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The J-2 is for everyone.
A new air vehicle designed with three objectives in mind: Mobility, Flyability, and Safety. It opens up a broad new area of aviation, providing more utility and flying fun with greater safety.

Fundamentals of flying the J-2 Gyroplane and how to fly it, is produced by McCulloch Aircraft Corporation, Post Office Box 1259, Lake Havasu City, Arizona, 86403. All photographs and contents are original and the property of McCulloch Aircraft Corporation, copyright © 1970 by McCulloch Aircraft Corporation. No part of the publication may be reproduced by any means, including electronic, photographic, data reduction, or computer, without the written permission from the publisher.

Fundamentals of flying the J-2 Gyroplane was prepared and written to acquaint the reader with the Gyroplane and to help him become knowledgeable about flying the aircraft. Details and technical specifications have been omitted purposefully.
There's a new dimension to the freedom of flight with the advent of the McCulloch J-2 Gyroplane.

Never before has an uncomplicated air vehicle achieved such safety, maneuverability and control. The J-2 has been acclaimed by all who have flown it to be the easiest to fly, most stable, and most fun of any type of plane.

Here is the complete story and the "Fundamentals of Flying the J-2 Gyroplane".
Development of the autogyro dates back to 1921 in Spain. Juan de la Clave, an aeronautical engineer and member of an aristocratic family designed a spinning wing to overcome the limitations of conventional airplanes. As illustrated above, the rotor system was actually mounted above an orthodox aircraft.
HOW THE GYROPLANE CAME INTO EXISTENCE

An ideal aircraft meeting various aerodynamic requirements, yet retaining the important elements of control, efficiency, and simplicity has been the goal of aviation pioneers since the beginning of flight.

Simple air vehicles like gliders and balloons lack power and control and are at the mercy of atmospheric conditions.

Powered fixed-wing aircraft are extremely controllable in high-speed cruise configuration, but conversely have less control in low-speed flight during the important take-off and landing. The added necessity of lengthy expensive runways further reduce the attractiveness and utility of powered fixed-wing aircraft.

Helicopter operation requires frequent and high cost maintenance on the powered rotor. Its almost unlimited landing and take-off capability is complicated by involved flight training and operation.

In 1966, McCulloch Aircraft Corporation organized a group of executives and engineers, all accomplished leaders in the aviation industry, with the purpose of developing an aircraft which would be safe, flyable, and functional.

Now, almost fifty years after Juan de la Cierva's first successful autogyro flight in Spain, the McCulloch Aircraft Corporation has succeeded in advancing the state-of-the-art by introducing the ultra-safe, simple, and easy-to-fly J-2 Gyroplane.

The Gyroplane combines the best of two aviation worlds. The simple control and economy of powered fixed-wing aircraft along with the maneuverability of powered rotor helicopter flight.
Lift, the essential requirement for flight in any aircraft is achieved under most conditions by the flow of air over an airfoil or wing. Conventional fixed-wing aircraft achieve the necessary airflow initially by first moving the vehicle with its pilot and passenger along the ground until the proper forward speed is obtained, whereby the airflow over the fixed-wing shape is sufficient to lift the vehicle into the air. Helicopters develop lift by rotating their wings or airfoils around their stationary fuselage. At a particular RPM, the airflow over the rotating blades provides suitable lift to allow flight.

The McCulloch J-2 Gyroplane combines the best features of the fixed-wing aircraft and the helicopter to achieve its efficiency. The rotating gyro airfoil provides the lift. Unlike the helicopter, however, these rotating wings are freewheeling and not engaged except for a temporary interval before takeoff to bring up the RPM. Since the rotor is freewheeling, the need for heavy transmissions and gear boxes to mechanically couple the engine to the rotor is unnecessary. More important is the fact that this freewheeling, auto-rotating gyro does not generate torque and as a result additional flight control functions and costly and sophisticated anti-torque devices such as a tail rotor, drive shaft, gear box, etc. This also contributes to the ease with which the gyroplane is controlled. Directional control in a helicopter requires almost continuous tail rotor pedal deflection to compensate for constantly changing torque generated by its powered rotor system. Although the ground roll is only a fraction of that needed by a regular aircraft, the gyroplane, like a fixed-wing aircraft, requires some forward movement on the ground. After the rotor revolutions have been brought up to the required speed in RPM, the pilot advances a standard throttle moving the vehicle forward through the pusher propeller mounted behind the cabin. As the gyroplane accelerates additional airflow added to that already flowing over and under the freewheeling rotor blades allows the kinetic energy of the rotor system to lift the gyroplane. Airborne, control response is direct, providing a high degree of maneuverability. The forward thrust from the propeller keeps the rotor system freewheeling at suitable RPM and thus lifting to sustain flight.
The J-2 is designed to be a safe flying air vehicle.

Handsome lines and new appearance verify an engineering breakthrough in the design of both a small and attractive rotorcraft without compromising the aero-dynamic and functional requirements of the gyroplane. The streamline cabin is fabricated of lightweight metals and fiberglass which provide weight and cost saving in construction, as well as providing a rugged structure. The unique twin boom tail design provides excellent structural integrity as well as protection from the pusher propeller mounted behind the cockpit.

Rear mounting of the propeller also provides excellent visibility for both pilot and passenger and is a major asset for operating into and out of tight areas.

The freewheeling rotor of the J-2 is much like the fascinating gyroscope toy we played with as children. The gyroplane remains relatively stable during flight about all axes. The smooth, easy flight of the J-2 is unequaled even in turbulence and strong crosswinds.

The basic rotor system employed on the J-2 reflects millions of flight hours in proven reliability and safety. Time-tested power plant for the J-2 is the 180 HP 2,000-hour Lycoming 0-360 engine.

Exterior dimensions of the dynamic J-2 are small compared to other general aviation aircraft in production. Rotor diameter is only 26 feet, with a height of 8' 3". The fuselage measures 16 feet long with an inclusive width of 11' 2" between wing tips. Inversely the J-2's cabin interior is roomy, 43 inches wide and 50 inches floor to ceiling which easily permits two large-frame adults to occupy the cockpit in comfort. A broad oversize door on each side eliminates the awkwardness usually associated with getting in and out of most aircraft.

Both pilot and passenger enjoy virtually unobstructed 180-degree vision laterally and 100-degree vertically, allowing panoramic visibility.

The attractive interior, designed by Fiori, is a tone blend of durable fabric and leatherette. The easy-to-read layout of engine and flight instruments mounted on an attractive low-profile console are unobstructed by dual control sticks. Baggage storage area is under the seat.

Land and take-off on this remote beach by the ocean or isolated mountain meadow. The J-2 offers a new safe "Go-anywhere passport" for everyone.
CONTROLS

The J-2 is easy to fly. After control pressures have been trimmed, its "hands off" stability, with full control effectiveness right down to minimum air speed make it easy, fun to fly. Simple conventional flight controls and instrumentation allow anyone to master the J-2 quickly and easily.

With a landing speed of only 30 mph, as opposed to 60-70 mph for fixed-wing aircraft, the pilot has more time to react to unexpected occurrences or maneuver the gyroplane in confined areas.

There are four basic controls used in flying the J-2:

1. The Main Control Stick (Joystick)
2. The Rudder Pedals
3. The Engine Throttle
4. Trim Controls

The Main Control Stick in front of the pilot changes the blade pitch and effectively tilts the rotor system in the direction of flight.

The J-2's Rudder Pedals function simply with slight pedal deflection.

The main forward thrust is provided by the pusher propeller controlled by a standard push/pull Engine Throttle on the instrument panel. There is also a second throttle control performing the same function.

It is a motorcycle twist type located on the spin-up lever just to the left of the pilot seat, and is coupled to the panel throttle. Each throttle may be operated independently.

In addition, there are two important controls which are actuated on the ground before flight. One identified as the rotor blade spin-up lever, as mentioned previously, is located on the left side of the pilot seat. It engages the engine to the rotor and changes the angle of rotor blade pitch, thus reducing the drag and time in spin-up. In the down position the blades have zero degree pitch for ground operations including run up. The blades automatically move up to four degrees pitch when the lever is released for flight operations.

A Transmission Engagement Lever is located on the rear cabin wall centered above the seat back. Its function is to engage the power train to the rotor shaft. After run up it is automatically released through a direct mechanical linkage when the spin-up lever is allowed to return to the neutral position just prior to take off. The completion of the operation is confirmed by a light indication on the instrument panel.

Trim Controls are used for compensating control pressures caused by variable in-flight conditions and are located on the center of the seat support below the seat cushion.
FLYING THE GYROPLANE

PRE-FLIGHT INSPECTION

Pre-flying the J-2 Gyroplane is quick and uncomplicated. The small proportions and clean design allows simple walk around and inspection of all major items. The rugged basic structure provides for eye-level accessibility. A limited amount of sight gages allows for quick inspection of the various servicing levels.

EXTERIOR CHECK

1. A. Remove pilot covers and blade flags. Check nose wheel and strut.
   B. Inspect nose access door, windshield, air speed static port, oil cooler, and drain fuel to check for contamination.

2. A. Turn on the master switch and check the fuel quantity indicator for left and right tanks, then turn master off.
   B. Check rotor pitch lever, transmission disengagement linkage, and engagement light.

3. Inspect left main wheel and strut.
4. Check left wing fuel tank, fuel level, secure fill cap.
5. Check propeller, spinner, and rotor drive belts.
6. Check left and right tail booms and rudders.
7. Inspect right main wheel and strut, check left wing fuel tank, fuel level and secure fill cap.
8. Check right airspeed static port.
INTERIOR CHECK

The clean cockpit and console arrangement allow a quick interior inspection prior to starting the engine.

1. Adjust seat back, fasten seat and shoulder belt and secure doors.
2. Check controls and trim for travel and re-position to neutral.
3. Set mixture full rich, elevation on altimeter, with carburetor heat on cold position.
4. All electrical switches—off. Check fuse holders, secure with spares. Check pitot and static lines.
5. Battery switch — on, check transmission lever in disengaged position and light out on panel.
6. Select right and left fuel tank and verify fuel quantity indication.
7. Fuel boost pump on and check pressure indication.
STARTING THE ENGINE

Starting the J-2 is easy and similar to starting any vehicle except for the short interval the main rotor system is engaged to be brought up to operational RPM's.

After clearing the area around the vehicle, the pilot cracks the throttle, switches on the alternator and starts the engine. The engine is then allowed to run at 700 RPM's for a short period while the oil pressure comes up to operating limits.

TAXIING

Taxing in the J-2 Gyroplane is also accomplished much in the same manner as ground taxiing other aircraft. Primary control is maintained through coordination of the engine throttle, rudder-pedals and brake application. The behind-the-cabin location of the pusher propeller and large front windshield affords excellent forward visibility for the pilot as he taxi's forward.

The gyroplane may be taxied over smooth surfaces with the rotor stopped. If the surface is somewhat rugged, taxiing with the rotor system turning is recommended. Taxi speed over smooth terrain can be up to 15 mph while under 5 mph is recommended over rough terrain.

In the event taxiing is done with a stiff wind and the rotor system engaged, better directional control can be achieved by holding the stick (rotor-lilt) slightly into the wind.
ROTOR SPIN-UP

Bringing-up the rotor system to operational revolutions is accomplished by the following standard sequence:

1. The transmission engagement lever is placed in the "engage" position causing the "rotor-engaged" light located on the instrument panel to go on.

2. With the engine RPM set for 800, the spin-up lever is depressed to the full down position. This movement engages the rotor system through a 'V-belt' assembly and engine power begins to drive the rotor system. At this time, the rotor RPM begins to increase and is controlled by twisting a "motorcycle" type throttle located on the end of the lever.

3. At 500 rotor RPM, the spin-up lever is then gently raised to the full-up position. This disengages the power train and places the rotor blades into the four degree pitch position necessary for flight operation. The J-2 is now ready for take-off.

TAKE-OFF

The brakes are released and the pilot advances the engine throttle to full power. As the gyroplane accelerates along the ground, directional control is maintained with the rudder pedals.

At an indicated air speed of approximately 30 mph the aircraft is rotated to the nose-up position for lift-off.

The amazing efficiency of the J-2 is such that under normal conditions, this take-off technique can be accomplished within 100 feet or less.

CLimb

Climb is accomplished by moving the control stick back. After breaking ground, a climbing air speed of about 60 mph is used until all obstacles are cleared. At that time, the best climbing speed of 70 mph is maintained until cruising altitude is reached.
Cruise

The J-2 cruises at 105 mph and has a range of 200 miles. The Gyroplane has less drag than a helicopter and therefore the J-2 has considerably better cruising speed than a helicopter of similar power. However, unlike the helicopter, the Gyroplane cruises very much like a fixed-wing in that small applications of stick and rudder are all that are needed. The gyroscopic effect of the rotating rotor system provides the excellent stability about its longitudinal and lateral axis.

Once achieving cruise, the pilot adjusts the engine RPM for 2450 RPM's. Rotor RPM may fluctuate slightly due to differences in weight of the vehicle, altitude and speed, but is of little consequence and requires no attention.

The J-2 is also fitted with a simple mechanical trim system to allow smooth flight with a minimum of stick and rudder application during cruise.
TURNS AND BANKS

By moving the stick in the direction of the desired turn the rotor disc is tilted in that direction rolling the Gyroplane into a bank. The rudder pedal is deflected to turn the fuselage, and completing turn.

Satisfactory turns in either direction may be made without the use of the rudder pedals.
S-TURNS ACROSS A ROAD

The ground track pattern should be uniform on both sides of the road.
Use points on the ground to help plan the flight path.
Watch for drift on all turns.
**Descent and Approach**

Just as pulling back on the rotor control stick rotated the Gyroplane into the air for take-off and climb, pushing the stick forward moves the Gyroplane nose down into a descending flight path. In order to control the speed of the descent, power is reduced. The rate of descent is controlled with the throttle.

Reducing the in-flight speed below 28 mph simply causes the aircraft to descend gently; however, there is no less of latitudinal or longitudinal control.

Descent and approach angles are controlled by the adjustment of power to which the Gyroplane is very responsive. This permits a high degree of accuracy in spot landings.
LANDING

The following sequence occurs:

1. Mixture control is set to 'rich', carburetor heat and fuel boost pump are turned on.
2. A descent is established using an air speed of approximately 45-80 mph.
3. The Gyroplane is flared out about 10-15 feet above the ground by pulling the stick back and touch down is at approximately 25 mph with the nose in a slightly high attitude.
4. Brakes are applied if needed.

Again, the exceptionally slow touchdown speed required of approximately 25 mph (on no wind day) facilitates, under normal conditions, a comfortable full stop landing within 75 feet.

Another outstanding convenience during the landing phase is achieved through the excellent visibility afforded with the large front windshield and by having the pusher propeller mounted behind the cabin. Such forward visibility is important during operations in and out of restricted areas with nearby obstacles.

Rectangular course simulates approach and landing pattern starting at 750 feet above ground level.

The angle of approach is maintained with adjustments of power along with fore and aft pressure on the control stick.

Landing touchdown is made with nose high attitude on main wheels. Throttle is then closed and nose eased down with control stick for nose wheel touchdown. Brakes are applied if required.
CROSSWIND TAKE-OFF AND LANDING

TAKE-OFF

The crosswind take-off is accomplished essentially the same as a normal take-off, with the exception of holding the rotor control stick into the wind.

After breaking ground the Gyroplane is allowed to swing its nose into the wind, and the slip ball is centered with the rudder and flight path direction maintained with control stick.

LANDING

The landing into a crosswind is also just about the same as a standard into the wind landing. Final approach is at normal speed in a forward slip. Control of the flight path is achieved with the stick into the wind, and maintaining the heading along the flight path with the rudder.

After touching down, the nose wheel is lowered to contact the ground promptly and the main control stick is held into the direction of the wind. Brakes are applied as needed and a rotor speed of 100-150 RPM maintained while taxiing.
SAFETY AND MANEUVERABILITY

The design of the J-2 was dictated by the desire to achieve three major objectives:

1. **Mobility**: To develop an aircraft which would be capable of taking off and landing with a very short ground roll. In short, develop the first true Short Take-Off and Landing (STOL) aircraft. Such STOL capability would permit the vehicle to operate off airports and in and out of unimproved sites, providing "point-to-point" transportation. (In addition to take-offs and landings from small, unimproved areas — and airports — an active program of establishing gyroports at ski resorts, lakes, and other locations has already begun.)

2. **Flyability**: To develop an aircraft that would be easy to learn to fly and operate. That is, a vehicle which would have inherent handling qualities which would better fit the abilities of the average person. This meant the classical fixed-wing spin and stall had to be eliminated and take-off and landing speeds reduced considerably to insure that the aircraft would not "get ahead of the operator." Both objectives were accomplished by the rotating wing, or gyro, which provides control down to zero forward speeds and lift at very low speeds to accomplish slow take-offs and landings. This rotating wing, or gyro, permits the J-2 to lift-off and touch down at approximately 30 mph. Checking your car speedometer at this speed will give you a relative feel of the touch-down and lift-off speeds of the J-2 on a no-wind day.

3. **Safety**: To develop an aircraft which would provide new standards of safety. Of the three criteria, this was considered the most important.

a. The first safety objective was to eliminate the classical spin and stall and to substantially reduce the take-off and landing speeds. As noted above, this was accomplished by the rotating gyro.

b. The second safety objective was to substantially reduce those many accidents caused by fixed-wing non-IFR pilots faltering into weather. The vehicle had to provide, through its high degree of control and low-speed maneuverability, an opportunity for the pilot to maintain visual contact with the ground when visibility suddenly deteriorated; in short, an aircraft that could slow up and maneuver in accordance with the weather in which it was flying — and, in the event of weather emergency or engine failure, land safely in a relatively small area with very slow forward speed.

c. The third safety objective was to reduce the possibility of mid-air encounters. The advantages of slow-speed maneuverability had to be combined with excellent visibility. The rear-mounted engine and the absence of wings in the J-2 removes obstructions to the pilot's line of sight, providing excellent visibility.

d. The fourth safety objective, though seldom discussed candidly, was to provide better crash survivability characteristics. This was achieved by insuring touchdown speeds in the order of 25 to 30 mph. Sudden impact at these speeds would result in lower G's than the higher touch-down speeds of classical fixed-wing.

These three important characteristics, **MOBILITY, FLYABILITY** and **SAFETY** were the design objectives for the J-2.
SAFETY AND MANEUVERABILITY

AUTOROTATION

The initial rotation of the J-2 rotor system on the ground is brought about with power transmitted from the engine during a short powered spin-up period of approximately a minute and a half. Thereafter, in take-off, climb, flight, descent, and landing, the rotation is aerodynamic. This essential effect commonly called auto-rotation, (i.e., automatic rotation) is the important factor which eliminates the notorious "Classical Fixed-Wing Stall."

The air speed of the Gyroplane has little, if any, effect on the sensitivity or adequacy of the control aircraft. Satisfactory control is available at zero forward air speed.

ENGINE OUT

Since the J-2 rotor is always in autorotation in flight, it is spin-proof, stall-proof, and maintains control even in vertical descent with the engine out. The pilot establishes a glide to a spot he has chosen for landing, flares out at 10-15 feet above the ground, and touches down with a parachute-soft landing.

CROSS WINDS AND TURBULENCE

Due to the high rotor system disc loading (this relates to wing loading on fixed-wing aircraft), there are no rapid force reversals in flight. This means that the J-2 is almost insensitive to gusts, crosswinds, and turbulence. This is of great importance in making crosswind, short-field take-offs and landings. Its gust characteristics also give the J-2 Gyroplane an unequaled smoothness in flight. Pilot and passenger fatigue are reduced to a minimum.
GYROPLANE TRAINING

Rotorcraft - Gyroplane Rating Requirements.

Minimum requirements for pilot certificates at McCulloch dealer schools.

I. Student Pilot

A. 16 years minimum age.
   1. Under 21 years of age requires written consent of the parent or guardian.

B. Read, speak, and understand the English language.

C. Hold at least valid Third-Class Medical Certificate.

II. Requirements for Solo

A. Familiar with Part 91 of Civil Air Regulations.

B. Eight hours dual instruction in the following:
   1. Pre-flight inspection.
   2. Starting and warm-up.
   3. Taxiing.
   4. Take-offs.
   5. Climbs.
   6. Turns and banks.
   7. Traffic pattern procedures.
   8. Descents.
   9. Landing and parking.
   10. Emergency procedures.

C. Student certificate endorsed by flight instructor.

D. After solo student remains in local practice area until qualified for flight outside local area by flight instructor.
GYROPLANE TRAINING

III. Private Pilot
(no fixed-wing flying time).

A. 17 years minimum age.

1. Under 21 years of age requires parental consent.

B. Read, speak, and understand the English language.

C. Hold at least a valid Third-Class Medical Certificate.

D. Aeronautical knowledge requires written examination of the following:

1. Parts 91, 61, and 430 of Civil Air Regulations.

2. Practical aspects of cross-country flying.

3. Weather conditions.

4. General safety practices in the operation of rotocraft.

E. Aeronautical Experience:

1. Student pilot certificate appropriately endorsed recommending solo and cross country.

2. 40 hours total flight time. (25 of the above may be fixed wing flying time.)

3. 15 hours solo flight time in Gyroplane.

4. 3 hours solo cross-country flight time. (May be 3 hours fixed wing solo cross-country flight time.)

5. Pass Rotorcraft-Gyroplane flight test.

IV. Private Pilot
(holding private fixed-wing rating).

A. Private Pilot Certificate.

B. Hold at least a valid Third-Class Medical Certificate.

C. 20 hours dual flight time, and 5 hours solo flight time in Gyroplane.

D. Pass written Rotorcraft-Gyroplane examination.

E. Pass Rotorcraft-Gyroplane flight test.
GYROPLANE TRAINING

V. Commercial Pilot

(holding Private Certificate)

A. Valid Private Pilot's Certificate.

B. At least a valid Second-Class Medical Certificate.

C. Aeronautical knowledge of and pass written test on the following:
   1. Meteorology.
   3. Principals of safe flight operations.
   4. Civil Air Regulations Parts 91, 61, and 430.

D. Aeronautical Experience:
   1. Total of 150 hours flight time of which 100 hours may be fixed-wing.
   2. 50 hours in Rotorcraft of which 15 are solo in Gyroplane.

3. 100 hours as pilot in command.
4. 20 hours as pilot in command cross-country.
5. 10 hours dual instruction in Gyroplane in preparation for commercial test.

E. Aeronautical Skill:
   1. Pass commercial pilot's flight test for Rotorcraft.

VI. Commercial Pilot

(holding fixed-wing commercial)

A. Hold valid Commercial Pilot Certificate.

B. Hold at least a valid Second-Class Medical Certificate.

C. 10 hours dual Gyroplane instruction.

D. 5 hours solo Gyroplane flight time.

E. Pass commercial pilot flight test for Rotorcraft-Gyroplane.
Small nose luggage compartment.

Large under-seat luggage compartment.

One person can handle the J-2 on the ground with this tow bar.

Each wing tip fuel tank holds 12 gallons.

Clean lines of the J-2 represents an engineering breakthrough for a safe reliable, easy to fly air vehicle.
Ready to take-off, fly, and land almost anywhere. The J-2 is an exceptional forgiving air vehicle, with easy, safe, flight characteristics which appeal to the man and woman of average ability.
There's A New Way To Fly

Would you like to fly in the McCulloch J-2 Gyroplane?

Here's how. You can indicate your interest in flying the J-2 by simply completing the Flight Certificate below and mailing directly to McCulloch Flight Dispatch Headquarters. Your flight certificate will be confirmed and returned to you by your nearest McCulloch Gyroplane dealer.

He will arrange a convenient time and place (airport not essential) for you to fly the J-2. A $5.00 charge for your orientation flight will be made at that time.

SEND TO:
FLIGHT DISPATCH HEADQUARTERS
McCulloch Aircraft Corporation
P.O. Box 1259
Lake Havasu City
Arizona 86403

YES, I would like to take the $5.00 orientation flight in a McCulloch J-2 Gyroplane.

Name ____________________________
Street ____________________________
City ____________________________
State ____________________________ Zip ____________
Occupation ____________________________
# Specifications

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Specifications and performance subject to change without notice.
April 30, 1971

Office of the President

Dear Lake Havasu City Property Owner:

Production of McCulloch's J-2 Gyroplane is now in full swing, signaling yet another step forward in Lake Havasu City's exciting growth story. Over the next three years, it's anticipated that over 1600 McCulloch J-2 Gyroplanes will roll off the assembly lines.

Its implications are exciting to us and to you as a Lake Havasu City property owner. The production of this exciting new aircraft, built in an exciting new city means more residents, new and bigger payrolls and more capital improvements. But most importantly, as Lake Havasu City grows, your investment in its future grows with it!

Look over the enclosed J-2 Gyroplane manual. Even if you're not quite ready to try your wings we thought you would be interested in seeing just what's happening in 'your city.' As you read about the potential of the J-2 and its many applications you'll share with us the feeling that it will be a major industrial operation for years to come.

This is McCulloch Corporation's 25th Anniversary year, and the J-2 stands as another symbol of McCulloch's 25 years of leadership through creative engineering as well as evidence that "McCulloch men" are an innovative, progressive team. The engineering effort that created a major aviation breakthrough in the J-2 Gyroplane is typical of the "imagineering" throughout all McCulloch operations.

The J-2 Gyroplane. The revolutionary, lightweight Power Mac 6 Chain Saw. London Bridge at Lake Havasu City. All benchmarks of a progressive, growing and creative organization.

Isn't it good to know we're "partners in progress?"

Cordially,

Lorne B. Pratt

LBP:sw