



# GYRO-GLIDER



**BUILDING INSTRUCTIONS WITH  
OPERATING AND FLIGHT MANUALS**



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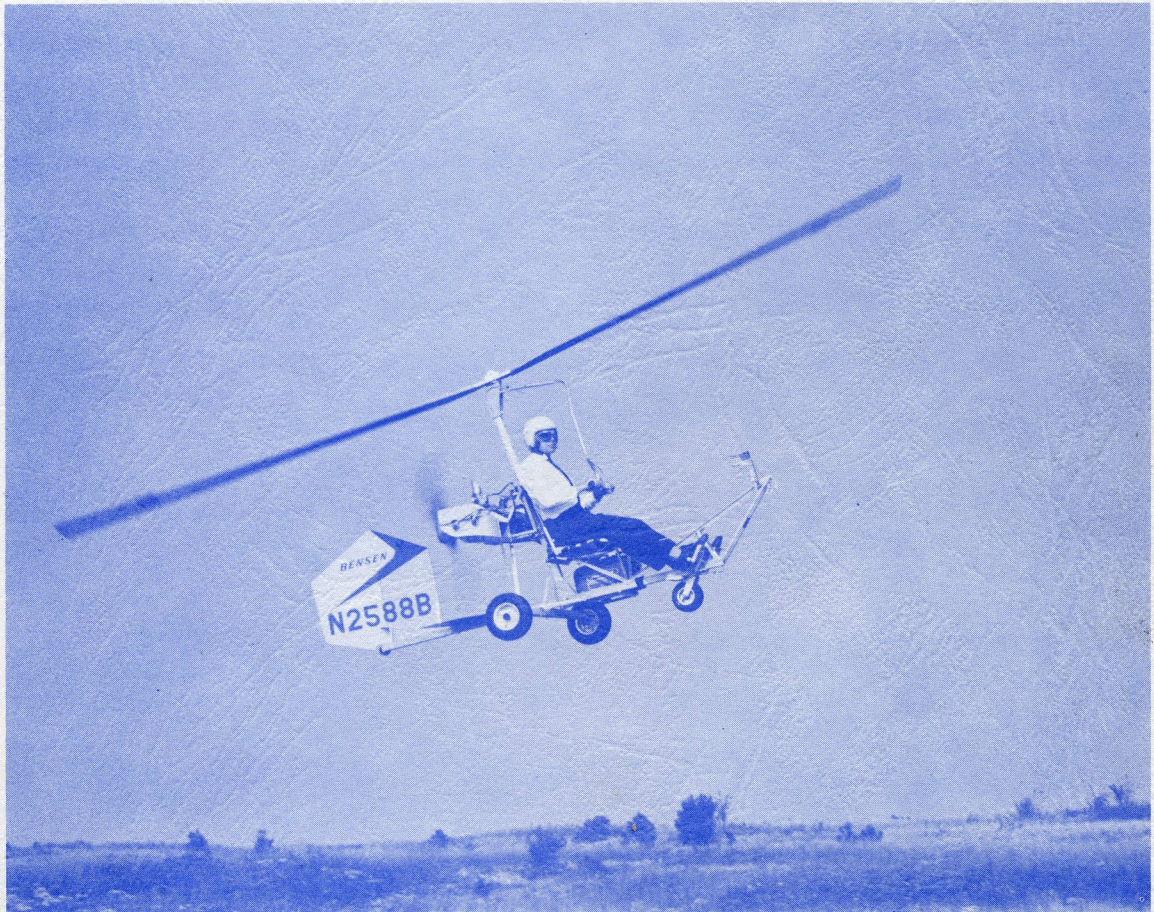
RALEIGH-DURHAM AIRPORT

RALEIGH, NORTH CAROLINA, 27602, U.S.A.





# GYRO-COPTER



## ENGINE INSTALLATION CONSTRUCTION & FLIGHT MANUAL



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# BENSEN B-8M GYROCOPTER

The Bensen B-8M, designed for construction by the do-it-yourself builder, holds 12 world flying records. The Gyrocopter is available in inexpensive pre-cut raw material packages and factory-finished component kits.

## GENERAL SPECIFICATIONS

Effective January 1968

<b>Dimensions:</b>	Height	75 In.	Rotor Diameter	20.0 Ft.
	Length (less Rotor)	136 In.	Tread	60 In.
	Width	66 In.		
<b>Weights:</b>	Normal Gross	500 Lbs.	Useful Load	253 Lbs.
	Empty	247 Lbs.	Overload U.L.	353 Lbs.
<b>Rotor:</b>	Airfoil	Bensen G2	Solidity	.037
	Thickness Ratio	.010	Normal Disc Loading	1.59 PSF
	Chord	7.0 In.	Rotor Speed	380 RPM

Construction: Laminated wood with steel spar.

Design Load Factor — 9.0

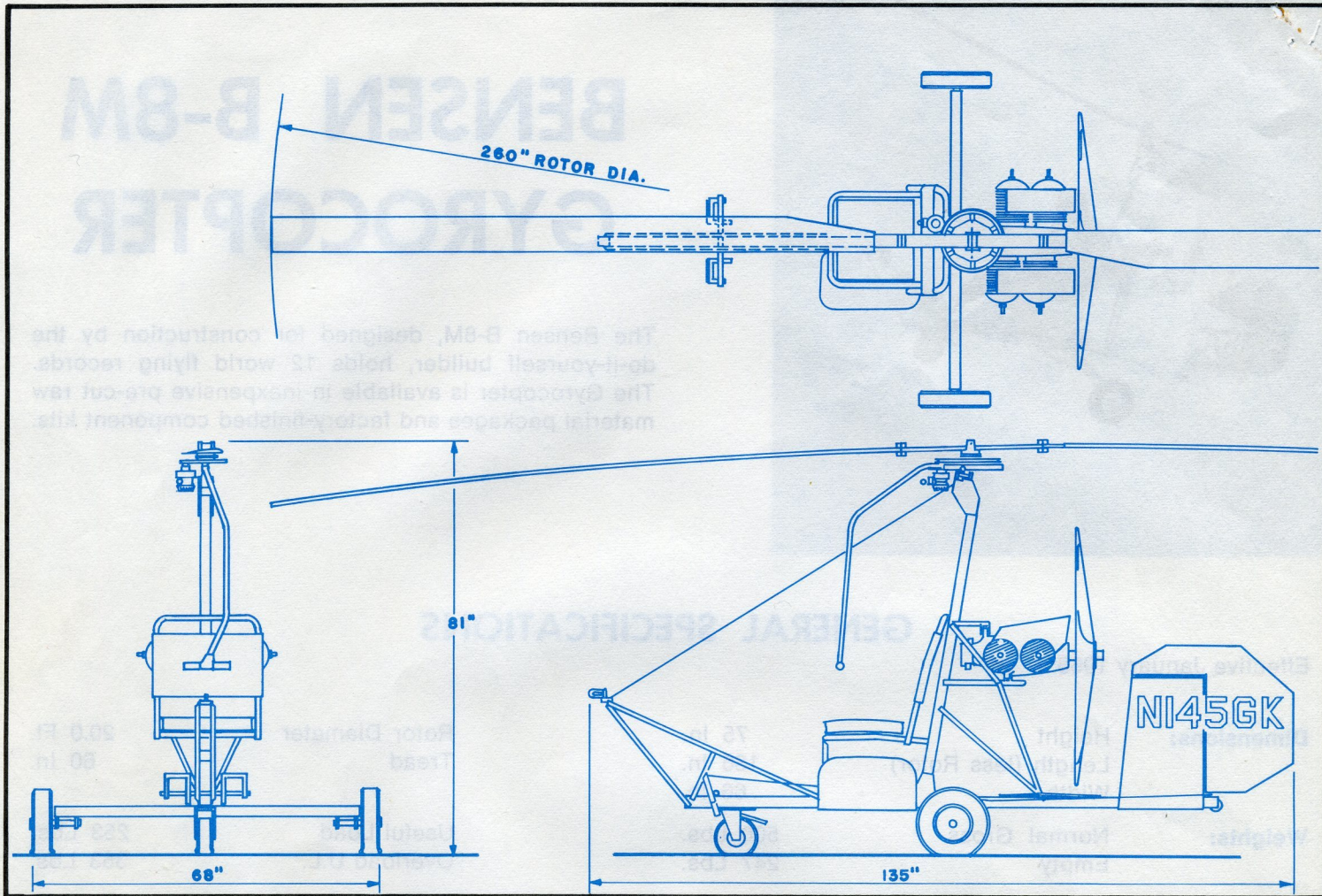
Suspension: Teeter Hinge, No Lag Hinges.

<b>Power Plant:</b>	Engine	McCulloch 4318E	Fuel Capacity	6.0 Gal.
	Cooling	Air	Fuel Cons./cruise hp	4.5 GPH
	Cylinders	4	Weight Dry	77 Lbs.
	Cycle	2 Stroke	Compression Ratio	7.8 to 1
	Horsepower	72 HP	Displacement	100 Cu. In.
	Rated Speed	4100 RPM	Dimensions	15 x 27 x 28

<b>Propeller:</b>	Make	Aero Prop	Rotation	CCW
	Model	BA 45-A2	Pitch	29"
	Type	Pusher	Diameter	45"
	Material	Birch	Rated Speed	4100 RPM

<b>Controls:</b>	Cyclic	Overhead Azimuth Stick (Joystick optional)
	Collective	None
	Yaw	Rudder and Nose-wheel Steering
	Throttle	Twist Grip on Left Handle-Bar
	Brakes	Single, Nose-Wheel





**Fuselage:**

Main Structure — 6061-T6 Aluminum Tubing, Heat Treated.  
 Landing Gear — Tricycle with Auxiliary Tail Wheel.  
 Main Wheels — General Tire, Pneumatic.  
 All Primary Structure is assembled with Aircraft quality bolts.

There are no welded, brazed, glued, riveted, or bonded joints in the primary structure.

**Equipment:**

(a) **Standard**

Airspeed Indicator  
 1000 Lb. Safety Belt  
 Kapok Seat Cushion  
 Wheel-Type Landing Gear  
 Tow Hook 1000 Lb. capacity

(b) **Optional**

Conventional Joystick Control  
 Altimeter  
 Compass  
 Auxiliary Fuel Tank  
 Float Landing Gear

**Performance:**

at Normal Gross Weight\*

Cruising Speed at S. L.	60 MPH	Range	100 Mi.
Max. Speed at S. L.	85 MPH	Endurance	1.5 Hrs.
Min. Level Speed S. L.	15 MPH	Service Ceiling	12,500 Ft.
Take-off Speed at S. L.	20 MPH	Max. Rate of Climb	1000 FPM
Landing Speed at S. L.	7 MPH	Min. Rate of Descent	18 FPS
Max. Economy Speed	45 MPH	Ferry Range	300 Mi.
Landing Roll in 10 MPH wind	0 Ft.	Landing Roll in calm air	20 Ft.
T.O. Run in Calm Air	300 Ft.		

\*These data are based on preliminary measurements and must not be interpreted as guaranteed figures.



