

 Hawk-Laser

User Manual

Laser Bird Repeller



Hawk-Laser



SCAN 30

Laser Technical & Safe Information

⚠ WARNING

Laser Safety Hazard 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 an aircraft at any distance! Illumination of aircraft, vehicles, etc. is

DANGEROUS! Do not do it.

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

⚠ WARNING

Light from Hawk-Laser SCAN30 is very bright! **DO NOT** aim laser at people or vehicles.

NEVER look into the output of the Hawk-Laser SCAN30! Viewing the laser light or a bright reflection can cause potential eye injury.

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

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

Eye injury is theoretically possible if the laser of Hawk-Laser SCAN30 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 which are present on Hawk-Laser SCAN30.

DO NOT attempt to disassemble the Hawk-Laser HD30, this can lead to hazardous exposure.

DO NOT attempt any repair or modification.

DO NOT use if lenses of laser is cracked or broken.

Due to the laser beams low divergence, it makes a small bright spot at very long distance. Aiming a laser at aircraft, vehicles, law enforcement officials or other situations where vision and situational awareness are critical can cause disruptions of safe operation of these craft, cause dangerous situations.

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

1. Product Description

The Scan30 laser is developed as a safe, silent and effective tool for bird control. It is designed to chase birds in plants, warehouses, loading docks, railroad sidings, tunnels, breezeways, underpasses, stadiums, barns and storage sheds.

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

2. Hardware Feature

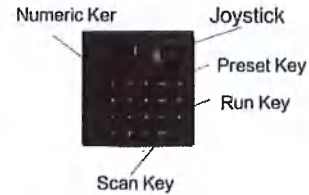
The Scan30 consist of four parts:

1. Power adapter: provide 12V DC power supply.
2. Laser and Pan/Tilt device: Laser and positioning.
3. Controller: Program the Scan30 Laser.
4. Junction Box: E-stop and remote access to the Scan30 laser.



Connection and Switch of Scan30

1	Power Supply	Power supply and Communication for Scan30. This cable must connect to T1 of the junction box
2	Communication Port	Communication Port for Controller. Provide power and communication for controller
3	Power Switch	Power Supply Switch. Turn power supply on and off.
4	Laser Switch	Laser Switch. Turn laser on and off.

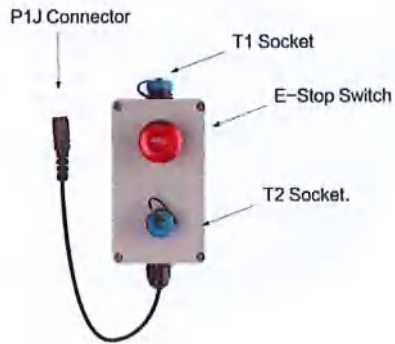


Function Key of the Controller:

1	Joystick	Steer the laser beam to the desire position.
2	Preset	Preset laser position and save the position to the Pan/Tilt.
3	Scan	Once pushed, 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 among the preset position in sequence or in random.
8	S	Running mode, laser run from one preset position to another preset position in Sequence.
9	R	Running mode, laser run from one preset position to another preset position in Random.

Junction Box:

1	E-stop Switch	Emergency Stop, turn off power supply of 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, DC12V.


3. Technical Specification:

Power	DC 12V
Operating Temperature	-15°C-40°C
Storage Temperature	-20°C-50°C
Protection	IP65
Casing	Aluminum Alloy
Weight	<3Kg

Laser

MODEL NO	Scan30 -P50	Scan30 -P80	Scan30 -P250	Scan30 -P500
Power	<50mW	<80mW	<250mW	<500mW
Laser Classification	III b			
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°C to 40°C			
Lifetime	About 10000 Hours			

Pan/Tilt device

Pan Range	0° -350°
Tilt Range	-20° -90°
Total Preset Position	16
Running Speed	4-10° /S

4. Set Up and Operation

Installation Guide

Read the safety instruction provided in the user manual before activating the device.

- Mount the Pan/Tilt device on the horizontal and flat surface.
- Do Not Position the Pan/Tilt device on a surface which is subject to vibration.
- Do Not use outside force to stop the running Pan/Tilt.
- Do Not let the laser beam cross public roads, pathways, sidewalks or parking spaces.
- The Scan30 should be mounted and programmed that people have no chance to stare into the laser beam.
- The Protection of the Scan30 is IP65, it can be used both in indoor or outdoor.

Installation:

1. Mount the Pan/Tilt device.
2. Mount the junction box on the wall.
3. Plug in the connector of 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 communication port on Pant/Tilt or T2 of junction box to program the Scan30 laser.

Programming the Preset Position

Laser control

The two key [On] and [Off] on the controller is use to enable or disable the laser, press [On] will turn on the laser and press [Off] will turn off the laser.



Once the laser is turn off and the controller is unplug from the Scan30 laser, the laser can not be turned on any more, this will prevent unauthorized people to turn on the laser. The two key [On] and [Off] on the controller is 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 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.
Press [2][Preset] to save the No 2 position.
4. Repeat step 2 and step 3 to save more position. Total 16 positions can be saved, from No 1 to No 16.
5. To remove all the preset position, Press [1][2][0][Preset].
6. The keys [S] and [R] are running mode selection.
Press [S] then press [Run], the laser will move from one preset point to another preset point in Sequence: No1...No2...No3...No16...No1...No2...
Press [R] then press [Run], the laser will move from one preset point to another preset point in Random.

7. The [Speed] key is used to change the running speed of Pan/Tilt. The Pan/Tilt has 4 running speed and normally the Pan/Tilt should be set to run at lower speed.

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 first stop the Pan/Tilt, the key must be pressed again to enter the command to the Scan30 laser.

Operation:

After power is turned on, the Pan/Tilt device will take about 30 seconds to seek the "Origin" point, at this moment the Pan/Tilt device can not be controlled by the controller.

Once the Pan/Tilt device finish seeking the "Origin" position, the Scan30 can be started to run the following three operation mode:

1. Manual mode: Use the joystick to move the laser beam.
2. Scan Mode: The laser beam sweep back and forth without changing in Tilt direction. Scan mode can be started by press 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 mode, 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 position randomly. Run mode can be started by press the [Run] key on the controller.

There is an Emergency Stop switch in the junction box, the switch is to remote shut down the laser. Push the switch will shut off the laser, clockwise rotate the switch will release the switch and will turn the laser on again. The emergency stop switch is the remote interlock of the Scan30 laser.

5. MAINTENANCE

DO NOT attempt to disassemble or clean the Hawk-Laser SCAN30 internally. This will invalidate the warranty.

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

DO NOT open, modify or service this product.

No maintenance or service is allowed by the customer.

Troubleshooting

If you experience problems during installation please do or check the following:

- Check the power supply.
- 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 for 30 seconds.

6. Warranty

Should you encounter any problem with your model, please carefully read this manual. If you encounter defects, please contact your local dealer. Should any defect arise as result of production faults, free repair or replacement is guaranteed. The Hawk-Laser SCAN30 has a warranty period of 6 months, starting on the date of purchase. In case of replacement, the warranty period of original will remain valid.