

TransGard™

SUBSTATION PROTECTION

LASER BIRD DEFENSE
Keep **birds out.** Keep the **power on.**

Laser Bird Defense: Safe, Silent, Effective

For decades, bird incursions at substations have resulted in equipment damage, outages and expensive cleanups due to corrosive bird droppings. The available deterrents – coverups, noisemakers, fake predators, fog machine equipment damage es – only provide temporary, spotty relief.

Now, TransGard substation operators have a superior alternative: **Laser Bird Defense** – the high-tech bird deterrent for the electric power industry.

How it works

Laser Bird Defense

is a fully automated bird deterrent system that provides continuous performance after a one-time configuration. When operational, birds perceive the system's approaching laser beam as a physical danger and disperse to seek safety.

Unlike conventional methods, birds will not become accustomed to **Laser Bird Defense**. They will consider the area unsafe and will not return.

FAST, LONG-LASTING

RESULTS The system deploys easily in a few hours with no power interruption, and immediately provides effective prevention of bird presence.

SILENT, LONG-RANGE

EFFECTIVENESS **Laser Bird Defense** noiselessly repels birds in the programmed target area.

COST-EFFECTIVE TECHNOLOGY

Our lasers offer highly precise optics, filtering and light frequencies, resulting in exceptional performance.

BETTER FOR ANIMALS ... AND THE ENVIRONMENT

No smoke, no noise. **Laser Bird Defense** offers a silent solution that won't harm birds or other animals – and won't disturb neighbors.

NO HABITUATION

Birds become accustomed to other deterrents over time. But because of its dynamic action, Laser Bird Defense continues to deliver effective bird repelling over months – and years.



Flexible by nature

Laser Bird Defense can be programmed with up to 150 different patterns and 20 different time slots. Each pattern can be assigned to a specific time slot, enabling a variety of bird-repelling patterns at different times of the day. The system also offers up to 2400 unique waypoints, enabling you to selectively target trouble spots.

Safety first

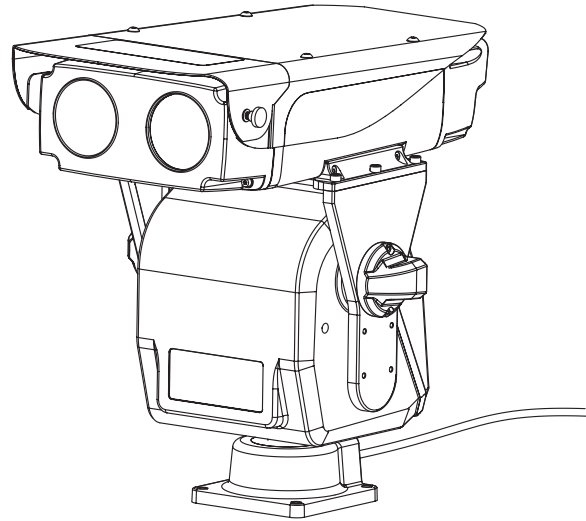
Laser Bird Defense offers unique safety features based on years of research and experience in the field.

PASSWORD LOCK The password prevents unauthorized adjustments to settings.

EMERGENCY STOP In an emergency, the **Laser Bird Defense** can be quickly deactivated by depressing an easily accessible emergency stop button.

INDICATOR LIGHT **Laser Bird Defense's** indicator light displays the system status at all times.

FREE LASER SAFETY TRAINING Users who install **Laser Bird Defense** are given free online laser-safety training and laser-safety glasses.



The bird deterrent that actually works...

Laser Bird Defense offers superior benefits to other bird-control methods. For example, lasers prevent birds from entering a substation, while coverups allow birds to freely roost – leaving damaging droppings and creating a risk for flashovers.

	TransGard Laser	Predatory Decoy	Plastic Guards	Custom Coverups	Sound
Low Costs	✓	✓	✓	✗	✓
Easy to Deploy	✓	✓	✓	✗	✓
Autonomous Solution	✓	✓	✓	✓	✓
Humane/Positive Perception	✓	✓	✓	✓	✓
Low Environmental Impact	✓	✓	✓	✓	✗
No Habituation	✓	✗	✗	✗	✗
Steering of Birds	✓	✗	✗	✗	✗
Prevents Nesting and Roosting	✓	✗	✗	✗	✗

Laser Bird Defense FAQ

WHY DO LASERS WORK SO WELL?

Birds perceive the system's approaching laser beam as a physical danger and disperse to seek safety. In contrast to conventional deterrence methods, birds will not become accustomed to the laser deterrent. They will consider the area as unsafe and will not return.



IS LASER BIRD DEFENSE SAFE? Yes. It can be used safely as long as the operator complies fully with the provided safety instructions and follows local regulations.

WHY IS THE COLOR OF THE LASER GREEN? Birds perceive the green laser light best and therefore the bird dispersal is most effective. (Note: most birds can only hear 1–4 kHz (kilohertz), so sight is a much better sense to target.)

ARE THE LASERS HARMFUL FOR BIRDS? No. The beam is always moving and birds typically disperse before the beam comes into contact.

IS IT EFFECTIVE DURING THE DAYTIME? Yes. Laser Bird Defense's powerful laser output balances out the loss of contrast when the laser beam is spread over a larger surface area.



TransGard

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Technical specifications

Laser beam color	Green (520 nm)
Projection range	Horizontal: 360° (continuous) Vertical: -50° to +30°
Amount of predefined patterns	150
Amount of waypoints	2400
Variable speed	4° – 6° / second
Power source	Power adapter (100 - 277 VAC)
Operating voltage	24 VDC (max. 4A)
Power consumption	100 W (peak operating power)
Autonomic size	Weight: 11kg (24lb) Dimensions: (LxWxH) 50 (19.7) x 21 (8.3) x 40 (15.8) cm (in)
Endurance	IP66 (suitable for indoor and outdoor use)
Anti-Theft protection	Password protection Physical fixation to structures Anti-Theft sticker
Safety	Password lock Emergency stop button Indicator light
Operating temperature	-15 °C to 50 °C (5 °F to 122 °F)
Certification	CE FDA 2006/42/EC (Machine Directive) 2006/95/EC (LVD Directive) EN-IEC 60825-1:2014 (Laser Safety Directive) 2004/108/EC (EMC Directive)
IR filter	Available



WARNING – LASER RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT

MAXIMUM OUTPUT <500 mW
WAVELENGTH 532 nm
CLASSIFIED TO NEN EN 60825-1:2014

*For more information or
to arrange a demo:*



www.TransGardLasers.com