

**Key Features and Benefits**

- Increased pilot safety
- Lightweight
- Easy installation
- Highly visible panel display
- 2-year warranty
- NVG (optional)
- STC'd

# FreeFlight Radar Altimeter TRA3500

For critical flying operations, the FreeFlight TRA3500™ Radar Altimeter, combined with the TRI40 Radar Indicator, provides the pilot with highly accurate altitude-above-ground-level (AGL) information. This real-time system offers an extra measure of operational safety during landing, navigation, or hovering. It is especially useful in flying search and rescue missions, forestry operations, pipeline maintenance, offshore helicopter operations, aeromedical emergency medical services, border patrol, and electronic news gathering operations.

For transportation-category aircraft, helicopter and sea-plane operations, the TRA3500 radar altimeter provides precise AGL information from 2,500 feet down to ground level. Its patented “anti-rotor-modulation” capability prevents altitude wandering while hovering in your helicopter. The TRA3500 consists of a remote unit and dual antennas for greater accuracy. ARINC



*The Complete TRA3500 Radar Altimeter System*

analog outputs allow seamless integration with other on-board equipment such as flight director systems.

### TRI40 Radar Indicator

The TRA3500 is used with the TRI40 indicator. This panel-mounted indicator provides important information when there are no visual clues to the landscape surrounding the airport or your flight path. The indicator displays the AGL and your preselected decision height (DH) in a bright, LED readout and provides an audible warning when you descend below the DH. A test button sends a 40-foot altitude code to the indicator to test the display and warning alerts at any time.

The TRI40 also includes a visual and audible gear-up warning when the aircraft is below 100 feet. A trip-point output allows you to activate additional pilot alerts every 100 feet up to 800 feet.

Whether you are a private or professional pilot, the full-featured FreeFlight TRA3500 Radar Altimeter System is the ideal choice where precise, near-ground navigation and safety are key. The system is covered by a two-year warranty.

# FreeFlight Radar Altimeter

TRA3500

## TECHNICAL SPECIFICATIONS

### TRA3500/TRI40

<b>Altitude range:</b>	0 to 2500 ft. (0 to 762 m)
<b>Power requirements:</b>	27.5 VDC; $\pm 20\%$ , 750 mA
<b>Environmental:</b>	TRI: $-4^{\circ}\text{F}$ to $+131^{\circ}\text{F}$ ( $-20^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ ) TRA: $-40^{\circ}\text{F}$ to $+158^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ) Alt: -45,000 ft. (13,716 m)
<b>Size (HxWxL):</b>	TRI: 1.375 x 3.5 x 7.5 in. (3.5 x 9.9 x 19 cm) TRA Unit: 3 x 3 x 6.9 in. (7.6 x 7.6 x 17.5 cm)
<b>Weight:</b>	TRI: 0.75 lb. (0.34 kg) TRA Unit/Ants.: 3.25 lbs. (1.47 kg)
<b>Antenna(s) response angle when mounted <math>\pm 6^{\circ}</math> from horizontal:</b>	Dual; $\pm 20^{\circ}$ pitch, $\pm 30^{\circ}$ roll
<b>Display type:</b>	LED, yellow seven segment, auto dim
<b>Transmitter power:</b>	20 mW minimum
<b>Frequency:</b>	4.3-GHz center frequency sweep, 4.25 to 4.35 GHz
<b>Display update rate:</b>	2 times/sec. min.
<b>Altitude accuracy:</b>	0 to 100 ft $\pm 5$ ft (0 to 30.5 m: $\pm 1.5$ m) 100 to 500 ft $\pm 5\%$ (30.5 to 152.4 m: $\pm 5\%$ ) 500 to 2500 ft $\pm 7\%$ (152.4 to 762 m: $\pm 7\%$ )
<b>Decision height selection:</b>	50-ft. increments from 0 to 600 ft. plus 700, 800, 900 ft. (15.2-m increments from 0 to 183 m, plus 213, 244, 274 m)
<b>Flag(s):</b>	Displays "U" when unlocked
<b>Self-test:</b>	Indicates "8's," then DH & gear lights, then 40 ft. (12 m) altitude
<b>Visual DH alert:</b>	Internal DH light; External output
<b>Aural DH alert:</b>	1-kHz tone output
<b>Gear warning:</b>	Internal gear light aural and visual out
<b>ARINC analog outputs:</b>	A: 2.5 mV/ft., 0 V=0 ft. B: 20 mV/ft., 400 mV=0 ft.
<b>Trip point outputs:</b>	Eight fixed trip points; 100 to 800 ft. (30 to 244 m)
<b>Display disable:</b>	Two strut switch inputs—ground or line
<b>Anti-hover circuit:</b>	Yes. Prevents altitude wandering while helicopter is hovering.

## CERTIFICATIONS

PMA Eligible, Cessna 182Q, Mooney M20J, M20M, M20R

*Note: Specifications subject to change without notice. Made in the U.S.A.*



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