Hawk Laser - SCAN 30

User Manual

Hawk-Laser

SCAN 30

Laser bird repeller

The Scan30 laser is developed as an eco-friendly, safe, silent and effective tool for bird control. It is designed to chase birds from Agricultural environments, warehouses, loading docks, railroad sidings, tunnels, breezeways, underpasses, stadiums, barns and storage sheds.

The laser pattern of the Scan30 is fully programmable and will run between preset positions. Using the controller of the Scan30, the preset position can be easily programmed and saved in the Pan/Tilt device.

LASER TECHNICAL & SAFETY INFORMATION

WARNING- Laser Safety Hazard Warning

⚠ WARNING

This Hawk-Laser SCAN30 emits laser light. Laser light is very bright and can potentially cause injury to the eyes if not used correctly.

Read all operation and safety information prior to use.

NEVER look into laser or at bright reflections.

NEVER aim the laser of SCAN30 or the reflection at aircraft, people or moving vehicles at any distance as it is dangerous. (Please follow local laws regarding laser use)

DO NOT stare into the beam or view directly with optical instrument.

WARNING

DO NOT allow unauthorised people to operate the Hawk-Laser SCAN30.

Laser reflections from flat shiny mirror like surfaces can be as hazardous as the laser beam itself.

Eye injury is theoretically possible if the laser is aimed at people using telescopes, rifle scopes, spotting scopes, binoculars, cameras or any other optical light gathering instruments.

DO NOT remove or damage any safety labels present on the Hawk-Laser Scan30

DO NOT attempt to disassemble the Hawk-Laser SCAN30 as it may lead to hazardous exposure.

DO NOT attempt any repair or modification.

DO NOT use if lenses are cracked or broken.

Due to the laser beams low divergence, a small bright spot is produced at the end of the beam. Aiming a laser at an aircraft, vehicles, law enforcement officials or other situations where vision and situational awareness are critical is illegal and can cause disruption of safe operation.

This class of laser will not cause skin burns, nor start fires, the one potential hazard is to the eyes if instructions for use are not followed.

WARRANTY

Our goods and services come with guarantees that cannot be excluded under Australian Consumer Law

Should you encounter any problem with your model, please carefully read this manual.

If you encounter defects, please contact your local dealer. Should any defects arise as a result of production, repair or replacement is guaranteed for a period of 12 months from the date of purchase.

In the case of replacement, the warranty period of your original purchase will remain.

Please email the serial number of your Hawk Laser unit with your order number after purchase to: info@birdcontrolaustralia.com.au.

HARDWARE FEATURES

The Scan30 consists of 4 parts:

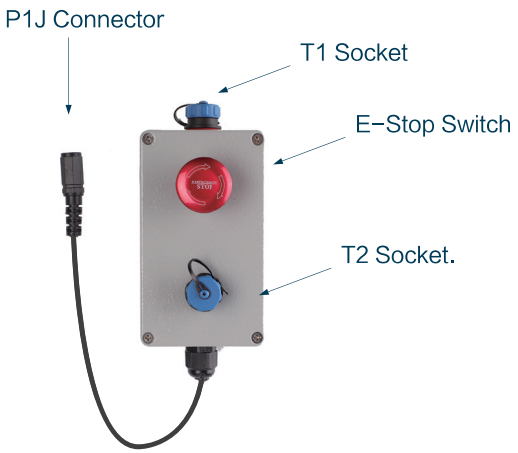
- **Power adapter - 12V DC power supply**
- **Laser Pan/Tilt device: Laser and positioning**
- **Controller: Program the Scan30 laser**
- **Junction Box: Emergency Stop and remote access to the Scan30 Laser.**

Connection and switch of Scan30

1	Power Supply	Power Supply and communication to Scan30. This cable must be connected to T1 of the Junction Box.
2	Communication Port	Optional communication port for controller.
3	Power Switch	Turns power on and off.
4	Laser Switch	Turns laser on and off.

Junction Box

1	Emergency stop switch	Emergency Stop turns off power supply to the laser.
2	T1 Socket	Connect to Scan30 laser.
3	T2 Socket	Connect to controller to remote program the Scan30 laser.
4	P1J Connector	Connect to power adapter, DC 12V (or optional battery clips).



Function key to the controller

1	Joystick	Steer laser beam to the desired position
2	Preset	Preset laser position and save the position to the pan/tilt
3	Scan	Once pushed, the laser beam will sweep back and forth
4	Speed	Used to change the running speed
5	On	Enable the laser
6	Off	Disable the laser
7	Run	Once pushed, the laser beam will move through the preset position in sequence or in random.
8	S	Running mode, laser runs from one preset position to another preset position in sequence.
9	R	Running mode, laser runs from one preset position to another preset position in Random.

TECHNICAL SPECIFICATIONS

Power	DC 12V
Operating Temperature	minus 15 degrees Celsius to 40 degrees Celsius
Storage Temperature	minus 20 degrees Celsius to 50 degrees Celsius
Protection	IP65
Casing	Aluminium alloy
Weight	<3kg

Laser

MODEL NO	Scan30 −P50	Scan30 −P80	Scan30 −P250	Scan30 −P500
Power	<50mW	<80mW	<250mW	<500mW
Laser Classification	Ⅲb			
Wave Length	532nm, Continuous			
Diameter @aperture	25mm			
Beam divergence	0.5mrad			
NOHD	80m	109m	206m	296m
MPE	25.4W/ m^2 Exposure duration of 0.25 seconds			
Operating Temperature	−15℃ to 40℃			
Lifetime	Approx 5000 hours			

Pan/tilt device

Pan range	0 degrees to 350 degrees
Tilt degrees	-20 degrees to + 90 degrees
Total preset positions	16
Running speed	4-10deg /S

SET UP AND OPERATION

Installation guide - read the safety instructions provided in the user guide before activating the device.

- Mount the pan/tilt device on a horizontal and flat surface. *NOTE- When installing the Hawk Laser on a high post, please ensure both buttons are switched on (pushed in) the main unit before erecting.*
- **Do not** position the pan/tilt device on a surface which is subject to vibration.
- **Do not** use external force to stop the running of the pan/tilt
- **Do not** allow laser beam to cross public roads, pathways, footpaths or parking spaces.
- The Scan30 laser should be mounted and programmed in such a way that people are not able to stare into the laser beam.
- The rating protection of the Scan30 is IP65 so it can be used both indoors and outdoors.

Installation

1. Mount the pan/tilt device
2. Mount the junction box on the wall
3. Plug in the connector of the Scan30 laser to T1 of the junction box.
4. Connect P1J connector to DC 12V power supply.
5. Turn on Scan30 laser
6. Connect the controller to the communication port on the Pan/Tilt or T2 of junction box to program the Scan30 laser.
7. The (speed) key is used to change the running speed of the Pan/Tilt. The Pan/Tilt has 4 running speeds and should ideally be set to the low speed for best results.

Note:

Pressing any key on the controller will be effective only when the pan/tilt is not running. When the pan/tilt is running, pressing any key on the controller will stop the pan/tilt. The key must be pressed again to enter the command.

Operation

After power is turned on, the pan/tilt device with take approx. 30 seconds to seek the “origin” position. At this point the pan/tilt cannot be controlled by the controller.

Once the pan/tilt device completes seeking the “origin” position, the scan30 can be started to run one of the following 3 operation modes:

1. **Manual Mode:** Use the joystick to move the laser beam.
2. **Scan Mode:** The laser beam sweeps back and forth without changing in tilt direction. Scan mode can be started by pressing the (scan) key on the controller.
3. **Run mode:** The laser beam will move from one preset position to another. The Scan30 has two running modes, S mode and R mode. In S mode, the laser beam will move according to the sequence of the preset position. In R mode, the laser beam will run between the preset positions randomly. Run Mode can be started by pressing the (Run) key on the controller.

There is an Emergency Stop switch in the junction box, pressing this switch will remotely shut down the laser. Clockwise rotation of the switch will release the switch and turn the laser on again. The Emergency Stop switch is the remote interlock of the Scan30 laser.

Programming the Preset Position Laser Control

The two keys (on) and (off) on the controller are used to enable and disable the laser.

Pressing (on) will turn on the laser and (off) will turn off the laser.

Once the laser is turned off and the controller is unplugged from the Scan30 laser, the laser cannot be turned on anymore. This will prevent unauthorised people from turning on the laser. The two keys (on) and (off) on the controller are used as the security master control of the laser.

Programming the Pan/Tilt device

1. Connect the plug of the controller to the communication port of the Scan30 or to the T2 connector of the junction box.
2. Use the joystick of the controller to steer the laser to the desired position.
3. Press the numeric key and then (Preset) key to save the position. For example: Press (1)(Preset) to save the No.1 position, then press (2)(Preset) to save number 2 position.
4. Repeat step 2 and step 3 to save more positions. A total of 16 positions can be saved, from No.1 to No.16.
5. Once you have your last position steer the laser back to the origin start position or close to it and preset this as the final preset number.
6. To remove all the preset positions, Press (1)(2)(0)(Preset)
7. The keys (S) and (R) are running mode selections.

Press(S) then press (Run), the laser will move forward from one preset point to another preset point in Sequence No.1..No.2…No.3…etc

Press (R) then press (Run), the laser will move from one preset point to another preset point in Random.

MAINTENANCE

Do not attempt to disassemble or clean the Hawk-Laser SCAN-30 internally. This will invalidate the warranty.

The external surfaces should occasionally be wiped clean with a soft cloth. Remove any external dirt or sand with a soft brush so as to avoid scratching the finish.

Do not open, modify or attempt to service this product. Servicing and repairs are to be arranged by the company you purchased the unit from.

Troubleshooting

If you are experiencing problems during installation, please do or check the following:

- Check power supply and voltage on battery output if using 12VDC.
- Ensure the temperature is not out of specification, otherwise the diode laser will not work properly.
- Check the connection between Pan/Tilt device and controller, disconnect plug of the controller and then reconnect.
- If the Pan/Tilt device is not working properly, power off and on and then wait 30 seconds.
- Check the Emergency Switch is turn clockwise and on (popped out)