



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 - **Human 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 Human 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 .mp3 files and used as alarm messages.

The **HDF-AMD** unit (**AMD** = **A**larm **M**anagement **D**evice) enables targeted forwarding of alarm messages to digital terminal devices (e.g. Android tablets and smartphones) and to external services. A precise distinction is made here as to who is responsible for which alarm. Likewise, the **HDF-AMD** in combination with the **HDF-ANTI-JAM** 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.

hedder 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 Alarm Centers and Management

The **Human Detector Flex** alarm system has a larger number of sensors. These detect threats and monitor a wide variety of situations. In the event of an alarm, they send a coded radio signal. To ensure that this is noticed by the operator, various alarm control centers and an alarm management system are available.



In the following chapters, the operation of the various systems is described.

HDF-BUZZER	Alarm centre with piezo siren and three switching outputs
HDF-SPEECH	Alarm centre with piezo siren, three switching outputs and voice output
HDF-AMD	Alarm-Management-Device
HDF-ANTIJAM	Jammer detection system

HDF-ANTIJAM

Use and Operation Principle

The **Human Detector Flex** Alarm Management System **HDF-AMD** can be extended by the **HDF-ANTIJAM** module. For increased radio network security, it is important to detect interfering transmitters. This functionality is taken over by the alarm management system. For this purpose, the **HDF-ANTIJAM** sends out defined identifiers at regular intervals. A "jammer alarm" is triggered, if these identifiers are repeatedly disturbed and cannot be properly received by the **HDF-AMD**.

Note!

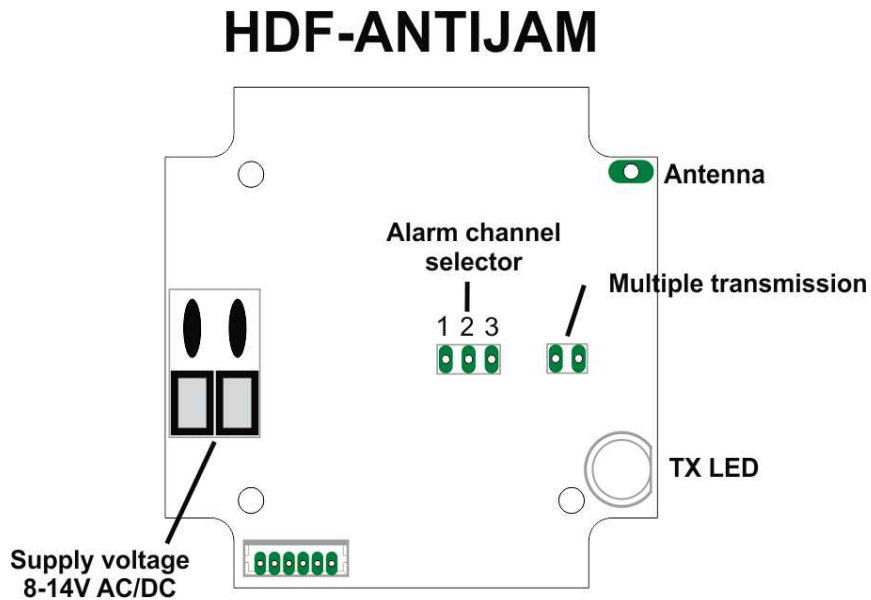
The **HDF-ANTIJAM** system protects against interfering transmitters that emit random permanent interfering signals. It is not of importance whether these signals are frequency-related or broadband. Interfering signals are reliably detected in this way.



The **HDF-ANTIJAM** is an additional module that is used exclusively in **PROFI mode**. Programming is not required. It is carried out with the **HDF-CONFIGURATOR** software as part of the programming for the **HDF-AMD**.

Design and Connections

The electronics of the **Human Detector Flex** module are located on a printed circuit board inside the compact transmitter housing. Open the housing cover by removing the four locking screws. **Do not remove the four screws that connect the circuit board to the base plate of the housing.** There are no connecting elements or controls below the circuit board that are necessary for operating the sensor electronics. If you have opened the housing, please handle the sensor electronics with extreme care.



Terminal Operating Voltage	<p>Operating voltage 8-14 V, AC or DC, current 100 mA min.</p> <p>The connection has internal reverse polarity protection. Only use rigid connection cables or flexible cables with wire end ferrules and a cross-section of 0.25 ... 0.34 mm². The use of cables with larger cross-sections may cause damage to the terminal.</p>
Selecting the Alarm Channel	<p>Pin 1 and pin 2 connected -> alarm channel 1 (default) Pin 2 and pin 3 connected -> alarm channel 2</p> <p>Ensure that the micro connector is properly plugged in. It may come loose otherwise during operation and deactivate the HDF-ANTIJAM module.</p>
Multiple transmission	Jumper must be plugged in, NC
TRANSMITTING LED	Red LED flashes during transmission
Antenna	1/4 lambda wire aerial for 868 MHz

Mounting Location and Installation

The power and flexibility of the **Human Detector Flex** alarm system lies in its wireless radio connection. Protection against interfering signals is important, as these can negatively influence the functions of wireless alarm systems.

It is possible to use one or more **HDF-ANTIJAM** modules. They send a coded pilot signal at intervals of approx. 10 seconds. This is monitored by the **HDF-AMD** alarm management system. The **HDF-ANTIJAM** units should be installed in a half-way position to the **HDF-AMD**. This is approximately half the distance of the **HDF-AMD** to the farthest sensor module.

The use of several **HDF-ANTIJAM** should be considered if

- several **HDF-AMDs** are in use
- the building to be protected has several wings, for example, and the **HDF-AMD** is placed centrally in the building
- the building to be protected has several floors.

When installing the **HDF-ANTIJAM** modules, the same rules must be observed as for the installation of the sensor modules:

- Do not install the module directly on metal surfaces.
- If this is not possible, try to keep a minimum distance of approx. 40 cm from the metal surface. This is important to ensure proper radiation of the high frequency.
- If possible, select the installation position in such a way, that there are no large metal parts between the **HDF-ANTIJAM** and **HDF-AMD**.
- Choose the location of the installation to ensure access to the modules.
- **Unauthorised persons should never have free access to the modules. This also applies to any connected cables.**

Note!

The **HDF-ANTIJAM** module is deliberately not operated with a battery. The external power supply should be in the same power supply system as the operating voltage of the alarm centres. This would be detected in the event of a failure of the supply network, provided that the alarm control panels and the alarm management system are connected to an uninterruptible power supply.

System Login

A login of the **HDF-AMD** is not necessary. The registration takes place during the setup by the **HDF-CONFIGURATOR** software.

Maintenance and Care

The **Human Detector Flex HDF-ANTIJAM** module for the detection of interfering transmitters requires no special maintenance and care. However, as these are safety-relevant systems, regular checks are recommended. The following functions should be checked:

Regular testing of the HDF-ANTIJAM module

It is recommended to check the functionality of the system at regular intervals. The test frequency must be in accordance with the security plan of your institution. **At least one test should be carried out per year. Record the test and archive the documentation.**

The tasks listed below must be carried out:

- Check that the red TRANSMITTING-LED flashes briefly at regular intervals of 10 sec.
- Check that the **HDF-ANTIJAM** is properly mounted.
- Check that the **HDF-ANTIJAM** shows no sign of external damage.
- Check that the three external antennas are correctly mounted and adjusted.
- Check that no shielding objects have been retrofitted near the **HDF-ANTIJAM**.
- Check the correct function of the voltage supply to the **HDF-ANTIJAM**.

Note!

HDF-ANTIJAM messages cannot be checked for correctly encrypted transmission. This is, however, indicated by the flashing TRANSMITTING-LED. Provided you have checked the associated mandatory **HDF-AMD** in the system, a malfunction of the **HDF-ANTIJAM** would be reported.

It is important that the inspection work is carried out diligently by instructed personnel. We can carry out this work on request.

Please contact our sales department should you be interested in this service.

Cleaning the HDF-ANTIJAM housing

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 **HDF-ANTIJAM** surface with the paper.

Note!

Do not use solvents to clean the 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 HDF-ANTIJAM 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 **heddiel 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 **heddiel 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 extent 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: **heddi er electronic GmbH**
support@heddi er.com
Phone: +49 2864 95 178-0

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.

heddi er 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.