

R44[®] RAVEN II NEWSCOPTER^{HD}



ROBINSON HELICOPTER COMPANY

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The **ROBINSON R44 RAVEN II NEWSCOPTER** is a fully integrated Electronic News Gathering (ENG) helicopter capable of transmitting, receiving, and recording live audio and video in High Definition (HD). The Newscopter's ENG equipment is designed, tested, and FAA-approved to optimize work flow and provide an airborne, broadcast-quality studio.

An aerodynamic nose-mounted, gyro-stabilized Ikegami HD digital camera system captures the news in striking detail and vivid color. Additional standard ENG gear includes in-cabin talent and tail-mounted micro cameras, video switcher, Geneva audio system, four color video monitors, and a complete microwave transmission package.

The R44 Raven II Newscopter does the job for half the cost of larger turbine ENG helicopters. The Newscopter's economical purchase price and low operating costs provide small TV stations access to state-of-the-art news gathering technology, and enable broadcasters in large media markets to field multiple ENG helicopters for more extensive coverage.

PERFORMANCE

Lycoming's IO-540 engine delivers a cruise speed of up to 130 mph to get the R44 Newscopter on scene fast. A fully-fueled Newscopter provides up to three hours of flight endurance for continuous live news coverage. Aerodynamic rotor-blade tip caps lower flyover noise. The R44 Raven II Series operates for 100 hours between inspections, and up to 2,200 hours or 12 years between overhauls. All R44s are backed by the Robinson Helicopter Company two-year/1000-hour limited aircraft warranty.

FEATURES

- **HYDRAULIC CONTROLS** reduce pilot workload and supply precision handling.
- **PISTOL-GRIP CYCLIC** incorporates two-position trigger switches for intercom and transmit. Pilot-side grip features buttons for convenient switching of COM frequencies. Left-seat flight controls are removable.
- **AUTOMATIC CLUTCH ENGAGEMENT** simplifies the starting procedure and reduces the possibility of an overspeed during startup.
- **RPM GOVERNOR** monitors engine speed and adjusts the throttle automatically to maintain optimal RPM.
- **TRI-HINGE ROTOR HUB** eliminates lag hinges, dampers, and hydraulic struts. Blades have a stainless steel spar at the leading edge which resists erosion. Droop stops prevent excessive main rotor teetering while stopping or starting under normal operating conditions.
- **UNDER-THE-SEAT STORAGE** allows for carry-on bags, briefcases, and personal belongings.



Low operating costs make the R44 Newscopter ideal for budget-conscious news programs.

OPTIONAL UPGRADES

AIR CONDITIONING

The air conditioning system features front and rear vents that circulate cool air throughout the cabin.

PILOT'S AVIONICS CONSOLE places a GPS unit in an easy-to-see and reach position, minimizing time spent looking down. The console can accommodate a GPS, GPS/COM, or GPS/NAV/COM.

LEATHER SEATS available in tan, blue, and gray.

BOSE A20 AVIATION HEADSETS with active noise reduction and Bluetooth communications interface.

ENG EQUIPMENT

GYRO-STABILIZED HD DIGITAL CAMERA SYSTEM

Light, compact, and entirely digital, the five-axis gyro-stabilized camera system comes standard with a full-bandwidth Ikegami 1080p HD Camera matched with a Canon HD Series 22x (44x with extender) zoom lens for crisp images. Camera and lens are housed in a rugged nose-mounted gimbal that rotates 360° to track subjects and to film from any angle.

Camera Feature	Standard
Format	2/3", 1080p, AIT, 50 Hz or 60 Hz
Gain	0 to +54dB
Effective Pixels	1920 (horizontal) x 1080 (vertical)
Sensitivity	2000 lux @ f10
Video Output	HD SDI
Zoom Lens	Canon HJ22 x 7.6
Zoom Ratio	22x (44x with extender)
Filters	3000K, 5600K, 5600K+ 1/32 ND

*For comparison purposes only, actual results may differ

DIGITAL OR HD MICROWAVE BROADCAST EQUIPMENT

A BMS 2/2.5 GHz digital COFDM transmitter is standard. For stations ready to receive HD transmissions, optional packages are available. The standard omni-antenna (6 dB gain) transmits up to 40 miles. An optional directional antenna broadcasts between 60 and 90 miles. A GPS data modem that allows the station's receive antenna to track the Newscopter may be purchased as an add-on. A receiver enables the R44 Newscopter to acquire and record transmissions from the ground or to act as a mobile relay station.

ONBOARD REPORTING AND MORE

In the forward cabin, an adjustable micro camera, talent light, second FM radio, and transmit switch enable live newscasts by a front seat reporter. Two flat-screen, five-inch monitors above the pilot's instrument console simultaneously display on-air broadcast and on-board camera's image stream for viewing by pilot and reporter. Also, pilot, reporter and camera operator have separate audio panels to monitor or transmit independently on any of the COMM, FM and AM/FM radios, scanner, or TV tuner.



Forward cabin has two monitors to view images from any of the helicopter's cameras and on-air broadcast.

CENTRALIZED ENG WORKSTATION

The camera is operated through a full-function, laptop console located in the rear passenger/ENG workstation compartment. Along with all of the camera functions, features include joy stick control for X, Y, and Z-axis gimbal movements, snap-zoom, transmit, intercom, and video switches.



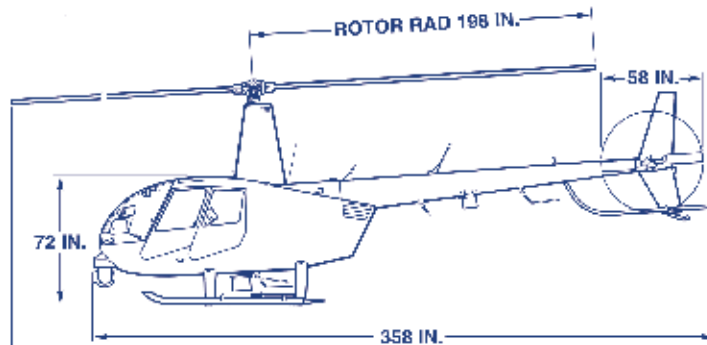
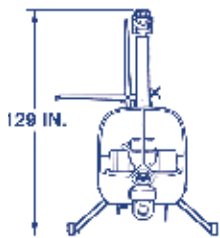
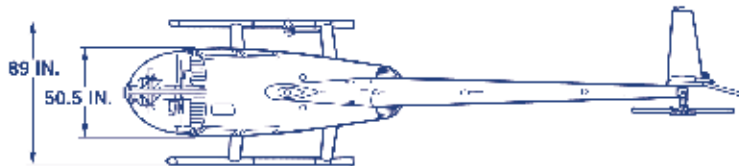
A laptop console consolidates all of the camera controls and functions for ease of use.

An integrated control panel next to the camera operator gives ready access to an FM radio, Geneva audio system, video switcher, and microwave controls. Within easy reach is an on-air TV tuner and equipment such as AM/FM receiver, scanner, or video recorder.

Camera images display on a ten-inch HD monitor that together with a five-inch monitor lets the camera operator view and transmit live or prerecorded material. The video switcher allows rapid on-air selection between the gimbal camera and micro "lipstick" cameras located on the aft stabilizer and inside the cabin.

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SPECIFICATION	RAVEN II NEWSCOPTER
Engine Type	Lycoming IO-540 fuel injected
Cylinders	6
Max Gross Weight	2500 lb
Approximate Empty Weight (including oil & std avionics)	1675 lb
Standard Fuel (29.5 gal)	177 lb
Auxiliary Fuel (17.0 gal)	102 lb
Passengers and Baggage with Standard Fuel	648 lb
Cruise Speed	up to 115 kts (130 mph)
Max Range (no reserve)	approx 300 nm (350 sm)
Hover Ceiling IGE @ Gross Weight	8950 ft
Hover Ceiling OGE @ 2300 lb	7500 ft
Rate of Climb	over 1000 fpm
Max Operating Altitude	14,000 ft
7-Hole Instrument Panel	standard
Electrical System	28V



STANDARD INSTRUMENTS

- Airspeed indicator
- Altimeter (in-Hg)
- Rotor/engine dual tachometer
- Manifold pressure gage
- Vertical speed indicator
- Magnetic compass
- Cylinder head temperature gage
- Oil temperature & pressure gages
- Fuel quantity gages
- Ammeter
- Quartz clock
- Digital OAT gage/voltmeter
- Hourmeter

WARNING LIGHTS

- Alt low voltage
- Low fuel
- Low oil pressure
- Low rotor RPM (light and horn)
- Main gearbox temperature
- Main gearbox chip
- Tail gearbox chip
- Engine fire
- Rotor brake engaged
- Starter engaged
- Clutch actuator
- Governor off

STANDARD EQUIPMENT

- Anti-collision light
- HID dual landing lights
- Navigation, panel, and map lights
- Auxiliary fuel system
- Cabin heater and defogger
- Carbon monoxide detector
- Door locks
- Floor and hand intercom switches
- Pilot-side adjustable pedals
- Tinted windscreen and windows
- Belly hardpoint
- Tow cart adapter
- Oil filter and engine oil quick drain
- Ground handling wheels
- Rotor blade tie downs
- Windshield cover
- Robinson travel bag

QUALITY MANUFACTURING



Robinson's 617,000 square foot facility.

Robinson manufactures, assembles, inspects, and flight tests all of its helicopters at its Torrance, California factory. State-of-the-art equipment is utilized to manufacture the majority of parts in-house, allowing Robinson to maintain a high level of quality control and eliminate unnecessary costs.

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