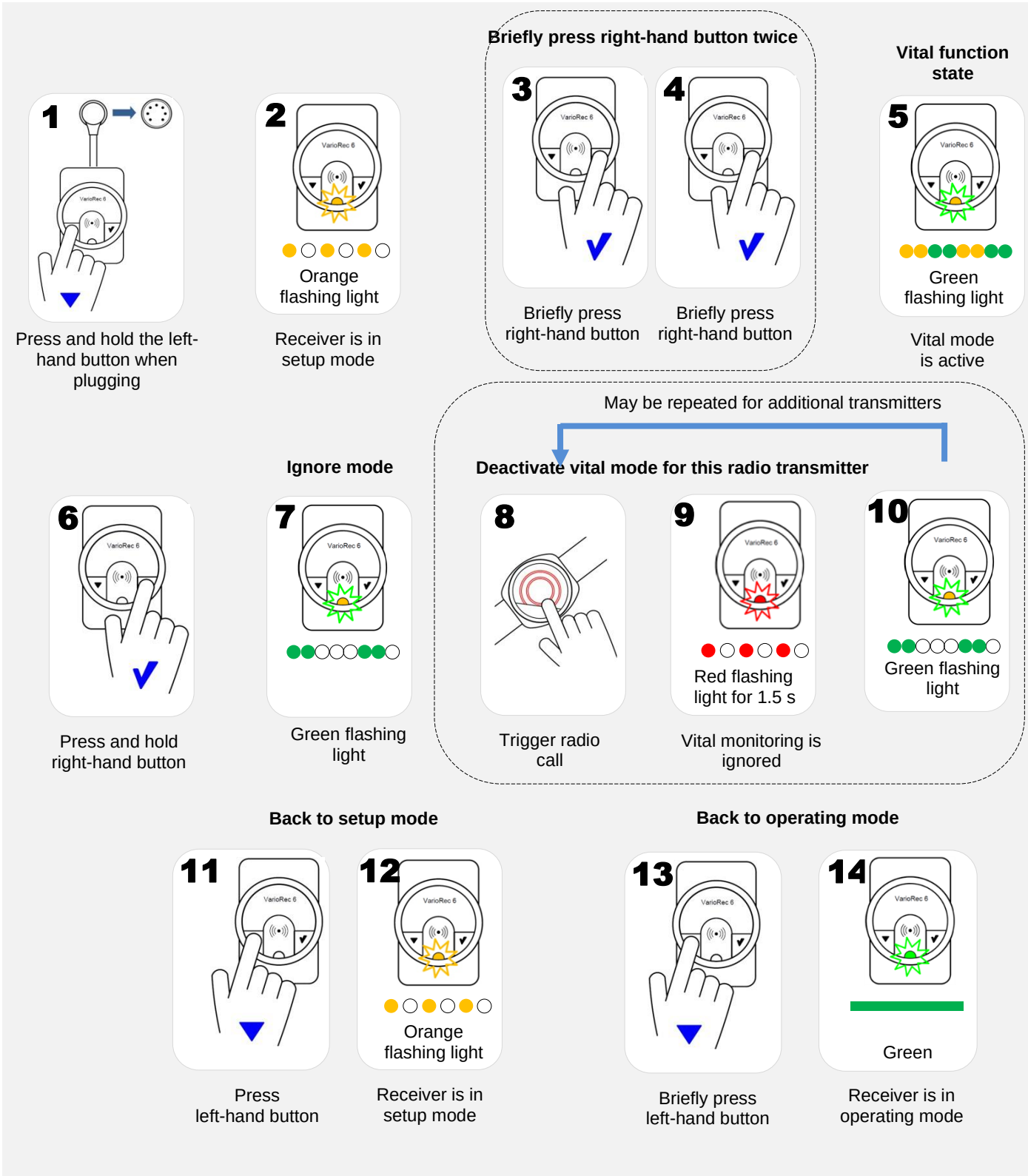


11.5.1 Ignoring Vital Monitoring of Individual Radio Transmitters

This function is used to exclude individual radio transmitters from the general vital monitoring.
This allows, e.g., a mobile emergency call transmitter to trigger an active call at any time even if the vital monitoring by a contact mat,
for example, has been activated.

- Functions
  - Ignore vital monitoring: The vital monitoring does **not** trigger a call if the 24 h radio message of the assigned radio transmitter is **not** received.

Image sequence: Deactivating (ignoring) vital mode monitoring of individual radio transmitters



12 System Control

12.1 Resetting All Parameters to Factory Settings

Image sequence: Resetting all parameters to factory settings

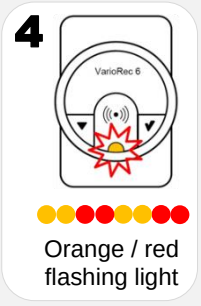
Putting the radio receiver in system mode

Press and hold the **middle** button when plugging

Orange / green flashing light

Receiver is in system mode

Press and hold right-hand button



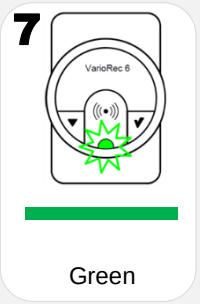
Orange / red flashing light

Resetting to factory settings

Press the middle button for **5 seconds**

Green flashing light for 1.5 s

Factory settings have been set



Green

Receiver is in operating mode

Abort

Briefly press any button

7

13 Regular Measures

Important
Carefully perform the periodic checks. Immediately replace worn / damaged parts.
A damaged system or a system not functioning properly must not be used until it has been repaired.

Measures
We suggest a weekly inspection including the reception of a test call while observing the indicator elements and the call transmission.
If radio reception problems are suspected, check the range as during initial putting into operation.

14 Specifications

Specifications

Operating frequencies:	See product variants
Radio ranges:	Within buildings typically up to 30 m, in the open air up to approx. 100 m
Controls:	Left-hand button, middle button, right-hand button
Indicators:	Red, green, yellow indicator LED
Alarm:	Call indicator contact: 24 V DC / max. 100 mA
Fault indicator contact:	24 V DC / max. 100 mA
No. of programmable radio transmitters:	64
24-h monitoring:	Only for the 869.2125 MHz model (social alarm frequency)
Blockage monitoring:	Only for the 869.2125 MHz model (social alarm frequency)
Power supply:	24 V DC / 25 mA by the call system, alternatively model with power supply unit
Dimensions:	66 x 46 x 18 mm (W x H x D) plus length of connecting cable of approx. 50 mm (system-dependent)
Temperature range:	-5 °C to +55 °C
Weight:	approx. 50 g
Rating:	IP 63
Colour:	Housing similar to RAL 9016 (traffic white)
Conformity:	CE (RED, RoHS II)

Accessory and replacement parts
Accessory and replacement parts are available from your supplier.

Warranty

The manufacturer is not liable for any damage resulting from improper or inappropriate use. During the legal warranty period we shall correct, free of charge, all defects of the device attributable to material or manufacturing defects, either by means of repair or replacement. The warranty shall become void in the case of interference by a third party or improper use. The warranty shall not apply to wear and tear of moving parts.

Service address

Please contact the supplier of your call system.

Disposal instructions

Used devices and batteries must not be disposed of together with domestic waste. Dispose of used devices according to local laws and disposal regulations (through a recycling centre or your speciality retailer). Dispose of used batteries according to local laws and disposal regulations (in battery collection containers or through the specialised trade). Dispose of packaging material according to local laws and disposal regulations (in recycling bins for cardboard, paper, and plastic material).

15 Cleaning in Private and Hospital Sectors

Caution! Do not use abrasive cleaning agents.
Use only cleaning agents included in the VAH list.
Use only approved disinfectants mentioned in EN16615.

Cleaning:
Use a soft, moist, not dripping cloth. Use demineralised water. Do not spray.

16 Cleaning in the Private Sector

Caution! Do not use abrasive cleaning agents.

Cleaning:
With a soft, moist, not dipping cloth with the addition of a small amount of detergent. Do not spray.

17 Repair

The device is not intended for repair; either partial or a complete replacement is possible.

18 Replacement Parts (Informal)

Components:

- No replacement parts have been listed for this product.

Note: Ask your supplier for the current parts list.

19 Returns

You may help us to assess a return if you enclose a short description of the reasons and, in case of a problem, a description.

20 Staff Briefing

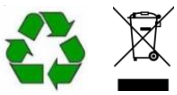
Staff using the VarioRec6 radio receiver and matching radio transmitters must have the “trained personnel” status.

20.1 Documentation

The instructed person must be provided with at least one copy of this manual and the Quick Reference Guide LE235 for further reference.

21 Disposal Instructions

Used devices and batteries must not be disposed of together with domestic waste. Dispose of used devices, used batteries and packaging material according to applicable laws and disposal regulation



22 Conformity

Lehmann Electronic declares that, if applicable, the product complies with the essential requirements and the other relevant provisions of the EMC Directive 2014/30/EU, the RED Directive2014/53/EU and the RoHS Directive 2011/65/EU. You will find the complete declarations of conformity in the Internet under www.lehmannweb.de.

REACH Regulation Within the meaning of the Regulation we are a downstream user. The product is exempt from the specific labelling requirements of the Regulation. Further information is available on the website.