



**The Gira Radio Alarm System**

**GIRA**

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# Burglar Alarm Equipment Terminology

## General

This radio alarm system has been specifically designed and outlined in order to be able to retrofit a burglar alarm system without any problems and installation expenditure.

The concept of this radio alarm system offers no restrictions compared with conventional cabled burglar alarm systems.

Due to the use of battery-powered radio components, the time-consuming cabling work and the associated inconvenience can be avoided.

The radio alarm system stands out for showing good functionality and for being easy to operate, leading to high user-friendliness and easy installation.

The use of narrow-band radio modules utilising the maximum of transmitting power permitted by the postal administration guarantees wide working ranges and, at the same time, high interference immunity to external influences.

All components of the radio alarm system are continuously checked for their state within the system by the radio alarm center and, if required, are shown in the display of the latter.

## Theory of Operation of a Radio alarm system

A radio alarm system consists at least of a radio alarm center, a facility for arming/unarming, alarm transmitters such as sirens or any other equipment of choice, as well as of various detectors which should have different physical detection properties. Normally, detectors are always connected with the radio alarm center, i. e. an open window will thus be detected by the radio alarm center, even in the unarmed condition. An armed system only means that, if a window is open, for example, and the system is armed, this message will be through-connected to the alarm transmitters such as external sirens.

**Note: A radio alarm system can only report but not avoid burglary.**

## Detector Group Types

Basically, different group types can be processed in a center. Such group types are treated in different ways.

### 1. External Group/Group 1

The external group/group 1 detectors serve for monitoring the outside body (windows, doors).

The user is absent and externally arms the radio alarm system.

The radio magnetic contact is a typical external group/group 1 detector.

### 2. Internal Group/Group 2

The internal group/group 2 detectors serve for internal monitoring.

The user is present and internally arms the radio alarm system.

The radio movement detector is a typical internal group/group 2 detector.

User	Armed Condition	Detector Group causing Alarm
Absent	External	Group 1 and Group 2
Present	Internal	Group 1

### 3. Attack Detector Group

Contrary to the other detector group types, an attack detector group is always through-connected for triggering all alarm transmitters, irrespective of its armed/unarmed state.

Exception: if so-called silent alarm triggering is intentionally programmed. In such a case, only telephone diallers, for example, will be triggered (e. g. triggered by attack radio hand transmitter).

### 4. Tamper Detector Group

A tamper detector group is connected with tamper detectors, e. g. normally closed contacts of housings. The triggering of a tamper detector group in unarmed and internally armed states causes a disturbance. In the externally armed state, all alarm transmitters connected are released and triggered.

# Burglar Alarm Equipment Terminology

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## Detector Group Types

### 5. Smoke Detector Group

Only smoke detectors are allocated to the smoke detector group. The triggering of a smoke detector, in any case, causes a so-called main alarm, i. e. all alarming units connected are triggered, irrespective of the armed state of the radio alarm system.

### 6. Technical Detector Group

Only so-called technical detectors are allocated to the technical detector group. The triggering of a technical detector causes a trouble message at the radio alarm center. Sensors for detecting trouble in the heating, oil and water systems etc. are connected to the technical detector.

### 7. Interlock Switch Contact Group

The interlock switch contact group serves for monitoring the closing of doors. External arming will only be possible after the interlock switch contact group has been recognised as closed.

### 8. Armed/Unarmed Group

The armed/unarmed group serves for arming the radio alarm system. Arming can be effected via the radio alarm center, the key-operated switch, the radio door module or the armed/unarmed radio hand transmitter.

### Arming in the Presence/Absence of the User

Basically, distinction is made between the so-called externally armed condition (the user is absent) and the internally armed condition (the user is present).

In the externally armed condition, all detectors are evaluated and all externally connected alarm transmitters triggered in the occurrence of an alarm event. In the internally armed condition, only such detectors are evaluated which were programmed for the external group during the installation.

If an alarm event occurs in the internally armed condition, only the internal siren will be triggered.

To allow free movement within the object in the internally armed condition, it is possible to inhibit (switch off) detectors for the internally armed state.

Make sure the detectors to be inhibited are combined in the internal group during the installation. Such switching off only applies to the internally armed condition.

These detectors will automatically be turned on again in the externally armed state.

## Controlled Arming

Controlled arming means that a radio alarm system can only be armed when the radio alarm center is in the so-called ready-to-be-armed condition.

This means that no doors or windows may be open (detector lines not disturbed), and no disturbance and no alarm must exist.

## Controlled Unarming

Controlled unarming means that the user will only be able to get into the so-called security area (e. g. into his house) if the system was unarmed before in order to avoid alarms triggered by himself.

If, for example, a hand transmitter is exclusively used for external arming/unarming, i. e. no controlled unarming is provided, then, of course, main alarm will be triggered upon opening the door if you forget to unarm the system (90 % of all false alarms can, according to police statistics, be attributed to alarms triggered by users themselves).

## Individual Detector Identification

Basically, distinction must be made between central units dividing the detectors into groups and central units which are capable of **additionally** identifying each detector at the central unit.

Individual detector identification should, in any case, be preferred as any response, any trouble message, simply any function of the detector will be individually indicated at the central unit.

This provides an essential advantage for troubleshooting and, in addition, gives considerably better information to the user.

For central units which exclusively divide their detectors into groups, up to 30 detectors can be connected to such group.

If a problem occurs at a detector, normally all 30 detectors will have to be checked.

For radio alarm systems, individual detector identification is inevitable since the signal field strengths of the individual detectors must be stored into the radio alarm center as a significant criterion.

# Burglar Alarm Equipment Terminology

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## Types of Alarming

The following types of alarming are possible and are specified in various German and European standards.

### 1. Internal Siren

The internal siren is only triggered in case of alarm in the internally armed condition (armed in the presence of the user).

### 2. External Siren

The external siren is triggered upon alarm releasing in the externally armed condition.

It should be preferred to provide two external sirens. The alarming period must not exceed 180 s.

Upon unarming by the key-operated switch, the radio door module or by the radio hand transmitter, the external siren is deactivated in any case.

### 3. Flashing Light

The flashing light is triggered when an alarm is released in the externally armed condition.

The flashing light will only be switched off after the unarming of the radio alarm center. The radio external flashing-light siren, where the flashing light is also switched off upon unarming, is an exception.

### 4. Telephone Dialler ( AWUG )

The AWUG-type telephone dialler (automatic dialling and transmission set) is used to facilitate the passing forward of an alarm to a permanently attended station (security service).

In addition, it is possible, for example, to transmit the armed/ unarmed state as well as a disturbance.

### 5. Telephone Dialler ( AWAG )

The AWAG-type telephone dialler (automatic dialler and announcing set) transmits an alarm message to a freely selectable telephone connection (e. g. neighbour) by means of speech.

This kind of transmission does not guarantee that the intended receiver can directly receive the message as the party may not be present or the connection can be busy.

### 6. Trouble Relay

The trouble relay of the radio alarm center is triggered in case of the following disturbances in the radio alarm system:

- Mains failure of more than 1 hour.
- Rechargeable storage battery failure.
- Battery failure of a detector.
- Weak battery of a detector.
- Detector failure.
- Equipment malfunction.
- Tampering in the unarmed/internally armed state.

An additional alarm transmitter can be connected to the trouble relay.

### 7. Technical Relay

The technical relay of the radio alarm center is triggered in case of a technical message from the wired connection or from the radio technical transmitter, e. g. to enable the heating control system.



## Radio alarm center

The radio alarm center manages all peripheral components connected and learned in during the installation, such as radio movement detectors, radio magnetic contacts, radio external sirens etc. There, all information from the individual components are collected, evaluated correspondingly and passed forward.

The center continuously monitors the radio channel for extraneous influences, and the current state of the radio alarm center and of the detectors can be shown in a four-line plain-text display. In addition, light-emitting diodes give a quick visual indication of the current state of the system.

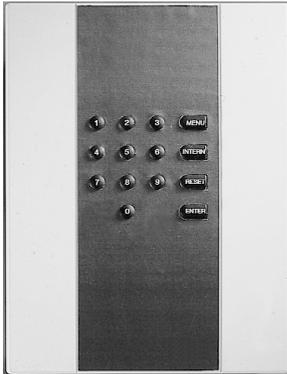
Via the keyboard, the radio alarm system can be internally armed or unarmed.

The terminal board of the radio alarm center has inputs for the direct connection of magnetic contacts, attack detectors, smoke detectors, technical detectors, interlock switch contacts, and of the wired tamper circuit. For arming/unarming, a key-operated switch, a bar switch latch or a block connecting link can be connected. Outputs for triggering the external alarm signal transmitters and for a telephone dialler are available for passing forward the alarm. A total of up to 50 different detectors which, depending upon the function of the system, are distributed over different detector groups can be managed by the radio alarm center.

The radio alarm center has an integrated floating storage battery which, in case of mains failure, guarantees a back-up time of approx. 12 hours. The description of the installation and of the central unit start-up begins on page 13, while programming is described from page 52 on.

## Radio door module

The radio door module facilitates wireless arming/unarming without any additional mains supply. A magnetic contact for monitoring the opening, an interlock switch contact for monitoring the closing and a key-operated switch/bar switch latch can be connected to the radio door module. In addition, a monitored tamper input and an output for triggering an external piezo buzzer are available.



Via the keyboard of the radio door module, the radio alarm center can be internally or externally armed or unarmed after previous code entry. A specific "CODE" function key allows the user's code to be changed.

The installation is described on pages 20-22.

## Radio movement detector

The radio movement detector receives the temperature transmitted by a human body. The detection characteristic has been specifically rated to the skin temperature of human beings, and the radio movement detector being able to distinguish it from the ambient temperature down to an accuracy of 1 °C.



Due to specific optics (a so-called Fresnel lens) fan-shaped observation of the space within a detection range of 8 x 11 m (90°) is possible for an installation height of 2.4 m.

The installation is described on pages 23-25.

## Radio glass breakage detector

The radio glass breakage detector serves for the contactless monitoring of windows for glass breakage, the noise produced thereby, and for the change in air pressure. Due to its acoustic principle of operation, several windows, large glass fronts or doors with glass inserts, respectively, can be monitored within a detection range of up to 6 m.



The glass breakage detector is suitable for flat, structured, wire-reinforced and multilayer glass.

The installation is described on pages 26-27.

## Radio magnetic contact

The radio magnetic contact serves for monitoring the opening and closing of doors and windows. For monitoring the opening, it has two integrated reed contacts, one of them being utilisable without any additional cabling.



It can be activated by the attached magnet. In addition, the printed circuit board offers the possibility of connecting further magnetic contacts to be cabled, an interlock switch contact for monitoring the closing, and for a tamper contact.

The installation is described on pages 28-29.

## Radio technical detector

The radio technical detector transmits technical messages from connected sensors which, for example, detect heating failures, oil etc. The technical message is displayed at the radio alarm center and passed forward, depending upon the extension of the system.



Evaluation and passing forward take place independently of the state of the radio alarm system. Three independent connection facilities are available which, when being released, trigger the technical relay of the radio alarm center.

The installation is described on pages 32-33.

## Radio smoke detector

The radio smoke detector is based on the ecological smoke box principle. This smoke detector reports fire already at the beginning stage. The optical sensors already detect low concentrations of combustion particles in the smoke box. In case of alarm, all alarming facilities of the radio alarm system are triggered independently of the state of the system.



The installation is described on pages 34-35.

## ARMED/UNARMED RADIO HAND TRANSMITTER

With the aid of the armed/unarmed radio hand transmitter, the radio alarm system can be easily armed or unarmed from any place within the house.



Irrespective of the programming performed during the installation, the radio hand transmitter can be used for internal or external arming/unarming. Moreover, operation as pure remote control for switching on or off a consumer connected to the radio alarm center or radio sub-center is possible. The flush-mounted control key and the pressing period of 1 s avoid unintentional actuation.

The installation is described on page 36.

## ATTACK RADIO HAND TRANSMITTER

By means of the attack radio hand transmitter, and irrespective of the operating state of the radio alarm system, an attack message can be sent to a permanently attended Security Service or, if programmed so, to the alarm transmitters connected.



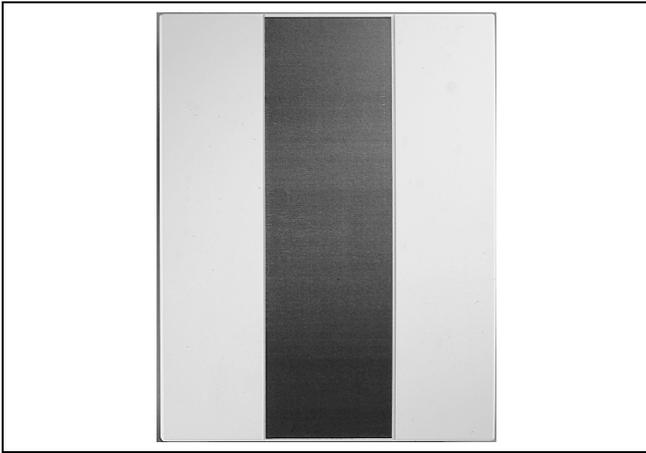
The flush-mounted control key and the pressing period of 1 s avoid unintentional actuation.

The installation is described on page 37.

## Radio subcenter

The radio subcenter permits the wireless connection of two external sirens, one internal siren, one flashing light as well as the triggering of a potential-free relay output which can be switched on and off via remote control.

For communication with the radio alarm center, a transmitter and a receiver are integrated. In case of mains failure, a floating storage battery provides for a back-up period of approx. 12 hours.



The installation is described on pages 38-40.

## AWUG radio telephone dialler

The AWUG telephone dialler (automatic dialling and transmission set) serves for silently passing forward an alarm or trouble message to a permanently attended Security Service.

In case of an alarm or a disturbance, the radio telephone dialler will be triggered by the radio alarm center in a wireless way. The triggering criteria of fire, attack, burglary, trouble as well as of armed/unarmed can be transmitted.

In case of mains failure, a floating storage battery provides for a back-up period of approx. 12 hours.



The installation is described on pages 41-43.

## Radio external flashing-light siren

The external radio siren with an integrated siren and a flashing light permits mains-independent and wireless communication with the radio alarm center. Due to factory preassembling of the electronic components, the installation is reduced to fitting the protective enclosure in the outdoor area. A built-in tamper cover contact monitors the signal transmitter combination for being screwed open, and alarm being released upon unauthorised opening.



The installation is described on pages 44-45.

## External flashing-light siren

The external siren/flashing light is a signal transmitter combination consisting of a red flashing light and a siren accommodated in a stainless steel protective enclosure. Both components are supplied with 12 VDC through the radio alarm center or the radio sub-center. An alarm message can be passed forward from the central unit to the external siren.

A tamper detector built into this signal transmitter combination monitors it for screwing open the siren enclosure and for being torn off the wall.



The installation is described on pages 46-47.

## Internal siren

The internal siren serves for additional audible alarming in the indoor area. The integrated siren guarantees loud and far-reaching alarming. Its white enclosure of high-quality plastic decently matches to the residential environment. Two different alarm sound options can be set during the installation.



The installation is described on pages 48-49.

## Key-operated switch

The key-operated switch is the switching device for externally arming/unarming the radio alarm system in the outdoor area. The key-operated switch can be used in combination with the radio door module or the radio alarm center. A built-in acknowledge buzzer tells the user the state of the system when he is arming/unarming it.

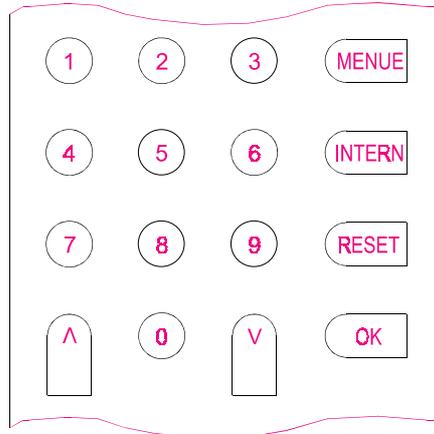


The installation is described on pages 50-51.

# Keyboard Assignment • Collective Displays

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## Radio alarm center keyboard assignment



- [MENU]** Key **[MENU]** is used for programming.  
At the top menu level, each pressing of the **[MENU]** key selects the next menu item. Pressing this key in the menu item selected takes you back to the top menu level.
- [INTERN]** Pressing this key arms or unarms the system. The **[INTERN]** key is not used for programming.
- [RESET]** To reset an alarm or to cancel an existing fault, respectively.  
At the programming level, pressing this **[RESET]** key leads to exiting the programming mode.
- [OK]** The **[OK]** key serves for confirming the display reading or a code entered and, if a setting is changed, for storing it into the memory.
- [0] to [9]** Through the numerical keyboard, the access code for both the user and the installer can be entered.  
At the programming level, the numerical keys serve for entering the setting parameters.
- [^] , [v]** With the aid of the **[^]** , **[v]** keys, other setting options or lists such as message texts can be selected under the respective menu item.

## Radio alarm central unit collective displays



The green LED indicates an available mains voltage. In case of mains failure, this indicator will flash rhythmically, being off for 9 seconds and on for 1 second.



This yellow indicator is triggered when the radio alarm system is at the internally armed state.



The red collective display indicates an alarm.



The yellow collective display indicates an existing disturbance. In case of trouble, this indicator will flash rhythmically, being off for 1 seconds and on for 1 second.

# Display Readings • Abbreviations Used

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## Description of the Center Display Readings:

The following example of an unsuccessful arming attempt shows the display reading principle:

<b>OPEN DETECTORS:</b>
<b>Nr. 03 MAE * OPEN</b>
<b>LIVING ROOM</b>
<b>CONT = V</b>

*Reference line*

*Detector number Det. type Low Bat Det. state*

*Place of installation*

*Menu prompting auxiliary line More details*

## Abbreviations used in the display:

### Detector abbreviations

MOE	External radio movement detector
MOI	Internal radio movement detector
GDE	External radio glass breakage detector
GDI	Internal radio glass breakage detector
MAE	External radio magnetic contact
MAI	Internal radio magnetic contact
SD	Radio smoke detector
TE	Radio technical detector
RTD	Radio telephone dialler
RSC	Radio subcenter
HEA	Externally armed radio hand transmitter
HR	Remote control radio hand transmitter
HIA	Internally armed radio hand transmitter
HAT	Attack radio hand transmitter
DME	External radio door module
DMI	Internal radio door module

### Detector state abbreviations

OPEN	Door or window open
CLOSE	Door or window closed
EXTARM	Externally armed
INTARM	Internally armed
UNARM	Externally/internally unarmed
ISC	Interlock switch contact open
GLASS	Radio glass breakage detector response
ACT	Radio movement detector response
ATTACK	Attack response
TECHN	Technical channel response
FAIL	Failure of a radio component
R BATT	Rechargeable storage battery failure
MAINS	Mains failure
*	Battery undervoltage
TAMP	Tamper response

## Safety Instructions

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- **CAUTION:** The installation and assembly of electrical equipment may only be performed by a skilled electrician.
- Maintenance and repair work may only be performed by skilled personnel.
- Disconnect the 230 V mains before getting access to the connecting terminals of the central unit.
- The radio components of the radio alarm system are not intended for external use (exception: radio external flashing-light siren).
- Do not use the equipment for any purpose they are not intended for.
- To clean the components wipe them with a moist cloth and a mild cleaning agent.
- Do not allow any liquids to penetrate into the inside of the equipment.
- The inside of the component enclosures may only be cleaned by a service technician.
- Do not store the components in a cold environment (storage temperature 0 °C to +50 °C).
- The socket (230 VAC) used for the electrical connection must be located in the near vicinity of the unit and should be clearly visible and well accessible.

# Mounting and Installation • Radio Alarm Center

## Function

The radio alarm center manages all peripheral components connected and learned in during the installation, such as radio movement detectors, radio magnetic contacts, radio external flashing-light sirens etc.

## Installation

The radio alarm center consists of a front and a rear part securely factory-screwed to each other. A terminal board with an electronic evaluation circuit is integrated in the enclosure rear part. For communication with the radio components, a transmitter and a receiver are provided. In the as-supplied condition, a floating storage battery (12 V/1.2 Ah) is already firmly built in.

The printed circuit board holding the keyboard display and the "Betrieb", "Intern", "Alarm" and "Störung" collective indicators is integrated in the enclosure top part.

A flap at the enclosure front side facilitates access to all installation-relevant parts such as connecting terminals for alarm transmitters and detectors to be cabled directly, as well as fuses, interface, a reset key, a tamper switch, a floating storage battery and a display contrast control potentiometer.

## Important notes on the center's place of installation

- The radio alarm center should be placed at central a location as possible within the area to be monitored so that all detector signals can, if possible, be received with the same intensity.
- If possible, avoid installation on outer walls for reasons of manipulation from outside.
- Do not install the unit in places where it is exposed to extreme temperatures (e. g. direct sun radiation).
- Do not install the radio alarm center in such a way as to allow covering by pieces of furniture so as to impair the radio working range.
- Caution: Never install the radio alarm unit in a metal cabinet or in the close vicinity of fuse boxes or current meters.

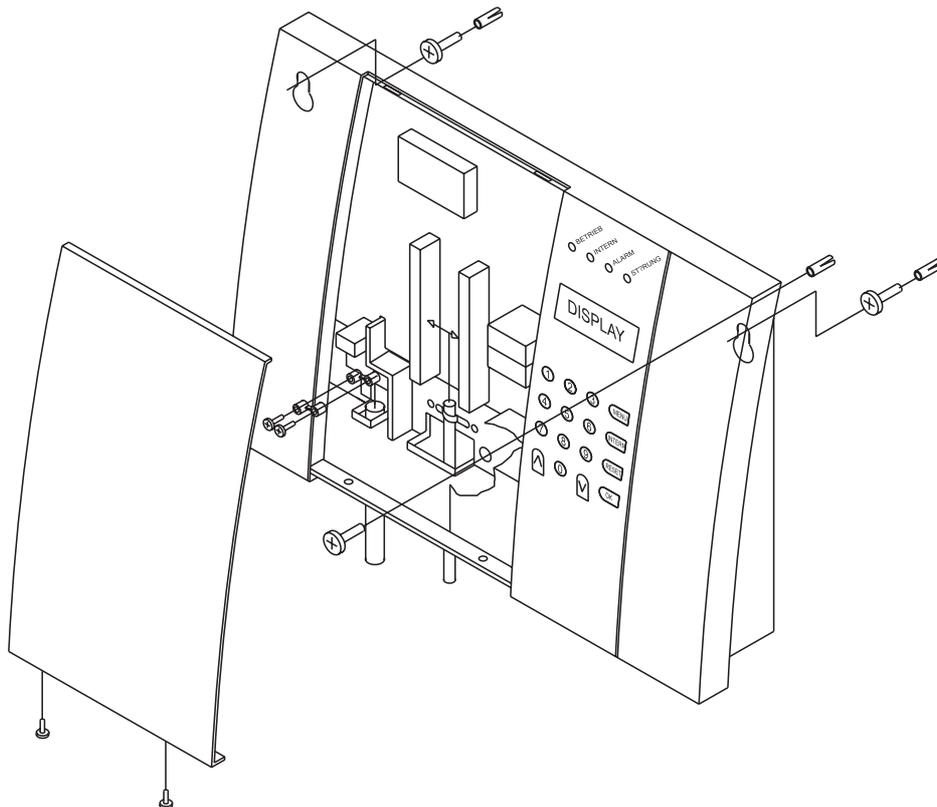


Fig. 1: Radio alarm centre

# Mounting and Installation • Radio Alarm Center

## Installation

Carry out the following working steps to install radio alarm center:

1. Determine the place of installation for the radio alarm center. To guarantee optimum control over the keyboard and readability of the display, installation at the user's eye level is recommended.
2. Screw open the installation flap at the bottom side, carefully lift it off diagonally upward and lay it down.
3. Mark the drill holes by means of the attached template.
4. Drill the mounting holes (6 mm dia.) at the intended place of installation and insert the attached dowels.
5. Fit the rear part of the radio alarm center with the attached screws (7 mm screw spacing).
6. Attach the cabling to the connection terminals.

### P10 connection terminal assignment

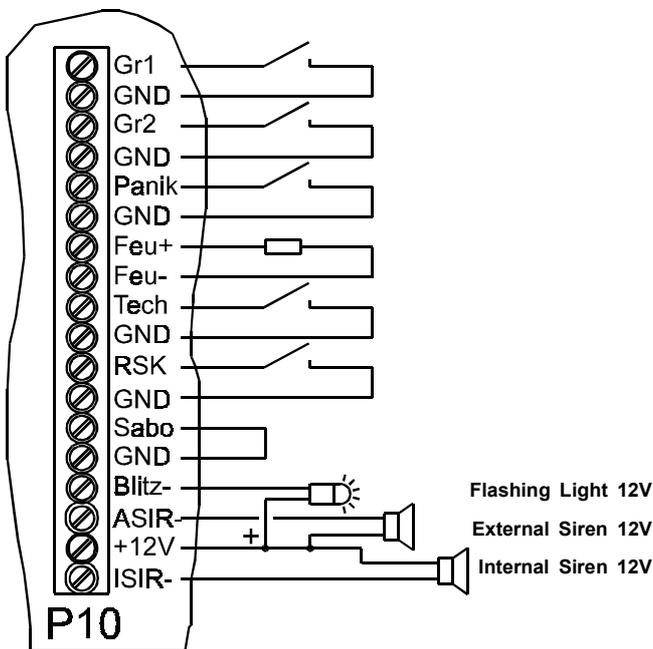


Fig. 2: P10 Connection Terminal Assignment

- Gr1 The external group/group 1 detectors serve for monitoring the outside body (windows, doors). The user is absent and arms the radio alarm system externally.  
The radio magnetic contact is a typical external group/group 1 detector.  
Under menu item 11, "wired groups", the input can be programmed as a normally closed or a normally open contact.
- Gr2 The internal group/group 2 detectors serve for internal monitoring.  
The user is present and arms the radio alarm system internally.  
The radio movement detector is a typical internal group/ group 2 detector.  
Under menu item 11, "wired groups", the input can be programmed as a normally closed or a normally open contact.
- GND Ground (0 V).
- Panik Input of the wired attack detector group.  
Under menu item 11, "wired groups", the input can be programmed as a normally closed or a normally open contact.
- Feu+ Positive pole of a wired smoke detector.
- Feu- Negative pole of a wired smoke detector.
- Tech Input of the wired technical detector group.  
Under menu item 11, "wired groups", the input can be programmed as a normally closed or a normally open contact.
- RSK Input of the wired interlock switch contact group. This input serves for monitoring the closing of doors. Under menu item 11, "wired groups", the input can be programmed as a normally closed or a normally open contact.
- Sabo Input of the wired tamper detector group.  
This input must, in any case, be terminated by a resistance of 0 Ohms or 12 Ohms. The factory setting is a resistance of 0 Ohms (refer to the programming of the radio alarm system on page 78). The resistor should be accommodated in the device connected (if provided), e. g. in the external siren or in the key-operated switch.
- Blitz- Connected to ground when an external alarm is released or acknowledging was programmed for the flashing light.
- ASIR- Connected to ground when an external alarm is released or acknowledging was programmed for the external siren.
- 12V Plus 12 V supply for the external siren, flashing light, internal siren, in case of being triggered.
- ISIR- Connected to ground when an internal alarm or a trouble message is released, or acknowledging was programmed for the internal siren.

**Important: The total current for ASIR, BLITZ and ISIR must not exceed 2A.**

# Mounting and Installation • Radio Alarm Center

## P9 connection terminal assignment

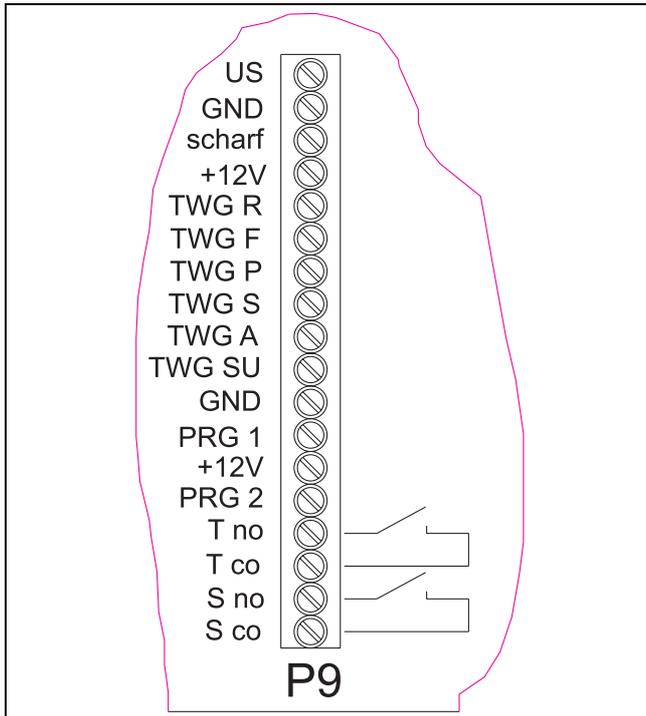


Fig. 3: P9 Connection Terminal Assignment

- US** Input for unarming the radio alarm center. The unarm terminal of a key-operated switch, a bar switch latch or of a block connecting link can be connected to the input. Pulse length: > 200 ms
- GND** Ground connection (0 V)
- Scharf** Input for arming the radio alarm center via a connected key-operated switch, bar switch latch or block connecting link. Pulse length: > 200 ms
- +12V** Plus 12 V supply for a device to be connected, such as a cabled telephone dialler, block connecting link etc. Maximum current consumption  $I = 150 \text{ mA}$ .

- TWG R** Feedback input of a connected external dialler. Leading to alternative alarming via the external siren when the input is enabled.
- TWG F** Telephone dialler fire output. Triggered in case of fire, irrespective of the state of the system.
- TWG P** Telephone dialler attack output. Triggered in case of attack, irrespective of the state of the system.
- TWG S** Telephone dialler trouble output. Triggered in case of a trouble message.
- TWG A** Telephone dialler alarm output. Triggered in case of an external alarm.
- TWG SU** Armed/unarmed telephone dialler. Triggered upon external arming/unarming.

### Note:

**The TWG (TD = Telephone Dialler) outputs are open-collector outputs (total load 12 V/100 mA max.).**

- GND** Ground connection (0 V).
- PRG 1** Programmable program output. Refer to pages 63-64.
- +12V** Plus 12 V supply for a device to be connected. Maximum current consumption  $I = 350 \text{ mA}$ .
- PRG 2** Programmable program output. Refer to pages 63-64. Note: The PRG 1/PRG 2 outputs are open-collector outputs (total load 12 V/400 mA max.).
- T no** Outputs of the potential-free technical relay.
- T co** The relay is triggered in case of a technical message.  
co = common contact (center contact)  
no = normally open contact
- S no** Outputs of the potential-free trouble relay.
- S co** Triggered in case of a disturbance.  
co = common contact (center contact)  
no = normally open contact

# Mounting and Installation • Radio Alarm Center

## Connecting the key-operated switch to the radio alarm center

The wired tamper line of the radio alarm center should be run through the key-operated switch to monitor the latter for cover lifting or drilling. Wire up as shown in the connection diagram. For detailed installation instructions, refer to pages 50-51.

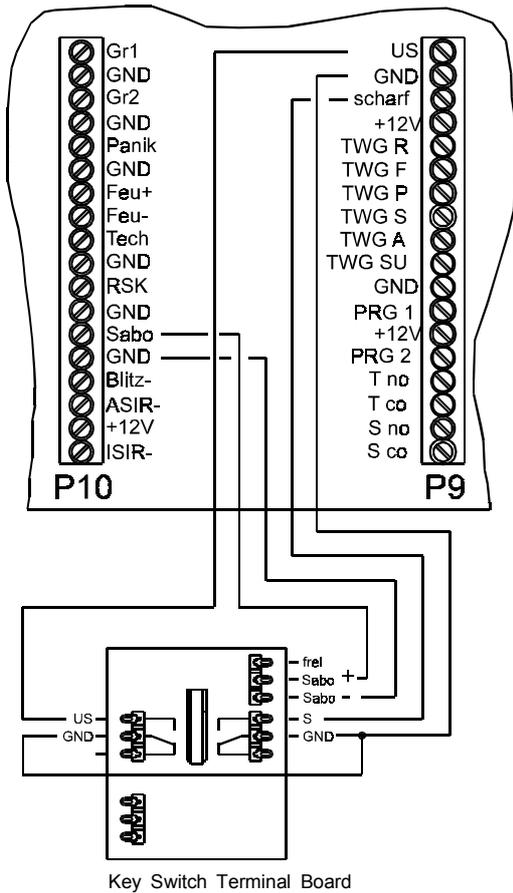


Fig. 4: Key-Operated Switch Connection to the Radio Alarm Center

## Connecting the pulse door opener to the radio alarm center

Wire up the pulse door opener as shown in the connection diagram. Terminal "ZU" (closed) must be wired with PRG 1, terminal "AUF" (open) with PRG 2, as well as the opening contact wired with Gr1 and GND as shown in Fig. 6.

When the door is closed, group 1 is evaluated as closed (group 1 factory setting = N. O. (normally open)), whereas group 1 is evaluated as open when the door is open.

The program output must be programmed for IMPULS (pulse) (refer to 63-64).

Upon arming, open-collector output PRG 1 is triggered by ground (GND, 0 V) for a short time.

Upon unarming, open-collector output PRG 2 is triggered by ground (GND, 0 V) for a short time.

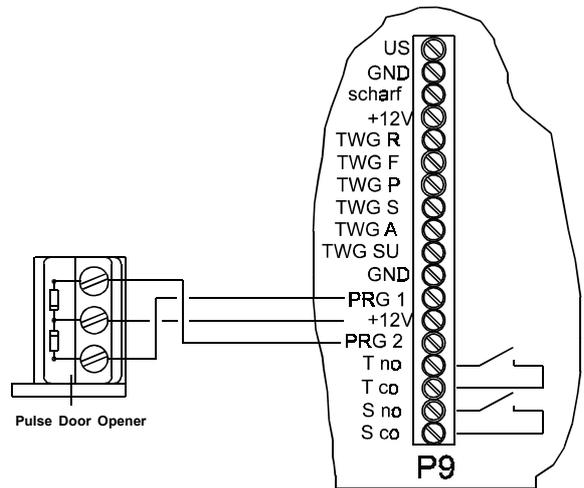


Fig 5: Pulse Door Opener Connection with the Radio Alarm Center

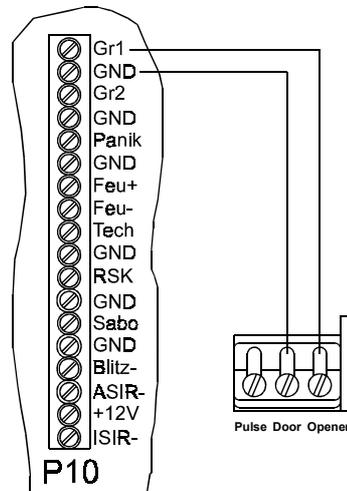


Fig 6: Opening Contact Connection

# Mounting and Installation • Radio Alarm Center

## Connecting a block connecting link to the radio alarm center

The following Fig. 7 shows the wiring of a block connecting link (model 22150/22151 from EFF-EFF) with the connecting terminals. The program output must be programmed for COIL (refer to pages 63-64). If the block connecting link is connected to the program output (PRG 1/PRG 2), the latter will no longer be available for any other function. A 12 kOhm resistor is integrated to monitor the block connecting link for tampering. Since tamper monitoring is factory-set to 0 Ohms, the jumper between the "Sabot" and "GND" terminals must be removed. Moreover, the value of 0 Ohms must be re-programmed for 12 kOhms from the "change tamper" menu item (refer to page 78). Detailed fitting and installation instructions are attached to the packing of the block connecting link.

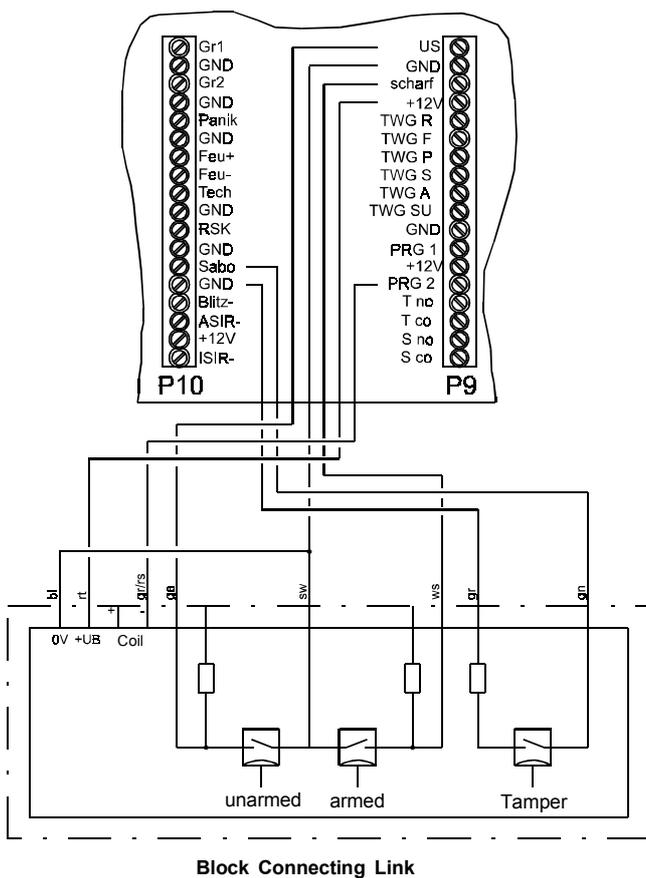


Fig 7: Example for Connecting a Block Connecting Link to the Radio Alarm Central Unit

## Connecting the telephone dialler (AWUG) to the radio alarm center

The telephone dialler outputs are open-collector outputs and can be directly connected to the terminals of the AWUG telephone dialler (automatic dialling and transmission set). Wire up the telephone dialler as shown in Fig. 8.

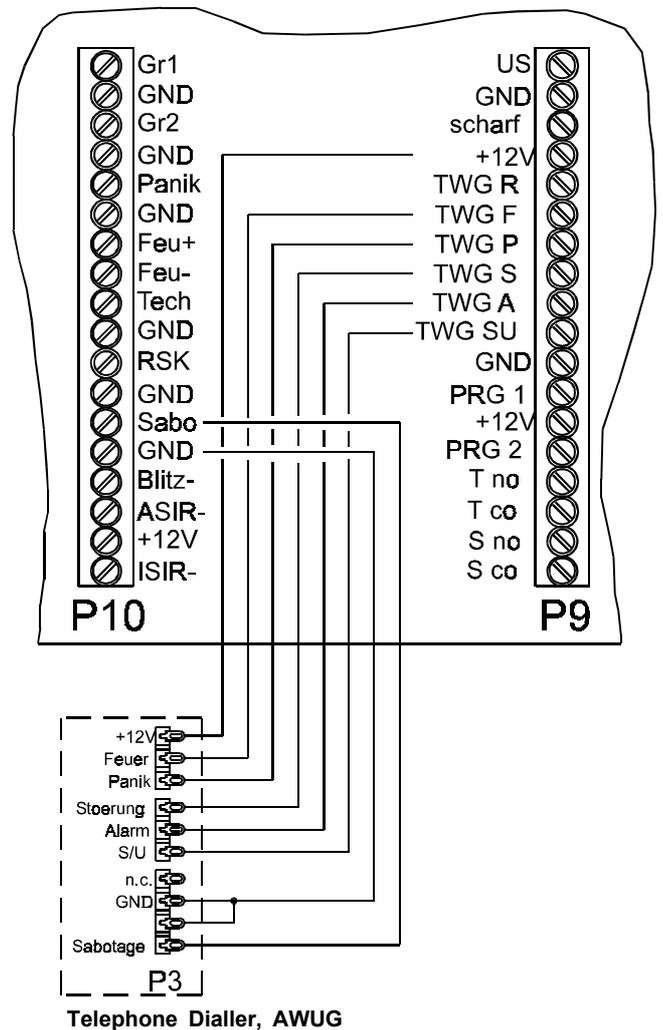


Fig. 8: AWUG Telephone Dialler Connection

# Mounting and Installation • Radio Alarm Center

## Start-up

After all components to be cabled have been connected as shown in the diagrams, the radio alarm center can be started up. As the floating storage battery has already been connected up at the factory and will automatically come into action via the so-called "automatic mains starting", only the mains voltage will have to be connected to the radio alarm center.

Important: Use a separate fuse for the mains connection, if possible. It must, however, be made impossible by all means that the radio alarm center is protected by fusing circuits which can be manipulated from outside.

## Resetting the radio alarm center

If a trouble message which can, for the moment, not be eliminated is present at the radio alarm center, it may be wise to reset the radio alarm center to the original factory setting. For this purpose, press the key marked RESET and located on the printed circuit board. This process may, for example, make sense if the trouble on a detector cannot be eliminated for the moment, but the system is supposed to stay ready for operation until the final rectification of the problem. It should be noted that pressing the RESET key will reset the following values to factory-set defaults which would have to be re-programmed:

Date and time will be reset (date: 01.01, time: 00:00).  
The history memory will be set to "History End" (history end).  
Pressing the [A], [V] keys will make the history entries re-appear in the display.

**Important: Any other settings of the programming made such as detectors learned in and their text assignments, alarm durations, delay times, acknowledging as well as the user and installer codes will remain in the memory of the radio alarm center.**

## Specifications

Mains voltage:	230 V, +10% / -15%
Technical relay:	3 A/24 V contact rating
Trouble relay:	3 A/24 V contact rating
Flashing light output:	2 A/12 V (12 V connected)
External siren output:	2 A/12 V (12 V connected)
Internal siren output:	2 A/12 V (12 V connected)
Program output:	12 V/400 mA total rating (open collector)
TWG outputs:	12 V/100 mA total rating (open collector)
Fuse SI 1:	T 80 mA L 250 V
Fuse SI 2:	T 2 A L 250 V
Fuse SI 3:	T 630 mA L 250 V
Fuse SI 4:	T 2 A L 250 V

**Caution: The total current for program output, ASIR, Blitz, ISIR must not exceed 2 A.**

Radio frequency:	434 MHz
Working range:	approx. 300 m (free field)
Temperature:	+5 °C to +50 °C
Emergency power supply:	12 V/1.2 Ah lead storage battery
Dimensions (W x H x D):	361.5 x 244 x 68.5 mm

# Mounting and Installation • Radio Alarm Center

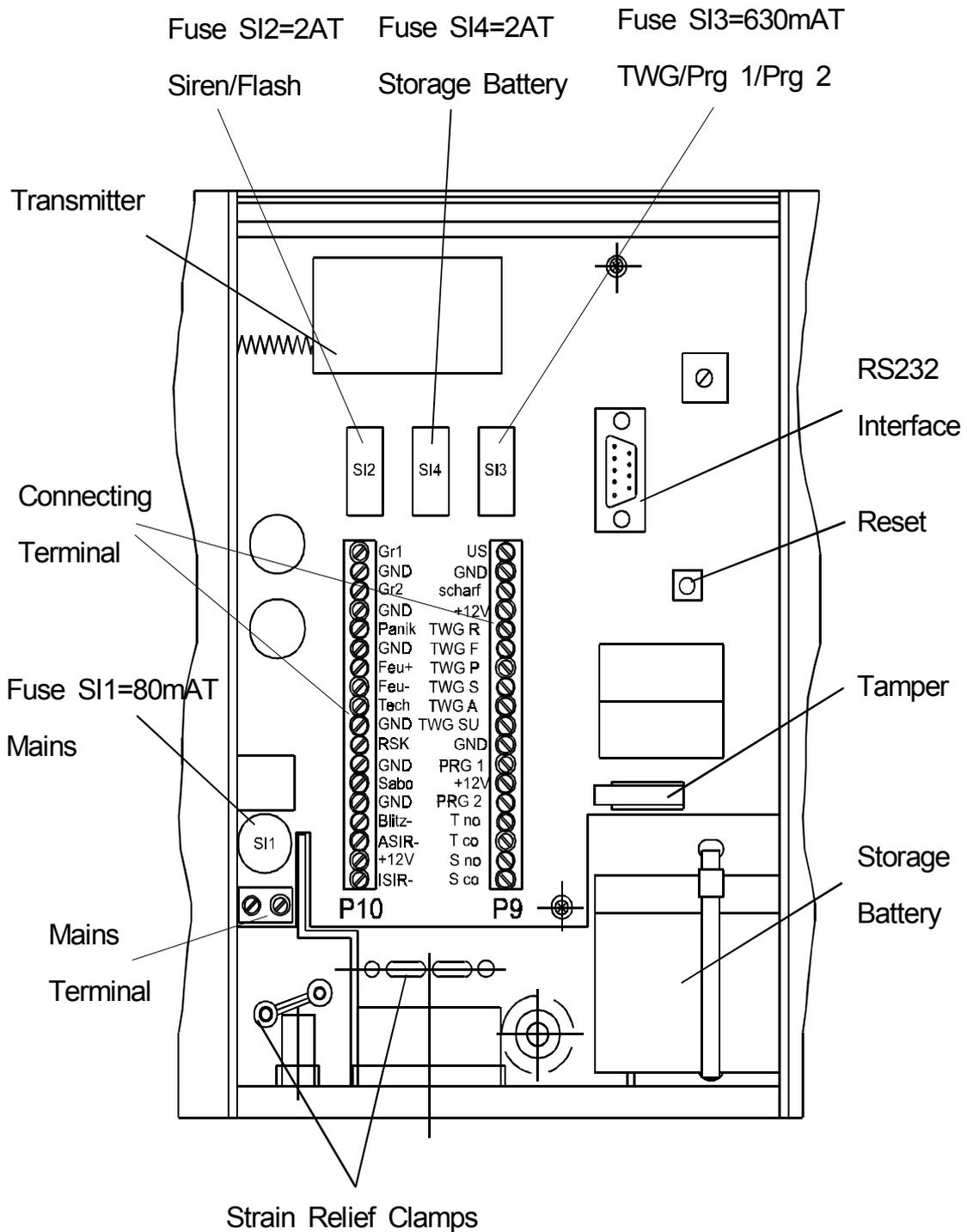


Fig. 9: Radio Alarm Center Terminal Board

# Mounting and Installation • Radio Door Module

## Function

The radio door module allows wireless arming/unarming without any additional mains supply.

## Installation

The radio door module consists of a front and a rear part screwed to each other by two enclosure screws. A terminal board with an electronic evaluation circuit, an acknowledge buzzer, connecting terminals and with mains-independent power supply consisting of a 9 V lithium battery is located in the enclosure rear part.

A transmitter is provided for radio communication with the radio alarm center.

Via a flat cable, the enclosure top part, where the keyboard is integrated, and the rear part are connected with each other.

A magnetic contact for monitoring the opening, an interlock switch contact for monitoring the closing and a key-operated switch/bar switch latch can be connected to the radio door module. In addition, a monitored tamper input and an output for triggering an external piezo buzzer are provided.

The enclosure is monitored for unauthorised opening by a cover switch.

## Place of installation:

The radio door module must be installed indoors, in the area of the entrance door.

## Installation:

Carry out the following working steps should for the installation:

1. Determine the place of installation. Recommended mounting height approx. 1.40 m.
2. Separate the front and rear parts from each other and pull off the flat cable.
3. Mark the drill holes.
4. Drill the mounting holes (6 mm dia.) and insert the attached dowels.
5. Mount the rear part with the attached screws.
6. Attach the cabling to the connection terminals.
7. Re-connect the flat cable of the enclosure front to the connector of the enclosure rear part. Ensure correct positioning.

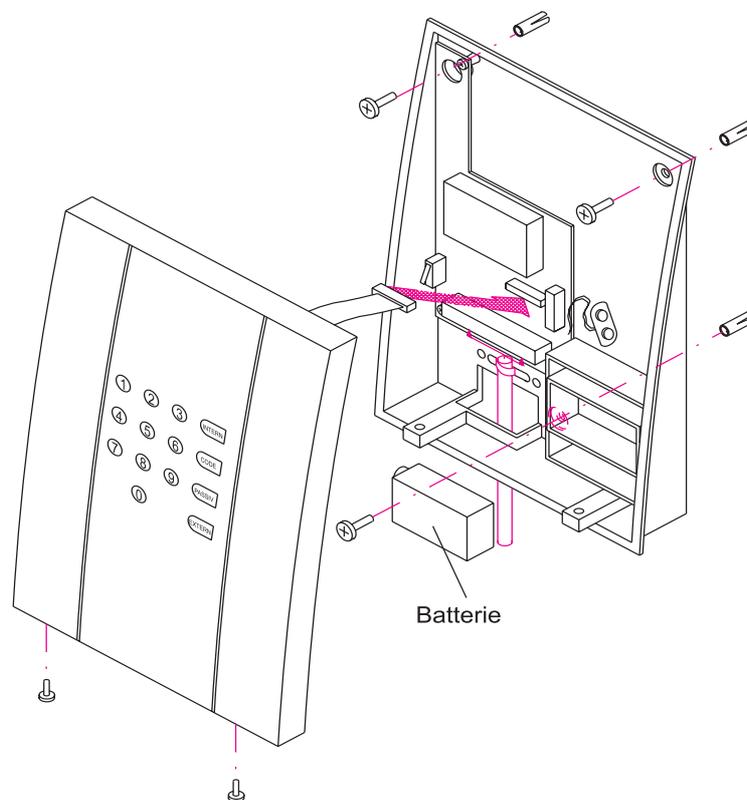


Fig. 10: Radio Door Module

# Mounting and Installation • Radio Door Module

## Connecting the key-operated switch to the radio door module

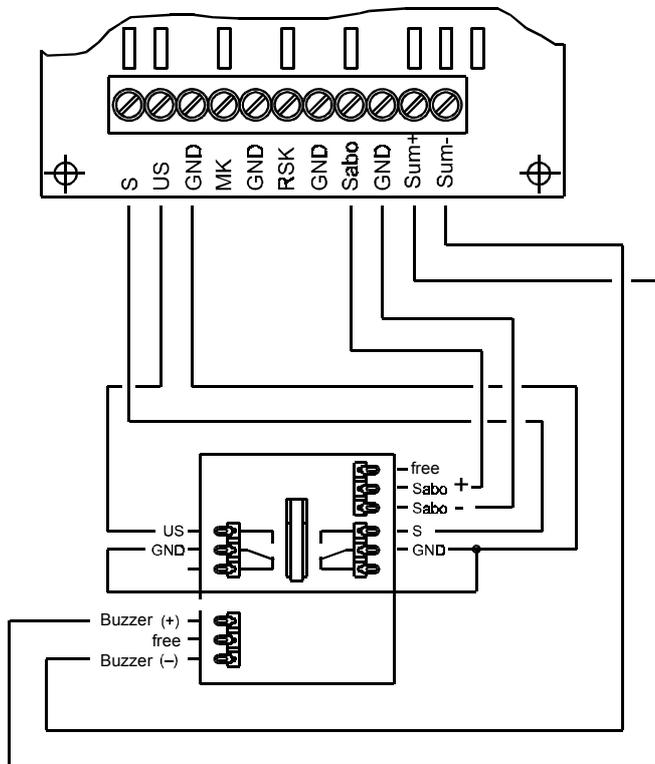


Fig. 11: Key-Operated Switch Connection with the Radio Door Module

- s Arms the system externally when the input is connected to ground (GND, 0 V).
- Us Unarms the system when the input is connected to ground (GND, 0 V).
- GND Ground (0 V).
- SUM + Plus output for connecting the acknowledge buzzer in the key-operated switch.
- SUM - Minus output for connecting the acknowledge buzzer in the key-operated switch.

## Connecting the magnetic contact/interlock switch contact to the radio door module

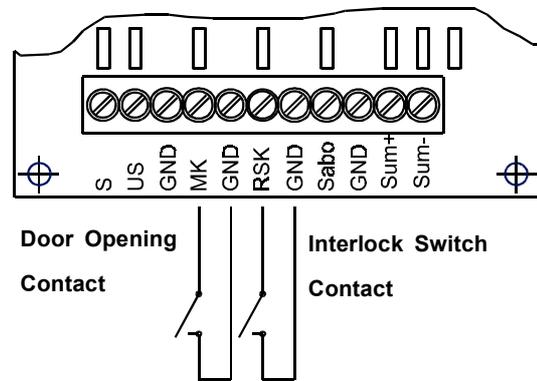


Fig. 12: Connection of Magnetic and Interlock Switch Contacts

- MK Input for connecting a wired magnetic contact. If the input is connected to ground GND (0 V), the radio alarm center will evaluate the door as closed. If the input is not connected, the MK terminal will have to be bridged with GND so that the door module evaluates the door as closed.
- RSK Input for connecting a interlock switch contact. If the input is connected to ground GND (0 V), the radio alarm center will evaluate the door as closed. If the input is not connected, the RSK terminal will have to be bridged with GND so that the door module evaluates the door as closed.
- Sabo Input for connecting a tamper contact. If the input is connected to ground (GND, 0 V), a tamper message will be given to the radio alarm center. If the input is not connected, the Sabo terminal will have to be bridged with GND (GND, 0V) so that the door module evaluates the tamper contact as closed.

# Mounting and Installation • Radio Door Module

## Start-up

After all components have been connected to the radio door module as shown in the connection diagrams, the module can be started up and learned into the radio alarm center.

1. Connect the 9 V lithium battery. Important: Ensure correct polarity. The supply inputs are protected through fuse SI1 = 80 mA T. A spare fuse is attached.
2. Call the "learn detector" menu item on the radio alarm center.
3. Learn the radio door module into the radio alarm center by shortly pressing the tamper key. Successful reception of the learn signal is indicated by the radio alarm center in the form of a loud beep.
4. Allocate the association with the group and the text on the place of installation to the radio door module as described in the radio alarm center programming instructions (refer to pages 56-58).

After the learn process, the start-up procedure is complete, and a subsequent test of the radio door module is run under the function test of the entire system.

## Specifications

Transmitting frequency:	434 MHz
Fuse SI1:	80 mA T
Voltage supply:	9 V lithium comp. battery
Temperature:	+5 °C to +50 °C
Current consumption:	$I_{rest} = 12 \mu A$ $I_{transmit} = 45 mA$
Siren volume level:	approx. 83 dBA (at a distance of 10 cm)
Dimensions (W x H x D):	165 x 215 x 48 mm

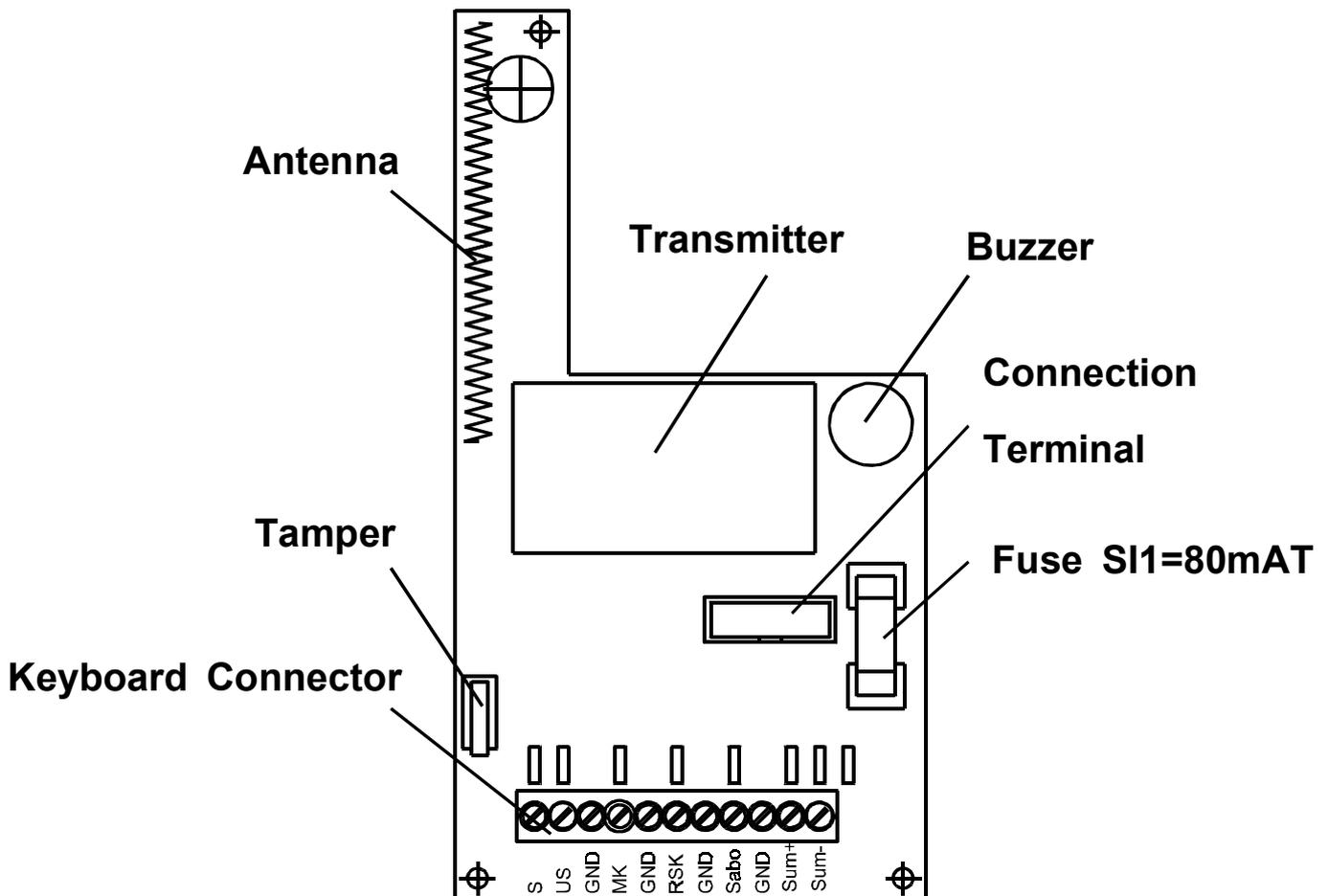


Fig. 13: Radio door Module Terminal Board

# Mounting and Installation • Radio Movement Detector

## Function

The radio movement detector serves for indoor monitoring and receives the temperature emitted by a human body.

## Installation

The radio movement detector consists of a front and a rear part screwed to each other. The rear part accommodates a 9 V lithium battery, a control and evaluation board as well as a radio transmitter. The integrated optical component, a so-called Fresnel lens, which guarantees a monitoring range of 8 x 11 m (90°), is fixed in the front part. Moreover, the movement detector printed circuit board contains a reed contact which can be actuated externally by means of a magnet. This allows the test modes to be activated during start-up and maintenance without the need of opening the detector.

**The radio movement detector has a so-called sleep mode, i. e. after detecting a movement and sending a data telegram to the radio alarm center, the detector goes into an energy-saving operating state for approx. 3 minutes.**

## Important notes of the place of installation

Because of the operating principle of the radio movement detector, you should take into consideration the following points choosing the place of installation:

- Ensure the detector is installed transversely with the moving direction of a burglar.
- Ensure an installation height of 2 - 2.4 m.
- The corner of a room should be preferred as place of installation.
- Do not direct the movement detector straight to the window, to the heating or to open fire places.
- Do not install the detector by the side of curtains as these may lead to false alarm in a draught.
- Do not obstruct the range of vision of the detector into the room by pieces of furniture.
- Do not install in the outdoor area.
- Keep in mind the movements of domestic animals.

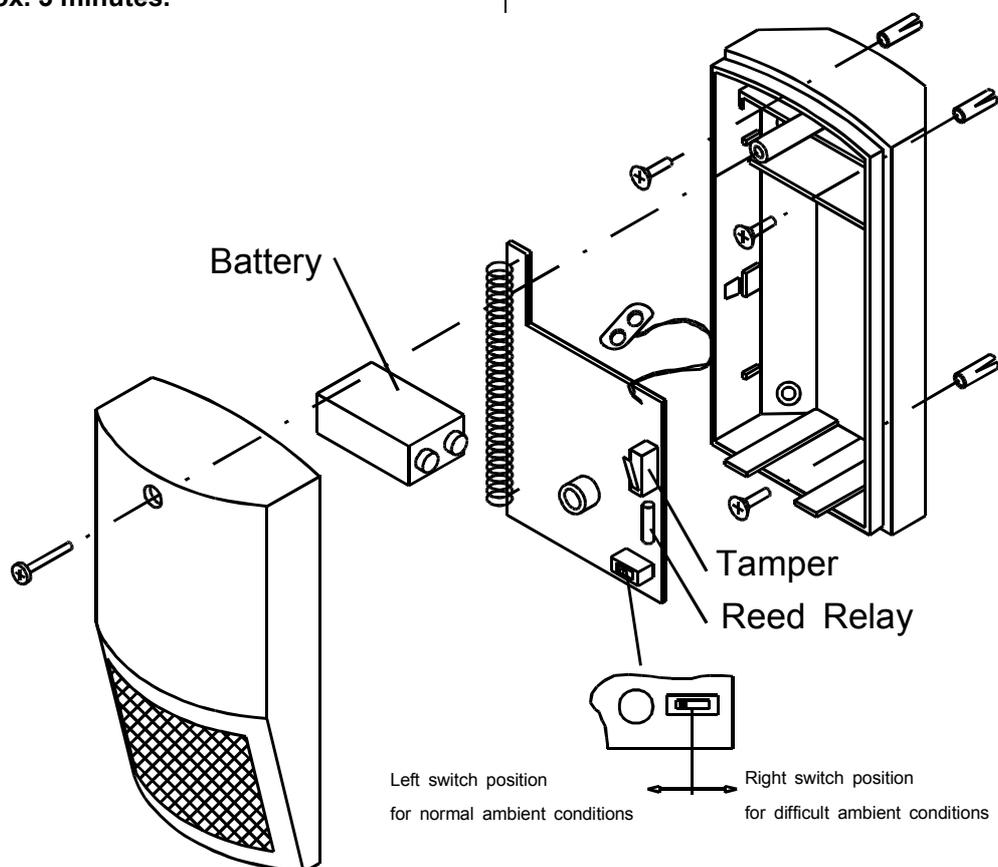


Fig. 14: Radio Movement Detector

# Mounting and Installation • Radio Movement Detector

## Mounting

Carry out the following working steps to mount the radio movement detector:

1. Determine the optimum place of installation for the radio movement detector (refer to Important Notes on the Place of Installation).
2. Screw open the enclosure and carefully lift the cover off the lower part.
3. Remove the movement detector printed circuit board from the rear part and carefully lay it down.
4. Mark the drill holes, drill the mounting holes (6 mm dia.) and insert the attached dowels.
5. Mount the rear part with the attached screws.
6. Re-insert the movement detector board.

**Note: When using the radio movement detector in**

- draughty cellars,
- rooms with floor heating,

**slide the selector switch on the movement detector board to the "insensitive" position.**

Left switch position: Normal ambient condition (factory setting).  
Right switch position: Difficult ambient condition (insensitive).

## Start-up

1. Open the enclosure of the radio movement detector.
2. Connect the attached 9 V battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Actuate the tamper key.
5. Close the enclosure and screw it up.
6. Enter the radio movement detector into the List of Detectors (refer to page 90).

To check the detector for proper functioning after the installation, a subsequent function test must be made.

After the function test, the start-up is complete.

## Function Test

To activate the test functions, externally bring the magnet close to the reed contact.

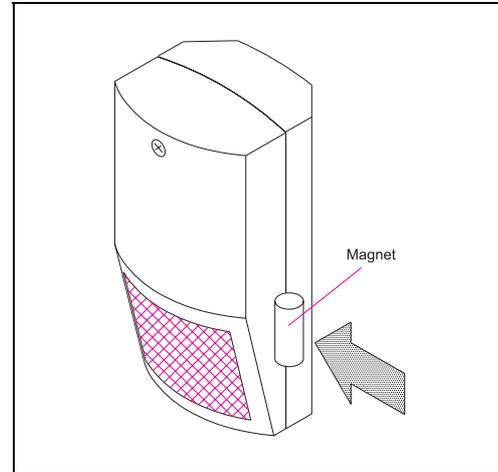


Fig. 15: Performing the Walking and Transmitting Test

## Walking Test

- To activate this test, the magnet must be held close to the reed contact for approx. 1 s.
- The light-emitting diode behind the Fresnel lens will indicate a detection when somebody walks through the detection range.
- The walking test automatically deactivates itself after approx. 90 seconds.

## Transmitting Test

- To activate this test, the magnet must be held close to the reed contact for more than 2 seconds.
- The detector will now transmit a radio signal every eight seconds for a period of approx. 90 seconds. This transmitting is indicated by the flashing of the LED.
- The transmitter automatically turns off after approx. 90 seconds.
- The transmitting test can be used for maintenance work to check the radio link and proper reception at the radio alarm center in the "test detect" test mode of the center (refer to page 69).

**Note: The magnet for activating the walking and transmitting tests is attached to the radio alarm center.**

# Mounting and Installation • Radio Movement Detector

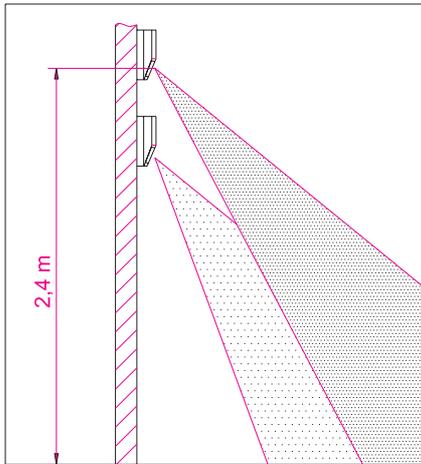


Fig. 16: Monitoring Range Top View

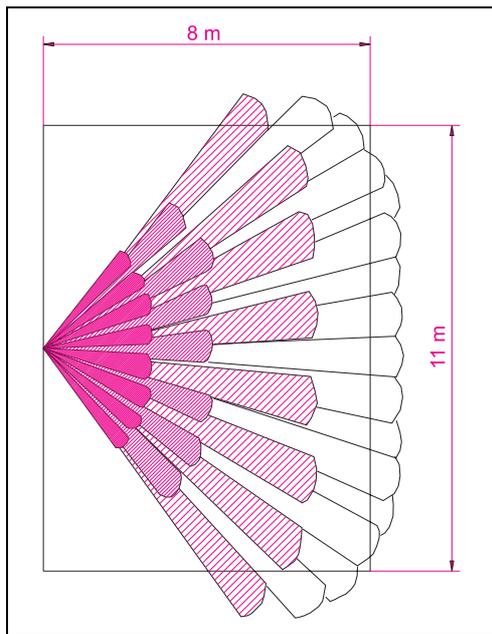


Fig. 17: Monitoring Range Vs. Installation Height

## Specifications

Transmitting frequency: 434 MHz  
Working range: approx. 300 m (free field)  
Voltage supply: 9 V lithium comp. battery  
Monitoring range: 8 x 11 m (90°)  
Current consumption:  $I_{rest} = 14 \mu A$   
 $I_{transm} = 45 mA$   
Temperature: +5 °C to +50 °C  
Dimensions (W x H x D): 62.5 x 120.3 x 53.1 mm



# Mounting and Installation • Radio Glass Breakage Detector

## Start-up

1. Open the enclosure of the radio glass breakage detector.
2. Connect the attached 9 V battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Actuate the tamper key.
5. Close the enclosure and screw it up.
6. Enter the radio glass breakage detector into the List of Detectors (refer to page 90).

A subsequent function test must be made. After the function test, the start-up is complete.

## Function test

A test can be made after learning. To simulate glass breakage, a glass breakage tester should be used. Press the test key on the glass breakage tester. The test noise caused thereby will activate the test mode. This can be recognised by the red LED shining for a few seconds and then indicating the test mode by flashing for about 1.5 minutes. Now, bring the glass breakage tester into the vicinity of the glass panes to be detected and trigger it there. The detector must recognise this as an alarm and indicate it by the LED shining steadily (for three to four seconds).

When the radio alarm center is in the "TEST DETECT" menu item (refer to page 69), it is possible to check whether the alarm message from the radio glass breakage detector is correctly received by the radio alarm center.

**Caution: The hand-held tester produces a very loud and high-pitched sound. Do not trigger in the close vicinity of your ears.**

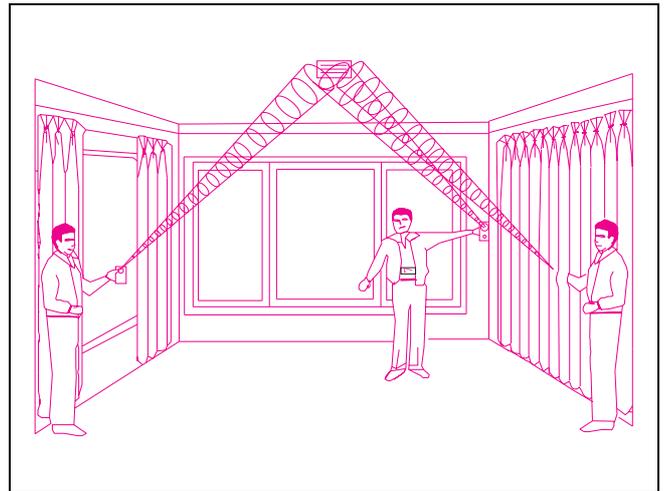


Fig. 19: Acoustic Radio Glass Breakage Detector Function Test

## Specifications

Transmitting frequency:	434 MHz
Working range:	approx. 300 m (free field)
Voltage supply:	9 V lithium comp. battery
Detection radius:	approx. 6 m
Current consumption:	$I_{rest} = 25 \mu A$ $I_{transm} = 45 mA$
Temperature:	+5 °C to +50 °C
Dimensions (W x H x D):	80 x 115 x 32 mm

# Mounting and Installation • Radio Magnetic Contact

## Function

The radio magnetic contact serves for monitoring the opening and closing of doors and windows.

## Installation

The radio magnetic contact consists of a front and a rear part screwed to each other. The rear part accommodates a 9 V lithium battery, an evaluation board with two integrated reed contacts and a radio transmitter.

At the side of the enclosure bottom part, the positioning of the reed contacts is marked. If only one wing of a window or door is monitored, the attached magnet can be integrated directly to the window wing or door leaf (max. distance 8 mm). If several window wings are to be monitored, the connection of external, further contacts will be possible. For this purpose, the rear part is provided with predetermined break points for leading in the cables.

Note: Since magnetic contacts, interlock switch contacts and tampering are evaluated by the radio alarm center separately, it must be ensured that these are, by all means, be connected to the terminals provided therefor.

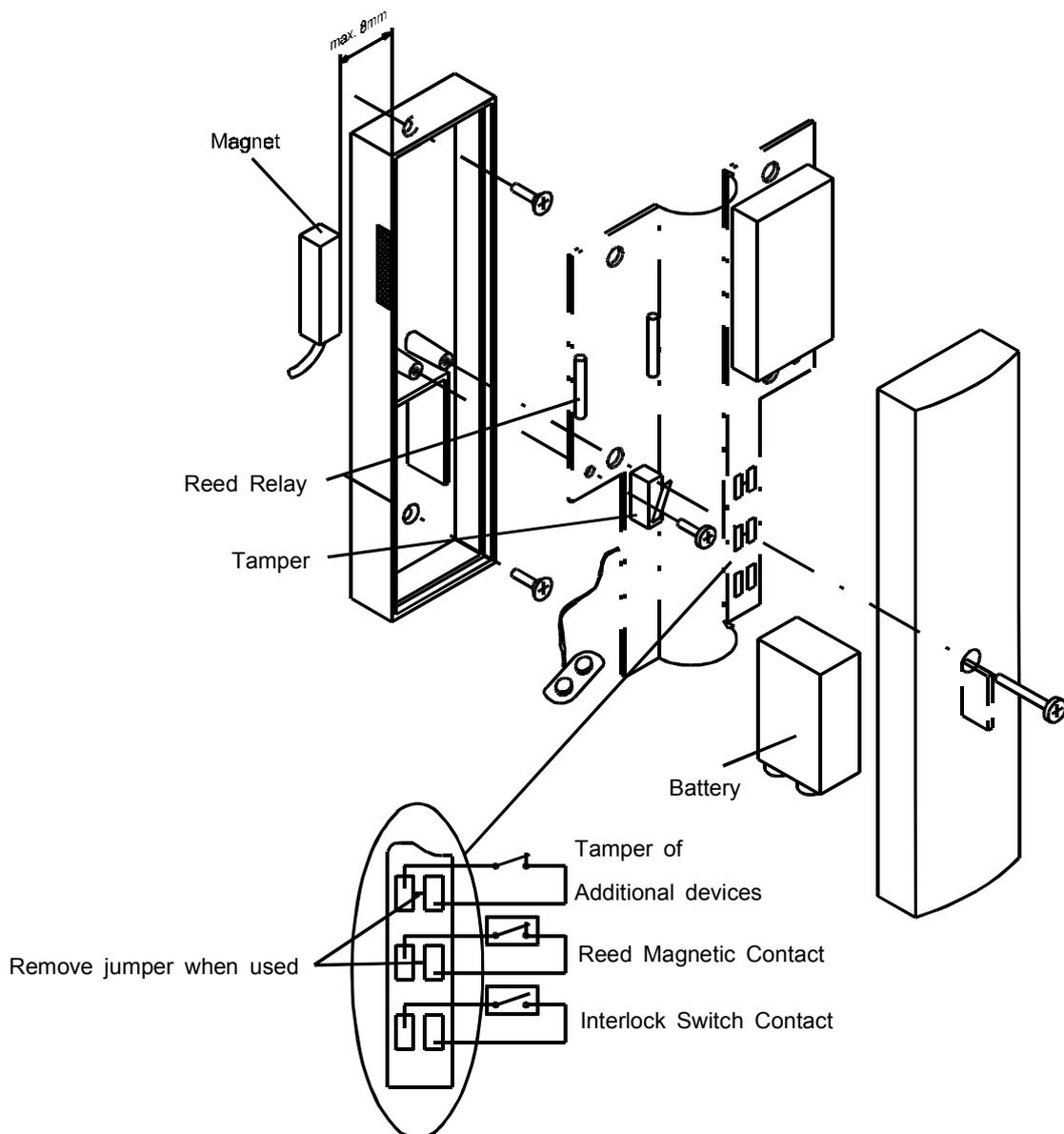


Fig. 20: Radio Magnetic Contact

# Mounting and Installation • Radio Magnetic Contact

## Place of installation

Normally, the radio magnetic contact should be mounted to the door or window frame to be monitored. The attached magnet must be directly fitted to the window wing or door leaf. The distance between the enclosure of the radio magnetic contact and the magnet must not exceed 8 mm.

## Mounting

Carry out the following working steps to mount the radio magnetic contact:

1. Determine the optimum place of installation for the radio magnetic contact in the door/window area (refer to Important Notes on the Place of Installation).
2. Screw open the enclosure and lift off the cover.
3. Remove the printed circuit board from the rear part and carefully lay it down.
4. Mark and drill the mounting holes.
5. Mount the rear part with the attached screws.
6. Apply the connections to the printed circuit board of the radio magnetic contact.
7. Re-insert the printed circuit board and secure it with the fixing screw.

## Installing magnetic contacts

When the "ex Ö" input (external opening, i. e. external magnetic contact) is used, the jumper between the two solder tags will have to be separated by means of a pointed tool (e. g. knife, screwdriver) (refer to Fig. 20).

If the reed contacts integrated on the board are not used, one of them will have to be short-circuited by a wire jumper.

If several magnetic contacts (10 max.) are to be connected, a distributor will have to be used. The polarity can be disregarded for the magnetic contacts.

## Installing the interlock switch contact

The interlock switch contact must be connected to the solder tags marked RSK (refer to Fig. 20).

## Installing a wired tamper contact

If a wired tamper contact is used, the connection correspondingly marked in Fig. 20 will have to be cancelled on the board.

## Start-up

1. Open the enclosure of the radio magnetic contact.
2. Connect the attached 9 V battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Actuate the tamper key.
5. Close the enclosure and screw it up. When closing the enclosure, ensure the correct position of the cover.
6. Enter the radio magnetic contact into the List of Detectors (refer to page 90).

Note: It will be absolutely necessary that the radio magnetic contact is actuated once more after learning (e. g. during the function test) to enable the radio alarm center to recognise the last state of the detector, OPEN or CLOSE, respectively.

## Function-Test

To check proper functioning after the installation, a subsequent function test should be performed. For this purpose, call the "test detect" menu item at the radio alarm center (refer to page 69) as well as open and close the doors and windows monitored by the radio magnetic contact. Each change of state will be indicated in the display of the center. After the function test, the start-up is complete.

## Specifications

Transmitting frequency:	434 MHz
Working range:	approx. 300 m (free field)
Voltage supply :	9 V lithium comp. battery
Current consumption:	$I_{rest} = 10 \mu A$ $I_{transm} = 45 mA$
Connections:	magnetic contact, interlock switch contact, tampering
Temperature:	+5 °C to +50 °C
Dimensions (W x H x D):	80 x 115 x 32 mm

# Mounting and Installation • Magnetic Contact

## Function

The magnetic contact serves for monitoring the opening of doors and windows. The magnetic contact consists of a reed contact and a magnet.

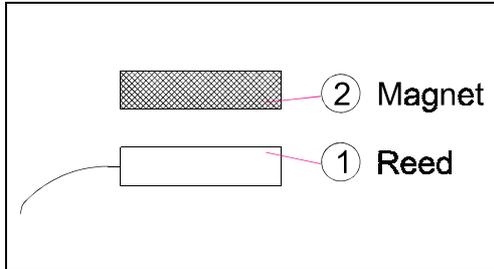


Fig. 21: Magnetic Contact

## Important Notes on the place of installation

Depending upon the situation, magnetic contacts can be installed as built-in or surface-mounting versions. Therefore, the materials of the objects to be safeguarded must be taken into consideration at the planning stage.

### Built-in version:

For wooden windows and doors, it is possible to sink in the magnetic and reed contact to prevent access to it and to visually hide it.

For window installation, the permanent magnet should be mounted into the wing and the reed contact into the frame. For door installation, the permanent magnet should be fitted in the door and the reed contact in the door frame.

### Surface-mounting version:

If the installation situation not otherwise permitting, it will be possible to mount the permanent magnet and the reed contact onto the door or window frame. Surface-mounting reed contacts must, at any rate, be screwed on as pasting entails the hazard of separating due to environmental influences, eventually leading to false alarm.

For plastic windows, make sure the mounting screws are not turned into the metal core, or the field of the permanent magnet will be adversely affected which will result in malfunctioning of the reed contact within the shortest time.

## Mounting

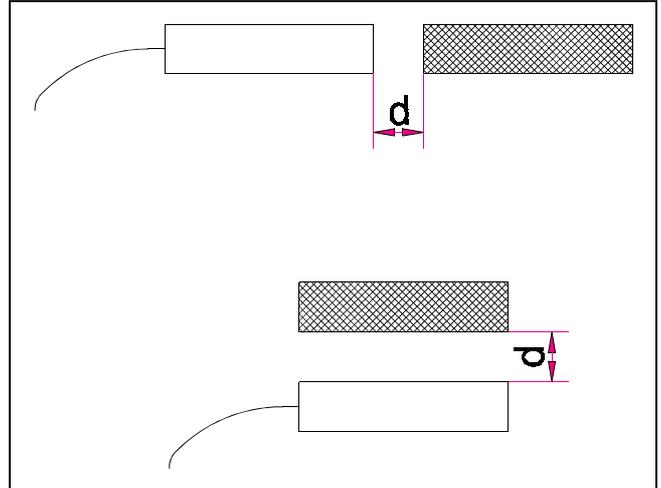


Fig. 22: Correct Fitting Position of the Magnetic Contacts

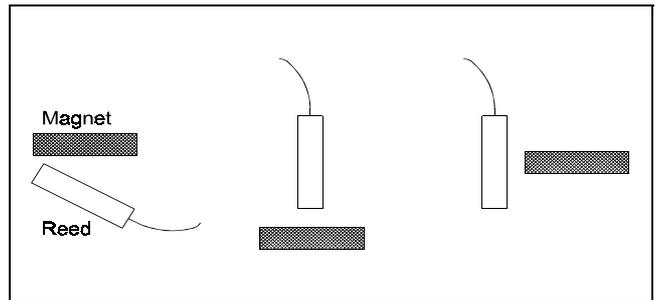


Fig. 23: Wrong Mounting of the Magnetic Contacts

Mounting must be axially in longitudinal alignment or in parallel with each other (refer to Fig. 22). Mounting distance  $d$  must not be wider than maximally 15 mm.

**Important: For metal doors, distance  $d$  between the door and the magnet must be at least 8 mm so as not to lose the magnetism of the magnet in the longer run. This, in time, would lead to false alarm.**

The magnet must be mounted to the moving part (door leaf or window wing). The reed contact must be fitted to the fixed part (frame or case).

### Fitting the built-in version

When building in the magnetic contact, ensure that a 4 mm dia. hole is drilled for the lead-in. Mechanically fix the reed contact and the magnet by a bonding agent such as silicone rubber when installing them.

# Mounting and Installation • Magnetic Contact

## Fitting the surface-mounting version

The assembling parts of the magnetic contact serve for installation on windows and doors.

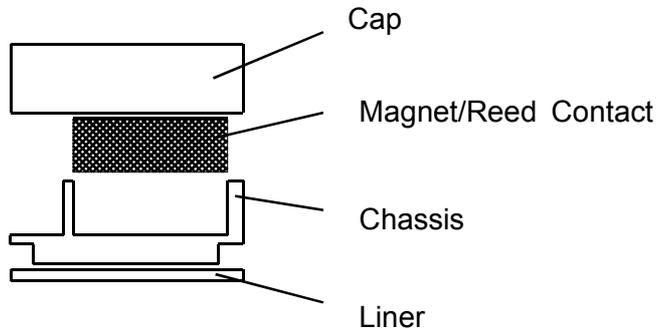


Fig. 24: Magnetic Contact Arrangement

### Liners:

Two liners are attached for setting up the magnetic/reed contact to different heights. These liners have small pegs on one side and holes on the other to facilitate proper stacking.

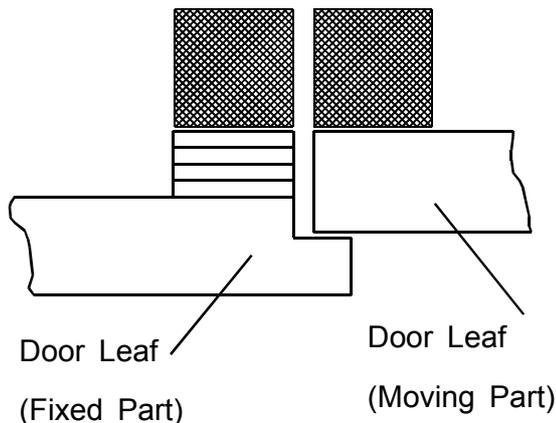


Fig. 25: Magnetic Contact Door/Window Mounting Example

**Note:** Liners not needed should be kept, for several liners may be required in some installation cases.

### Chassis:

The chassis has two lateral notches provided for leading in the supply line when reed contact is used. This facilitates the leading in of the supply line directly from behind.

Undercuts on the chassis serve for locking in the caps.

### Cap:

On one side and at the end, the caps have a reduced wall thickness for breaking out openings and inserting the lead-in. Thus, this is possible laterally and lengthwise.

The cap can be pressed over chassis and locks in with a clearly audible click.

When properly installed, it can no longer be removed without being destroyed. This serves for safeguarding the reed contact from tampering and protects it against subsequent manipulation.

## Specifications

### Reed Contact

Number of wires:	2 x
Switching distance:	5 mm - 12 mm
Switching capacity:	10 W max.
Switching current:	0.5 A max.
Protective system:	IP 67

### Magnet

Material:	ALNICO 500, magnetised
Diameter:	8 mm
Length:	30 mm

# Mounting and Installation • Radio Technical Detector

## Function

The radio technical detector transmits technical messages from connected sensors which, for example, detect heating failures, high water, oil etc.

## Installation

The radio technical detector consists of a front and a rear part screwed up with each other. The rear part accommodates a 9 V lithium battery, an evaluation board with connecting pads and a radio transmitter.

## Place of installation

The radio technical detector must be installed in the vicinity of the technical device to be monitored. Make sure the transmission of the radio technical detector is not impaired by installing it behind metallic objects such as the heating.

**Note: No wired smoke detectors should be connected to the radio technical detector, as the triggering of the radio technical detector does not release main alarm.**

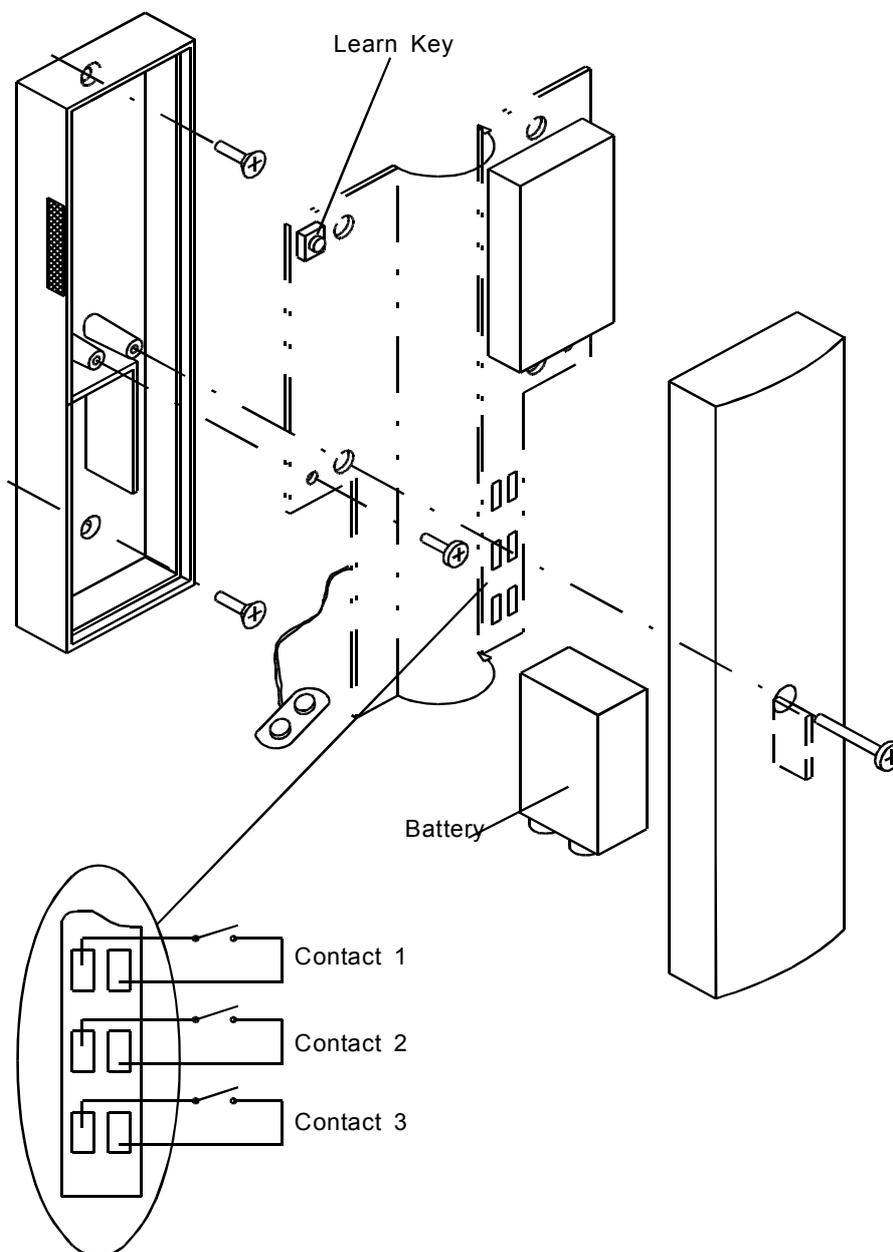


Fig. 26: Radio Technical Detector

# Mounting and Installation • Radio Technical Detector

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## Mounting

Carry out the following working steps to mount the radio technical detector:  
Screw open the enclosure and lift off the cover.  
Remove the printed circuit board from the rear part and carefully lay it down.  
Mark the drill holes, drill the mounting holes (6 mm dia.) and insert the attached dowels.  
Mount the rear part with the attached screws.  
Apply the connections to the printed circuit board of the radio technical detector.  
Re-insert the printed circuit board and secure it with the fixing screw.  
Close the enclosure.

## Start-up

1. Open the enclosure of the radio technical detector.
2. Connect the attached 9 V battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Actuate the tamper key.
5. Close the enclosure and screw it up. Ensure the correct position of the cover when closing the enclosure.
6. Enter the radio technical detector into the List of Detectors (refer to page 90).

## Function Test

To check proper functioning after the installation, a subsequent function test should be performed. For this purpose, call the "test detect" menu item at the radio alarm center (refer to page 69) and simulate a fault at the technical device monitored by the radio technical detector. Each change of state will be indicated in the display of the radio alarm center. After the function test, the start-up is complete.

## Specifications

Transmitting frequency: 434 MHz  
Working range: approx. 300 m (free field)  
Voltage supply: 9 V lithium comp. battery  
Current consumption:  $I_{rest} = 10 \mu A$   
 $I_{transm} = 45 mA$   
Connections: 3 technical channels  
Temperature: +5 °C to +50 °C  
Dimensions (W x H x D): 36 x 132 x 34 mm

# Mounting and Installation • Radio Smoke Detector

## Function

The radio smoke detector is based on the ecological smoke box principle. This smoke detector reports fire already at the beginning stage.

## Installation

The radio smoke detector consists of two enclosure parts, a detector and a wall unit. The detector contains a smoke box, an electronic evaluation circuit and a transmitter for communication with the radio alarm center.

Power supply is provided by a 9 V lithium compound battery.

## Important notes on the place of installation

To avoid false alarm and malfunctions, the smoke detector should not be installed at the following places:

- In kitchens or bathrooms (because of the water vapour or of "fatty" air).
- In the close vicinity of fireplaces and open chimneys.
- In the vicinity of ventilating shafts, because the air flow may possibly prevent the smoke to be detected from reaching the detector.
- In a dusty or dirty environment.
- In the vicinity of fluorescent lamps as the starter can produce false alarm by its "rustling".
- In rooms, the temperatures of which are below 0 °C or above 40 °C, respectively.

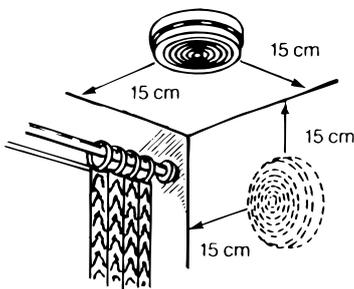


Fig. 27: Radio Smoke Detector Place of Installation

## Mounting

To guarantee proper functioning of the radio smoke detector, the choice of the place of installation is of particular importance. The radio smoke detector shows an optimum detection characteristic line when it is installed in the middle of the room under the ceiling. If this is not possible, a minimum distance of 15 cm from the wall will have to be kept for ceiling or wall mounting.

The radio smoke detector should at least be installed in bedrooms and at each floor in multi-storey buildings.

Carry out the following working steps to mount the radio smoke detector:

1. Determine the optimum place of installation for the radio smoke detector (refer to Important Notes on the Place of Installation).
2. Remove the detector from the wall unit by turning it anticlockwise.
3. Mark the drill holes (holes marked "A"), drill two mounting holes (5 mm dia.) and insert the attached dowels.
4. Mount the wall unit to the ceiling or wall in the "A" holes by means of the attached screws.
5. After the start-up, attach the smoke detector to the wall unit at the position marked with an arrow and turn it clockwise.

# Mounting and Installation • Radio Smoke Detector

## Start Up

1. Remove the factory-inverted 9 V battery from its holder.
2. Insert the battery with the indicated polarity until the battery connection terminals clearly click in (refer to Fig. 28). Important: Ensure correct polarity.
3. Call the "**LEARN DETECTOR**" menu item at the radio alarm center (refer to pages 56-58).
4. Press the learn key.
5. Attach the enclosure top part to the wall unit at the position marked with an arrow and turn it clockwise.
6. Enter the radio smoke detector into the List of Detectors (refer to page 90).

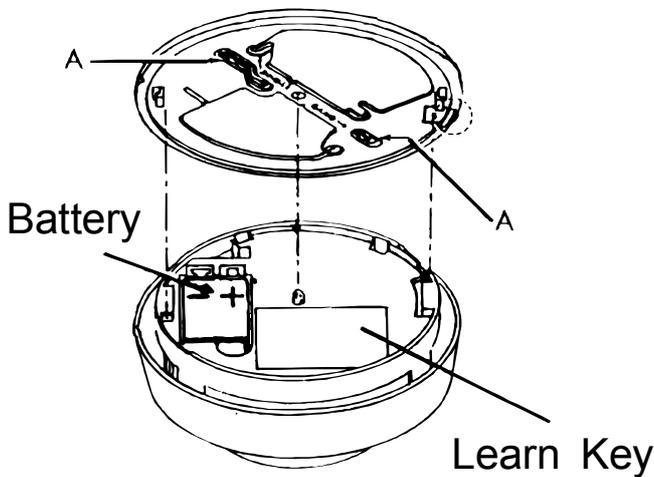


Fig. 28: Radio Smoke Detector

## Function Test

Press the test key on the radio smoke detector for about 10 seconds until the built-in buzzer of the radio smoke detector sounds for approx. 10 seconds.

**Caution: The radio smoke detector produces a very loud and high-pitched sound (95 dBA at a distance of 1 m). Do not trigger in the close vicinity of your ears.**

## Test Key

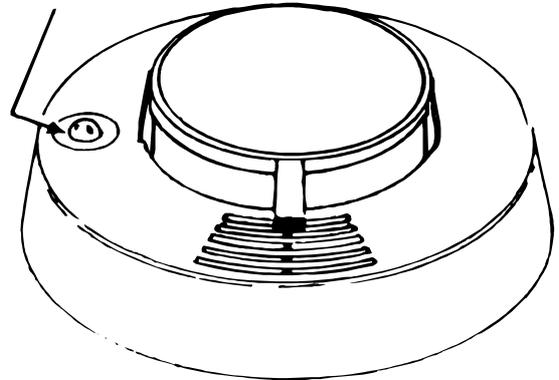


Fig. 29: Radio Smoke Detector

When the radio alarm center is in the "**TEST DETECT**" menu item (refer to page 69), it is possible to check whether the alarm message from the radio smoke detector is correctly received by the radio alarm center.

## Specification

Transmitting frequency:	434 MHz
Working range:	approx. 300 m (free field)
Voltage supply:	9 V lithium comp. battery
Current consumption:	$I_{rest} = 18 \mu A$ $I_{transm} = 45 mA$
Buzzer volume:	95 dBA (at 1 m distance)
Temperature:	+5 °C to +50 °C
Dimensions:	140 mm diameter

# Installation • Armed/Unarmed Radio Hand Transmitter

## Function

Depending upon how it is programmed during its installation, the armed/unarmed radio hand transmitter can be used for internal or external arming/unarming. Moreover, operation as pure remote control for switching on or off a connected consumer is possible.

## Installation

The armed/unarmed radio hand transmitter consists of an enclosure top and a rear part screwed to each other by an enclosure screw.

In the enclosure top part, a board with an electronic evaluation circuit, a transmitter for communication with the center and keys for arming/unarming are integrated. Power supply is provided by a 9 V lithium battery.

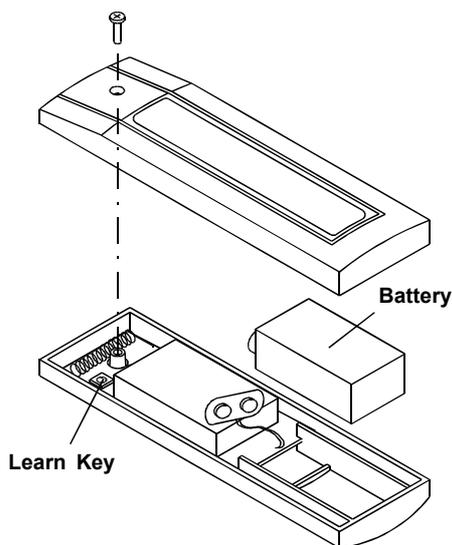


Fig. 30: Armed/Unarmed Radio Hand Transmitter

## Start-up

1. Open the enclosure of the radio hand transmitter. For this purpose, screw it open at the rear side.
2. Connect the attached 9 V lithium compound battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Learn in the radio hand transmitter by pressing the learn key.
5. Close the enclosure and screw it up.
6. Enter the radio hand transmitter into the List of Detectors (refer to page 90).

## Notes on starting up

If the radio hand transmitter was programmed as remote control device during the installation, it will be possible to trigger the program output of the radio alarm center and the potential-free relay in the radio subcenter. Press the yellow key to switch on a connected consumer, and the green key to switch off. When the radio hand transmitter is used for external arming/unarming, the installer can set an arming and an alarm delay time.

To check proper functioning after the installation, a subsequent function test must be performed.

## Function Test

Select the "test detect" menu item on the radio alarm center (refer to page 69) and hold the yellow key and then the green one pressed for 1 s. Depending upon the programming of the hand transmitter, the display of the radio alarm center shows the state released:

Key/Function	Yellow	Green
Hand transm., internal	armed	UNarmed
Hand transm., external	armed	UNarmed
Remote control	on	off

In addition, the function of the respective radio hand transmitter or of the radio remote control device must be checked in a final system test by arming/unarming the system or switching on/off the connected consumer.

## Specifications

Transmitting frequency: 434 MHz  
 Working range: approx. 150 m (free field)  
 Voltage supply: 9 V lithium comp. battery  
 Current consumption:  $I_{rest} = 2 \mu A$   
 $I_{transm} = 45 mA$   
 Temperature: +5 °C to +50 °C  
 Dimensions (W x H x D): 44.5 x 146 x 24 mm

**Important: Depending upon the frequency of operations, the 9 V lithium battery should be replaced every five years within the scope of the maintenance interval.**

# Installation • Attack Radio Hand Transmitter

## Function

With the attack radio hand transmitter, an attack message can be transmitted to a permanently attended Security Service or to the alarm transmitters connected, irrespective of the operating state of the radio alarm system.

## Installation

The attack radio hand transmitter consists of an enclosure top and a rear part screwed to each other by an enclosure screw.

In the enclosure top part, a board with an electronic evaluation circuit, a transmitter for communication with the center and a key for activating the attack message are integrated. Power supply is provided by a 9 V lithium battery.

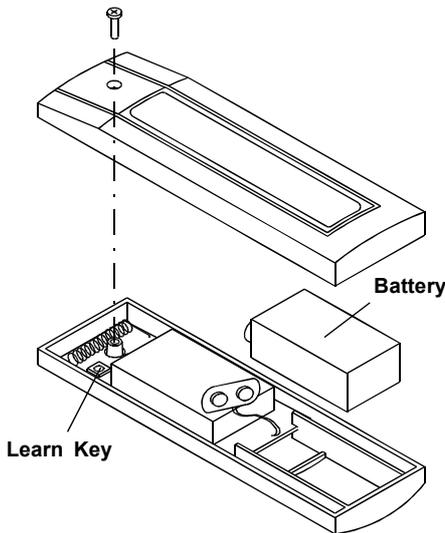


Fig. 31: Attack Radio Hand Transmitter

## Installation / Start-up

1. Open the enclosure of the attack radio hand transmitter. For this purpose, screw it open at the rear side.
2. Connect the attached 9 V lithium compound battery. Important: Ensure correct polarity.
3. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
4. Learn in the attack radio hand transmitter by pressing the learn key.
5. Close the enclosure and screw it up.
6. Enter the attack radio hand transmitter into the List of Detectors (refer to page 90).

To check proper functioning after the installation, a subsequent function test must be performed.

## Function Test

Select the "test detect" menu item at the radio alarm center (refer to page 69) and hold the red key pressed for 1 s to trigger an attack message. The display of the radio alarm center shows the triggered attack radio hand transmitter.

## Specifications

Transmitting frequency:	434 MHz
Working range:	approx. 150 m (free field)
Voltage supply:	9 V lithium comp. battery
Current consumption:	$I_{rest} = 2 \mu A$ $I_{transm} = 45 mA$
Temperature:	+5 °C to +50 °C
Dimensions (W x H x D):	44.5 x 146 x 24 mm

**Important: Depending upon the frequency of operations, the 9 V lithium battery should be replaced every five years within the scope of the maintenance interval.**

# Mounting and Installation • Radio Subcenter

## Function

The radio subcenter permits the wireless connection of two external sirens, one internal siren, one flashing light as well as the triggering of a potential-free relay output.

## Installation

The radio subcenter consists of a front and a rear part screwed to each other by two enclosure screws. The enclosure rear part accommodates the entire electronic evaluation circuitry, a power supply unit, a radio transmitter and a radio receiver for communication with the center as well as connecting facilities for the alarm transmitters.

The radio subcenter facilitates the triggering of two external sirens, one flashing light, one internal siren as well as the external lighting, for example, via the potential-free relay output. A resistance-monitored tamper line allows signal transmitters connected to be monitored for opening.

## Place of installation

Place the radio subcenter so that it is at the same level as the external siren. The radio subcenter must be installed in the indoor area.

## Mounting

Carry out the following steps when mounting the radio subcenter:

1. Use a suitable drill to provide a hole to the external siren.
2. After installing the external siren, pull in the control cable (cable type IY(St)Y 4 x 2 x 0.6 mm, for example).
3. Separate the front and rear parts from each other.
4. Mark the drill holes with the attached template.
5. Drill mounting holes (6 mm dia.) at the intended place of installation and insert the attached dowels.
6. Mount the rear part with the attached screws.
7. Apply the connections of the signal transmitters.

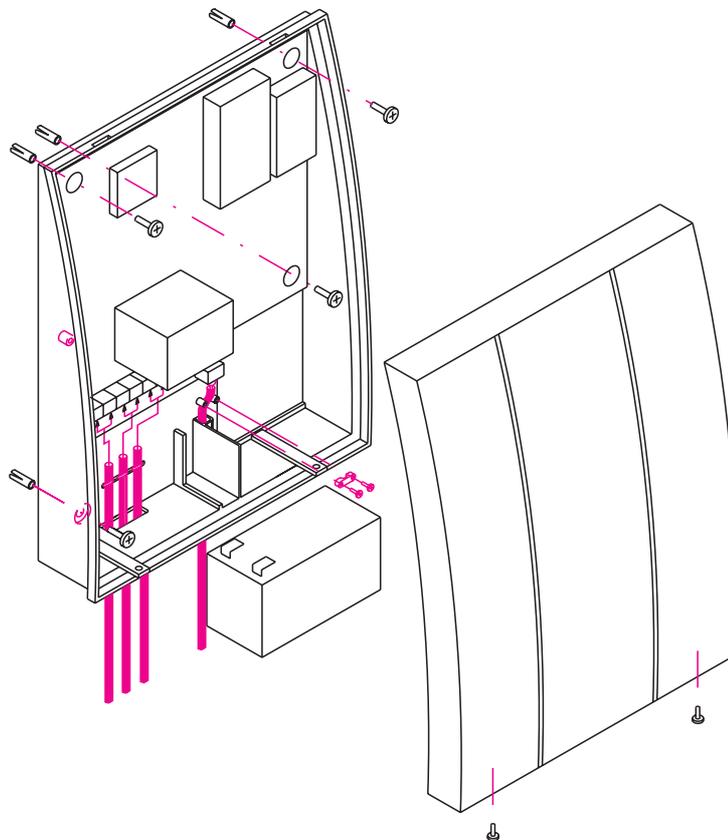


Fig. 32: Radio Subcenter

# Mounting and Installation • Radio Subcenter

## Description of the outputs

- ASIR 1** These outputs switch 12 V in case of main alarm, i. e.
- ASIR 2** in case of alarm in the externally armed state. The output is reset upon justified un-arming or after the alarm duration set, at the latest.
- BLITZ** This output switches 12 V in case of main alarm, i. e. in case of alarm in the externally armed state. The output is reset by resetting at the radio alarm center.
- ISIR** This output switches 12 V. Here, an internal siren triggered in case of internal alarm can be connected. The output is reset by un-arming.

When programmed correspondingly, the outputs can also be used for acknowledging.

**SABO** This tamper group input must, at any rate, be terminated by a 12 kΩ resistor. This input is provided for monitoring the external siren enclosure for opening. This resistor should be preferably inserted into the terminal unit such as an external siren. If the tamper group is not used, the "GND" and "SABO" inputs will have to be bridged by 12 kΩ.

**NO/NC/COM** This output is a potential-free relay contact. Depending upon the programming done at the radio alarm center, this output can be switched on/off via the remote control unit upon arming or unarming.  
 Co = common (centre contact)  
 No = normally open (make contact)  
 Nc = normally closed (break contact)

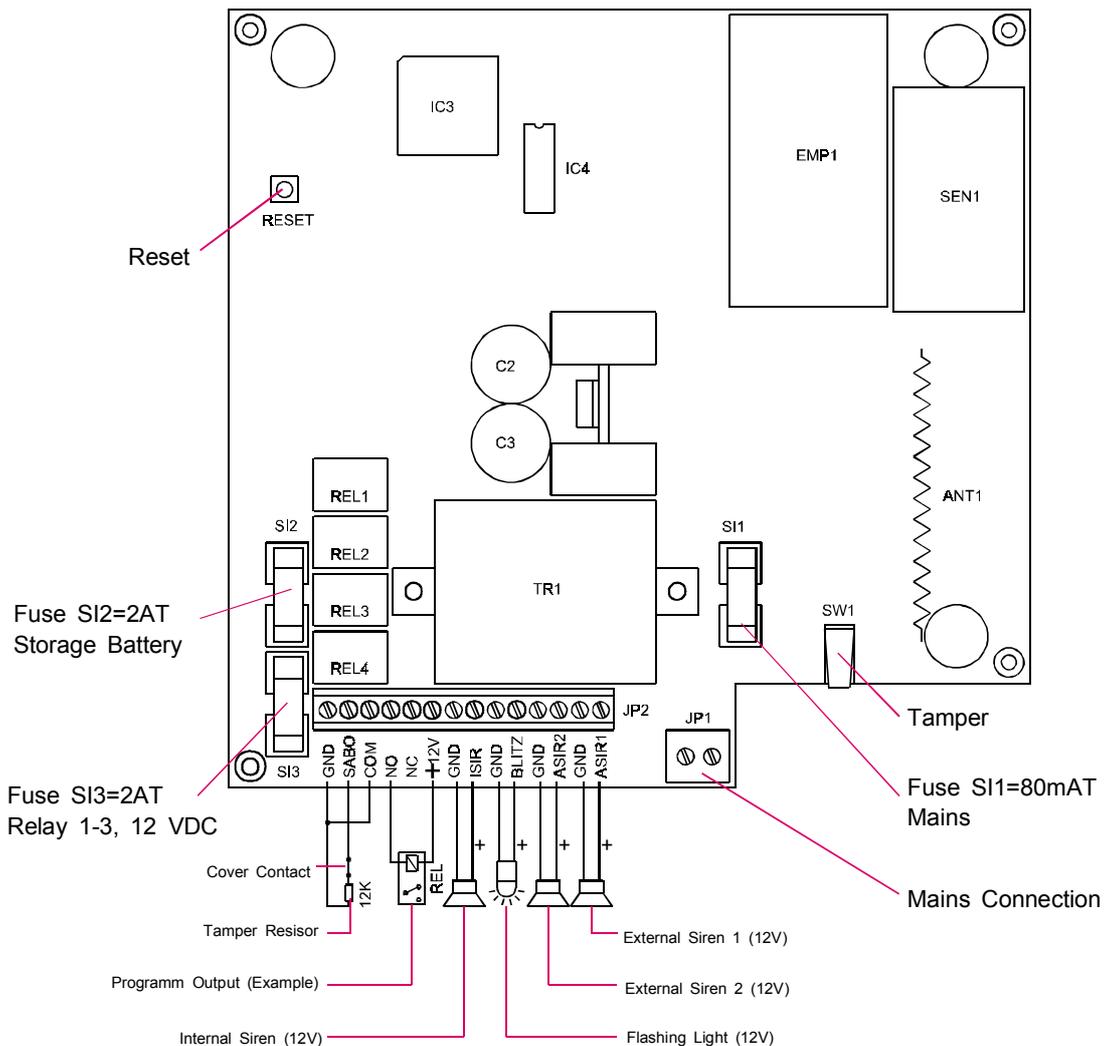


Fig. 33: Radio Subcenter Terminal Board

# Mounting and Installation • Radio Subcenter

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## Start-up

### Connection

1. Open the enclosure of the radio subcenter.
2. Connect all provided units.
3. Apply the storage battery voltage (mind the polarity: plus = red, minus = black).
4. Then, establish the mains connection.
5. Important: Make absolutely sure to press the reset key after applying the supply voltage.
6. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
7. Learn in the radio subcenter by pressing the tamper key.
8. Close the enclosure and screw it up.
9. Enter the radio subcenter into the List of Detectors (refer to page 90).

### Function Test

Within the scope of an overall system test, the radio subcenter can be checked directly from the radio alarm center. For this purpose, select the "relay test" option from the "system test" menu (refer to pages 70-72). The radio subcenter can be tested by the TEST, flashing light, external siren, internal siren items.

## Specifications

Mains voltage:	230 V +10/-15%
Emergency power supply:	12 V/1.2 Ah lead storage battery
Program output:	3 A/24 V (potential-free) contact rating
External siren output:	2 A/12 V (12 V switched)
Flashing light output:	2 A/12 V (12 V switched)
Internal siren output:	2 A/12 V (12 V switched)

### Caution:

**The total current for external siren, internal siren and flashing light must not exceed 2A.**

Tamper input:	Closed-circuit current, R = 12 k $\Omega$ $\pm$ 40 %
Fuse SI 1:	T80mAL250V (mains fuse)
Fuse SI 2:	T2AL250V (storage battery fuse)
Fuse SI 3:	T2AL250V (relays 1-3 and 12 V)
Transmitting frequency:	434 MHz, Working range approx. 300 m (free field)
Dimensions (W x H x D):	210 x 270 x 73 mm

**Important: The 12 V floating storage battery should be replaced every four years within the scope of the maintenance interval.**

# Installation • AWUG Radio Telephone Dialler

## Function

The AWUG radio telephone dialler (automatic dialling and transmission set) serves for silently passing forward an alarm or trouble message to a permanently attended Security Service.

A so-called intrusion contract (attached to the packing) in which the necessary activities of the Security Service in dependence of the alarm or trouble message triggered are agreed upon can be concluded with the Security Service.

An identification number firmly allocated to the customer enables the Security Service to determine the origin of the incoming message and the execution of the deposited list of measures.

The identification number is individually allocated to each telephone dialler and is already pre-programmed at the factory.

The AWUG radio telephone dialler has been factory-programmed for all its setting parameters so as to largely facilitate operation on the telephone system of the customer without subsequent programming expenditure.

If operation should not be possible, it may be necessary to change the customer's settings with the aid of the programming tools listed in the catalogue. A detailed description of the parameters to be changed is enclosed to the Programming Instructions manual attached to the programming set.

**Note: The factory settings can be obtained from the AWUG radio telephone dialler programming check list attached to the dialler. This check list must be kept in a safe place.**

## Installation

The AWUG radio telephone dialler (automatic dialling and transmission set) consists of a front and a rear part screwed to each other by two enclosure screws.

The enclosure rear part accommodates the entire electronic evaluation circuitry, a power supply unit, a radio transmitter and a receiver for communication with the radio alarm center as well as a dialler board for the transmission of the alarm, trouble and arming/unarming messages to the Security Service. The dialler has already been pre-programmed at the factory for intrusion into the Security Service.

## NOTE:

1. The radio telephone dialler must always be installed at the subscriber's main station. An existing telephone connection will be interrupted by the radio telephone dialler in case of an alarm.
2. Prior to the installation, the Security Service must be informed by telephone that the installation of a radio telephone dialler will be done.

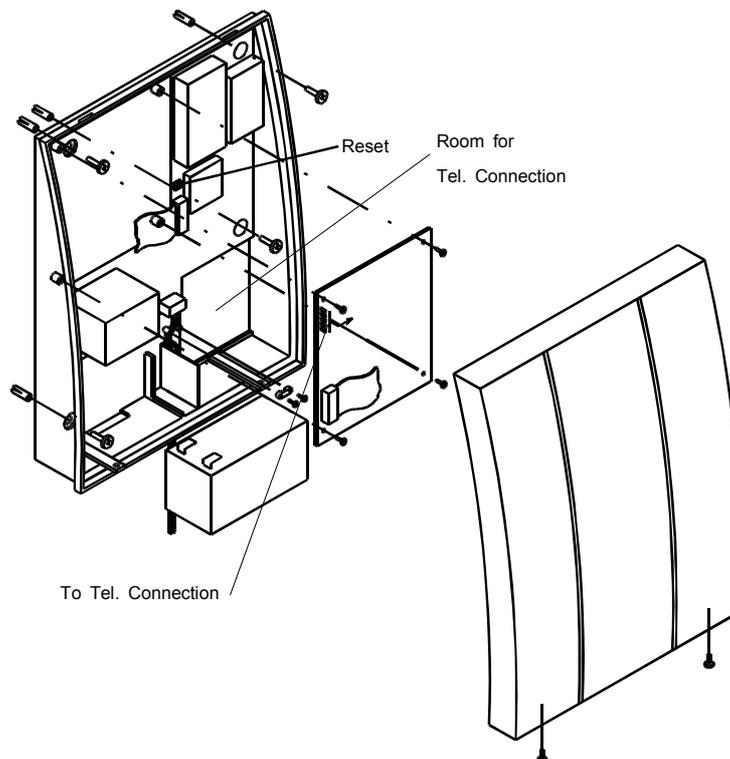


Fig. 34: Radio Telephone Dialler

# Installation • AWUG Radio Telephone Dialler

## Place of installation

Place the AWUG radio telephone dialler (automatic dialling and transmission set) so that the telephone connection box is covered by the enclosure bottom part, if possible.

## Mounting

Carry out the following steps to mount the AWUG radio telephone dialler (automatic dialling and transmission set):

1. Separate the front and rear parts of the subcenter from each other.
2. Mark the drill holes with the attached template.
3. Drill mounting holes (6 mm dia.) at the intended place of installation and insert the attached dowels.
4. Mount the rear part of the AWUG radio telephone dialler (automatic dialling and transmission set) with the attached screws.
5. Insert the connecting cable to the telephone connection box into left-hand socket "N" (refer to Fig. 35).

## Start-up

The mounting of the AWUG radio telephone dialler (automatic dialling and transmission set) is followed by the start-up:

1. Connect the 12 V floating storage battery. Important: Ensure correct polarity (plus = red, minus = black). The floating storage battery is protected by the 2 A slow-blow storage battery fuse. A spare fuse is attached.
2. Apply the mains voltage.
3. Important: Press the reset key after applying the supply voltage.
4. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
5. Press the tamper key.
6. Close the enclosure and screw it up.
7. Enter the AWUG radio telephone dialler into the List of Detectors (refer to page 90).

After learning, return the front part to the rear part and fix it with the two screws. This completes the start-up.

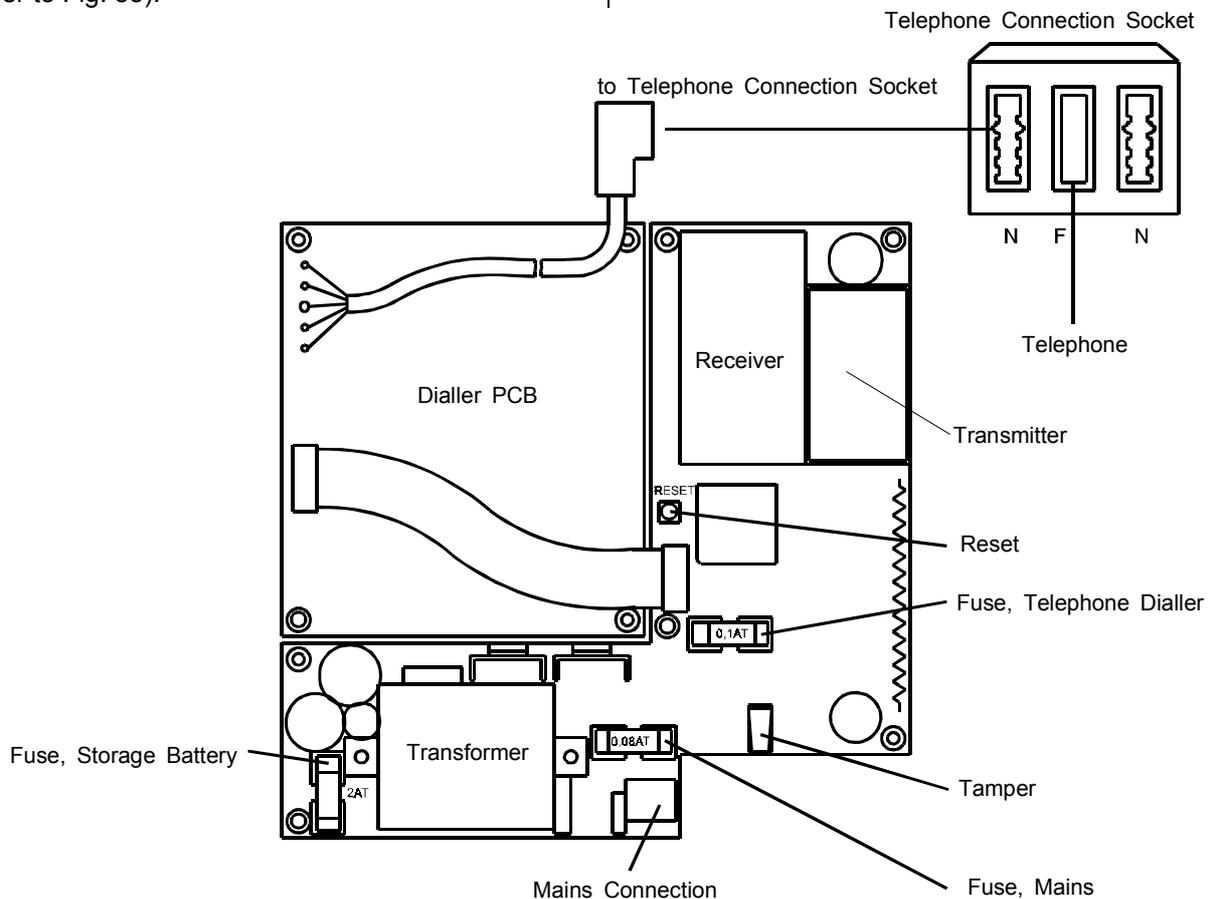


Fig. 35: AWUG Radio Telephone Dialler Connection Diagram

# Installation • AWUG Radio Telephone Dialler

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**Important: Use a separate fuse for the mains connection, if possible. It must, however, be made impossible, by all means, that the AWUG radio telephone dialler is protected by fusing circuits which can be manipulated from outside.**

## Function Test

A practice alarm should be agreed upon with the Security Service. For this purpose, the Security Service should be called and informed that the installation is complete and a practice alarm agreed upon will be released. The alarm or trouble messages released must be confirmed by the Security Service. To be on the safe side, it would be wise to have confirmed in writing and by fax the messages received.

The practice alarm can be triggered in two different ways:

1. Select the "TD TEST" option from the "SYSTEM TEST" menu item (refer to pages 70-72) as well as activate and deactivate the individual channels.
2. Cause a real alarm in the externally armed state by triggering any detector.

## Specifications

Mains supply:	230 V +10/-15 %
Emergency power supply:	12 V/1. 2 Ah lead storage battery
Mains fuse:	T80mAL250V
Storage battery fuse:	T2AL250V
Dialler board fuse:	T100mAL250V
Temperature:	+5 °C to +50 °C
Transmitting/receiving frequency:	434 MHz
Working distance:	approx. 300 m (free field)
Dimensions (H x W x D):	210 x 270 x 55 mm

## Radio Telephone Dialler Presettings

- Operation on the subscriber's main station.
- Security service telephone number.
- Telim protocol.
- Pulse dialling method.

All the presettings can be obtained from the radio telephone dialler programming check list attached to the AWUG radio telephone dialler.

**Important: The 12 V floating storage battery should be replaced every four years within the scope of the maintenance interval.**

## Dialler board scope of functions

- Telim, Privat, City-Ruf (city call) transmission protocols.
- A maximum of 4 telephone numbers each having 16 digits.
- Pulse and frequency dialling methods.
- Non-volatile EEPROM.
- Suitable for extensions.
- Priority selection, thus rendering impossible the blocking of the telephone line.
- Five channels: Fire, Attack, Alarm, Trouble, Armed/Unarmed
- Message line resetting (can be programmed).
- Message line and telephone number allocating (can be programmed).
- Acknowledge function.
- Programming by means of hand programming set or PC/laptop.

# Mounting and Installation • Radio External Flashing-Light Siren

## Function

The radio external flashing-light siren facilitates mains-independent and wireless communication with the radio alarm center.

## Installation

The radio flashing-light external siren consists of an enclosure front and rear part screwed to each other by a screw. The rear part accommodates an electronic evaluation circuit with a radio transmitter/receiver for communication with the radio alarm center, a 14 V lithium battery for power supply, a siren, a flashing-light attachment with an integrated antenna as well as a tamper contact against cover opening.

### Important notes on the place of installation

- Install only with the flashing light vertically upright.
- The place of installation shall be clearly visible and audible from far away.
- Choose the place of installation so that the radio external flashing-light siren is difficult to reach (at a minimum height of 3 m).
- Mount at a minimum distance of 1.5 m away from parts which might carry voltage in case of a lightning stroke (e. g. eaves gutter, lightning rod).
- Choose the place of installation so that the radio external flashing-light siren is protected from mechanical influences, impact and direct access.

## Mounting

Carry out the following steps to mount the radio external flashing-light siren:

1. Determine the optimum place of installation (refer to Important Notes on the Place of Installation).
2. Remove the screw with a Philips screwdriver until the front part can be taken off.
3. Take the enclosure front part off the rear part and carefully lay it down.
4. Mark the drill holes with the attached template (scale 1:1).
5. Drill four 8 mm dia. holes and one 6 mm dia. hole and insert the attached dowels.
6. Mount the rear part with the attached screws.
7. Fasten the pull-off cord with the attached screw.
8. Close the enclosure by sliding in the front part and then screwing it up. Ensure proper seating of the lateral borderings.

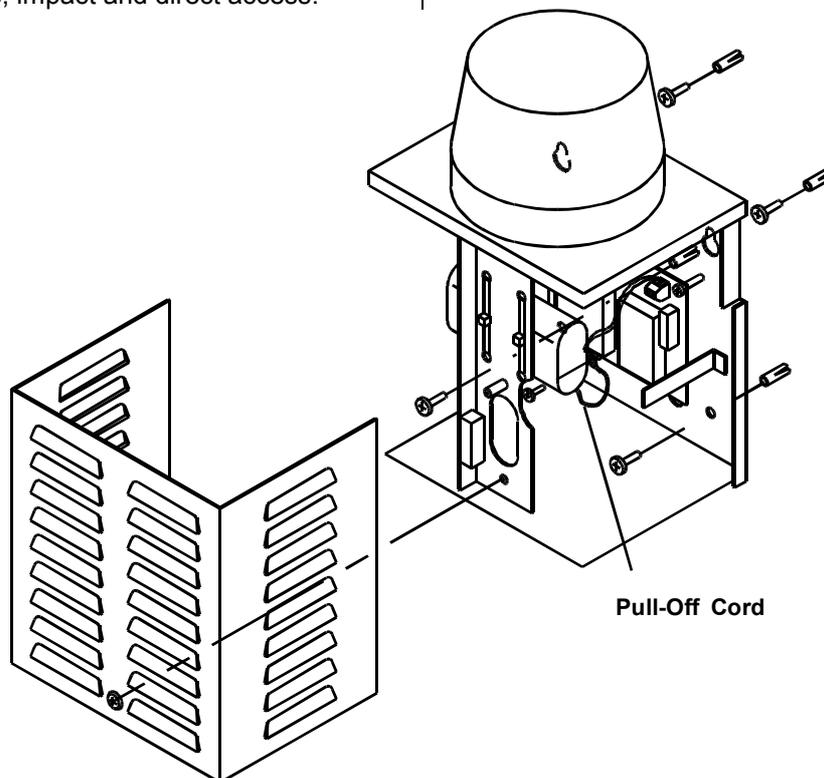


Fig. 36: Radio External Flashing-Light Siren

# Mounting and Installation • Radio External Flashing-Light Siren

## Start-up

The 14 V lithium battery is already factory-connected to the two terminals.

Red (battery plus) = batt. +

Blue (battery minus) = batt. -

**Important: When changing the battery during maintenance, ensure correct polarity.**

1. Insert the attached 315 mA slow-blow fuse into the fuse holder. The second fuse is identical and is attached as a spare fuse.  
After the fuse has been inserted, the radio external flashing-light siren is ready for being learned into the radio alarm center.
2. Call the "LEARN DETECTOR" menu item at the radio alarm center (refer to pages 56-58).
3. Trigger tampering. The tamper contact can be actuated by shortly putting on the enclosure front part and removing it again, or by shortly holding a magnet (e. g. of the radio magnetic contact) in front of the cover tamper contact and removing it.
4. Close the enclosure and screw it up.
5. Enter the radio external flashing-light siren into the List of Detectors (refer to page 90).

This completes the start-up, and a subsequent function test should be performed.

## Safety instructions

**WARNING: Do not open the flashing-light attachment when in operation. This will create the hazard of contact with a dangerous voltage.**

Do not expose the radio external flashing-light siren directly to a water jet, a steam jet or to similar influences. For cleaning, wipe it with a moist cloth wetted with a mild cleaning agent. Do not use any scouring agent.

When installing the unit from ladders, observe the safety regulations by all means.

## Specifications

Voltage supply:	14.4 V lithium battery
Fuse:	315 mA slow-blow
Flashing light/siren current consumption:	approx. 300 mA
Current consumption I <sub>rest</sub> :	approx. . 300 µA
Siren volume:	approx. 110 dBA (at a distance of 1 m)
Protective system:	IP 54
Temperature:	-20 °C to +50 °C
Dimensions (W x H x D):	180 x 300 x 140 mm
Material:	V2A stainless steel

**Note: Due to the short triggering times of the relay outputs, the flashing light of the radio external flashing-light siren cannot be tested from this menu item.**

**The flashing light must be tested under a subsequent practice alarm.**

# Mounting and Installation • External Flashing-Light Siren

## Function

The external flashing-light siren is triggered by the radio alarm center in case of an alarm release in the externally armed state.

## Installation

The external flashing-light siren consists of an enclosure front and rear part screwed to each other by a screw. The rear part accommodates the siren, a flashing-light attachment as well as a tamper contact against cover opening.

### Important notes on the place of installation

- Install only with the flashing light vertically upright.
- The place of installation shall be clearly visible and audible from far away.
- Choose the place of installation so that the external flashing-light siren is difficult to reach (at a minimum height of 3 m).
- Mount at a minimum distance of 1.5 m away from parts which might carry voltage in case of a lightning stroke (e. g. eaves gutter, lightning rod).
- Choose the place of installation so that the external flashing-light siren is protected from mechanical influences, impact and direct access.

## Mounting

Carry out the following steps to mount the external flashing-light siren:

1. Remove the screw with a Philips screwdriver until the front part can be taken off.
2. Take the enclosure front part off the rear part.
3. Mark the drill holes with the attached template (scale 1:1).
4. Drill four 8 mm dia. holes and one 6 mm dia. hole (to fasten the pull-off cord) and insert the attached dowels.
5. Mount the rear part with the attached screws.
6. Fasten the pull-off cord with the attached screw.
7. Apply the connections as described in the following.
8. Close the enclosure by sliding in the front part and then screwing it up. Ensure proper seating of the lateral borderings.

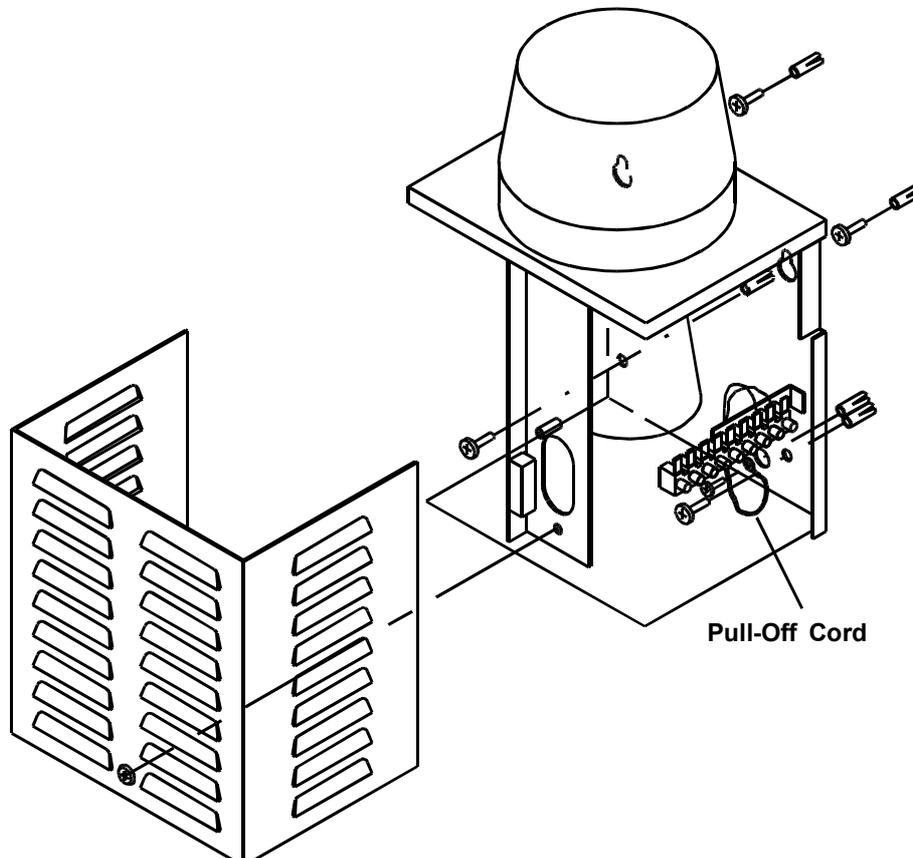


Fig. 37: External Flashing-Light Siren

# Mounting and Installation • External Flashing-Light Siren

## Electrical connection

To wire the external flashing-light siren with the radio alarm center or the radio subcenter, use a conventional cable such as IY(St)Y 4x2x0.6. The connection lines for tamper monitoring as well as for the siren and flashing light voltage supply must be inserted into the enclosure from the rear.

At the right-hand side of the enclosure rear part, a solder/screw terminal strip is provided, to which the flashing light, the siren, the cover tamper contact and the tamper loop against pulling off the wall (pull-off cord) have already been factory-soldered.

For your information on how to connect the wiring to the solder/screw terminal strip, a label showing the terminal assignment of the external flashing-light siren is provided in the enclosure. A detailed radio alarm center and radio subcenter terminal assignment survey can be obtained from the installation and mounting instructions of this component.

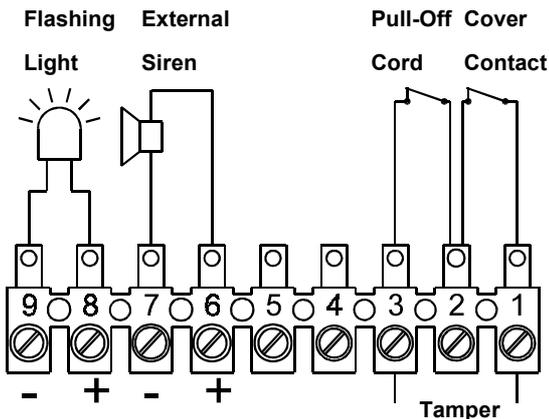


Fig. 38: External Flashing-Light Siren Terminal Assignment

## Safety instructions

- **WARNING:** Do not open the flashing-light attachment when in operation. This will create the hazard of contact with a dangerous voltage.
- Do not expose the external flashing-light siren directly to a water jet, a steam jet or to similar influences. For cleaning, wipe it with a moist cloth wetted with a mild cleaning agent. Do not use any scouring agent.
- When installing the unit from ladders, observe the safety regulations by all means.

## Specifications

Operating voltage:	12 V DC ( 9 - 13.8 V )
Flashing light current consumption:	approx. 500 mA
Siren current consumption:	approx. 250 mA
Flashing light power:	approx. 6.7 Ws
Siren volume:	approx. 110 dBA (at a distance of 1 m)
Protective system:	IP 64
Temperature:	-20 °C to +50 °C
Dimensions (W x H x D):	180 x 300 x 140 mm
Weight:	2.8 kg
Material:	V2A stainless steel

## Function Test

Within the scope of an overall system test, the radio subcenter can be checked directly from the radio alarm center. For this purpose, select the "relay test" option from the "system test" menu (refer to pages 70-72).

# Mounting and Installation • Internal Siren

## Function

The internal siren serves for additional audible alarming in the indoor area.

## Installation

The internal siren consists of an enclosure front and a rear part.

The enclosure bottom part accommodates an electronic driver card and the siren. Depending upon how the siren is connected, it is possible to produce two different tones.

The internal siren is provided for direct connection to the radio alarm center or the radio subcenter.

## Place of installation

The internal siren is intended for indoor installation. Choose the place of installation so that the siren can be heard well.

## Mounting

Carry out the following working steps to mount the internal siren:

1. Choose the place of installation.
2. Separate the front from the rear part. To do so, clip open the enclosure by inserting a screwdriver into the opening provided in the enclosure top for this purpose.
3. Use the enclosure bottom part to mark the drill holes. Make sure the background is even to prevent the enclosure from twisting and to ensure later reassembling without any problems.
4. Mount the rear part with the attached screws.
5. Apply the cabling to the connection terminals.
6. Put on the enclosure top, allow it to lock in and fix it with the attached screw.

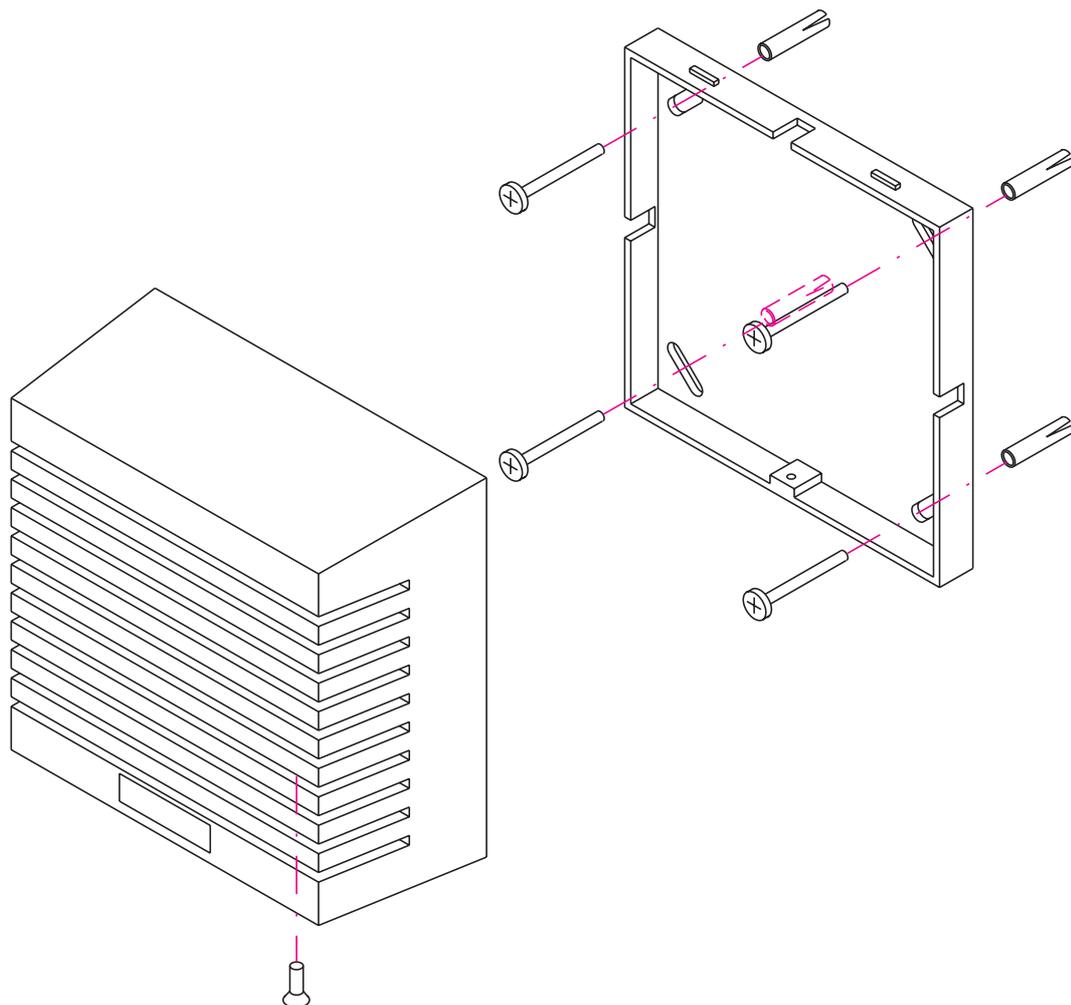


Fig. 39: Internal Siren

# Mounting and Installation • Internal Siren

## Electrical connection

To wire the internal siren with the radio alarm center or the radio subcenter, use a conventional cable such as IY(St)Y 4x2x0.6.  
To insert the connection line, the enclosure front and rear parts are provided with predetermined break points which can be tweaked out as required.

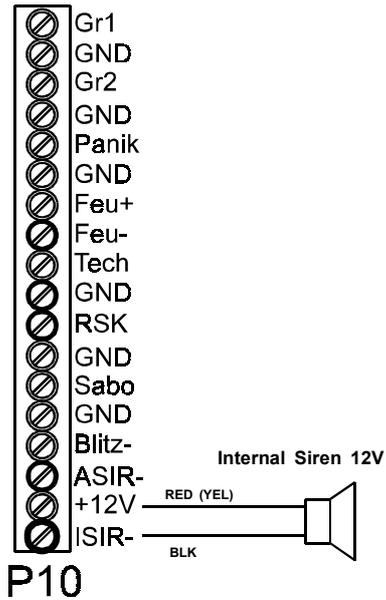


Fig. 40: Connection of the Internal Siren to the Radio Alarm Center

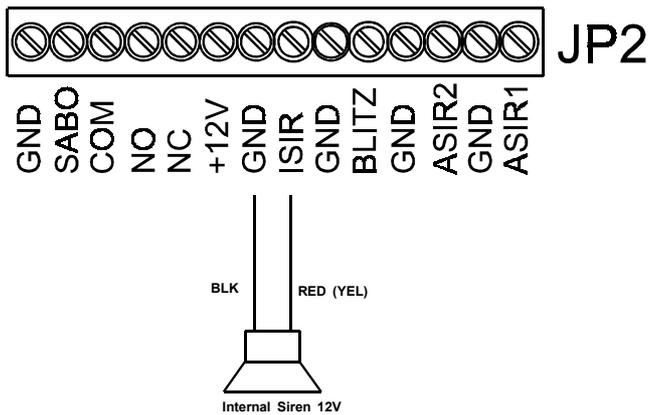


Fig. 41: Connection of the Internal Siren to the RadioSubcenter

The internal siren has two different tones produced depending upon which wires are connected:

Tone	Wires to be used
Alternating tone	Black/red (BLK/RED)
Continuous tone	Black/yellow (BLK/YEL)

## Function Test

The final function test of the internal siren must be made after the installation of all system components. For this purpose, cause an internal alarm where the internal siren is triggered until it is reset.

## Specifications

Enclosure:	ABS plastic, white
Protective system:	IP 30
Voltage supply:	9-14 V DC
Current consumption:	approx. 400 mA (at 12 V)
Volume:	approx. 110 dBA (at 12 V, a distance of 1m)
Dimensions (W x H x D):	110 x 110 x 60 mm

# Mounting and Installation • Key-Operated Switch

## Function

The key-operated switch is the switching device for the external arming/unarming of the radio alarm system in the outdoor area.

## Installation

The key-operated switch consists of an enclosure front and a rear part.

The enclosure front part accommodates a closing cylinder, a terminal board and an acknowledge buzzer.

## Place of installation

The key-operated switch is normally used in the door entrance area.

## Mounting

Carry out the following working steps to mount the key-operated switch:

1. Open the enclosure of the key-operated switch with the attached special key.
2. The rear side of the enclosure has a sealing groove which can be filled with acid-free sealing compound when the switch is in outdoor use. Thus, the enclosure can be sealed against the mounting surface, if required.
3. Position the enclosure at the desired place to mark the drill holes.

4. Mark the four drill holes (3x for fixing the enclosure, 1x for the tamper contact).
5. Drill the mounting holes (6 mm dia.) at the intended place of installation and insert the attached dowels.
6. Mount the rear part with the attached screws.
7. The screw for the tamper contact (4x45-50 mm screw) must be turned into the dowel until the contact spring is reliably actuated. The screw will then protrude into the enclosure inside for 9-10 mm.
8. Pull off the multipole connectors. Establish the electrical connection of the key-operated switch to the radio alarm center as shown in Fig. 43 on page 51. Connect to the radio door module as shown in Fig. 44 on page 51. The line ends must be soldered to the multipole connectors.
9. Plug on the multipole connectors.
10. Fix the cable with the clamp.

**Caution: There must be no cable within the turning range of the closing lug.**

11. Mount the front plate to the rear part with the special screws (hexagon socket with hole).

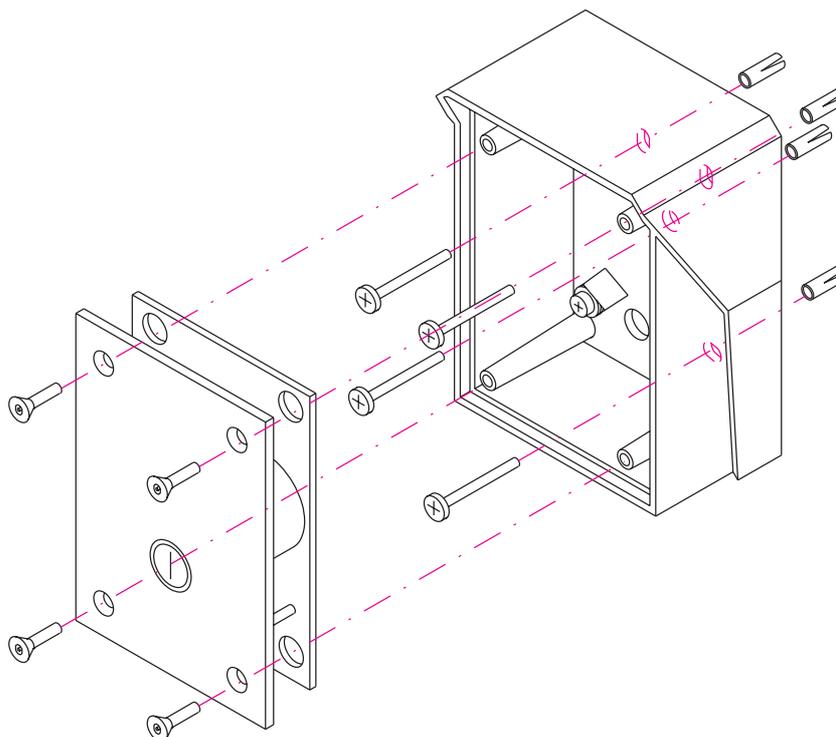


Fig. 42: Key-Operated Switch

# Mounting and Installation • Key-Operated Switch

## Connecting the key-operated switch to the radio alarm center

The wired tamper line of the radio alarm center should be run through the key-operated switch to monitor it for cover lifting and drilling. Arrange the wiring as shown in the connection diagram.

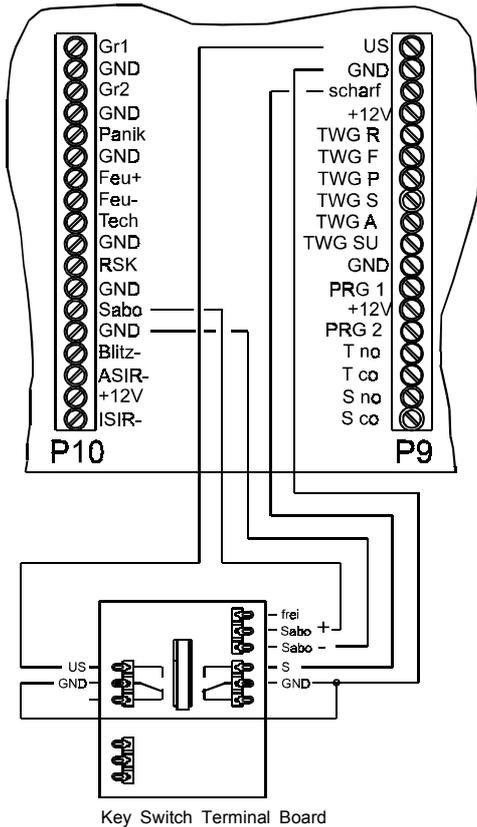


Fig. 43: Key-Operated Switch Connection to the Radio Alarm Center

## Connecting the key-operated switch to the radio door module

Arrange the wiring as shown in the connection diagram.

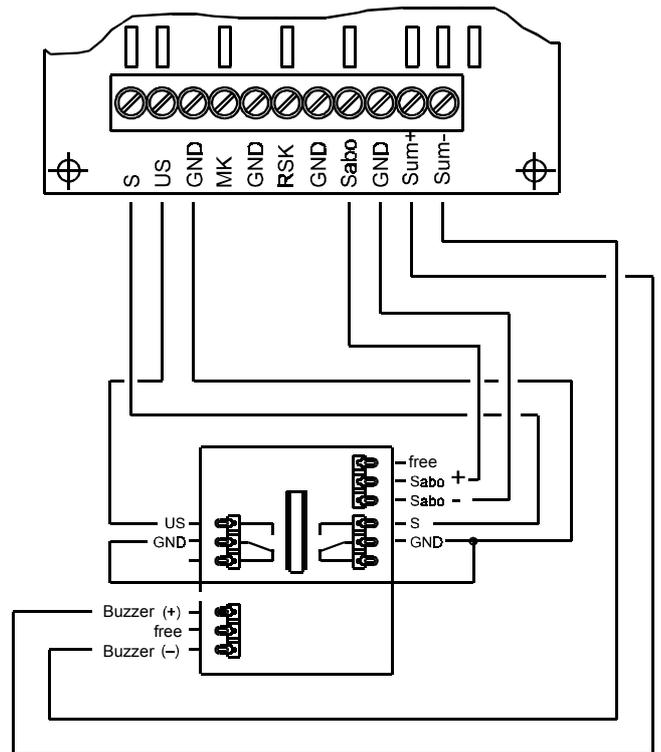


Fig. 44: Key-Operated Switch Connection to the Radio Door Module

## Specifications

- Colour: RAL 9002 (gray white)
- Front panel: Plastic-coated aluminium
- Tamper protection: drilling, screwing open, pulling off
- Buzzer current consumption: +12 VAC, 10 mA max.
- Buzzer volume: approx. 83 dBA (at a distance of 10 cm)
- Dimensions (W x H x D): 85 x 115 x 57 mm

**Note:** If spare keys are needed, the attached coupon will specify the type to be ordered.

# Radio Alarm Center Programming Instructions

The following description of the Radio Alarm Center Programming Instructions explains the principal possibilities of the software-controlled menu prompting. All functions have been designed so that they are very easy to use without any technical "programming" knowledge.

Certain values are already factory-set and need not necessarily be readjusted. The preset values are shown in the overall survey of the menu structure below.

**The programming level is accessible by factory-set installer code  
0 0 0 0 with subsequent pressing of the [OK] key.**

<b>DATE / TIME</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 1

To set the time and the date.

<b>LEARN DETECTOR</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 2

To learn in radio components.

<b>SHOW DETECTOR</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 3

To show detectors.

<b>PROGRAM OUTPUT</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 7

To program the program output to a triggering criterion.

Factory setting:  
EXTERNAL SIREN 180s

<b>ACKNOWLEDGE</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 8

To acknowledge the armed state via EXTERNAL SIREN, FLASHING LIGHT, INTERNAL SIREN, speaker (center).

Factory setting:  
External: off  
Speaker: low

<b>ALARM DURATION</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 9

To set the alarm duration of the EXTERNAL and INTERNAL SIRENS.

Factory setting:  
EXTERNAL SIREN = 180s  
INTERNAL SIREN = 180s

<b>SYSTEM TEST</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 13

To test the software, the center, telephone dialler outputs and relays.

<b>DISPLAY</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 14

To program the service telephone number for the start image.

Factory setting:  
0000000000000000

<b>SET CODE</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 15

To change the user and installer codes.

Factory setting:  
Installer: 0000  
User: 1

<b>CHANGE TAMPER</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENUE</b>
<b>SELECT</b>	<b>=OK</b>

## MENU 19

12 kOhm or 0 Ohm tamper resistance evaluation.

Factory setting: 0 Ohm

# Software-Controlled Menu Prompting

The function keys of the center have the following functions for programming:

- [MENU]** To select the next menu item and to return from the menu item selected.
- [INTERN]** The **[INTERN]** key is not used for programming.
- [RESET]** Pressing the **[RESET]** key leads to exiting the programming mode.
- [OK]** The **[OK]** key serves for confirming and taking over the value into the memory.
- [0] to [9]** To enter the access code and the setting parameters.
- [^] , [v]** With the **[^]** and **[v]** keys, other setting options can be selected from the respective menu item.

<b>CLEAR DETECTOR</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 4**  
To delete detectors already learned into the center.

<b>ASSIGN DETECTOR</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 5**  
To subsequently change detectors already learned in.

<b>ATTACK IS :</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 6**  
To program attack to loud or mute.

Factory setting: Mute

<b>DELAY</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 10**  
To set the arming and alarm delay times.

Factory setting:  
Alarm delay = 15s  
Arming delay = 15s

<b>WIRED GROUPS</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 11**  
To allocate the wired groups to normally closed or normally open contacts.

Factory setting:  
Normally closed

<b>TEST DETECT.</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 12**  
To test system-associated detectors.

<b>TD TRANSMISSION</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 16**  
To program the transmission channels of the telephone dialler outputs.

Factory setting:  
Fire, attack, trouble, alarm are set.

<b>HISTORY</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 17**  
To recall the history memory.

<b>RECH BATT OFF</b>	
<b>EXIT</b>	<b>=RESET</b>
<b>CONTINUE</b>	<b>=MENU</b>
<b>SELECT</b>	<b>=OK</b>

**MENU 18**  
To switch off the floating storage battery.

# Programming Instructions

---

## How to directly select menu items

<b>MENU NO. :</b>
11
<b>NUMBER, OK</b>
<b>SELECT = OK</b>

The individual menu items can be selected by the **[MENUE]** key. Each pressing of this key selects the next menu item. In addition, it is possible to directly select the individual menu items by entering the related code number. In the following example, this is explained for the **"WIRED GROUPS"** menu item.  
Enter the number which corresponds to the menu item (**[1], [1]** in this case).

Press key **[OK]**.

<b>WIRED GROUPS</b>
<b>EXIT = RESET</b>
<b>CONTINUE = MENUE</b>
<b>SELECT = OK</b>

Now, the **"WIRED GROUPS"** menu item can be directly selected by pressing the u key.

# Programming Instructions

---

## 1. How to set date and time

<b>DATE/TIME</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key [OK] to do the setting.

<b>03.01.</b>	<b>05:28</b>
<b>DATE:</b>	
<b>TIME:</b>	
<b>NUMBER/OK/MENUE</b>	

### To set the date:

Press key [1] once, then press key [OK].  
Press key [1] twice, then press key [OK].

### To set the time:

Press keys [1], [7] then press key [OK].  
Press keys [1], [2] then press key [OK].

<b>01.11.</b>	<b>17:12</b>
<b>DATE: 01.11</b>	
<b>TIME: 17:12</b>	
<b>CORRECT = OK</b>	

The radio alarm center has a so-called history memory where alarm and trouble events are stored together with the date and time they occurred in order to be able to exactly retrace them. The date and the time can be set from the "**DATE/TIME**" menu item.

The date and the time are factory-set to "**0**".

If, for example, the date 01.11. with the time 17:12 is to be entered, proceed as described in the following:

This completes the setting of the date. Now, the entry of the time is expected:

This completes the setting of the time.

The current setting of the date and the time is read in the display. You will be asked whether the values set are correct. Pressing the [OK] takes over the setting.

If the t key is pressed instead, the settings will **not** be taken over, and the original reading will reappear to enable you to repeat this procedure.

**Note: The setting of the date and the time should be done as the last step during the installation to avoid deviations in the time set.**

# Programming Instructions

---

## 2. How to learn in detectors

<b>LEARN DETECTOR</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

From the "**LEARN DETECTOR**" menu item, radio components such as radio movement detectors, radio magnetic contacts etc. belonging to the radio alarm system can be learned in. The respective component must be triggered by its tamper switch or learn key.

Press key **[OK]**.

<b>LEARNING</b>	
<b>TRIGGER DETECTOR</b>	
<b>WITH TAMPER !</b>	
<b>CANCEL = MENUE</b>	

Trigger the detector by its tamper switch or learn key; other triggering will be ignored here.

<b>LEARNING</b>	<b>GOOD</b>
<b>NO.05 GDE TAMPER</b>	
<b>TAKE OVER = OK</b>	

The radio component triggered is shown in the display. The detector learned in is audibly indicated by a loud acknowledge tone. Press key **[OK]** to take over the radio glass breakage detector (GDE) shown in the display. If the detector is not to be taken over here, press key **[MENUE]**. The original reading will be shown.

Press key **[OK]**.

### Abbreviations Used in the Display:

#### Detector Abbreviations

MOE	External radio movement detector
MOI	Internal radio movement detector
GDE	External radio glass breakage sensor
GDI	Internal radio glass breakage sensor
MAE	External radio magnetic contact
MAI	Internal radio magnetic contact
SD	Radio smoke detector
TE	Radio technical detector
RTD	Radio telephone dialler
RSC	Radio subcenter
HEA	Externally armed radio hand transmitter
HR	Remote control radio hand transmitter
HIA	Internally armed radio hand transmitter
HAT	Attack radio hand transmitter
DME	External radio door module
DMI	Internal radio door module

#### Detector State Abbreviations

OPEN	Door or window open
CLOSE	Door or window closed
EXTARM	Externally armed
INTARM	Internally armed
UNARM	Externally/internally unarmed
ISC	Interlock switch contact open
GLASS	Radio glass breakage detector triggered
ACT	Radio movement detector triggered
ATTACK	Attack triggered
TECHN	Technical channel triggered
FAIL	Failure of a radio component
R BATT	Rechargeable storage battery failure
MAINS	Mains failure
*	Battery undervoltage
TAMP	Tamper function triggered

# Programming Instructions

---

## 2. How to learn in detectors

LEARN	GOOD
NO.05	GDE TAMPER
EXTERNAL GROUP	
V/OK/MENUE	

Press key [OK].

By the v key, the group where the detector is to be learned in can be allocated.

GDE = EXTERNAL group radio grass breakage detector.

GDI = INTERNAL group radio grass breakage detector.

The group selected (EXTERNAL in this case) must be confirmed with the [OK] key.

### 1. External Group/Group 1

The external group/group 1 detectors serve for monitoring the outside body (windows, doors).

The user is absent and arms the radio alarm system externally.

The radio magnet contact is a typical external group/ group 1 detector.

### 2. Internal Group/Group 2

The internal group/group 2 detectors serve for internal monitoring.

The user is present and arms the radio alarm system internally.

The radio movement detector is a typical internal group/group 2 detector.

LEARN	GOOD
NO.05	GDE TAMPER
DEPOT	
v, ^, NO :OK	

Press key [OK].

The next step is the assignment of the place of installation for the detector. The factory setting offers the "DEPOT" as the first possible text. With the [^] and [v] keys, you can search the list in alphabetical order or select the desired text by directly typing in the number and confirming with the [OK] key (refer to the list on page 58).

Confirm the text selected with the [OK] key. The display will then show the original reading for learning in another detector. The learning process can be cancelled here with the [MENUE] key if no other detector is to be learned in.

# Programming Instructions

---

## 2. How to learn in detectors • Detector texts

- |                      |                      |                    |
|----------------------|----------------------|--------------------|
| 0. Accounts Dept     | 40. Hobby Room       | 80. Stairway       |
| 1. Apartment         | 41. Ironing Room     | 81. Storage        |
| 2. Apartment Door    | 42. Kitchen          | 82. Storage Room   |
| 3. Apartment Win     | 43. Kitchen Door     | 83. Storage Door   |
| 4. Archive           | 44. Kitchen Window   | 84. Storage Window |
| 5. Back Door         | 45. Laboratory       | 85. Store Room     |
| 6. Balcony Window    | 46. Laundry          | 86. Study          |
| 7. Bar Room          | 47. Library          | 87. Summer House   |
| 8. Bathroom          | 48. Living Room      | 88. Swimming Pool  |
| 9. Bedroom           | 49. Living Room Door | 89. Terrace Door   |
| 10. Bedroom Door     | 50. Living Room Win  | 90. Terrace Window |
| 11. Bedroom Window   | 51. Locker Room      | 91. Toilet         |
| 12. Bicycle Cellar   | 52. Main Entrance    | 92. Training Room  |
| 13. Business Room    | 53. Musical Room     | 93. Treatment Room |
| 14. Cellar           | 54. Nursery          | 94. TV Room        |
| 15. Cellar Door      | 55. Nursery Door     | 95. Utility House  |
| 16. Cellar Window    | 56. Nursery Window   | 96. Veranda Door   |
| 17. Chief's Room     | 57. Office           | 97. Waiting Room   |
| 18. Computer Room    | 58. Office Door      | 98. Wine Cellar    |
| 19. Conference Room  | 59. Office Window    | 99. Winter Garden  |
| 20. Corridor         | 60. Pavillion        | 100. Workshop      |
| 21. Corridor Door    | 61. Practice         |                    |
| 22. Designing Dept   | 62. Reading Room     |                    |
| 23. Dining Room      | 63. Reception        |                    |
| 24. Dining Room Door | 64. Reception        |                    |
| 25. Dining Room Win  | 65. Recreation Room  |                    |
| 26. Director         | 66. Room             |                    |
| 27. Distrib. Room    | 67. Sales Dept       |                    |
| 28. Domest. Equipmt  | 68. Sales Room       |                    |
| 29. Entrance         | 69. Sauna            |                    |
| 30. Entry Door       | 70. Secretariat      |                    |
| 31. Exit             | 71. Sewing Room      |                    |
| 32. Fire Place Room  | 72. Shop             |                    |
| 33. Fitness Room     | 73. Shop Door        |                    |
| 34. French Window    | 74. Show Window      |                    |
| 35. Garage           | 75. Shower           |                    |
| 36. Gate Keeper      | 76. Showroom         |                    |
| 37. Guest Room       | 77. Skylight         |                    |
| 38. Hall             | 78. Smoke Detector   |                    |
| 39. Heating          | 79. Staff Dept       |                    |

### Predefined Detector texts:

1. ALARM CENTER
2. EXTERNAL SIREN
3. TELEPHONE
4. ATTACK
5. INTERNAL HAND
6. EXTERNAL HAND
7. REMOTE HAND
8. DOOR MODULE

# Programming Instructions

---

## 3. How to display detectors learned in

<b>SHOW DETECTOR</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key [OK].

Under this menu item, all detectors learned into the radio alarm center can be displayed. During the installation, this item serves for finally checking whether all radio components have been correctly learned in or allocated, respectively.

<b>SHOW DETECTOR</b>		
<b>NO.01</b>	<b>DME</b>	<b>CLOSE</b>
<b>DOOR MODULE</b>		
<b>^, v / END = OK</b>		

Press key [^].

This shows the first detector learned into the system (a radio door module in this example). The display shows the consecutive detector number, the detector type abbreviation, the current state of the detector, and the detector text allocated.

<b>SHOW DETECTOR</b>		
<b>NO.02</b>	<b>MAE</b>	<b>CLOSE</b>
<b>CORRIDOR DOOR</b>		
<b>^, v / END = OK</b>		

Press key [OK].

With the [^] or [v] key, all other detectors can be displayed. In this example, radio magnetic contact no. 02, learned into the EXTERNAL group with the CLOSED state. The corridor door is the place of installation.

By pressing the [OK] key, you can exit this menu item, the original reading reappearing.

# Programming Instructions

---

## 4. How to clear detectors

CLEAR DETECTOR	
EXIT	= RESET
CONTINUE	= MENUE
SELECT	= OK

Press key [OK].

From the "CLEAR DETECTOR" menu item, it is possible to clear from the memory detectors already learned into the radio alarm center.

CLEAR DETECTOR	
NO.01	R SUBCENTRE
EXTERNAL SIREN	
^, v / OK / MENUE	

Press key [OK].

First of all, the display shows the detector learned in first. With the [^] key, the detector to be cleared can be selected. Use the [OK] key to confirm that the detector currently shown in the display is to be cleared.

CLEAR DETECTOR	
EXTERNAL SIREN	
CLEAR = OK	

Press key [OK].

Press key [OK] once more to definitely confirm that, for example, the radio subcenter having detector no. 01 is to be cleared.

CLEAR DETECTOR	
NO.01	R SUBCENTRE
DETECTOR CLEARED	
CONTINUE = MENUE	

The successful clearance is shown in the display. You can exit this programming item by pressing the [MENUE] key, the original reading reappearing. Repeat this procedure if another detector is to be cleared.

CLEAR DETECTOR	
NO DETECTOR	
EXISTING	
^, v / OK / MENUE	

If all detectors learned into the center have already been cleared, the opposite display will appear.

# Programming Instructions

---

## 5. How to assign detectors

<b>ASSIGN DETECTOR</b>		
<b>EXIT</b>	<b>=</b>	<b>RESET</b>
<b>CONTINUE</b>	<b>=</b>	<b>MENUE</b>
<b>SELECT</b>	<b>=</b>	<b>OK</b>

Press key **[OK]**.

<b>ASSIGN DETECTOR</b>		
<b>NO.09</b>	<b>MAE</b>	<b>CLOSE</b>
<b>LIVING ROOM</b>		
<b>^, v / OK / MENUE</b>		

Press key **[OK]**.

<b>ASSIGN DETECTOR</b>		
<b>NO.09</b>	<b>MAE</b>	<b>CLOSE</b>
<b>GROUP ABSENT</b>		
<b>^, v / OK / MENUE</b>		

Press key **[OK]**.

<b>ASSIGN DETECTOR</b>		
<b>NO.09</b>	<b>MAE</b>	<b>CLOSE</b>
<b>CORRIDOR DOOR</b>		
<b>^, v / OK / MENUE</b>		

If the group allocation or the text of detectors already learned into the system is to be subsequently changed, the "ASSIGN DETECTOR" menu item will have to be selected.

Use key **[^]** to select the detector, the settings of which are to be changed. In this example, the text of radio magnetic contact no. 09 is to be changed from living room into corridor door.

With the **[v]** key, the accociation of the detector to the group can be selected.

MAE = EXTERNAL group radio magnetic contact.  
MAI = INTERNAL group radio magnetic contact.

The group selected (EXTERNAL in this example) must be confirmed with the **[OK]** key.

For detailed explanations of the External and Internal groups, refer to para. "2. HOW TO LEARN IN DETECTORS" on pages 56 to 58.

Under the next item, the test of the place of installation can be changed. With the **[^]** and **[v]** keys, you can search the list in alphabetical order or select the desired text by directly typing in the number and confirming with the u key (refer to the list on page 58). Confirm the text selected with the **[OK]** key. The display will then read the original "ASSIGN DETECTOR" reading.

# Programming Instructions

---

## 6. How to set the attack function to loud or mute alarming

<b>ATTACK IS :</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key [OK].

<b>ATTACK IS :</b>	
<b>MUTE</b>	
<b>^, v / OK / MENUE</b>	

Press key [OK].

<b>ATTACK IS :</b>	
<b>LOUD</b>	
<b>^, v / OK / MENUE</b>	

Press key [OK].

<b>ATTACK IS :</b>	
<b>LOUD</b>	
<b>CORRECT = OK</b>	

From this menu item, you can choose whether the attack message is to be handled as mute only via a telephone dialler, or, when set to loud, with additional alarming by an external siren and flashing light.

The police recommend the mute setting in combination with a telephone dialler to avoid over-reaction of the offender.

The factory setting is **MUTE**. When the attack alarm is released, the corresponding attack telephone dialler channel is activated at the radio alarm center and the radio subcenter. To re-program the setting from **MUTE** to **LOUD**, press the [V] key.

When **LOUD** is set the following will be triggered:

- The external siren terminal of the radio alarm center and the radio subcenter.
- The flashing light terminal of the radio alarm center and the radio subcenter.
- The internal siren terminal of the radio alarm center and the radio subcenter.
- The speaker of the radio alarm center with a loud siren sound.
- The attack telephone dialler of the radio alarm center and of the AWUG radio telephone dialler (automatic dialling and transmission set).

The current setting, **LOUD** in this example, is shown in the display. You will be asked whether the settings are correct. Pressing the [OK] key takes over the settings.

If the [MENUE] key is pressed instead, the settings will not be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Programming Instructions

## 7. How to set the program and trouble output

PROGRAM OUTPUT	
EXIT	= RESET
CONTINUE	= MENUE
SELECT	= OK

Press key [OK].

PROGRAM OUTPUT	
v / OK / MENUE	

Press key [OK].

PROGRAM OUTPUT	
ALARM	180 s
v / OK / MENUE	

Press key [OK].

The radio alarm center has a specific program and trouble output which can be programmed to a desired triggering criterion.

The program and trouble output, the triggering criterion of which is to be set, can be selected with the [V] key. Confirm the selected output with the [OK] key.

The desired triggering criterion for the program and trouble output can be selected with the [V] key. When the desired function appears, confirm the setting by pressing the [OK] key. The following list gives you a survey of the triggering functions possible:

- ALARM** The program output will be triggered in the externally armed state when an alarm is released.
- ATTACK** Irrespective of the state of the system, the output will be triggered in case of an attack alarm.
- FIRE** Irrespective of the state of the system, the output will be triggered in case of a fire alarm.
- TAMPER** The program output will be triggered in case of a tamper message.
- TECHN** The program output will be triggered in case of a technical message.
- REMOTE** If the radio hand transmitter was programmed as a remote control unit, the program output will be triggered upon switching on until switching off again through the remote control unit.
- ARMED** If the system is armed externally, the output will be triggered.
- INTERF** If a 30 s interference source was detected by the external radio signal detector the output will be triggered.
- WARN** If someone enters the area to be monitored while the radio alarm system is in the armed state, the output will be switched on for the period of the alarm delay time set.
- PULSE** When a locking element such as a pulse door opener is used, the program output will trigger the switching inputs of the locking element.
- COIL** When a block connecting link is connected to the radio alarm center, the program output controls the block connecting link coil from this menu item.
- OFF** The program output does not respond to any trouble or alarm event. The trouble output responds to trouble.

**Note: When a block connecting link or a locking element is connected to the program output, the latter will no longer be available for any other function.**

# Programming Instructions

---

## 7. How to set the program and trouble output

PROGRAM OUTPUT	
ALARM	180 S
TIME: ■	
NUMBER	/ OK

When the desired triggering criterion (ALARM in this example) was selected with the **[OK]** key, the factory-set alarming time will appear in the display (180 s in this example). If the alarm time is, for example, to be changed from 180 s to 120 s, the procedure described next will have to be followed.

Press keys **[1]**, **[2]**, **[0]**,

then press key **[OK]**.

PROGRAM OUTPUT	
ALARM	120 S
TIME: 120 s	
CORRECT	= OK

The current setting is shown in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings, the original reading reappearing.

If the **[MENUE]** key is pressed instead, the settings will **not** be taken over, and the original reading will reappear to enable you to repeat this procedure.

Time Entry	Effect
0 - 250 s	Triggering with the time set.
251 - 254 s	Permanent triggering until reset.

**Important: For Germany, it should be noted that the external siren must not be triggered for longer than 3 minutes.**

# Programming Instructions

## 8. How to set acknowledging

<b>ACKNOWLEDGE</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key **[OK]**.

<b>ACKNOWLEDGE</b>	
<b>EXTERNAL: OFF *</b>	
<b>SPEAKER: LOW</b>	
<b>^, v / OK / MENUE</b>	

Press key **[OK]**.

<b>ACKNOWLEDGE</b>	
<b>EXTERNAL: FLASH LIGHT</b>	
<b>SPEAKER: LOW *</b>	
<b>^, v / OK / MENUE</b>	

Press key **[OK]**.

<b>ACKNOWLEDGE</b>	
<b>EXTERNAL: FLASH LIGHT</b>	
<b>SPEAKER: LOW *</b>	
<b>CORRECT = OK</b>	

From the "ACKNOWLEDGE" menu item, you can set whether external arming is to be acknowledged via an alarm transmitter. When acknowledging is activated, you can select from this menu item whether the external siren, the flashing light, the internal siren, or the internal speaker is shortly turned on. For the radio external flashing-light siren, no acknowledging is possible).

Acknowledging does not distinguish between arming or unarming.

The factory setting deactivates acknowledging via the external siren, the internal siren and the flashing light. The desired alarm transmitter (FLASHING LIGHT in this example) can be selected with the **[V]** key. Confirm the setting by pressing the **[OK]** key.

The following settings are possible for the EXTERNAL option:

- **OFF** (factory setting – no acknowledging)
- **INTERNAL SIREN** (internal siren - approx. 1 second)
- **EXTERNAL SIREN** (external siren - approx. 1 second)
- **FLASHING LIGHT** (flashing light - approx. 2 seconds)

From the next selection item (indicated by an asterisk), the volume of the internal speaker of the center can be changed. The following settings are possible:

- **LOW** (approx. 1 second)
- **LOUD** (approx. 1 second)
- **SIREN** (SIREN TONE of the radio alarm center)
- **OFF** (no acknowledging)

Confirm the volume of the internal speaker of the radio alarm center (LOW in this example) by pressing the **[OK]** key.

The current ACKNOWLEDGE setting is shown in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings.

If the **[MENUE]** key is pressed instead, the settings will not be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Programming Instructions

## 9. How to set the alarm duration

<b>ALARM DURATION</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press the **[OK]** key.

<b>ALARM DURATION</b>	
<b>EXTERNAL SIREN 180 S</b>	
<b>TIME:</b>	<b>n</b>
<b>^, v / OK / MENUE</b>	

Press the **[OK]** key.

<b>ALARM DURATION</b>	
<b>EXTERNAL SIREN 180 S</b>	
<b>TIME:</b>	<b>n</b>
<b>DIGITS: / OK</b>	

Press keys **[1], [2], [0]**  
then press the **[OK]** key.

<b>ALARM DURATION</b>	
<b>EXTERNAL SIREN 120 S</b>	
<b>TIME:</b>	<b>120</b>
<b>CORRECT = OK</b>	

Time Entry	Effect
0 - 254 s	The internal and external sirens will be triggered for the time period set.

From the "ALARM DURATION" menu item, the alarming time periods for the external and internal sirens can be set. The external and internal sirens are factory-preset to the following values:

**EXTERNAL SIREN = 180s**  
**INTERNAL SIREN = 180s**

With the **[V]** key, you can choose whether to set the alarm duration for the EXTERNAL SIREN or the INTERNAL SIREN.

Confirm the alarming unit selected (external siren in this example) by pressing the **[OK]** key.

Set the alarm duration in seconds (120 s in this example). Press keys **[1], [2], [0]** of the keyboard and then confirm with the **[OK]** key.

**Note: The actual alarm duration can deviate ± 10 seconds from the time entered.**

The current ALARM DURATION is read in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings. This completes the setting of the external siren, and the internal siren can be programmed with the **[V]** key by following the same procedure.

If the **[MENUE]** key is pressed instead, you will exit the "ALARM DURATION" menu item, the original reading reappearing.

**Important: For Germany, it should be noted that the external siren must not be triggered for longer than 3 minutes.**

# Programming Instructions

## 10. How to set the delay times

<b>DELAY</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press the **[OK]** key.

<b>DELAY</b>	
<b>ARMED</b>	<b>00 s</b>
<b>^, v / OK / MENUE</b>	

Press the **[OK]** key.

<b>DELAY</b>	
<b>ARMED</b>	<b>00 s</b>
<b>TIME: n</b>	
<b>DIGITS: / OK</b>	

Press keys **[6]**, **[0]**  
then press the **[OK]** key.

<b>DELAY</b>	
<b>ARMED</b>	<b>60 s</b>
<b>TIME: 60</b>	
<b>CORRECT = OK</b>	

Press the **[OK]** key.

From the "DELAY" menu item, the arming delay and the alarm delay can be programmed. Such delay will be necessary if the radio alarm system is externally armed by the hand transmitter (externally programmed) or through the keyboard of the radio door module. An audible indication by short signal tones will be given when this time has elapsed.

Use the **[M]** key to select whether the arming delay or the alarm delay is to be set. The following factory settings are stored: Arming delay = 15s, alarm delay = 15s  
If, in this example, the arming delay is to be changed, you will have to press the **[OK]** key.

Type in the arming delay in seconds through the numerical keyboard (60 s in this example).

**Note: The actual delay duration can deviate  $\pm 10$  seconds from the time entered.**

The current setting is shown in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings, the original reading reappearing. If the **[MENUE]** key is pressed instead, the settings will not be taken over, and the original reading will reappear to enable you to repeat this procedure.

Time Entry	Effect
0 - 254 s	The alarm and arming delays will elapse with the time set.

# Programming Instructions

## 11. How to program the wired groups

<b>WIRED GROUPS</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key **[OK]**.

<b>WIRED GROUPS</b>				
<b>TE</b>	<b>IS</b>	<b>AT</b>	<b>G2</b>	<b>G1</b>
<b>DIGITS 1-5 / OK</b>				

Press keys **[1], [5]**.

<b>WIRED GROUPS</b>				
<b>TE</b>	<b>IS</b>	<b>AT</b>	<b>G2</b>	<b>G1</b>
*				*
<b>DIGITS 1-5 / OK</b>				

Press key **[OK]**.

<b>WIRED GROUPS</b>				
<b>TE</b>	<b>IS</b>	<b>AT</b>	<b>G2</b>	<b>G1</b>
*				*
<b>CORRECT = OK</b>				

The radio alarm center has wired inputs which can be re-programmed from open (normally open = N. O.) to closed (normally closed = N. C.) from the "WIRED GROUPS" menu item.

The inputs are factory-set to open (normally open = N. O.). To re-program them to closed (normally closed = N. C.), a number between 1 and 5 must be entered. An input programmed from open to closed is indicated by an asterisk. In the following example, the technical detector group (TE) and the EXTERNAL group (G1) are to be re-programmed to closed.

For the following groups, the inputs can be re-programmed through menu prompting: [ ] = N. O., [ \* ] = N. C.

1. TE = Technical detector group
2. IS = Interlock switch contact group
3. AT = Attack group
4. G2 = Internal group
5. G1 = External group

The current setting of the wired group is shown in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings.

If the **[MENUE]** key is pressed instead, the settings will **not** be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Programming Instructions

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## 12. How to run a detector test

<b>TEST DETECT.</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key [OK].

From the "TEST DETECT." menu item, detectors learned into the system and detectors not learned in yet but belonging to the system family can be tested. During the installation and maintenance work, the detector test serves for the final function test of all detectors within the system.

<b>TEST DETECT.</b>	
<b>TRIGGER DETECTOR</b>	
<b>CANCEL = MENUE</b>	

Trigger any detector.

The detector to be tested must be triggered by the corresponding function, for example, the opening of the door for the radio magnetic contact, the pressing of the actuation key for the hand transmitter etc.

<b>TEST DETECT.</b>	<b>GOOD</b>
<b>NO.03 TE</b>	<b>TECHN</b>
<b>HEATING</b>	
<b>CANCEL = MENU</b>	

Trigger another detector.

The display shows the detector triggered, together with its detector number, its abbreviation (radio technical detector in this example), the current state of the detector (technical channel triggered in this example) and the place of installation of the detector.

<b>TEST DETECT.</b>	<b>GOOD</b>
<b>NO.04 MAE</b>	<b>OPEN</b>
<b>LIVING ROOM</b>	
<b>CANCEL = MENUE</b>	

If another detector is to be tested, it must be triggered. Each change of state of the detector such as door/window OPEN or CLOSED for the radio magnetic contact is indicated.

In addition, the receiving field strength is evaluated in the upper right corner of the display during the detector test.

- GOOD** Very good to good reception of the detector.
- NORM** Medium-quality reception of the detector.
- BAD** Bad reception of the detector. Check the detector position or replace the battery after a longer period of operation, respectively.

The detector test can be cancelled with the [MENUE] key.

# Programming Instructions

## 13. How to run the system test

<b>SYSTEM TEST</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key [OK].

<b>SOFTWARE TEST</b>	
<b>v / START</b>	<b>= OK</b>

Press key [OK].

<b>BG190E01AD</b>
<b>V 2.11β</b>
<b>CSUM: 99D4H</b>
<b>CONT = v</b>

Press key [V].

<b>CENTER TEST</b>	
<b>v / START</b>	<b>= OK</b>

Press key [OK].

<b>CENTER TEST</b>	
<b>- LEDs, DISPLAY</b>	
<b>- SPEAKER</b>	

From the "SYSTEM TEST" menu item, the principal hardware and software functions of the center can be checked.

### SOFTWARE TEST:

With the software test, the software functions of the center can be checked.

After the internal self-test is completed, the current processor version and the checksum determined are then displayed.

Please advise the manufacturer these numbers if you have any queries.

The display is showing the current processor version (BG190X01AA in this example) and the checksum (2E27H in this example).

If you want to select the center test as the next item, press the v key.

### CENTER TEST:

The center test serves for basic testing of the visual and audible indicators of the center.

Press key [OK] to start the test.

- Activation of all light-emitting diodes for approx. 2 seconds.
- Activation of the speakers (siren tone) for approx. 2 seconds.
- Activation of the display segments for approx. 5 seconds.

After the display check, the center test is complete, which is shown in the display. Press key [V] to initiate the telephone dialler test.

# Programming Instructions

---

## 13. How to run the system test

TD TEST
v / START = OK

Press key [OK].

TD TEST
CHANNEL.FIRE
OFF
V / OK / MENUE

Press key [OK].

TD TEST
CHANNEL.FIRE
ON
OFF = OK

Press key [OK].

TD TEST
CHANNEL.FIRE
OFF
V / OK / MENUE

### TELEPHONE DIALLER TEST:

From the "TD TEST" menu item, the individual telephone dialler transmission channels of both the center and the radio telephone dialler can be separately checked for their functioning. Press key [OK] to start the telephone dialler test.

Channel 1 = fire is displayed. It is possible to transmit a total of 5 channels.

- Channel 1 = FIRE
- Channel 2 = ATTACK
- Channel 3 = TROUBLE
- Channel 4 = ALARM
- Channel 5 = ARMED/UNARMED

Press the [V] key to select the next channel, or select channel 1 = FIRE by pressing the [OK] key.

The telephone dialler channel remains activated until the [OK] key is pressed again.

**Note: When a block connecting link or a locking element is connected to the program output, the latter will no longer be available for any other function.**

Now, the next channel can be selected by pressing the [V] key, or finish the "TD TEST" by pressing the [MENUE] key. The next "RE-LAY TEST" menu item will be called automatically.

# Programming Instructions

## 13. How to run the system test

RELAY TEST
v / START = OK

Press key [OK].

RELAY TEST
RELAY: INTSIR
OFF
V / OK / MENUE

Press key [OK].

RELAY TEST
RELAY: INTSIR
ON
OFF = OK

Press key [OK].

RELAY TEST
RELAY: INTSIR
OFF
V / OK / MENUE

### RELAY TEST:

From the "RELAY TEST" menu item, the individual relay or 12 V outputs of both the radio alarm center and the radio subcenter can be triggered separately.

Press key [OK] to start the "RELAY TEST" function.

The relay to be tested is indicated (INTERNAL siren in this example).

The following relays or 12 V outputs can be tested:

INTERNAL SIREN	
EXTERNAL SIREN	
FLASHING LIGHT	
TROUBLE RELAY	
TECHNICAL	technical relay
PROG1	program output 1
PROG2	program output 2

Press the [V] key to select the next channel, or press key [OK] to activate the INTERNAL siren relay.

The INTERNAL SIREN relay will remain activated until the [OK] key is pressed again.

Now, the next relay can be selected by pressing the [V] key, or finish the "RELAY TEST" by pressing the [MENUE] key. The "SYSTEM TEST" top menu level will be called back automatically.

Important: Due to the short triggering times of the relay outputs, the flashing light of the radio external flashing-light siren cannot be tested from this menu item.

The flashing light must be tested under a final practice alarm.

**Note: Selecting this test option deactivates the trouble relay. It will return to its original state after the test is completed.**

# Programming Instructions

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## 14. How to program the display

DISPLAY
EXIT = RESET
CONTINUE = MENUE
SELECT = OK

To change the display reading when the radio alarm system is at rest and to give the customer a service telephone number this menu item can be used for programming the display.

Press key [OK].

DISPLAY
■
NUMBER / OK

There is no factory setting of the display.

To type in a display value, the cursor is at the position of the first digit to be entered.

Enter the service telephone number.

DISPLAY
1 2 3 4 5 6 7 8 9
NUMBER / OK

Program the telephone number of the Fault Clearing Service that can help the customer in case of trouble. This telephone number must not exceed a maximum of 15 digits (123456789 in this example).

Press key [OK].

DISPLAY
1 2 3 4 5 6 7 8 9
CORRECT = OK

Pressing the [OK] key confirms the entry of the telephone number, and you will be asked whether the number typed in is correct. If you find this number wrong, you can cancel the entry by pressing the [MENUE] key.

-SYSTEM OK -
SERVICE-NO. :
1 2 3 4 5 6 7 8 9

When the radio alarm center is at rest, the service telephone number will be displayed from now on.

**Note:** If service telephone number "0" was typed in and confirmed with the [OK] key, no service telephone number will be displayed.

# Programming Instructions

## 15. How to change the installer and user codes

SET CODE
EXIT = RESET
CONTINUE = MENUE
SELECT = OK

Press key [OK].

SET CODE
INSTALLER :
0 0 0 0
v / OK / MENUE

Press key [OK].

SET CODE
INSTALLER :
■
CODE ENTRY / OK

Press keys [1], [2], [3],  
then press key [OK].

SET CODE
INSTALLER :
■
REPEAT!

Press keys [1], [2], [3],  
then press key [OK].

From the "SET CODE" menu item, the current installer and user codes can be changed. The factory settings are as follows:

**User code=1** (6 digits maximum)

It serves for arming/unarming as well as for trouble and alarm re-setting.

**Installer code=0000** (6 digits maximum)

In addition to the functionality of the user code, the installer code facilitates access to the programming level.

The currently valid installer code (factory setting 0000 in this example) is displayed as the first item. If you want to change the user code press the [V] key.

Pressing the [OK] key is to confirm that the installer code is to be changed in this case.

Program the new installer code through the keyboard (1, 2, 3 in this example) and confirm with the [OK] key.

If the first entry was an installer code that already exists the display will read "CODE EXISTS", and the entry has to be repeated by a different code.

**Note:** If the [MENUE] key is pressed instead, the settings will **not** be taken over, and the original reading will reappear to enable you to repeat this procedure.

To confirm type in the installer code a second time (1, 2, 3 in this example) and confirm with the [OK] key.

If the second code entry is not identical with the first one the display will read "WRONG CODE!!!". The complete installer code entry has to be repeated.

**Note:** If the [MENUE] key is pressed instead, the settings will **not** be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Programming Instructions

---

## 16. How to program telephone dialler channels

TD TRANSMISSION	
EXIT	= RESET
CONTINUE	= MENUE
SELECT	= OK

Press key [OK].

TD TRANSMISSION				
FI	AT	TR	AL	AU
*	*	*	*	
DIGITS 1-5 / OK				

Press key [3].

From the "TD TRANSMISSION" menu item, you can set which alarm and trouble criteria to transmit to a Security Service and which not. Depending upon the request of the customer, it may be necessary not to transmit to the Security Service the arming/unarming event or a trouble message.

Channels 1-4 are factory-set (ready for transmission). A set channel is indicated by an asterisk below the channel abbreviation. The abbreviations in the display stand for certain alarm or trouble criteria.

1. FI channel = FIRE
2. AT channel = ATTACK
3. TR channel = TROUBLE
4. AL channel = ALARM/BREAK-IN
5. AU channel = ARMED/UNARMED

If, for example, the trouble message is not to be passed forward through the telephone dialler, key [3] will have to be pressed in this case.

TD TRANSMISSION				
FI	AT	TR	AL	AU
*	*		*	
DIGITS 1-5 / OK				

Press key [OK].

Pressing digit 3 = TR channel resets the trouble channel. Now, existing trouble messages will no longer be transmitted to the Security Service.

TD TRANSMISSION				
FI	AT	TR	AL	AU
*	*		*	
CORRECT = OK				

The current setting is shown in the display. You will be asked whether the settings are correct. Pressing the [OK] key takes over the settings, the original reading reappearing.

If the [MENUE] key is pressed instead, the settings will not be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Programming Instructions

## 17. How to recall the history memory

<b>HISTORY</b>		
<b>EXIT</b>	<b>=</b>	<b>RESET</b>
<b>CONTINUE</b>	<b>=</b>	<b>MENUE</b>
<b>SELECT</b>	<b>=</b>	<b>OK</b>

Press key [OK].

<b>30.11.</b>	<b>14:10</b>	<b>21</b>
<b>CENTER</b>		<b>EXTARM</b>
<b>^,V / OK / MENUE</b>		

Press key [^].

<b>30.11.</b>	<b>20:22</b>	<b>22</b>
<b>NO.04</b>	<b>MAE</b>	<b>OPEN</b>
<b>LIVING ROOM</b>		
<b>^,V / OK / MENUE</b>		

Press key [^].

<b>30.11.</b>	<b>23:35</b>	<b>23</b>
<b>CENTER</b>		<b>UNARM</b>
<b>^,V / OK / MENUE</b>		

Press key [^].

<b>30.11.</b>	<b>23:35</b>	<b>23</b>
<b>CENTER</b>		<b>UNARM</b>
<b>HISTORY END</b>		
<b>^,V / OK / MENUE</b>		

Up to 50 alarm and trouble as well as the external arming/unarming events can be stored in this volatile memory including their date and time information. The history memory is of so-called floating type, i. e. earlier events are overwritten by more recent ones.

In the following, the principle of the history memory is explained on the basis of a concrete example.

When the history memory is called, the entry made from the time of the last external arming will be jumped at. In this example, the system was externally armed at the radio alarm center on 30.11 at 14:10 by a connected key-operated switch.

History entry no. 22 indicates that the radio magnetic contact (externally programmed) in the living room released alarm on 30.11. at 20:22.

The following history entry no. 23 shows that the system was un-armed at the radio alarm center on 30.11. at 23:35.

In this case, there is no more history entry. The display shows that the end of the history memory entries has been reached. To view earlier events, you can select such entries with the [V] key. Pressing the [MENUE] key will display the original reading.

# Programming Instructions

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## 18. How to switch off the floating battery

<b>RECH BATT OFF</b>
<b>EXIT = RESET</b>
<b>CONTINUE = MENUE</b>
<b>SELECT = OK</b>

Press key [OK].

<b>RECH BATT OFF</b>
<b>OFF = OK / MENUE</b>

Press key [OK].

<b>RECH BATT OFF</b>
<b>TURNED OFF</b>
<b>CONT = MENU</b>

The floating battery is already installed when the radio alarm center comes out. Once the radio alarm center is connected to the mains voltage after installation, the floating battery is activated by a so-called "automatic mains starting device". If it is necessary to switch off the battery, for example, to run the system inside a sample case, the "RECH BATT OFF" menu item will have to be selected.

Press key [OK] to turn off the battery. Exit this program item by pressing [MENUE].

If switching off the battery was activated by pressing the [OK] key, it will be confirmed in the display.  
After switching off the battery and subsequently disconnecting it from the mains, wait at least 2 minutes before re-applying the mains voltage. Not keeping this time will result in a "CENTER RECH BATT FAIL" error message.

**Note: Disconnecting and re-applying the mains voltage automatically switches on the floating battery by the automatic mains starting device. When in the switched-off state, the battery is not monitored for undervoltage.**

# Programming Instructions

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## 19. How to change the tamper function

<b>CHANGE TAMPER</b>	
<b>EXIT</b>	<b>= RESET</b>
<b>CONTINUE</b>	<b>= MENUE</b>
<b>SELECT</b>	<b>= OK</b>

Press key **[OK]**.

<b>CHANGE TAMPER</b>	
<b>TAMP IS 0 kOhm</b>	
<b>V / OK / MENUE</b>	

Press key **[V]**.

<b>CHANGE TAMPER</b>	
<b>TAMP IS 12 kOhm</b>	
<b>V / OK / MENUE</b>	

Press key **[OK]**.

<b>CHANGE TAMPER</b>	
<b>TAMP IS 12 kOhm</b>	
<b>CORRECT = OK</b>	

The wired tamper group of the radio alarm center is a resistance-monitored closed-circuit group which normally must be terminated by a 12 kOhm resistor. Any deviation from the resistance by more than  $\pm 40\%$  leads to a trouble message or, in the externally armed state, to an alarm message.

From the "CHANGE TAMPER" menu item, you can evaluate a resistance of both 12 kOhms and 0 Ohm (factory setting). This can be configured by the software.

The resistance of the tamper line is factory-set to 0 kOhm. You can change the recognition of the resistance from 0 kOhm to 12 kOhms with the **[V]** key.

In this example, the recognition of the resistance is set to 12 kOhms  $\pm 40\%$ . Confirm the display setting with the **[OK]** key.

The current setting is shown in the display. You will be asked whether the settings are correct. Pressing the **[OK]** key takes over the settings, the original reading reappearing.

If the **[MENUE]** key is pressed instead, the settings will not be taken over, and the original reading will reappear to enable you to repeat this procedure.

# Operation • Radio Alarm Center

---

## Showing open detectors

<b>OPEN DETECTORS</b>
<b>NO. 03    MAE    OPEN</b>
<b>LIVING ROOM</b>
<b>CONT = V</b>

If internal or external arming is not possible, it will be indicated by missing audible acknowledging and by the "OPEN DETECTORS" message in the display of the radio alarm center. In this example, radio magnetic contact (external group) no. 03 in the living room is still open.

Press key [V] to show more open detectors.

<b>OPEN DETECTORS</b>
<b>NO. 05    MAE    OPEN</b>
<b>BEDROOM</b>
<b>CONT = V</b>

Furthermore, radio magnetic contact (external group) no. 05 in the bedroom is still open. If the first open detector (in the living room in this example) reappears when the V key is pressed, no other detector will still be open. The open doors and windows in the living room and in the bedroom must be closed. Then you can check at the radio alarm center whether the system is now ready for arming.

Press key [V].

<b>SYSTEM</b>
<b>ARMING</b>
<b>READY</b>

The radio alarm center display shows that all open detectors have been closed and no disturbance exists which would prevent arming. The radio alarm center can now be internally or externally armed.

**Note: If you directly press the [V] key while the radio alarm center is at rest, you will be able to check whether the radio alarm system is ready for arming.**

# Operation • Radio Alarm Center

---

## Internal arming

- SYSTEM OK -
SERVICE - NO.:
123456

Enter user code.

- SYSTEM OK -
ENTER CODE
*n
DIGITS: / OK

Press key [OK].

CODE CORRECT
ARMED= INTERN

Press key [INTERN].

- INT ARMED -
---------------

When the radio alarm center is in the unarmed state, the opposite display will be shown. In this example, service telephone number 123456 has been programmed by the installer. To internally arm the alarm system through the keyboard of the radio alarm center the user code must be entered first.

Internal arming is only possible after entering the user code first. Type in the valid user code through the keyboard and confirm with the [OK] key.

The correct code entry is shown in the display. To internally arm the radio alarm system now, press key [INTERN].

Internal arming is shown in the display of the radio alarm center. An acknowledge tone with the programmed volume acoustically indicates the successful arming.

In addition, the yellow LED  is turned on.

Important: If the system is not ready for arming for there is still some open detector within the arming area, this detector will be directly displayed together with its detector number, type, its current state (OPEN in this example) and its place of installation. INTERNAL ARMING can only take place after all detectors are closed and no trouble to be eliminated before exists (refer to para. "OPEN DETECTORS" on page 79).

# Operation • Radio Alarm Center

---

## Internal unarming

- INTERNAL ARMED -

The internally armed state is shown in the display of the radio alarm center and indicated by yellow light-emitting diode p.

Enter user code.

- INTERNAL ARMED -
ENTER CODE
*n
DIGITS/OK

Internal unarming is only possible after entering the user code first. Type in the valid user code through the keyboard and confirm with the [OK] key.

Press key [OK].

CODE CORRECT
ARMED = INTERN

The correct code entry is shown in the display. To internally unarm the radio alarm system now, press key [INTERN].

Press key [INTERN].

- SYSTEM OK -
SERVICE - NO.:
123456

The speaker of the center acknowledges unarming. In addition, the yellow LED  is turned off.

Pressing the [INTERN] key returns the radio alarm center to the unarmed operating state.

# Operation • Radio Alarm Center

## Resetting Internal Alarm

- ALARM -
CONT = RESET

Press key **[RESET]**.

- ALARM -
ENTER CODE
DIGITS: / OK

Enter user code and confirm with key **[OK]**.

UNARM
FIRST!
UNARMED = INTERN

Press key **[INTERN]**.

- ALARM -
CONT = RESET

Press key **[RESET]**.

- ALARM -
NO.04 MAE OPEN
CORRIDOR DOOR
CLEAR = RESET

Press key **[RESET]**.

- SYSTEM OK -
SERVICE-NO.:
123456

If an alarm is triggered in the internally armed state, it will be acoustically released through the internal speaker of the radio alarm center as well as via the internal sirens possibly connected to the radio alarm center or the radio subcenter. Visual indication is given in the display of the radio alarm center. The detector which triggered the alarm is indicated. In addition, the red collective indicator  is turned on. Press key **[RESET]** to proceed. Pressing the **[RESET]** key turns off the speaker of the radio alarm center.

In any case, resetting the alarm triggered is only possible with the valid user code to avoid manipulation. The display prompts you to type in the user code through the numerical keyboard. The code typed in must then be confirmed with the **[OK]** key.

After entering the correct user code, you will be prompted to unarm the radio alarm system first. Press key **[INTERN]** to do so.

This will turn off the internal siren connected to the radio alarm center or radio subcenter. After unarming, you will be informed that an alarm message is still active. Press key **r** to cancel the existing alarms.

Now, the exact alarm cause is displayed. In this example, it is radio magnetic contact no. 04 on the corridor door. Press key **[RESET]** to reset the alarm. Further existing alarms can be cancelled with the **[RESET]** key.

This turns off the LED  and . After all existing alarms are cancelled, the radio alarm center will be back to its unarmed operating state.

**Note: An internal alarm can only be triggered by detectors which have been programmed for EXTERNAL/ group 1. INTERNAL/group 2 detectors do not trigger any internal alarm.**

# Operation • Radio Alarm Center

## Resetting External Alarm

- ALARM -
CONT = RESET

Press key [RESET].

In case of an external alarm, the radio alarm system must be un-armed by the key-operated switch or the remote control unit (programmed for external mode) before the house or the apartment can be entered. Unarming turns off the external siren, the flashing light continuing until the alarm is reset at the radio alarm center. The speaker of the radio alarm center will be triggered for about 30 seconds.

This turns off the speaker of the radio alarm center.

- ALARM -
ENTER CODE
DIGITS: / OK

Enter user code and confirm with key [OK].

In any case, resetting the alarm triggered is only possible with the valid user code to avoid manipulation. The display prompts you to type in the user code through the numerical keyboard. The code typed in must then be confirmed with the [OK] key.

- ALARM -
NO.04 MAE OPEN
CORRIDOR DOOR
CONT = RESET

Press key [RESET].

After the user code is entered, the display of the radio alarm center shows the exact cause of the alarm. In this example, it is radio magnetic contact no. 04 on the corridor door.

- ALARM -
NO.04 MAE OPEN
CORRIDOR DOOR
CLEAR = RESET

Press key [RESET].

Pressing the [RESET] key reads in the display that the alarm will be cancelled by pressing key [RESET] once more. If further alarms exist, they can be cancelled one by one. Pressing the [RESET] key now turns off the flashing light outside.

- SYSTEM OK -
SERVICE-NO.:
123456

The LED  is turned off. After all existing alarms are cancelled, the radio alarm center will be back to its unarmed operating state.

# Operation • Radio Alarm Center

---

## Resetting a trouble message

<b>MAINS FAILURE</b>
<b>CENTER MAINS</b>
<b>CONT = RESET</b>

Trouble occurring is indicated in the display of the radio alarm center and by the LED . The display gives exact information on the trouble cause, what produced the trouble, and what the further procedure is.

In this example, the 230 V mains voltage of the radio alarm center has failed for less than one hour.

Press key **[MENUE]**.

<b>MAINS FAILURE</b>
<b>ENTER CODE</b>
<b>DIGITS: / OK</b>

In any case, resetting the trouble is only possible with the valid user code. The display prompts you to type in the user code through the numerical keyboard. The code typed in must then be confirmed with the **[OK]** key.

Enter the user code and confirm with key **[OK]**.

<b>MAINS FAILURE</b>
<b>CENTER MAINS</b>
<b>CONT = RESET</b>

After the entry of the user code, the exact trouble cause is displayed once again. The trouble cause must be eliminated before, in this case, the trouble can be cancelled with the **[RESET]** key. As a general principle, one must always distinguish between resettable and non-resettable trouble.

A mains failure of less than one hour can, for example, be reset. A battery failure of the radio alarm center can only be reset after the trouble cause has been eliminated. (Refer to the table with the possible kinds of trouble on page 85.)

Press key **[RESET]**.

<b>MAINS FAILURE</b>
<b>CENTER MAINS</b>
<b>CLEAR = RESET</b>

Press key **[RESET]**.

<b>- SYSTEM OK -</b>
<b>SERVICE-NO. :</b>
<b>123456</b>

After all existing trouble has been eliminated and cleared with the **[RESET]** key, the radio alarm center is back to its unarmed operating state. The LED  is turned off.

# Operation • General Instructions

---

## Problems and self-help in trouble shooting

Not every trouble needs to be a defect in the radio alarm system. Depending upon the operating state, external manipulations of the system, for example, are indicated as trouble as these may adversely affect the function of the system if they are not eliminated.

Symptom	Cause	Remedy
mains failure <sup>1)</sup>	The 230 V supply has failed for less than one hour.	Check whether the fuse of the building has blown. This trouble can be reset within 1 hour and the radio alarm system armed.
Mains failure > 1h <sup>1)</sup>	The 230 V supply has failed for more than one hour.	Check whether the fuse of the building has blown. This trouble cannot be reset before it is eliminated.
Battery weak	The battery of the detector shown in the display is almost exhausted.	This trouble can be reset by the user. The battery must be changed by the installer within the next 30 days.
Battery failure	The battery of the detector displayed was not changed after the "battery weak" message.	The battery must be changed by the installer. This trouble cannot be reset before the battery is changed.
Rech batt fail center	The floating battery of the radio alarm center has failed (approx. 9.5 V).	Check battery fuse SI 4 (2 A slow-blow) and the charging voltage (13.8 V at 25 °C) of the rechargeable storage battery.
Rech batt fail subcenter	The floating battery of the radio sub-center has failed.	Check battery fuse SI 2 (2 A slow-blow) and the charging voltage (13.8 V at 25 °C) of the rechargeable storage battery.
Detector fail	The permanent state message of the detector displayed did not work.	Check the detector function from the "test detect" menu item. Cancel the trouble message. If the trouble repeats, change the detector.
Tamper	The tamper monitoring of the components was activated.	Shut the enclosure of the component displayed and bring it to normal function such as OPEN in the case of the radio magnetic contact.
Extraneous radio detected	An interfering transmitter has been found by the extraneous radio detection device of the radio alarm center.	Reset the trouble at the radio alarm center. If this trouble cannot be reset, remove from service the technical equipment in the environment of the radio alarm system and locate the source of interference.
Technical	The device connected to the technical detector has tripped.	Check the connected device for malfunctioning. The technical fault can be reset at the radio alarm center. The radio alarm system will then be ready for arming again.

<sup>1)</sup> In case of a mains failure, the  (ON) indicator keeps flashing until the mains voltage recovers.

# Operation • Radio Door Module

## Radio door module keyboard assignment

Basically, distinction between numerical and function keys must be made for this keyboard. The numerical keys just serve for typing in the user code, whereas arming/unarming (internal or external) and code changing can be initiated by the function keys. Each pressing of any key is acoustically emphasised.



To arm the system internally.

To change the user code.

To unarm the system internally/externally.

To arm the system externally.

Digit field for entering the user code.

### Bringing the radio door module/user code to basic setting "0"

During the start-up and in case the customer should have forgotten his user code, it is necessary to bring the code of the radio door module to basic setting "0".

#### Procedure:

1. Remove the screws from the enclosure of the radio door module and open it.
2. Connect the 9 V lithium compound battery.  
**Important: Ensure correct polarity.**
3. Bridge terminal S with GND.
4. Bridge terminal US with GND.
5. Remove jumpers S/GND and US/GND.
6. Close the enclosure.
7. Now, the user code can be entered (refer to how to change the installer and user codes).

**Note: The user code can only be brought to basic setting "0" when the 9 V lithium battery is connected.**

**When the battery is changed the "0" basic setting or the user code will be lost and will have to be set again.**

### Changing the user code

The basic setting of the radio door module is "0". To change the setting into the individual code of the customer proceed as follows:

- [0] Press key [0].  
This selects basic setting "0".
- [CODE] Press key [CODE].  
A long tone of about 2 s indicates the readiness for entering the new code.
- [1] [2] [3] Type in the new user code (6 digits max.)  
(1 2 3 in this example).
- [CODE] Confirm the code entry by pressing the [CODE] key. A long tone of about 4 s indicates the successful change of the code.

This completes the entering of the code. For the future, only the new user code (1 2 3 in this example) will be accepted.

# Operation • Radio Door Module

## Internal arming

The radio alarm system can be internally armed via the keyboard of the radio door module.

**[1] [2] [3]** Type in the user code (1 2 3 in this example).

**[INTERN]** Press key **[INTERN]** to internally arm the radio alarm system. A long tone will sound at the radio door module to confirm arming.

Then, arming will be acoustically confirmed at the radio alarm central unit.

If this signal fails to appear, the radio alarm system is not ready for arming as a detector may possibly still be open (refer to page 79).

## External arming

The radio alarm central unit can be externally armed on the radio door module through the keyboard or via a key-operated switch/interlock switch latch possibly connected. If the radio alarm system is externally armed through the keyboard of the radio door module, it will be absolutely necessary that arming and alarm delay times are set.

Factory setting: alarm delay = 15 s,  
arming delay = 15 s.

**Important:** Unarm, by all means, the radio subcenter within the alarm delay time set, as the area to be monitored was interfered into while the door was being opened and, otherwise, external alarming will take place after the alarm delay time set has elapsed.

## External arming through the keyboard

**[1] [2] [3]** Type in the user code (1 2 3 in this example).

**[EXTERN]** Press key **[EXTERN]** to initiate the external arming process. A long tone sounds at the door module to confirm arming. At the radio alarm center, the arming delay time set elapses until the system is finally armed. Arming is acknowledged via the speaker of the radio alarm center or, if programmed so, by short triggering of the external siren, the flashing light, or of the internal siren (refer to page 65).

Leave the security area during the arming delay period and close the door.

If an interlock switch contact is connected, you will have to lock the door within the arming delay period. This is absolutely necessary, or the radio alarm center will indicate open detectors, thus not being ready for arming.

## External arming with the key-operated switch

Leave the safeguarding area and close the door. Lock the door with the key. This is absolutely necessary, or the radio alarm center will indicate open detectors, thus not being ready for arming (this only applies when an interlock switch contact is connected).

Externally arm the radio alarm system on the key-operated switch. To do so, turn the key to position "S". A long tone will sound on the radio door module and at the radio alarm center to confirm arming.

If external arming is not confirmed through the speaker of the radio alarm center or by programmed alarm transmitters, the system will not be ready for arming. The state of the system and possibly open detectors can be queried at the radio alarm center (refer to page 79).

## Unarming

The radio alarm system can be unarmed from the internally/ externally armed state through the keyboard or via a key-operated switch/interlock switch latch connected.

## Unarming through the keyboard

**[1] [2] [3]** Type in the user code (1 2 3 in this example).

**[PASSIV]** Press key **s** to internally/externally unarm the radio alarm system. A long tone indicates successful unarming.

## Unarming with the key-operated switch

Unarm the radio alarm system from the internally or externally armed state by turning the key-operated switch to position "S" or "U". A long tone on the radio door module, the key-operated switch and at the radio alarm center indicates successful unarming.

**Note:** If the system was already internally armed (in the presence of the user) by the persons staying in the house/apartment, it can be unarmed by turning the key to position "U" or "S".

# Concise Instructions • Mounting and Installation

## CONCISE INSTRUCTIONS

These concise instructions give a compact survey of the efficient procedure for the installation of the radio alarm system.

### 1. MOUNTING AND INSTALLATION

- Carefully check the places of installation for the components (refer to "IMPORTANT NOTES ON THE PLACE OF INSTALLATION" in the sections of the individual detectors).
- Discuss the places of installation with your customer.
- Install all components as described in their Operating Instructions manuals.
- Apply the supply voltages (for the units supplied with 230 V, apply the battery voltage first (ensure correct polarity), the apply 230 V).

### 2. DOING NECESSARY ADJUSTMENTS

**Important: The following adjustments are absolutely necessary for correct functioning.**

- Learn in the radio components from menu item 2, "LEARN DETECTOR" (refer to pages 56-58).
- Enter detectors learned in into the "LIST OF DETECTORS" (refer to page 90).
- Check detectors learned in from menu item 3, "SHOW DETECTOR" (refer to page 59), and compare with the List of Detectors.
- Enter the service telephone number from the "DISPLAY" menu item (refer to page 73).
- Set the user and installer codes (refer to page 74).

### 3. FACTORY SETTINGS

The following settings are factory-programmed:

- Attack MUTE
- Program output EXTERNAL SIREN 180 s
- Arming confirmation EXTERNAL: OFF  
Speaker: LOW
- Alarm duration EXTERN. SIREN = 180 s  
INTERN. SIREN = 180 s
- Arming delay 15 s
- Alarm delay 15 s
- Wired group inputs Normally closed contacts
- Display 0000000000000000
- User and installer codes User code = 1  
Installer code = 0000
- Telephone dialler outputs FIRE, ATTACK,  
TROUBLE, ALARM

### 4. RUNNING A SYSTEM TEST/PRACTICE ALARM

- Select the "TEST DETECT" menu item (refer to page 69) and trigger individual detectors.
- Select the "SYSTEM TEST" menu item (refer to pages 70-72) and run the system test.
- Release practice alarm in the internally armed state.
- Release practice alarm in the externally armed state.

**Important: If a telephone dialler is connected, inform the Security Service beforehand.**

## Concise Instructions • Menu Prompting

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The following concise instructions give a compact survey of the programming level accessible through the installer code.

Access can be obtained by factory-set installer code "0000", followed by pressing the u key.

### **INSTALLER CODE: 0000**

1. DATE/TIME
2. LEARN DETECTOR
3. SHOW DETECTOR
4. CLEAR DETECTOR
5. ASSIGN DETECTOR
6. ATTACK IS
7. PROGRAM OUTPUT
8. ACKNOWLEDGE
9. ALARM DURATION
10. DELAY
11. WIRED GROUPS
12. TEST DETECT
13. SYSTEM TEST
14. DISPLAY
15. SET CODE
16. TD TRANSMISSION
17. HISTORY
18. RECH BATT OFF
19. CHANGE TAMPER







# Appendix • Manufacture's Warranty

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## Manufacture's Warranty

We grant the guarantee on our units - irrespective of claims arising out of the sales contract between the final consumer and the vendor - as follows:

1. Our warranty is limited at our discretion to repair or replacement if the functioning is impaired or not ensured due to proven defects resulting from faults in material or workmanship.
2. The period of guarantee is governed by our General Conditions of Sale. Adherence to this period must be justified by confirmation of purchase date in the form of invoice, delivery note or similar documents.
3. The costs of transport are borne in all cases by the purchaser.

Please return the unit postage paid to our central service department giving a brief description of the fault:

**Gira**

Giersiepen GmbH & Co. KG

**Service Center**

Dahlienstrasse 12

D-42477 Radevormwald



The **CE**-sign is a free trade sign addressed exclusively to the authorities and does not include any warranty of any properties.

Gira  
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