

TSR-1800

AUTOMATED, AIRBORNE, WIDE COVERAGE SEARCH & RESCUE

FLIGHT SCENARIOS



Temperature sensitivity over ground = 0.05°C

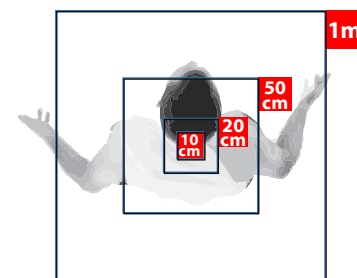
Wide ground speed range (helicopter to fixed wing 20 to 200+ knots)
Sees through smog, smoke (must fly below atmospheric clouds)

SLOWER PLATFORM SCENARIOS (120 KNOT GROUND SPEED)

Flying Height, AGL	Imaging Swath	# Flight Lines	Time to Cover 15 x 3 km Area	Resolution
814 ft	180 m	24	2.0 hr (120 min)	10 cm
1627	360 m	12	1.0 hr (60 min)	20 cm
2441	540 m	8	0.66 hr (39 min)	30 cm

FASTER PLATFORM SCENARIOS (170 KNOT GROUND SPEED)

Flying Height, AGL	Imaging Swath	# Flight Lines	Time to Cover 15 x 3 km Area	Resolution
814 ft	180 m	24	1.5 hr (92 min)	10 cm
1627	360 m	12	0.76 hr (45 min)	20 cm
2441	540 m	8	0.30 hr (30 min)	30 cm



Assumptions: The above tables are calculated based on the following information: search area size 15 km x 3 km, zig-zag flight pattern, 30% sidelap between adjacent flight lines, 1 minute turns. Overall time needed for turns will dominate total search time for short search areas flown at high resolution. Search time efficiency based on ground speed changes are more pronounced with longer search blocks. Resolutions below 10 cm possible with helicopter platform use. Faster flight speeds (200+ knots) also possible while maintaining high resolution.

SEARCH TIME CALCULATOR

Search Area Length km
 Search Area Width km
 Aircraft Ground Speed knots
 Desired Resolution cm
 Turn Time min

Flying Altitude ft AGL
 # Lines to Cover Search Area

→ Time to Cover Search Area Minutes

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All ITRES sensors are calibrated to traceable standards.
Specifications subject to change without notice.

