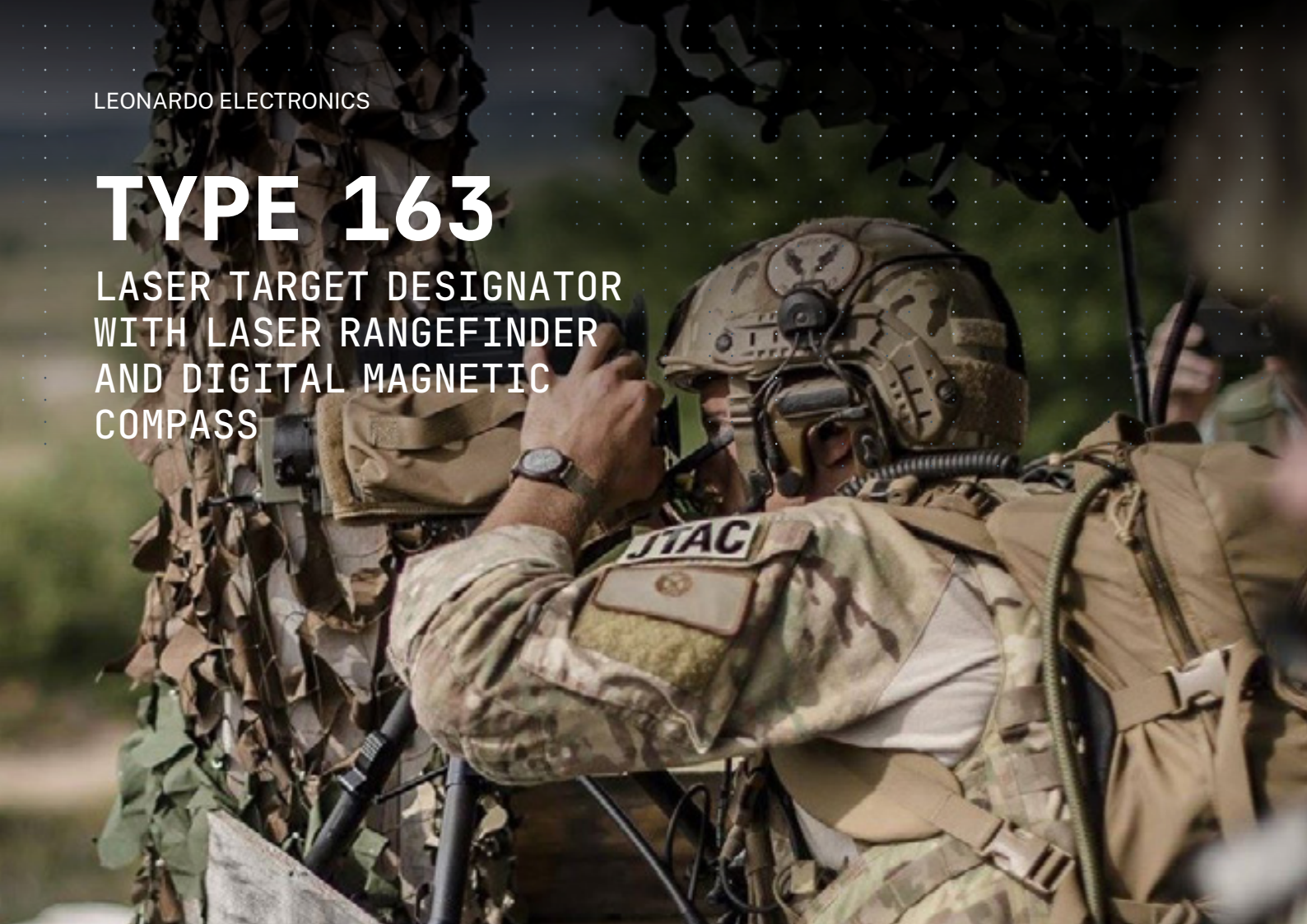


# TYPE 163

## LASER TARGET DESIGNATOR WITH LASER RANGEFINDER AND DIGITAL MAGNETIC COMPASS



The battle proven Type 163 laser target designator has been designed specifically to meet all of today's special and conventional force JTACs and JFOs mission requirements for marking and terminally controlling Semi-Active Air-to-Ground weapons accurately onto the target at ranges up to 10km.

At less than 2.5kgs (5.36 lbs) with battery it typically provides >80mJ per pulse for up to 30 mins\* with no duty cycle required. Full NATO STANAG 3733 Band I & II compatible with all PRF codes pre-loaded and ready for operation. Its size and simple operation allows rapid deployment and engagement. Switch on to fire in less than 3 seconds\*\*.

A wide variety of employment factors and conditions affect the quality of laser spots presented to both modern and legacy laser spot trackers and seeker heads by ground based laser target designators. These include slant range, altitude of electro optic targeting system and/or weapon seeker, solar load, target reflectivity, smoke, haze and LTD range to target.

The Type 163's combination of superior power coupled with excellent beam divergence and bore sighting helps mitigate these employment limiting factors.

This allows a JTAC or JFO employment flexibility to meet a wide range of mission sets (short, medium and long range) when conducting laser spot hand-off and/or terminal guidance. Feedback from Type 163 combat employment is that JTACs can designate with a high degree of confidence, reducing communications and increasing first attack hit probability. Additionally, employing the Type 163 reduces fratricide and collateral damage risks inherent in air to ground operations.

Designed from user feedback for a small lightweight with high power (SWaP) designator, the focus has been on a laser which is simple and easy to operate yet rugged and reliable. This has been achieved by incorporating the latest Diode Pumped technology along with Nd:YAG slab configuration, athermal resonator, active q-switch and high efficiency heat exchangers resulting in the Type 163 laser offering full performance over a broad operating temperature in a package suitable for military use.

\* Continuous lasing at low PRF (20Hz) in ambient temperature

\*\* PRF Code already programmed

The laser is designed to support a modular and separable approach to target acquisition and sensor equipment. This provides maximum flexibility in mission planning and importantly helping to minimise individuals' carrying load. The laser has an integrated digital magnetic compass (DMC) and a serial comms port for integration with Digital Aided Close Air Support (DACAS) systems, GPS or optical See Spot equipment if required.

## KEY FEATURES

- Small and Lightweight with high power
- Easy to train, simple to operate
- No complicated menu structures to remember
- Low beam divergence
- Detection range up to 10km
- Digital Magnet Compass
- Serial out comms port
- RS 422 serial comms port
- No significant warm up time
- Quiet operation for covert use
- Low maintenance and low life-cycle costs
- Picatinny rail to allow mounting of external equipment



## EQUIPMENT

- Type 163 LTD Laser Target Designator
- Remote arm/ fire control switch
- Lithium-Ion battery x 2
- Power adaptor charger
- Field carry pouch

## OPTIONAL

Tripod fine adjust, interface plate and carry pouch  
BA5590 battery adaptor.  
Beam Dump.

## TECHNICAL SPECIFICATION

<b>Output energy:</b>	> 70mJ (typically >80 mJ)
<b>Pulse width:</b>	18 ±7ns
<b>Repetition rate:</b>	NATO STANAG 3733
<b>Beam divergence:</b>	< 300µRad (typically <200 µRad)
<b>Direct view optics:</b>	10x Magnification, 2° Field of View, Open Cross Reticle
<b>Laser rangefinder:</b>	100m to 9.999km ±5m (first/last pulse logic)
<b>Digital Magnet Compass (DMC)</b>	<1° (typically < 0.5°) Typical DMC accuracy of better than 0.5 degree
<b>Dimensions (l x d x h):</b>	322mm x 142mm x 87mm (12.7" x 5.6" x 3.4") including battery and eyecup
<b>Mass:</b>	< 2.5Kg including battery (5.36lbs)
<b>Comms out:</b>	RS422/RS322
<b>Power supply:</b>	Rechargeable battery pack Rechargeable battery duration: Typically >30mins (>15mins at max PRF and continuous operation) Optional Pin Lock
<b>Temperature</b>	
Operating:	-30 to +50°C (-22 to +122°F)
Storage:	-40 to +85°C (-40 to +185°F)
<b>MTBF:</b>	12,000hrs (Mil-Hdbk-217 prediction)



VISIBLE AND INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT

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