

Instruction manual



LASER *OP* **AUTOMATIC 200**

To scare birds with a laser beam



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Im- en Export Frijters
Rijsbergen B.V.
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1 INTRODUCTION

Thank you very much for choosing this laser operated scarecrow from it's manufacturer Im- en Export Frijters Rijsbergen B.V. On the Internet, Im- en Export Frijters Rijsbergen B.V. uses the name www.ketrop.com

The instruction manual describes the laser operated scarecrow, model "LaserOp Automatic 200". The instruction manual contains important information about the safe and correct handling of the "LaserOp Automatic 200", hereafter called "LaserOp".

The "LaserOp Automatic 200", described in this instruction manual, has been designed to scare birds away by means of a laser beam.

The instruction manual will show you how to use the LaserOp in a safe manner, and how to service it in order to obtain maximum efficiency and device life.

This Instruction Manual has been compiled with great care. However, should you find any ambiguities, please contact your supplier before starting the operation of the LaserOp.

The correct operation of your LaserOp can only be guaranteed if it is used, maintained and cleaned according to the procedures explained in this instruction manual.

The images in this instruction manual are intended as instructive material only and cannot serve any other purpose.



Please read the instruction manual carefully before operating the device. Always keep the instruction manual available near the LaserOp as a reference, in order to have the opportunity to consult the "Operating and Safety Instructions" it contains at any time.

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This is a translated copy of the original instruction manual, written in the Dutch language.

2 GENERAL

2.1 WARRANTY

The General Terms & Conditions of Im- en Export Frijters Rijsbergen B.V. are applicable. Im- en Export Frijters Rijsbergen B.V. cannot be held liable for any injuries or damages that may occur, if the LaserOp is used in any other way than those described in the Intended Use, the Operating Instructions and the Usage Requirements, and/or if the LaserOp had been modified in any way and/or if any foreign devices or objects had been added to it.

2.2 SYMBOLS WITHIN THIS INSTRUCTION MANUAL AND ON THE LASEROP DEVICE

SYMBOL	MEANING	SYMBOL	MEANING
	Take care! Important instruction within the Instruction Manual		Reading the instruction manual is mandatory*
	Laser beam*		Prohibited to unauthorized individuals*

* Placed onto the Laserop Automatic 200

3 DEVICE DESCRIPTION LASEROP

3.1 APPLICATION

Your LaserOp has been specially designed as a professional tool, to be used by a trained, qualified specialist, specifically designated by the owner of the device. The LaserOp is intended to be used outdoors. The LaserOp is appropriate to scare birds away, up to a distance of 2 km (~1 mile), depending on the environmental conditions.

The LaserOp is powered by a 12V battery.

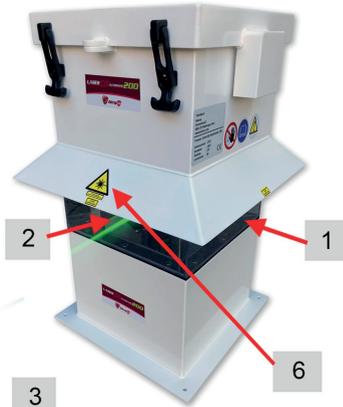


The laser is to be operated with the smallest possible beam.
The device is delivered with the smallest possible beam by default.

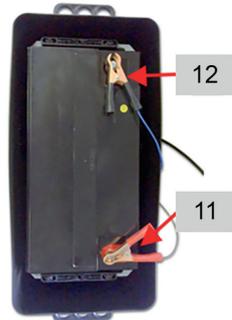
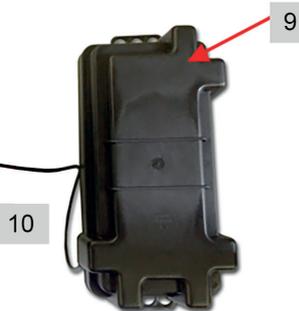
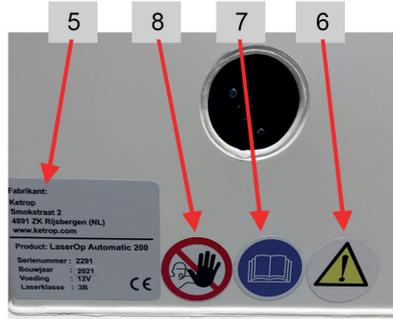
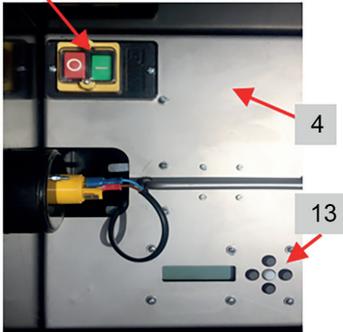
3.2 SAFETY MEASURES

- The LaserOp is equipped with a main switch that can be locked by means of a padlock.

3.3 THE LASEROP LAYOUT



- 1 LaserOp external enclosure
- 2 Laser beam aperture
- 3 Main switch
- 4 Internal body
- 5 Machine plate
- 6 Laser labels
- 7 Label "Read the operating instructions"
- 8 Label "Accessing the internal components is forbidden"
- 9 Body with battery cover
- 10 LaserOp connection to the battery
- 11 Battery connector, red = +
- 12 Battery connector black = -
- 13 Push buttons for settings with the display
- 14 Turn powerplug in socket to left for disassembly
- 15 Turn powerplug to right, "click"



Pull pawl back and turn left for disassembly.

4 SAFETY

Before operating the LaserOp, make sure to carefully read the Safety Instructions.

4.1 SAFETY INSTRUCTIONS



Before installing the LaserOp, check the foundations and the substrate to make sure it is strong enough to provide proper support. Any possibility of sagging should be excluded.

The installation, commissioning, setup, operating, cleaning and servicing of the LaserOp can only be performed by specially trained personnel. An “internal certification/authorisation” at the operator’s organisation is recommended in order to avoid that any unauthorized individuals might manipulate the LaserOp.

Ensure no other people are close to the working area. NEVER allow any children around the working area. Make sure nobody might touch the LaserOp.

Using the device near residences, roads and any other obstacles is only allowed after a proper risk assessment/risk inventory evaluation, performed correctly and in accordance with the applicable laws and rules.

If necessary, place warning signs for any possibly exposed persons, even if such persons aren’t present on the premises at that time.

Commissioning and use

NEVER allow yourself to be distracted when you are operating the device.

Ensure the LaserOp is clean at all time.



Do not start the setup the LaserOp if people are or could be within the reach of the laser beam.

Use the LaserOp as little as possible in areas within the reach of the device, where there could be people with an eye-height of less than 1 meter compared to the working height of the LaserOp.



Opening the LaserOp is only allowed to perform the setup of the device.

The user isn’t allowed to perform maintenance and/or repair activities.

Service and repairs



Service and repairs should only be performed by:
the supplier of your LaserOp

or by

the manufacturer:
Im- en Export Frijters Rijsbergen B.V.
Smokstraat 2, 4891 ZK Rijsbergen (NL)
The Netherlands
Phone: 0031 (0)6-51 35 34 47
E-mail: info@ketrop.com

PROTECTION EQUIPMENT

It is important to use the following personal protection equipment is recommended whilst performing these different tasks.

When transporting, installing and setting up the device:



Safety shoes

When setting up, operating and checking the device:



Laser safety goggles

4.2 SAFETY SYMBOLS ON THE LASEROP

The following labels are affixed to the LaserOp as indicated on the layout. Refer to paragraph 2.2 for the meaning of each symbol.



4.3 LAWS AND RULES CONCERNING LASER CLASSES AND SAFETY

The laser classification and this instruction manual have been compiled in accordance with the harmonized European Standard EN IEC 60825-1:2014.

The operator should comply with the requirements listed in sections 6.12, 6.26, and 6.27 of the ARBO resolution.

4.4 RESIDUAL RISKS AND RECOMMENDATIONS



The residual risk of the LaserOp device is that eye damage may occur after looking straight into the laser beam, with or without optical devices.

The installation location of the LaserOp must be chosen in such a way that looking into the laser beam cannot occur accidentally.

The owner has to take appropriate measures to ensure that possibilities of doing so are reduced to a minimum.



Looking into the laser beam from within a distance less than 1,016 metres (0.65 miles) from the device can cause serious eye damage. Should you happen to look into the laser beam from within this distance, you should immediately contact a physician or an oculist to check for possible eye injuries.

4.5 LASER BEAM POWER

This is a Class 3b laser device. The output power of this laser device is 100 mW at a laser beam wave length of 532 nm and applicable to the full surface of the lens. The power of the laser beam has been defined according to EN IEC 60825-1:2014: 21 mW over 7 mm at a distance of 100 mm from the lens. Besides this, the output power has also been defined according to EN IEC 60825-1:2014 (NOHD).

Power in mW	Distance in metres	Power in mW	Distance in metres
12.2	0.5	7.8	100
11.9	5	4.7	250
11.7	10	2.4	500
9.7	50	1	1016



SAFETY: The foregoing information means that the LaserOp 200 MAY ONLY BE OPERATED by trained operators, who have been “internally certified” by the owner.

The owner shall ensure that the operator knows and understands all requirements relating to the security and the operation of the device.

He shall have the operator sign a document specifying he was trained and instructed about the use of the LaserOp. The risks and security aspects related to a class 3b laser device are included herein.

All safety and operating instructions mentioned in this instruction manual are also included herein.



The installation of safety signs is necessary to warn any individuals present within a distance of less than 1,016 meters (0.65 miles) about the increased risks related to looking into the laser beam.

5 ACTIVITIES TO BE PERFORMED BY THE OPERATOR

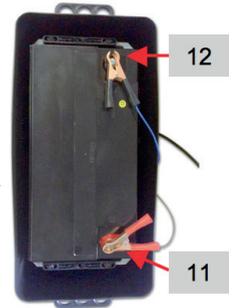


GETTING STARTED: The LaserOp is to be installed and set up by the operator.

The activities the operator is allowed to perform are:

1. **Activate or deactivate the device by means of the main switch (3)**
ON = activated
OFF = deactivated
2. **Lock (temporarily) the main switch (3) by means of a padlock**
3. **Replace the battery**
Getting started: Take care the battery is always correctly loaded, voltage of at least 12V.

- 3.1 Remove the cover of the battery compartment (9).
- 3.2 Set the main switch (3) to the OFF position.
- 3.3 Disconnect the battery.
- 3.4 Connect the red wire (11) to the positive lead = +
- 3.5 Connect the black wire (12) to the negative lead =
- 3.6 Replace the cover of the battery compartment (9).
- 3.7 Set the main switch (3) to the ON position.



6 DEHUMIDIFIER



A dehumidifying Penguin bag is included in the LaserOp; make sure it remains in the LaserOp at all times.

When the Penguin bag gets saturated with moisture, it will change colour from blue to pink. When this occurs, you should remove the Penguin bag out of the LaserOp, place it on a tray and heat it during 3 minutes in a microwave oven, set at 600 Watt. The tray should not hold any metal. After this procedure, place the Penguin bag back into the LaserOp.

7 CLEANING

The user is permitted to clean the outside of the LaserOp.
A scratch-free cloth should be used for the transparent plastic or glass.



Remove all power from the LaserOp by setting the main switch (3) to the OFF position and follow the instructions of the instruction manual before cleaning the LaserOp.

Repairing and/or changing (electric) parts, except for the battery, may only be performed by specialized technicians, and under the supervision of the manufacturer.

Contact your supplier for more information if required.

Always keep the glass surface of your LaserOp perfectly clean! Use a special tissue to do so, e.g. a lens cleaning cloth. Never use paper.

8 TECHNICAL SPECIFICATIONS

WEIGHT	22 kg
DIMENSIONS	460 x 460 x 700 mm
NOISE LEVEL	< 70 dB(A)
POWER SUPPLY	12 V
LASER CLASS	3B
TEMPERATURE RANGE*	-15 TO 50 ° C
IP CLASS	IP 66

* If the ambient temperature might rise above 40° C, it is recommended to install an overhead cover in order to avoid excessive temperatures inside the LaserOp.

Because of the ongoing innovative development of the LaserOp, Im- en Export Frijters Rijsbergen B.V. reserves the right to change the above mentioned technical data without prior notification.

Furthermore, the technical data may be different from one country to another.

The LaserOp is equipped with push buttons and a display (13) that allow the operator to change the settings if required.



Explanation of the settings:

You can set 2 time periods during which the device should be activated.

E.g., from 6 a.m. until 10 a.m. Within this time period you can set the device to be active during a number of minutes, or to remain in standby.

Each time period can be configured to be as long as you want, until 24 hours a day.

To access the menu, press the central white button.

If no other button is pressed (within a few seconds), the menu will revert to the state it was in just before pressing the white button (device active if it was active or on standby if it was on standby).



NEVER LOOK INTO THE LENS when changing the settings!



Safety: If you access a menu **outside of a time period, the laser will be activated briefly** and then deactivate again.

You can check the display at all times to see during which period of time the LaserOp is active.

If the LaserOp is outside an active period of time, the actual time will be displayed.

E.g., the display could show:

- "Timer 1 > Active" or the actual time
- "Timer 2 > Active" or the actual time
- The temperature is always displayed



Safety: The LaserOp can turn active at any time when the time setting switches to an active time period.

Settings menu:

Press:	Information on display:	Press:
WHITE BUTTON	English	BLACK BUTTON LEFT RIGHT UP DOWN
1x	WAIT or SET SPEED - 1928 +	Down Up
2x	SET POSITION POINTS/ Notice: Configurable points: 2 up to 14 Point beam towards 1st point	Left Right Up Down
1x	Confirm 1st point (press white button 1 x)	Left Right Up Down
1x	Point beam towards 2nd point	Left Right Up Down
1x	Confirm 2nd point (press white button 1 x) and so on	Left Right Up Down
1x	Point beam towards last point (2 up to 14)	Left Right Up Down
2x	Confirm last point (press white button 2 x) Notice: The device will rotate whilst configuring.	
3x	ON TIME: 2 MIN - / + per minute Device active within the set time period	Shorter Longer
4x	OFF TIME: 2 MIN - / + per minute Device on standby during the set time period	Shorter Longer
5x	TIMERS / TIMERS Time period setting = press right button	
	Hours plus or minus	Less More
1x	White button	
	Minutes plus or minus	Less More
6x	SETTINGS / Setting the actual time	
	Hours plus or minus	Less More
1x	White button	
	Minutes plus or minus	Less More
1x	White button	
	Setting the lowest point,	Up Down
1x	White button, device rotates again	



If you have problems with the settings, then perform a reset:

1. Switch off the device with the main switch.
2. Press and hold both the left and right black buttons.
3. Switch the device back on with the main switch while holding down the 2 black buttons.
4. Do not release the 2 black buttons until the display light turns off and the laser turns on.

10 FAULTS OVERVIEW

FAULT	POSSIBLE CAUSE	REMEDY
LaserOp doesn't start.	<ul style="list-style-type: none"><li data-bbox="423 400 512 424">• Battery <li data-bbox="423 616 684 639">• Main switch not unlocked	<ol style="list-style-type: none"><li data-bbox="714 400 941 448">1. Check if the battery is connected.<li data-bbox="714 456 983 504">2. Replace the battery with a fully charged battery.<li data-bbox="714 512 983 560">3. Check the battery voltage. It should be at least 12V. <p data-bbox="714 616 983 663">Put the main switch into the "ON" position.</p>
LaserOp doesn't stop.		<p data-bbox="714 679 972 783">Put the key switch into the "OFF" position and contact the manufacturer or your supplier.</p>
The beam of the LaserOp points too high.	<ul style="list-style-type: none"><li data-bbox="423 799 695 847">• Check the physical location and height setting	<p data-bbox="714 799 964 847">Adjust the location and/or the height setting.</p>

11 EC-DECLARATION OF CONFORMITY

EC-Declaration of Conformity

(Directive 2006/42/EC, Appendix II-1A)

Im- en Export Frijters Rijsbergen B.V., Smokstraat 2, 4891 ZK Rijsbergen (NL), The Netherlands, hereby declares that the device mentioned hereafter, meets the requirements of the Directives and Standards mentioned hereafter amongst others.

Type: LASEROP AUTOMATIC 200

Serial: to be found on the device itself

Year Built: 2017

EC-Directives applied:

- Machinery directive 2006/42/EC
- EMC-Directive 2014/30/EU

Applied Standards:

- EN ISO 12100:2010 (Safety of machinery – General principles for design – Risk assessment and risk reduction)
- EN 1005-2: 2003/ A1:2008 (Manual handling of machinery and component parts of machinery)
- EN IEC 60529:1992/A1:2000 (Degrees of protection provided by enclosures (IP Code))
- EN IEC 60825-1:2014 (Safety of laser products – Part 1: Equipment classification and requirements)
- EN 61000-6-2: 2005 (Electro Magnetic Compatibility (EMC) - Part 6-2: Generic Standards – Immunity for Industrial Environments)
- EN 61000-6-4:2006+A1:2011 (Electro Magnetic Compatibility (EMC) – Part 6-4: Generic Standards – Emission standard for industrial environments)

Rijsbergen, 1st of January 2017



A. Frijters, CEO

12 MACHINE PLATE

The machine plate contains all relevant information of your LaserOp.

Please always have the type, year of manufacturing and serial number at hand when you contact your supplier or the manufacturer for service or questions.

Fabrikant:

Ketrop
Smokstraat 2
4891 ZK Rijsbergen (NL)
www.ketrop.com

Product: LaserOp Automatic 200

Serienummer : 2201
Bouwjaar : 2016
Voeding : 12V
Laserklasse : 3B



13 CONTACT DETAILS OF MANUFACTURER

Im- en Export Frijters Rijsbergen B.V. Ketrop

Smokstraat 2
4891 ZK Rijsbergen (NL)
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