Instruction Manual

Human Detector *Flex* is a product of the

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Introduction

Security and surveillance technology
for museums, exhibitions, private collections and luxury goods trade

Thank you for choosing the **Human Detector** *Flex* alarm system.

A powerful, compact and quick-to-install security and surveillance system, it supports you in protecting your exhibits and valuables. Whether paintings, sculptures or automobiles, the **Human Detector** *Flex* system features a wide range of applications.

Sensors and alarm modules are available for almost every task. These are extremely small and can be operated with inexpensive lithium batteries, which last for up to 10 years.

(HDF - **H**uman Detector *Flex*)

HDF-3D PROTECT	The **HDF-3D PROTECT** module detects the slightest vibrations (structure-borne sound) and movements. This provides for the effective protection of showcases, pedestals, technical exhibits and vehicles.
HDF-TOUCH	Approaching and touching objects can be easily detected with the **HDF-TOUCH** module. The system is ideal for securing metallic objects, but can also be used for other purposes.
HDF-HANG	**HDF-HANG** secures pictures and hanging objects on gallery rails.
HDF-OPTICAL	Pictures, paintings and other hanging objects can be secured sustainably, simply and contact-free with **HDF-OPTICAL**.
HDF-EXTERN	External sensors with an alarm output (NO or NC) can be connected directly to the **HDF-EXTERN** module. This allows the **H**uman **Detector** *Flex* System to be extended as required.
HDF-WIRE	Securing with tear-off wires is in many cases the cheapest and quickest way to secure "small items" against theft. The **HDF-WIRE** module supports up to two signalling circuits.
HDF-DOOR	**HDF-DOOR** secures doors, flaps and inspection hatches.
HDF-SHOCK	The **HDF-SHOCK** module detects heavy blows, position changes and vibrations.
HDF-REMOTE	The **HDF-REMOTE** panic button allows for alarm messages to be easily and invisibly sent by supervisors.

All alarm modules, with the exception of the **HDF-REMOTE** panic button, can additionally be operated with an external power supply unit. The connection to the alarm centres (**HDF-BUZZER** and **HDF-SPEECH**) and the **HDF-AMD** alarm management system is wireless via radio. The communication that takes place in the 868 MHz range uses a special modulation method that easily penetrates solid walls and large buildings. The ranges achieved here are often several times greater than those that can be achieved with conventional systems.

The HDF-BUZZER and HDF-SPEECH alarm centres

Two systems with different extension levels are available with the **HDF-BUZZER** and **HDF-SPEECH** alarm centres.

The basic system **HDF-BUZZER** enables the output of a loud alarm via a built-in piezo siren (buzzer). In addition, three potential-free relay outputs are available. These can be individually controlled by the alarm modules. Alarm messages are acknowledged, and the system is armed and disarmed via an external input using a key switch.

The **HDF-SPEECH** alarm centre also has a voice output. Voice and sound messages are stored as .mps3 files and used as alarm messages.

The **HDF-AMD** unit (**AMD** = **A**larm **M**anagement **D**evice) enables targeted forwarding of alarm messages to IP-based control centers according to **SIA-DC09** standard and Ademco CID encoding. A precise distinction is made here as to who is responsible for which alarm. Likewise, the **HDF-AMD** in combination with the **HDF-ANTIJAM** monitors the radio network for interfering signals. The **HDF-AMD** is an open system. Future projects - such as the transmission of measurement data (temperature, humidity, etc.), but also the connection to video control centres - can be implemented.

Safety Instructions

The **Human Detector** _Flex_ systems are designed and manufactured according to the latest quality and safety standards. The following installation and usage instructions must be adhered to:

1. Get information about safety instructions

Read the entire instruction manual before operating the devices. Keep the instruction manual in a safe place. Observe all safety instructions and notes in this instruction manual.

2. Penetration of objects or liquids

Avoid inserting or penetrating objects or liquids into the housings of the **Human Detector** _Flex_ systems. Should this nevertheless occur, immediately disconnect the unit from the power supply (mains adapter or batteries) and send the unit to an authorised dealer or to the manufacturer for inspection.

3. High temperatures

Keep the systems away from fire, heaters or other heat-producing devices. Never install the **Human Detector** _Flex_ sensors and devices in or on highly flammable objects such as fuel tanks.

4. Climate

The units have been designed for use at temperatures between -10°C to +50°C. Operating the devices outside this temperature range must be avoided and cause permanent damage.

5. Cleaning

Do not use aggressive detergents or apply excessive moisture when cleaning the **Human Detector** _Flex_ sensors. Follow the recommendations for the individual products.

6. Power supply

Do not connect the **Human Detector** _Flex_ units directly to a 230 volt mains supply. Only use a suitable power supply (as included in the scope of delivery) or battery (type CR2450 or equivalent).

Important safety note!

The installation, programming and set-up must be carried out by trained and qualified personnel. Subsequent changes during normal operation (such as the relocation of **Human Detector** _Flex_ modules) can be carried out by trained staff (not qualified personnel). However, the above-mentioned safety instructions and general rules of electrical engineering must be observed. If unsure, ask your dealer or a qualified electrician.

heddier electronic GmbH does not guarantee or assume any responsibility for installations carried out by third parties. This also applies if personnel was trained or in contact beforehand.

Human Detector Flex Sensors

The **Human Detector** *Flex* System includes a range of sensors. All sensors have an extremely compact design, low energy consumption and a high radio range. The sensor housings provide good mechanical protection and are made of shatter-proof ABS plastic with a UL94V-1 fire rating.

The following chapters describe the functions of the different types of sensors. Take the time to read the information carefully. The right choice of sensor and the correct installation are important for the faultless operation.

Note:

Please contact us, if you cannot find a suitable type of sensor for your application. We will then try to develop a possible selection or operational environment for you. We are able to adapt sensors to your needs or develop new types of sensors in special cases. **Human Detector** *Flex* is an open system and grows with the requirements of the users.

heddier electronic GmbH offers upon request:

Training and coaching for interested customers.

Contact our sales department.

HDF-REMOTE

Use and Operation Principle

The **Human Detector** *Flex* **HDF-REMOTE** hand-held transmitter can be used as a panic, alarm or hand-held transmitter. It integrates into the alarm network like a regular **Human Detector** *Flex* alarm module. However, it has a reduced range of about 200 m in open space. This can be compensated for during operation by placing radio control centres with connected **HDF-EXTERN** alarm modules.

The small hand-held transmitter can be discreetly carried in a pocket or on a lanyard. The battery life is almost infinite, since energy is only required for transmission. The **HDF-REMOTE** hand-held transmitter provides the room supervisor with additional security and helps to defuse situations that otherwise cannot be solved or can only be solved with increased effort.

The **HDF-REMOTE** hand-held transmitter can be integrated into the safety network in an intelligent way by creating complex alarm structures in **MULTI** and **PROFI mode**. A call for help from an exhibition room can, for example, be specifically forwarded to the neighbouring rooms and to the supervisor in the exit area.

The **HDF-REMOTE** hand-held transmitter supports museum staff in performing the following tasks:

- **Call for help in case of distraction attempts by visitors**

- **Calling support staff when the section needs to be vacated**

- **Triggering an alarm according to personal decision of the security staff (misconduct of visitors)**

- **Panic alarm in case of attack or threat**

- **... and much more**

System Login

The **Human Detector** *Flex* security system has three operating modes with different levels of performance. Switching between the operating modes is possible at any time. All components are upward compatible. This means you can switch to a higher operating mode at any time and use the previously purchased units without restriction. You also have the option of downsizing larger security installations or converting them into multiple, stand-alone installations. The **Human Detector** *Flex* Technology offers maximum return on your investment.

Registration of hand-held HDF-REMOTE transmitters in EASY-Mode

EASY mode is the most simple operating mode. Due to its performance, it meets the demands of a wide range of users. Up to 30 alarm sensors incl. hand-held transmitters can be connected in **EASY-Mode** to an **HDF-BUZZER** or **HDF-SPEECH** alarm centre. However, it is also possible to connect one alarm sensor with several alarm centres. This is useful in applications where an alarm is to be output at several locations.

Pairing is done by pressing the pairing and alarm button on the hand-held **HDF-REMOTE** transmitter. When this button is pressed, the system operating data and identifiers are automatically shared. No additional configuration is required.

(+) Advantages EASY-Mode:

- Pairing in seconds at the touch of a button
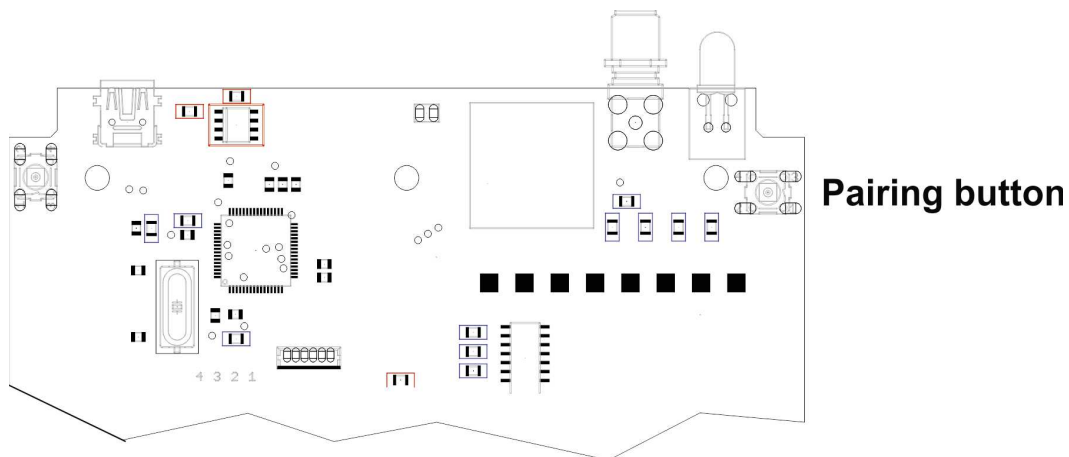- Fast training for inexperienced users

(-) Disadvantages EASY-Mode:

- Limited to 30 alarm sensors incl. hand-held transmitters max. per alarm centre
- Deletion only in complete blocks (no individual deletion)
- All paired sensors offer the same alarm behaviour at the respective alarm centre. This may vary at the individual alarm centres.
- Project documentation must be created manually by the user

To log in in **EASY-Mode**, proceed as follows:

- Open the housing of the **HDF-BUZZER** or **HDF-SPEECH** alarm centre by unscrewing the 4 screws on the back.
- Switch on the alarm centre. How?
- **Press the pairing button on the alarm centre once.** The RX LED next to the pairing button flashes once to indicate pairing readiness.

Pairing button

- **Press the alarm button on the hand-held transmitter once.** Successful pairing is indicated by a double flash of the red RX LED next to the pairing button.

- Press the alarm button repeatedly. Each time it is pressed again, an alarm is triggered.

You can now register more hand-held transmitters by repeating the process. Close the housing of the alarm centre after completion of the work.

Important note:

The alarm centre has a maximum of 30 memory locations for identifiers of alarm modules and hand-held transmitters. If all memory locations are already occupied by older installations, you should first reset the alarm centre to its original state. All 30 occupied memory locations are then deleted. Individual memory locations cannot be deleted. All alarm sensors and hand-held transmitters must be re-registered after a reset to the original state.

This procedure deletes all previous sensor registrations.

The **HDF-REMOTE** emergency transmitter does not transmit any vital signs (heartbeats). Monitoring the function and availability of the hand-held transmitter is not possible via heartbeat monitoring.

To reset the alarm centre to its original state, proceed as follows:

- Open the housing of the **HDF-BUZZER** or **HDF-SPEECH** alarm centre by unscrewing the 4 screws on the back.

- Switch on the alarm centre.

- **Press the pairing button for at least 10 seconds.** The RX LED next to the pairing button illuminates continuously during the delete process. The RX LED flashes three times when the delete process is finished. You can now stop pressing the pairing button. All connections to the previously paired sensors are now deleted. The alarm centre is reset to its original state.

Note:

Please do not forget to provide documentation of the work you carried out. This is necessary in order to completely understand the functionality of the security system.

Registration of hand-held transmitters in MULTI- and PROFI-Mode

Registration in **MULTI-** or **PROFI-Mode** is only possible with the **HDF-CONFIGURATOR** software, which is available free of charge. The operating modes provide for maximum flexibility and performance. Up to 200 alarm sensors and hand-held transmitters can be connected to one alarm centre, for example.

The entire security network is designed on the PC with the **HDF-CONFIGURATOR** Windows software. Once the design is complete, the module identifiers are transmitted to the software. The control files for the alarm centres (**HDF-BUZZER** and **HDF-SPEECH**) and the **HDF-AMD** alarm management unit are generated from this. These are then transferred to the units (**HDF-BUZZER**, **HDF-SPEECH** and **HDF-AMD**) via USB interface or WLAN.

(+) Advantages MULTI- or PROFI-Mode:

- Support of up to 200 alarm sensors and hand-held transmitters per alarm centre

- Easy configuration with the **HDF-CONFIGURATOR** Windows software

- Variable setting of alarm behaviour and networking

- Automatic generation of complete project documentation

- Forwarding of alarm messages to portable digital terminals of supervising staff

(-) Disadvantages MULTI- or PROFI-Mode:

- Familiarisation with **HDF-CONFIGURATOR** software required

- More complex installation of the **HDF-AMD** alarm management system

The exact procedure for registering sensors in **MULTI-** and **PROFI-Mode** is described in the chapter "**Human Detector** *Flex* **Software**".

Maintenance and Care

The **Human Detector** *Flex* **HDF-REMOTE** hand-held transmitters require no special maintenance and care. However, as these are safety-relevant systems, regular checks are recommended. These can be carried out as part of the regular inspection procedure of the security technology. It is recommended, however, to occasionally test the function during normal operation. This is important because the **HDF-REMOTE** hand-held transmitter has a reduced range in comparison with permanently installed alarm modules. These tests allow you to check the usability of the hand-held transmitter in the relevant area.

A battery change is usually not necessary. Should a battery change become necessary, proceed as follows:

Changing the batteries of the alarm modules

- Open the battery compartment on the back of the hand-held transmitter by removing the two securing screws.

- Remove the battery from the housing. Carefully prise it out of the holder by pressing on the edge of the battery.

- Insert the new **CR2032** battery into the holder. The positive pole should point upwards. Ensure that the battery is properly inserted.

  ### Note!

  Only use branded batteries of the **CR2032** type. Inexpensive batteries from unknown manufacturers often have a significantly lower capacity and a higher self-discharge. **Defective batteries can leak. The batteries contain mercury and there is the risk of poisoning if touched.**

- Close the hand-held transmitter housing by inserting and carefully tightening the two securing screws.

- Document the battery change.

Cleaning the hand-held transmitter

Normally, it is not necessary to clean the housing. Should it become necessary, we recommend the use of a mild glass cleaner.

Please proceed as follows:

- Take a sufficiently large piece of kitchen paper and spray the glass cleaner onto the paper once or max. twice.

- Spread the cleaning liquid on the kitchen paper and carefully wipe the surface of the hand-held transmitter with the paper.

- Then check the function of the hand-held transmitter by triggering a test alarm.

Note!

Do not use solvents to clean the hand-held transmitter housing. Do not spray the housing directly. Moisture must not penetrate the housing. In case of moisture penetration dry the housing and check its correct function.

In case of dirt or moisture in the hand-held transmitter housing and its function is permanently compromised, please contact our technical customer service immediately.

Terms of Warranty

The warranty period is 2 years from the date of purchase shown on the invoice. Different warranty conditions for commercial customers result from the General Terms and Conditions of **heddier electronic GmbH**. In the event of a warranty claim, the user is entitled to send the unit to their authorised dealer for repair. For each repair within the warranty period, a proof of purchase needs to be presented to the authorised dealer. The services included in the warranty cover all spare parts and labour costs necessary for repair.

Improper use or faulty installations are not covered by the terms of this warranty. In addition, technical modifications to the unit by unauthorised persons will render any claim invalid. The manufacturer is not liable for damage caused during transport to the service workshop.

The statutory warranty rules are not affected by the guarantee scheme. No guarantee or warranty claim exists for units where the serial number labels have been removed or the prescribed conditions of use and operation have been violated.

Procedure in Case of Warranty Repair

Defective **Human Detector** *Flex* components should be delivered to the authorised dealer in the original box or equivalent packaging. Attach a copy of the purchase invoice. No responsibility can be assumed for safe delivery by the carrier. It is therefore recommended to take insurance against loss, theft and damage during transit.

The **Human Detector** *Flex* components supplied cannot be returned after the original cardboard box has been opened or the seal has been damaged. Devices without a serial number decal are excluded from the warranty and guarantee agreement.

Miscellaneous

Changes to technical specifications and errors are possible. The manufacturer reserves the right to change the technical specifications of individual devices and components at any time and without providing reasons. The copyright of this document is owned by **heddier electronic GmbH.** The production of copies for work support or maintenance of the **Human Detector** *Flex* security systems is permitted at any time. The production of copies for distribution to third parties, even in excerpts - by whatever means - is only permitted after written approval.

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Help & Support

Despite its simple operation, many users find modern security technology quite complex and can grasp the concept to some extend only. The diversity of museums and collections requires an expert and the task-related installation of the **Human Detector *Flex*** technology. The aim is to create a security system that is optimized to customer needs. If you are in charge of the installation, we would like to make the following suggestions:

Suggestion	Thoroughly read the operating instructions to understand the various functions and special features of the individual components. Compare the delivered systems with the documentation.
Suggestion	It often is beneficial to try out an installation outside the exhibition first. Build small functional units and put them into operation. Change the settings of the various components and observe the outcome.
Suggestion	Plan your security system in advance. Create a diagram of which sensors collaborate with which alarm devices. Use your diagram as a guide during the installation. If you make changes to your concept - which is very likely - enter them immediately in your diagram. **Remember, accurate project documentation is a prerequisite for all future work on your security system.**
Questions	Please direct any questions to your retailer first. They should be trained and be able to answer your questions. If not, they will receive the necessary support from us.
Training	Take advantage of our training opportunities. We will train you and your colleagues in the installation and use of the **Human Detector *Flex*** security technology. The training courses can take place at your premises or at our training centre in Coesfeld (near Münster in North Rhine-Westphalia, Germany). Training can be combined with the initial installation of your security system, if required. Our sales department will be happy to inform you about costs, conditions and dates for technical training.
Support	Do you need help quickly? Our technical support can be reached by phone **Monday to Thursday between 8.00 and 17.00 or on Friday until 15.00**. Training and technical support can be provided by email, phone or video conference (Microsoft Teams).

Technical Support: **heddier electronic GmbH**
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Important!	**Check the functions of all installed components at regular intervals.** This is important in order to detect deviations from normal operation and possible errors at an early stage. Prepare and archive a test protocol. The tests can range from triggering a test alarm to checking the radio links and battery voltages. We will tell you about the exact procedure in our training courses.

heddier electronic GmbH reserves the right to make different service agreements with museums, collections, private collectors and other institutions. These agreements may include special services, response and repair times. All such agreements shall be in writing and signed. Verbal agreements outside the scope of the normal use of our systems and support are only valid after written confirmation.