

Requires 3 x AAA batteries (not included).

WARNING! This toy does not provide protection. The lenses do not protect against impacts or UV radiation. Do not look directly at the sun as it may cause serious injury to your eyes.



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Please retain the information in this manual for future reference.

Colour, designs and decorations may vary from those shown in the photographs.

Printed in China.



The purpose of the crossed-out wheelee bin symbol is to remind us that most electrical product and batteries contain trace elements which could be harmful to our environment and therefore our health. We must all be careful to dispose of them responsibly in a specifically designated way – either using a collection scheme or into the correctly labelled civic amenity (NOT into general waste) – this will help your local authority to arrange to recycle or dispose of them in the appropriate manner.



Item no. D13

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Night Vision Goggles

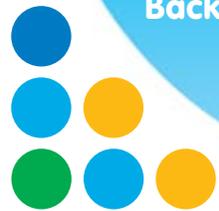


Instruction Manual

Explore Your World

Ages 8+

Components



Your Thermo Goggles open up the invisible world of infra-red heat. Unlike night vision devices that rely on amplification of light, your heat-seeking goggles rely on detection of human and animal heat.



This incredible device lets you track humans and animals even in complete darkness! Simply wear the goggles, turn your head very slowly* (see page 5) and the thermal sensor will indicate a heat trace from any humans/animals (or any other heat sources) that are in front of you. You will not be able to 'see' what it is, but your goggles will

indicate something or someone with a heat trace is there. In "stealth mode" (lights off) you can track your target(s) in darkness without them being aware that you have this amazing ability to sense them, but they cannot sense or see you, as long as you are quiet!

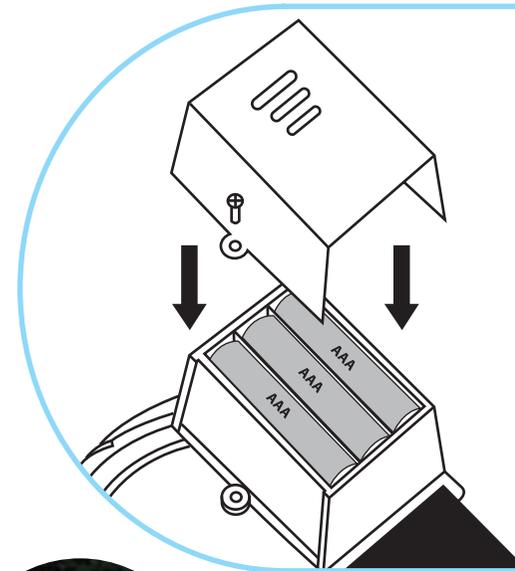
The goggles also have 2 x integral LED nightlights which allow you to see in the dark. You have two beams of light radiating from your headband which leaves your hands free to scramble or carry equipment. Of course with lights on, your target can see you!

Although the thermal sensor is primarily set to human/animal body heat wavelengths, the device will also sense other heat sources such as hot drinks and many other heat sources that are in our everyday environment.

As your goggles are a completely new type of tracking instrument it is very important that you fully read the instructions below to ensure they are operated correctly and you understand how they work.

Batteries

1. Unscrew the battery cover with a small Phillips (cross head) screwdriver.
2. Open the compartment door.
3. Insert 3 x AAA batteries with positive (+) and negative (-) ends facing the directions indicated in the battery compartment.
4. Replace cover, ensuring that it is securely tightened.



●●● IMPORTANT INFORMATION – Safe Battery Usage

- Batteries should only be replaced by an adult.
- Be sure to insert batteries correctly to prevent battery leakage.
- Always use fresh batteries, do not mix old and new.
- Replace all batteries at the same time.
- Do not mix alkaline, carbon-zinc or rechargeable batteries. Use only batteries of the same or equivalent type as recommended.
- Do not attempt to recharge non rechargeable batteries.
- Rechargeable batteries are to be removed from the toy before being charged.
- Rechargeable batteries are only to be charged under adult supervision.
- Always remove exhausted or dead batteries from product.
- If the unit will not be used for an extended term, remove the batteries. Otherwise batteries may leak or cause damage.
- Do not short-circuit the terminals.
- Make sure the battery compartment is secure.
- Do not take a battery apart.
- Do not dispose of batteries in fire; they may explode.
- Do not immerse battery-operated toys in water; wipe clean instead.

●●● Using Your Goggles:

Fitting the head band: Make sure the goggles sit comfortably and safely on your head by adjusting the soft headband with the integral slide clip.

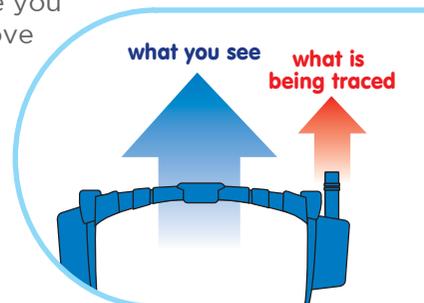
Turn on the goggles using the switch located under the sensor (see page 2). There are 3 positions for the switch. While you are wearing the goggles; the middle position is OFF, forward is Sensor and Lights, back is Sensor only (stealth mode).

After switching on your goggles, the heat sensor will take approximately 40 seconds to settle, in this time period the LED "Heat Trace" indicator will stay illuminated. After the settling period, the LED indicator will go out and will now respond (illuminate) when detecting heat targets.

To quickly check that your goggles are working, keep your head still and wave your hand in front of the sensor which should illuminate the indicator. Remove your hand, wait for the heat sensor icon to go out and you are ready to start.

*It is very important to move your head very slowly in the field of view where you want to detect heat traces. Moving too fast may cause false triggers.

Basically your sensor is trying to find and recognise heat, so needs to be given time in each position to evaluate the temperature. Your goggles cannot operate correctly if quick sweeps of an area are made. Turn you head slowly from left to right (or vice versus), taking at least 40 seconds each sweep. Once you have located a likely heat source you can move closer to to investigate. It is important to remember that the sensor is to the right side of your viewing lens, which is the direction your goggles are searching for heat, (i.e. not where you are looking through your lens). You will need to practise to become used to where the sensor is pointing - being the direction the heat source is actually located.



The heat we can feel from sunlight, a fire and a radiator is infrared. However, all objects emit some degree of infrared (IR) radiation.

The Thermo-Tracking sensor in your goggles is very directional with a small viewing area, with humans it will work best if you look at head level as a face gives off a good heat trace. If you believe a person is hiding, then start at head level and move very slowly down in case they are bending or squatting in their hiding position. Please note: thick clothing can completely mask a person's heat trace, (which shows how we actually keep warm thanks to jumpers and coats).

Your goggles work best outside at night as the temperature is much lower, and the sensor will not pick up so many other ambient heat traces. The goggles will also work inside your home and outside during the day. However, the sensitivity on a warm day (or in a warm room) may be less than usual as the background (full area) heat around the human/animal will be closer to their own body heat emissions.

The LED light source is only intended for use at night or when too dark to see properly.

As it is invisible to the naked eye, "heat radiation" can only be sensed or observed through the use of specialised equipment.

Our bodies radiate and absorb infrared energy through the skin. The military uses infrared sensors to locate and track human targets.

Function Modes

Full mode - both night LED's illuminated and thermal tracking enabled. With this mode (in darkness) any people/animals that you are tracking will see your position.

Stealth mode- the night LED's are turned off and thermal tracking is enabled. In darkness any people/animals that you are tracking will not see your position. This mode should ideally be used when you are stationary and your target is under intense surveillance.

Caution: Be careful moving around in the dark without lights helping you to see, especially on uneven ground, where objects are in the way that you may fall over and near water sources like ponds, lakes and rivers).

So now you are about to discover the thermal world that is all around us! Interesting objects that can give off thermal traces are:

- Humans.
- Animals.
- Computers and some computer monitors.
- Radiators.
- Water pipes.
- Hot drinks.
- Lights (especially incandescent lamps) - even when turned off they can emit a thermal trace for some time as the lamp/tube cools down.



Your detector senses heat, but converting infrared heat (IR) into an image that the human eye can actually see is only possible through a process called thermal imaging. Cameras that offer this are expensive to buy.

- You may also be able to detect heat coming from your house walls (inside and out). This may be due to water pipes in the wall, radiators and other heaters, or even poor insulation. You can also sometimes get a heat source trigger from looking at windows as there can be a big heat differential there.

CAUTION: Some heat sources you detect may be VERY HOT, e.g. water pipes. Do NOT touch heat indicated surfaces.

A fun game to play with your goggles is to get someone to try a creep up on you in the dark without detection, they will have to move very slowly and walk straight at you, any slight moves to the left or right should trigger the detector. To try this out, make sure that the Thermo-Tracking sensor is pointing at the target persons head at the start and throughout the game.

