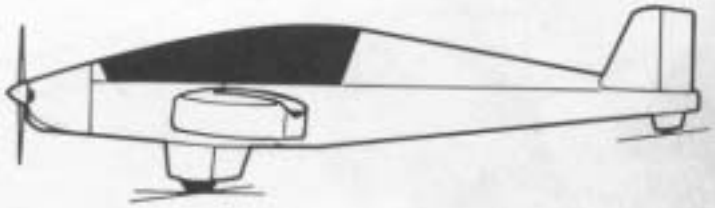
5000 - 5500 Static RPM
Tire pressure 39 psi
Prop Nuts Torque 156 in-lb
Spark plugs 180-204 in-lb
fuel/oil mix 40:1
(3.2oz oil/ gal fuel)

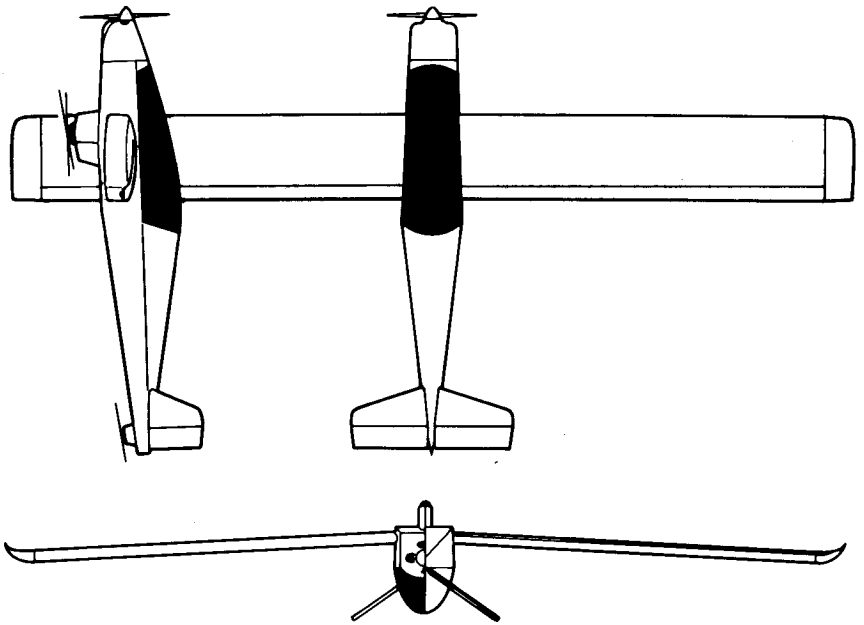
moni



flight manual

GENERAL

This owner's manual has been prepared as a guide to help you get the best performance, service and pleasure from your Moni. It contains information about your Moni's equipment, operating procedures, performance and suggestions for its servicing and care. You are urged to read it carefully and refer to it often. Blank performance charts are provided. The performance data for your individual Moni should be obtained and entered during the flight test period under the supervision of the F.A.A.



At any time questions arise that you are unable to find the answer to, write to us at Monnett Experimental Aircarft, Inc. P.O. Box 2984, Oshkosh, Wisconsin 54903 or phone us between the hours of 4 p.m. and 5 p.m. central time Monday thru Friday, and we will do our best to supply you the answer.

SECTION I

OPERATING CHECK LIST

One of the first steps in obtaining the utmost performance, service and flying enjoyment from your Moni is to familiarize yourself with your airplane's equipment, systems and controls. This can best be done by reviewing this equipment while sitting in the plane. Those items whose function and operation are not obvious are covered in Section II.

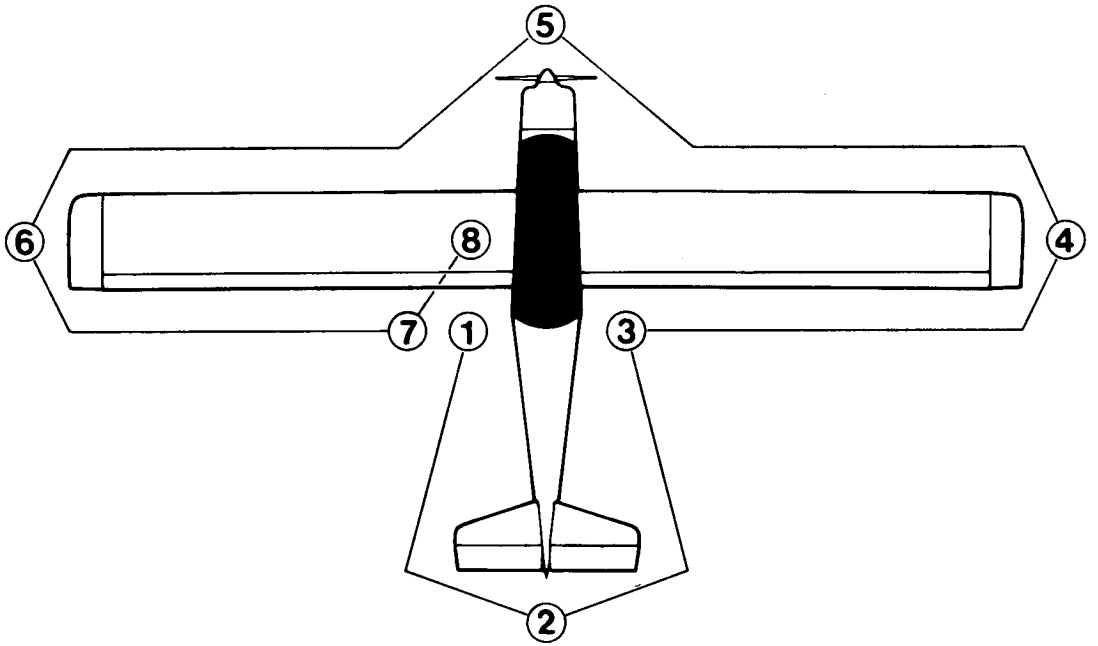
Section I lists, in Pilot's Check List form, the steps necessary to operate your airplane efficiently and safely. It is not a check list in its true form, as it is considerably longer, but it covers briefly all points necessary that you should know for a typical flight.

Flight and operational characteristics of the Moni are normal in all respects. There are no unconventional characteristics or operations that need to be mastered. All controls respond in the normal way within the entire range of operation. All airspeeds mentioned in Sections I thru VII are indicated airspeeds.

Figures calibrated for airspeeds and performance should be obtained during your flight test period.

BEFORE ENTERING THE AIRPLANE

Make an exterior inspection in accordance with figure below.



NOTE: Visually check aircraft for general condition during walk around inspection. In cold weather, remove even small accumulations of frost, ice or snow from the wing, tail and control surfaces. Also, make sure that surfaces contain no internal accumulation of ice or debris.

1: A. Check canopy and lock mechanism.

B. Remove control stick lock, if installed.

C. Check "Mag" switich is "Off".

D. Check fuel quantity - "MUST" indicate above "NO TAKE OFF."

E. Check fuel valve "ON".

2: A. Disconnect tail tie-down.

B. Check tail wheel and assembly for freedom of movement and security.

C. Check control surfaces for freedom of movement and security.

D. Check pitot tube (also total energy probe if used).

3: A. Check right aileron for proper engagement of actuator pin and freedom of movement and security.

B. Inspect static air source opening and right side of fuselage for stoppage.

4: A. Disconnect right wing tie-down.

B. Check main wheel tire for proper inflation. 39 lb

C. Visually inspect wheel fairing, brake cable and dive brakes.

5: A. Remove cowl periodically. Check starter oil level.

B. Visually inspect engine -- for leaks, broken gas line, cracked or plugged exhaust stacks, throttle linkage and carburetor hook-up.

C. Check battery fluid level.

D. Check fuel tank cap is closed and tight.

F. Check propeller and spinner for nicks, cracks and security.

G. Check carburetor air screen or opening for restrictions by dust or other foreign matter.

H. Replace cowling and secure.

6: A. Check fuel tank vent opening for stoppage.

B. Disconnect wing tie-down.

7: A. Inspect aileron for proper engagement of the aileron actuator pin and for freedom of movement and security.

B. Inspect static air source opening on left side of fuselage

8: A. Visually inspect fuel quantity again.

B. Check fuel valve is "ON. (See before starting engine section)

BEFORE STARTING ENGINE

1. Seat belts and shoulder harness -- Adjust and lock.
2. Fuel shutoff valve --"ON".
3. Master -- "ON".
4. Brakes -- test and set.

STARTING THE ENGINE

1. Throttle -- Idle
2. Propeller area -- "Clear and Contact"
3. Brake -- "ON", wheel chocked or tail tied down.
4. Magneto (MAG) switch -- "ON"
5. Choke -- "ON"
6. Mixture -- "RICH"
7. Push "START" button
8. Choke -- "OFF" as engine warms and will idle normally.

TAXIING

1. Brake -- "OFF"
2. Throttle - "Open Gently"
3. Taxi at slow walk *Especially on Rough Fields*
4. Zig-zag as necessary to observe other traffic or obstacles

BEFORE TAKE-OFF

1. Canopy -- closed and latched
2. Flight controls -- check for free and correct movement
3. Throttle setting -- "IDLE"
4. Engine instruments -- within green (operating) range
5. Flight instruments and radio -- set

NORMAL TAKE-OFF

1. Throttle -- Full "Open"
2. Aileron -- level wings
3. Elevator control -- lift tail
4. Rotation at approximately 45 MPH
5. Climb speed -- 60 MPH

MAXIMUM PERFORMANCE TAKE-OFF

1. Brakes -- Hold
2. Elevator Control -- "UP"
3. Throttle -- Full Open
4. Brakes -- Release
5. Level wings
6. Elevator control -- slightly tail high
7. Climb speed -- 70 MPH (with obstacles ahead)

CLIMB

1. Airspeed -- 60 to 70 MPH
2. Throttle -- Full "Open"

CRUISING

1. Power -- 5000 to 6000 RPM
2. Lean for smoother mid range

BEFORE LANDING

1. Airspeed -- 50 to 55 MPH
2. Throttle -- Retarded or closed enough to maintain above airspeed.
3. Mixture -- "Rich"
4. Airbrakes deployed
5. "Slip" as necessary

BALKED LANDING (GO AROUND)

1. Throttle -- Full "Open"
2. Slowly retract air brakes if deployed
3. Climb out re-enter pattern

WHEEL LANDING (FULL STALL LANDINGS PROHIBITED!)

1. Throttle -- Idle approximately 45 - 50 MPH
2. Touch down -- Main wheel first
3. Landing roll -- Stick back slowly, lower tail gently
4. Braking -- Minimum required

AFTER LANDING

1. Throttle -- "Open" gently
2. Taxi -- At slow walk, observe other traffic. Zig-zag
3. Watch wing tip clearance or narrow runway

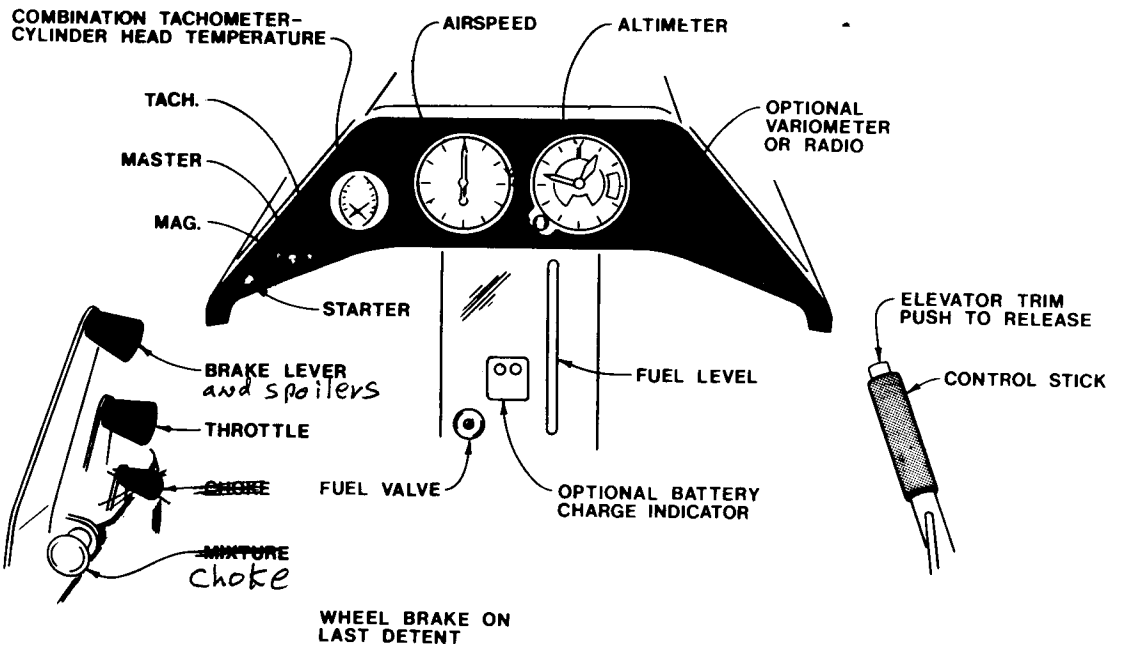
S E C U R I N G A I R C R A F T

1. Brakes -- Set
2. Radio and electrical equipment -- "OFF"
3. "MAG" -- switch off
4. Fuel valve -- "OFF"
5. Controls locked
6. Canopy latched and locked
7. Aircraft tied-down

SECTION II

DESCRIPTION AND OPERATING DETAILS

Typical Instrument Panel Layout



The following paragraphs describe the systems and equipment whose functions and operations is not obvious when sitting in the airplane. This section covers in greater detail, some items previously listed in Section 1 that require further explanation.

F U E L S Y S T E M

Fuel is supplied to the engine from one tank located aft of the engine fire wall under the canopy. Fuel flows by gravity through a fuel shutoff valve to the carburetor.

F U E L Q U A N T I T Y D A T A (U.S. GALLONS)

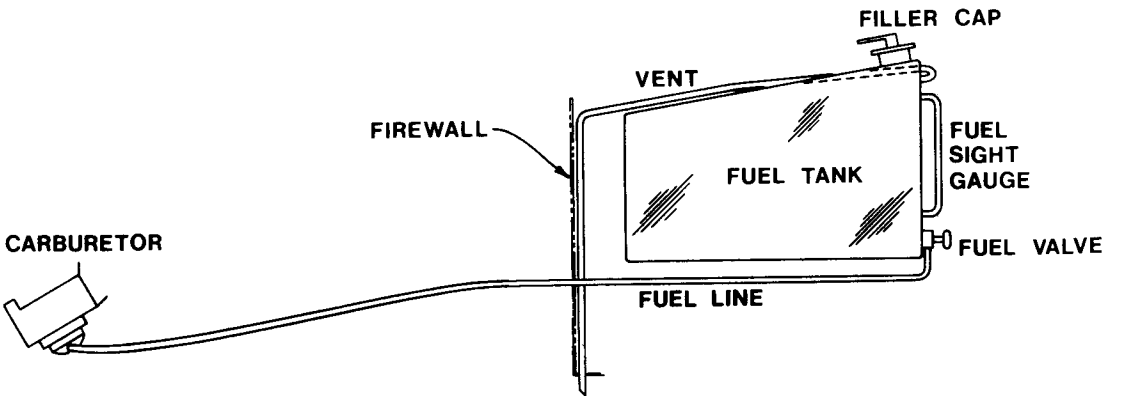
ONE TANK -- USABLE FUEL ALL FLIGHT CONDISTIONS -- 4.0

UNUSABLE FUEL---------- 0

TOTAL FUEL VOLUME---------- 4.0

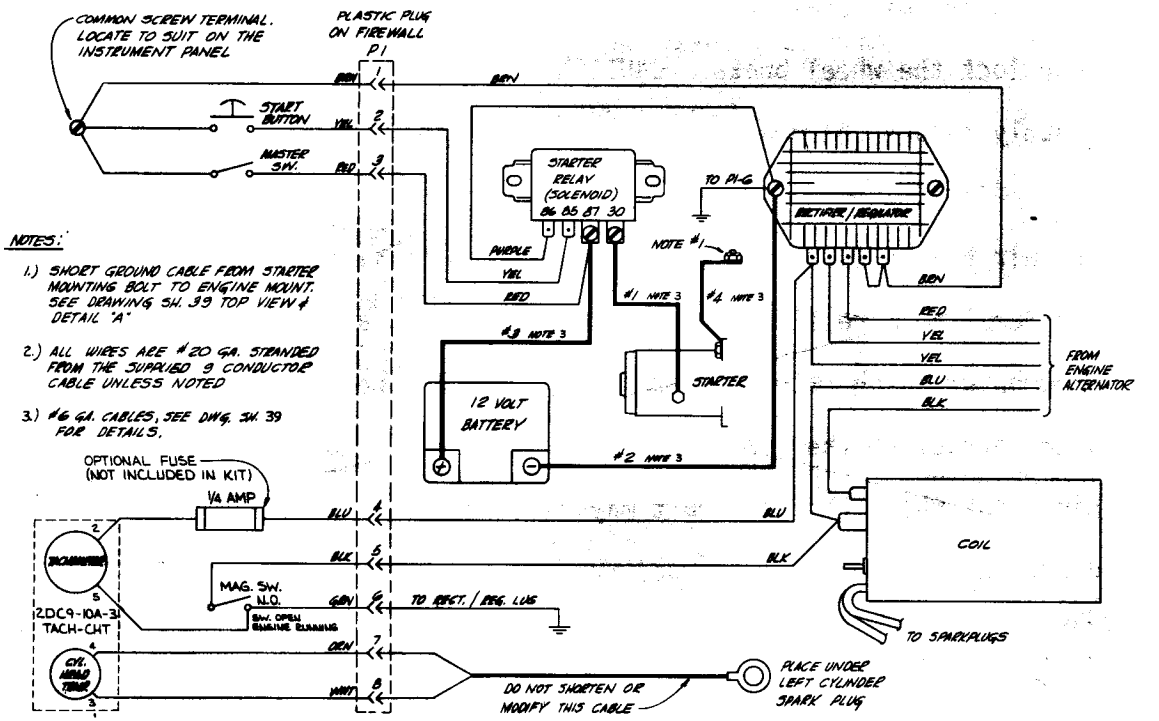
Above fuel volume based on use of Monnett supplied tank

F U E L S Y S T E M S C H E M A T I C



ELECTRICAL SYSTEM

The moni· is designed for day VFR flight, therefore, no additional electrical components are necessary. If you wish to install a radio, follow manufacturers recommendations.



CABIN VENTILATING SYSTEM

A separate adjustable aero-vator installed in the forward fuselage supplies outside air to the pilot. The volume of airflow into the cabin can be regulated to any degree desired if adjustable flap doors are installed. During cold weather operations, the vent may be stopped with foam rubber blocks.

BRAKE SYSTEM

Pulling back on the air brake handle located on the left applies pressure to the scrubber brake on the main wheel.

Locking the air brake handle in the fully deployed position will also lock the wheel brake. CAUTION! Landing on wet runways will greatly reduce the braking action so plan ahead!

No Air Brake - Spoilers instead

The air brakes will effectively double Moni's sink rate. Unlike spoilers and more like flaps if the air brakes are retracted quickly, a momentary high rate of sink will be experienced. Use caution when retracting the air brakes close to the ground to avoid this high sink rate. The aircraft may be slipped with the air brake deployed. Use ½ Spoiler abeam touchdown – full spoiler on final as necessary. Return to ½ spoiler before touchdown or no spoiler as desired.

SHOULDER HARNESS

A shoulder harness is provided for the pilot. The harness is attached to the cross members of the fuselage and interconnect with the seat belt. Leave just enough slack to allow all controls to be reached. During rough air and aerobatic operation, keep the belts very snug to avoid striking the canopy.

ENGINE STARTING & SHUTDOWN CHECK LIST

Ground Start

1. Fuel Valve -- "ON"
2. Seat Belt & Shoulder Harness -- "ON"
3. Wheel Brake -- "ON"
4. Choke -- "ON"
5. Master Switch -- "ON"
6. MAG Switch -- "ON"
7. Throttle -- "CLOSED"
8. "CLEAR"
9. Start Button -- "PUSH"
10. Engine -- "START"
11. Choke -- "OFF"
12. Radio -- "ON"

Ground Shut Down

1. Throttle -- "CLOSED"
2. MAG Switch -- "OFF"
3. Master Switch -- "OFF"
4. Fuel Valve -- "OFF"

Air Shut Down

1. Throttle -- "CLOSED"
2. Gentle Climb to Load Prop
3. MAG Switch -- "OFF"
4. Slow to Stop Prop
5. Choke -- "ON"

Air Restart - (Min. Altitude 1000 ft/A.G.L.)

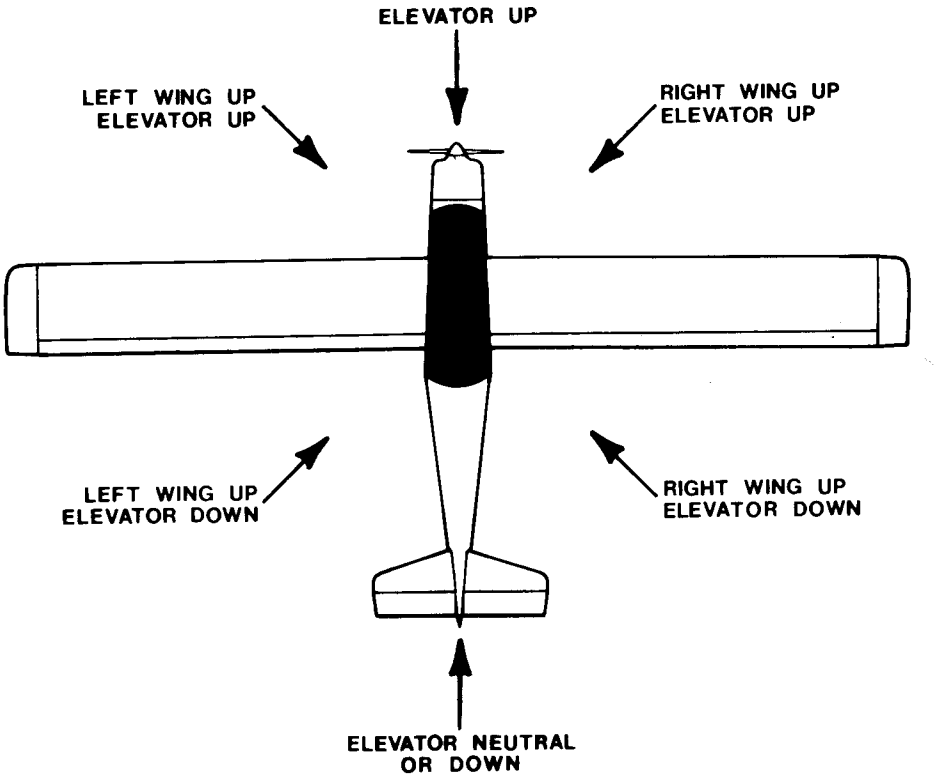
1. Throttle -- "CRACKED"
2. Master Switch -- "ON"
3. MAG Switch -- "ON"
4. Choke -- "CLOSED"
5. Start Button -- "PUSH"
6. Engine START -- If Engine Fails to Start Within 5 Seconds Choke "OFF". Push Start Button Until Engine Catches.
7. Choke -- "OFF"

T A X I I N G

When taxiing, it is important that speed and use of brakes be held to a minimum and that all controls be utilized to maintain directional control and balance.

Taxiing over loose gravel or cinders should be done at low engine RPM to avoid abrasion and stone damage to the propeller tips and under carriage of the fuselage. (See taxiing diagram below)

NOTE: For Moni it is best to taxi with the down wind wing down.



T A K E - O F F

It is important to check full-throttle engine operations early in the take-off run. Any signs of rough engine operation or sluggish engine acceleration is good cause for discontinuing the take-off. If this occurs, you are justified in making a thorough full-throttle, static runup before another take-off is attempted. The engine should run smoothly and turn approximately 5000 to 5500 RPM, depending on temperatures. NOTE: A normal two cycle "pick up" lag will be experienced until engine peaks to maximum take-off power.

Full throttle run ups over loose gravel are especially harmful to propeller tips. When take-offs must be made over a gravel surface, it is very important that the throttle be advanced slowly. This allows the airplane to start rolling before high RPM is developed, and the gravel will be blown back of the propeller rather than pulled into it. It is advisable to lift the tail as soon as possible to prevent blowing gravel against the tail surface. When small dents appear in the propeller blades, they should be immediately corrected as described in Section V.

CROSSWIND TAKE-OFF

Take-off into strong crosswinds normally are performed with the minimum amount of aileron and rudder necessary to minimize the drift angle immediately after take-off. The upwind wing should be down. The airplane is accelerated to a speed slightly higher than normal, then pulled off abruptly to prevent possible settling back to the runway while drifting. When clear of the ground, make a coordinated turn into the wind to correct for drift. Angling across the runway to minimize the crosswind component is acceptable

CLIMB DATA

For detailed data, see Maximum Rate-of-Climb data chart in Section VI.

C L I M B S P E E D S

Normal climbs are conducted at 65 MPH with full throttle for best engine cooling. The best rate of climb speed is approximately 70 MPH at sea level. Steep climbs at low speeds should be of short duration to allow improved engine cooling.

C R U I S E

Normal cruising is done at 5500 RPM to 6000 RPM. Top speed is attained at 6250 RPM. Variation in temperature and altitude affect maximum RPM.

S T A L L S

The stall characteristics are convention for Moni. Slight buffeting will occur just before the stall. Properly rigged Moni will stall straight away.

Stall speeds of 38 MPH are obtained for aft c.g., full gross weight conditions. This is a calibrated airspeed because indicated airspeeds are unreliable near the stall.

S P I N S

Spins are prohibited in this airplane, except when operating in the aerobatic c.g. limits. For recovery from an inadvertent or intentional spin, the following procedure should be used.

1. Retard throttle to idle (closed) position.

2. Apply full rudder opposite to the direction of rotation. Aileron and elevator neutral.
3. After one-fourth turn, move control stick forward of neutral in a brisk motion.
4. As rotation stops, neutralize rudder, and make a smooth recovery from the resulting dive by applying back pressure to the control stick.

Prolonged or "deep" spins should be avoided.

NOTE: When engaged in aerobatics of any type wear a parachute!

L A N D I N G

Normal landing approaches can be made with power-on or power-off at speeds of 45 MPH. Surface winds and air turbulence are usually the primary factors in determining the most comfortable approach speeds.

Add one-half of the headwind component to the approach speed. Example: Landing into a 5 MPH head wind, add 2.5 MPH to approach speed.

Actual touchdown should be power-off and above stall speed (touching) main wheel first, then the tail wheel as speed decreases below

stall, control stick slightly Aft of normal till airspeed drops, then full back until the airplane comes to a full stop.

Apply breaking as necessary.

SHORT FIELD LANDINGS

For a maximum performance, short field landing in smooth air conditions, make an approach at 50 to 55 MPH using enough power to control the glide path. Fully deploy the airbrake. After all approach obstacles are cleared, progressively reduce power and maintain 50 MPH by lowering the nose of the airplane and slipping if necessary. Touchdown should be made with throttle closed and a wheel landing. Immediately after touchdown, hold Moni level and apply heavy braking as required. For maximum brake effectiveness, hold back pressure on control stick and apply maximum brake pressure without sliding the tire. Slightly higher approach speeds should be used under turbulent air conditions.

CROSSWIND LANDINGS

When landing in a strong crosswind, use a wing low, crab or a combination method of drift correction and land in a nearly level altitutde.

NOTE: Winds 15 knots or above, use extreme caution. Angle across runway to diminish crosswind component.

BALKED LANDING (GO AROUND)

In a balked landing (go-around) climb, apply full power, nose down, retract airbrake slowly until a safe airspeed is attained. Climb to a safe altitute, re-enter pattern.

SECTION III

EMERGENCY PROCEDURES

Emergencies caused by aircraft or engine malfunctions are extremely rare if proper pre-flight inspections and maintenance are practiced. Flight planning together with good judgment can minimize enroute weather emergencies. However, if an emergency should arise the basic guidelines described in this section should be considered and applied as necessary to correct the problem.

ROUGH ENGINE OPERATION OR LOSS OF POWER

SPARK PLUG FOULING

A slight engine roughness in flight may be caused by one or more spark plugs becoming fouled by carbon or lead deposits. Two cycle engines have a normal rough midrange (3 to 4000 RPM). An obvious power loss in single ignition operation is evidence of spark plug or magneto trouble. Assuming that spark plugs are the likely cause, a leaner or richer mixture adjustment may be necessary. In an event, head for the nearest airport for repairs.

MAGNETO MALFUNCTION

A sudden engine roughness or misfiring is usually evidence of magneto problems. Select different power settings. If the problem still exists, it may be ignition wiring problems. In either case, head for the nearest airport for repairs

FORCE LANDINGS

PRECAUTIONARY LANDING WITH ENGINE POWER

Before attempting an "off airport" landing, one should drag the landing area at a safe but low altitude to inspect the terrain for obstructions and surface conditions, proceeding as follows:

1. Drag over selected field at 65 MPH airspeed, noting the preferred area for touchdown for the next landing approach.
2. On downwind leg, turn off all switches except "MAG" switch.
3. Approach field at 50 MPH.
4. Before touchdown turn mag switch "OFF".
5. Wheel land. Stick full back when speed reduces below stall.

EMERGENCY LANDING WITHOUT ENGINE POWER

If an engine stoppage occurs, establish a glide 45 to 50 MPH. If time permits, attempt to restart the engine by checking for fuel

quantity, proper fuel selector valve position. ~~Also check that~~ tachometer has ~~not~~ become grounded by turning ~~off tach~~ switch and ~~check MAG swith is~~ "ON".

If attempts to restart engine fail, select a suitable field and prepare for the landing as follows:

1. Establish up wind glide. Use airbrakes on slip as necessary.
2. Wheel landing.
3. Apply heavy braking as necessary.

ENGINE FIRE IN FLIGHT

Engine fires are rare in flight, if one is encountered, the following steps should be taken:

1. Turn fuel shutoff valve "OFF".
2. All switches "OFF".
3. Establish a 55 MPH glide. Airbrake on as necessary.
4. Select a field suitable for a forced landing.
5. If fire is not extinguished, increase glide speed in an attempt to extinguish it.
6. Execute a forced landing as described in paragraph emergency landing without engine power.

SECTION IV

OPERATING LIMITATIONS

Your Moni exceeds the requirements of airworthiness set forth by Monnett Experimental Aircraft as submitted to the F.A.A. The airplane is approved for day VFR operation only.

Your Moni must be operated in accordance with all FAA - approved markings, placards and check lists in the airplane. If there is any contradiction to FAA approved markings, placards, etc. in this section, it is to be disregarded.

MANEUVERS - UTILITY CATEGORY

This airplane is in the utility category and is designed for limited aerobatic flight. The following paragraph will test maneuvers permitted in this airplane. In connection with the foregoing, the following gross weight and flight load factors apply, with maximum entry speeds for maneuvers as shown:

	UTILITY	AEROBATIC
Gross Weight----------	550 LBS	500 LBS
Flight Load Factor----	4.4g's	+6-4g's

No aerobatic maneuvers are approved except those listed on the following page.

MANEUVER	MAXIMUM ENTRY SPEED
Chandelles	120 mph
Lazy Eights	120 mph
Steep Turns	120 mph
Spins	IDLE
Loops	120 mph
Aileron Rolls	120 mph
Barrel Rolls	120 mph
Stalls (Except Whip Stalls)	IDLE

Aerobatics that may impose high loads should not be attempted. The important thing to bear in mind in flight maneuvers is that the airplane is clean in aerodynamic design and will build up speed quickly with the nose down. Proper speed control is an essential requirement for execution of any maneuver, and care should always be exercised to avoid excessive speed which in turn can impose excessive loads. In the execution of all maneuvers, avoid abrupt use of controls. Always wear a parachute!

AIRSPEED LIMITATION

The following is a list of the calibrated airspeed (CAS) limitations for the Moni.

Aircraft Weight	500 lbs.	550 lbs.
Never Exceed speed (glide or dive, smooth air)	150 MPH	150 MPH
Maximum Structural cruising speed	120 MPH	105 MPH
*Maneuvering speed	105 MPH	95 MPH

* Speed below which abrupt movement or controls will not cause structural damage.

AIRSPEED INDICATOR MARKINGS

The following is a list of the calibrated airspeed markings (CAS) required on the Moni.

Never Exceed (glide or dive, smooth air)---------150 (RED LINE)

Caution Range ----------------------------------105 (YELLOW ARC)

Normal Operating Range----------38 to 105 (GREEN ARC)

Dive Brake Range----------105 (WHITE ARC)

ENGINE INSTRUMENT MARKINGS

FUEL QUANTITY INDICATOR

Visual fuel in tube .5 gallon usable at - NO TAKE OFF (Red Line)

TACHOMETER

Normal Operating Range----------5000 to 6000 RPM

Maximum Allowable----------6300 RPM

CYLINDER HEAD TEMPERATURE GAUGE

Normal Operating Range----------325^{o}F to 395^{o}F

Maximum Allowable----------430^{o}F

WEIGHT AND BALANCE

The following information will enable you to operate Moni within the prescribed weight and center of gravity limitations. To figure the weight and balance of your particular airplane, use the sample problem, loading graph and center of gravity moment envelope shown on plan sheet.

Consult the individual aircraft papers for actual weight and balance information.

EMPTY WEIGHT C.G. (NO PILOT, NO FUEL)			TABLE #1
ITEM	WEIGHT (LBS.)	ARM	MOMENT
MAIN WHEEL			
TAIL WHEEL			
-TOTALS- WEIGHT AND MOMENT		----	

÷ _____ = _____
TOTAL MOMENT / TOTAL WEIGHT / E.W. C.G.

C.G. WITH PILOT (NO FUEL)			TABLE #2
ITEM	WEIGHT (LBS.)	ARM	MOMENT
MAIN WHEEL			
TAIL WHEEL			
-TOTALS- WEIGHT AND MOMENT		----	

÷ _____ = _____
TOTAL MOMENT / TOTAL WEIGHT / C.G. WITH PILOT

CALCULATION FOR PILOT C.G. ARM		TABLE #3
TOTAL WT. WITH PILOT (TABLE 2A)	TOTAL MOMENT WITH PILOT (TABLE 2B)	
TOTAL EMPTY WT. (TABLE 1A) –	TOTAL EMPTY WT. MOMENT (TABLE 1B) –	
TOTAL WEIGHT DIFFERENCE	TOTAL MOMENT DIFFERENCE	

÷ _____ = _____
TOTAL MOMENT DIFF. / TOTAL WT. DIFF. / PILOT C.G. ARM

C.G. WITH PILOT AND BALLAST (NO FUEL)			TABLE # 4
ITEM	WEIGHT (LBS.)	ARM	MOMENT
TOTALS FROM TABLE 2 (A and B)			
BALLAST			
-TOTALS- WEIGHT AND MOMENT		----	

÷ _____ = _____
TOTAL MOMENT / TOTAL WEIGHT / C.G.

- MAXIMUM GROSS WEIGHT _ _ _ _ _ _ _ _ _ 560 LBS.
- MAXIMUM GROSS AEROBATIC WEIGHT _ _ _ _ 500 LBS.
- INTENTIONAL SPINS PROHIBITED BEYOND AFT AEROBATIC C.G. LIMIT

WEIGHT AND BALANCE FORMULA

WEIGHT x ARM = MOMENT _ _ _ _ _ _ _ _ _ W x A = M

TOTAL MOMENT ÷ TOTAL WEIGHT = CENTER OF GRAVITY _ _ _ $\frac{TM}{TW}$ = C.G.

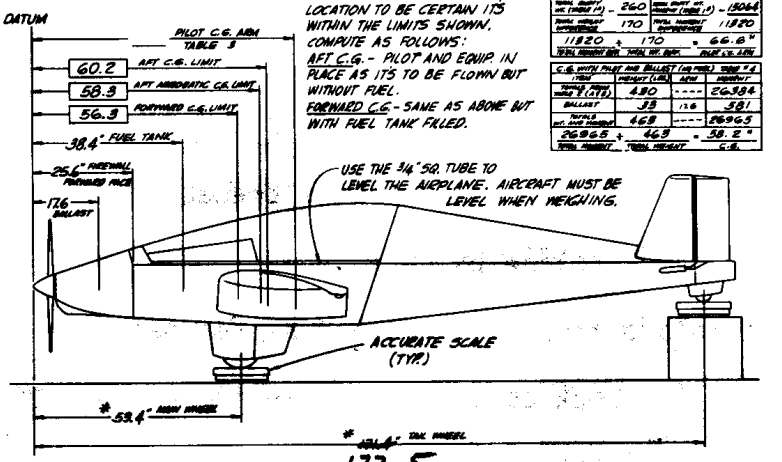
WEIGHT = TOTAL WEIGHT OF PLACED OBJECT

ARM = NUMBER OF INCHES WEIGHT CENTER IS PLACED AFT OF DATUM

BEFORE FLYING THE MONI AND WITH THE BALLAST IN PLACE CHECK THE GROSS WEIGHT AND C.G. LOCATION TO BE CERTAIN ITS WITHIN THE LIMITS SHOWN. COMPUTE AS FOLLOWS:

AFT C.G. - PILOT AND EQUIP. IN PLACE AS ITS TO BE FLOWN BUT WITHOUT FUEL.

FORWARD C.G. - SAME AS ABOVE BUT WITH FUEL TANK FILLED.



SAMPLE WEIGHT AND BALANCE

EMPTY WEIGHT C.G. (NO PILOT, NO FUEL)			TABLE #1
ITEM	WEIGHT (LBS.)	ARM	MOMENT
MAIN WHEEL	250	53.4	13350
TAIL WHEEL	10	171.4	1714
-TOTALS- WEIGHT AND MOMENT	260	----	15064

15064 ÷ 260 = 57.94" (TOTAL MOMENT / TOTAL WEIGHT / E.W. C.G.)

C.G. WITH PILOT (NO FUEL)			TABLE #2
ITEM	WEIGHT (LBS.)	ARM	MOMENT
MAIN WHEEL	401	53.4	21419
TAIL WHEEL	29	171.4	4971
-TOTALS- WEIGHT AND MOMENT	430	----	26384

26384 ÷ 430 = 61.36" (TOTAL MOMENT / TOTAL WEIGHT / C.G. WITH PILOT)

CALCULATING FOR THE PILOT C.G. ARM		TABLE #3
TOTAL WT. WITH PILOT (TABLE 2A)	430	26384
TOTAL EMPTY WT. (TABLE 1A) –	260	15064
TOTAL WEIGHT DIFFERENCE	170	11320

11320 ÷ 170 = 66.6" (TOTAL MOMENT DIFF. / TOTAL WT. DIFF. / PILOT C.G. ARM)

C.G. WITH PILOT AND BALLAST (NO FUEL)			TABLE # 4
ITEM	WEIGHT (LBS.)	ARM	MOMENT
TOTALS FROM TABLE 2 (A and B)	430	----	26384
BALLAST	33	17.6	581
-TOTALS- WEIGHT AND MOMENT	463	----	26965

26965 ÷ 463 = 58.2" (TOTAL MOMENT / TOTAL WEIGHT / C.G.)

SECTION V

CARE OF THE AIRPLANE

If your airplane is to retain that new-plane performance and dependability, certain inspection and maintenance requirements must be followed.

GROUND HANDLING

The airplane is most easily and safely maneuvered by hand if you grasp the tail wheel and tail surfaces leading edge at the tip and lift. The plane can now be moved forward or backward with ease.

MOORING YOUR AIRPLANE

Proper tie-down is the best precaution against damage to your parked airplane by gusty or strong winds. To tie down your airplane securely, proceed as follows:

1. Lock control stick in far aft position using seat belt.
2. Tie strong ropes to wing and tail tie-down position, and secure each rope to ramp tie-downs. Flat tie-down straps may be used over the top of the wing.

3. Install a surface control lock over the fin and rudder.
4. Remove pitot tube.
5. Lock main wheel brake and airbrake.

C A N O P Y

The plastic canopy should be cleaned with an aircraft windshield cleaner. Apply the cleaner sparingly with soft cloths and rub with moderate pressure until all dirt, oil scum and bug stains are removed. Allow the cleaner to dry, then wipe it off with soft flannel cloths.

NOTE: NEVER USE gasoline, benzine, alcohol, acetone, carbon tetrachloride, fire extinguisher or anti-ice, lacquer thinner or glass cleaner to clean the plastic. These materials will attach the plastic and may cause it to craze.

Do not rub the plastic canopy with a dry cloth since this builds up an electrostatic charge which attracts dust. Waxing with a good commercial wax will finish the cleaning job. A thin, even coat of wax, polished out by hand with clean soft flannel cloths, will fill in minor scratches and help prevent further scratching.

Do not use a canvas cover on the canopy unless freezing rain or sleet is anticipated since the cover may scratch the plastic surface.

PAINTED SURFACES

The painted exterior surfaces of your Moni no doubt have a durable, long lasting finish and under normal conditions, requires no polishing or buffing. Generally, the painted surfaces can be kept bright by washing with water and mild soap, followed by a rinse with water and drying with cloths or a chamois.

Waxing may or may not be necessary to keep the painted surface bright. This will depend on the type of paint you used when you finished your plane. However, if desired, the airplane may be waxed with a good automotive wax. A heavier coating of wax on the leading edges of the wings and tail and on the cowl nose and propeller spinner will help reduce the abraison encountered in these areas.

ALUMINUM SURFACES

The aluminum surfaces of your Moni require only minimum care to keep them bright and clean. To remove dirt, wash with water, oil and grease may be removed with gasoline, naphtha, carbon tetrachloride or other non-alkaline solvents. Dulled aluminum surfaces may be cleaned effectively with an aircraft aluminum polish.

After cleaning, and periodically thereafter, waxing with a good automotive wax will preserve the bright appearance and retard corrosion.

PROPELLER CARE

Preflight inspection of propeller blades for nicks, and wiping them or cleaning and waxing occasionally to remove grass and bug stains will help ensure long, trouble-free service. Small nicks on the blades, particularly near the tips and on the leading edges, should be dressed out as soon as possible since these nicks produce stress concentrations, and if ignored, may result in cracks.

NOTE: When filing or sanding nicks out, care should be used not to remove enough material from the blade to create an unbalanced condition.

The torque movement of the screws (bolts) is very important. We recommend for propellers with 5/16 - 24 UNF threads to use 160 in./lbs. This is a dry thread value. Retorquing is required after the first flight and thereafter every 50 hours.

INTERIOR CARE

The plastic canopy, instrument panel and control knobs need only be wiped off with a damp cloth. Household or automotive interior cleaners may be used on the A.B.S. and molded fiberglass components.

A small portable vacuum cleaner works well to clean the under seat areas and aft fuselage.

FLYABLE STORAGE

Aircraft which are not in daily flight should have the engine started and warmed up at least once a week. Warm-up should be accomplished at a throttle setting necessary to produce a minimum engine temperature in the normal operating range. Excessive ground run-up should be avoided. Run-up should not exceed 10 minutes duration. Engine warm-up also helps to eliminate accumulations of water in the fuel system and other airspaces in the engine.
Keep fuel tank full to minimize condensation in the tank.

INSPECTION PERIODS

Federal aviation regulations require that all airplanes have a periodic (annual) inspection as prescribed by the administrator, and performed by a person designated by the administrator.

AIRCRAFT FILE

There are miscellaneous data, information and licenses that are a part of the aircraft file. The following is a check list for that file. In addition, a periodic check should be made of the latest federal aviation regulations to ensure that all data requirements are met.

A. To be displayed in the aircraft at all times:

1. Aircraft airworthiness certificate (FAA Form 81-00-2)
2. Aircraft registration certificate (FAA Form 8050-3)
3. Aircraft radio station license, if transmitter installed (FCC Form 556)
4. Fire proof aircraft data plate.

B. To be carried in the aircraft at all times:

1. Weight and balance and associated papers (Repair and alteration form, FAA Form 337, if applicable).
2. Aircraft equipment list.

C. To be made available upon request:

1. Aircraft log book
2. Engine log book

Most of the items listed are required by the United States Federal Aviation regulations. Since the regulations of other nations may require other documents and data, owners in other countries should check with their aviation officials to determine their requirements. FAR Part 43, maintenance, preventive maintenance, rebuilding and alterations, is recommended as reference material. It does not apply to ameteur-built aircraft, but does provide worth while guidance in recommended practices for type certificated aircraft.

LUBRICATION AND SERVICING PROCEDURES DAILY

FUEL TANK FILLER:

Service after each flight with proper fuel-oil mixture (see engine manual). The capacity of the tank is 4 gallons.

SERVICING CHECK LIST EACH 25 HOURS

(Applicable for Annual type inspection)

1. Engine Comportment
   A. Clean engine and visually inspect for loose connections, leaks and cracks.

B. Inspect engine mount, exhaust system, and cooling baffles for security, cracks or any maintenance required.

C. Remove carburetor bottom cover and remove fuel screen and check for contaminants. Clean and reinstall.

D. Remove spark plugs and check for proper spark gap. Clean or replace if necessary and reinstall.

E. Check propeller for damage and for proper torque of prop mounting bolts.

F. Visually check entire area for general condition: loose wire, chafing, etc.

G. Lubricate engine controls and check for proper condition.

H. Each 100 hours, perform compression test.

2. Cockpit Area

A. Check under instrument panel for general condition: loose wires, chafing, etc.

B. Check fuel tank for leaks and security.

C. Check that all placards are installed properly and are legible.

D. Check wing attachment area for loose fittings, cracks, etc.

E. Inspect and lubricate control system. Check for proper operation and condition.

F. Check cockpit area and canopy for general condition.

3. Landing Gear and Wheel Pant

A. Clean landing gear assembly and interior of wheel pant. Check for cracks in wheel assembly. Check tire for wear.

B. Lubricate wheel bearings (grease) if required. Check condition of bearings.

C. Check brake for proper operation and excessive wear of brake pad.

D. Check landing gear structure for security and condition.

4. Wings
   A. Check skin and structure for damage, loose rivets and general condition. (If an area is suspected of a broken bond, it may be check by using a suction cup to see if the skin can be lifted off of the structure underneath.)
   B. Check wing tips for looseness and condition. Check tip wheels for wear.
   C. Lubricate aileron hinges.

5. Fuselage and Emfennage
   A. Check skin and structure for damage, loose rivets and general condition.
   B. Check controls for proper operation and lubricate.
   C. Check tailwheel for proper operation and damage.
   D. Check security and condition of stabilizers and control surfaces. Inspect attach points for looseness, etc.

For areas requiring lubrication, use 10W30 motor oil or equivalent, unless otherwise noted.

SECTION VI

O P E R A T I O N A L D A T A

The following operational data charts should be completed by the builder for his individual Moni during the flight test restriction period.

Variations in finish and weight will all significantly affect the performance of your Moni.

The charts are intended as a guide to accumulation data from your flight test period that will aid your future flight planning.

AIRSPEED CORRECTION TABLE

IAS - MPH	60	70	80	90	100	110	120	130
CAS - MPH								

STALL SPEEDS	- POWER - OFF -			
Gross Wt. 550 lbs.	ANGLE OF BANK			
CONDITION	0^{o}	20^{o}	40^{o}	60^{o}
Speeds are MPH, CAS				

MAXIMUM RATE OF CLIMB DATA										
Gross Weight LBS.	At Sea Level & 59°F			At 2500 Ft. & 50°F			At 5000 Ft. & 41°F			
	IAS MPH	Rate of Climb Ft/Min	Fuel Used Gal.	IAS MFP	Rate of Climb Ft/Min	Fuel Used Gal.	IAS MPH	Rate of Climb Ft/Min	Fuel Used Gal.	
Utility 560										
Aerobatic 500										

1. Full Throttle
2. Fuel Used Includes Warm-Up and Take Off Allowances.
3. For Hot Weather, Decrease Rate of Climb 15 Ft/Min for each 10° F. Above Standard Day Temp. For Particular Altitude.

T A K E - O F F D I S T A N C E						CLEAN-HARD SURFACE RUNWAY			
	Gross	IAS	Head	At Sea Level & 59° F		At 2500 Ft. & 50°F		At 5000 Ft. & 41° F	
Plane	Wt. LBS	50 Ft. MPH	Wind Knots	Ground Run	To Clear 50 Ft. OBS	Ground Run	To Clear 50 Ft. OBS	Ground Run	To Clear 50 Ft. OBS
MONI	550								

1. Increase the Distance 10% for each 35° F. Increase in Temperature Above Standard for the Particular Altitude.
2. For Operation on a Dry Grass Runway, Increase Distance (Both "Ground Run" and Total to Clear 50 ft. OBS) By 7% of the "Total to Clear 50 Ft. OBS Figure.

L A N D I N G D I S T A N C E

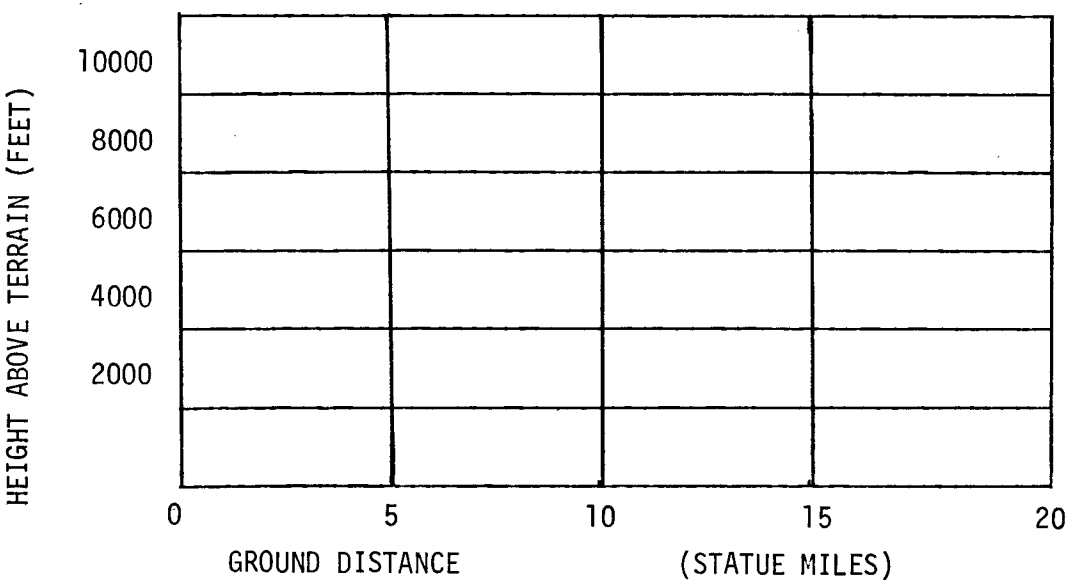
POWER OFF - ZERO WIND
HARD SURFACE RUNWAY

Gross Weight LBS.	Approach Speed IAS, MPH	At Sea Level & 59° F		At 2500 Ft. & 50° F		At 5000 Ft. & 41° F	
		Ground Roll	Total To Clear 50'	Ground Roll	Total To Clear 50' OBS.	Ground Roll	Total To Clear 50' OBS.

1. Decrease the Distances Shown by 10% for Each 4 Knots of Head Wind.
2. Increase the Distance by 10% for Each 60° F. temperature Increase Above Standard.
3. For Operation on a Dry, Grass Runway, Increase Distance (Both "Ground Roll" and "Total to Clear 50 Ft. Obstacle" Figure.

M A X I M U M G L I D E

SPEED MPH (IAS)
PROPELLER STOPPED
ZERO ~~WIND~~ WIND



C R U I S E P E R F O R M A N C E

Altitude	RPM	% BHP	TAS MPH	GAL/HR.	Endurance Hrs. Standard Tank	Range Miles Standard
2500						
5000						

1. Maximum Cruise is Normally Limited to 75% Power.
2. In the Above Calculations of Endurance in Hours and Range in Miles, No Allowances Were Made for Take-off or Reserve.

SECTION VII

GENERAL DESCRIPTION OF AIRCRAFT

"N" Number _____

Aircraft Type: MONI

Power Plant: KFM 107E

Serial No. Eng. _____

Major Construction Material:

Aluminum

Colors - Exterior _____

_____

Special Features _____

_____

_____

Source of Plans, Kit, Replacement Parts:

Monnett Experimental Aircraft, Inc.
895 W. 20th Ave.
P.O. Box 2984
Oshkosh, WI 54903

Serial Number of Aircraft

_____

Model Number of Aircraft

_____

Constructed by:

Names:

1. _____

Address _____

2. _____

Address _____

3. _____

Address _____

Date Construction Started _____

_____

Date Construction Completed

_____

FAA Approval By _____
(name)

FAA Office Phone _____

Date Approved for Flight _____

First Flight:

Date _____

Place _____

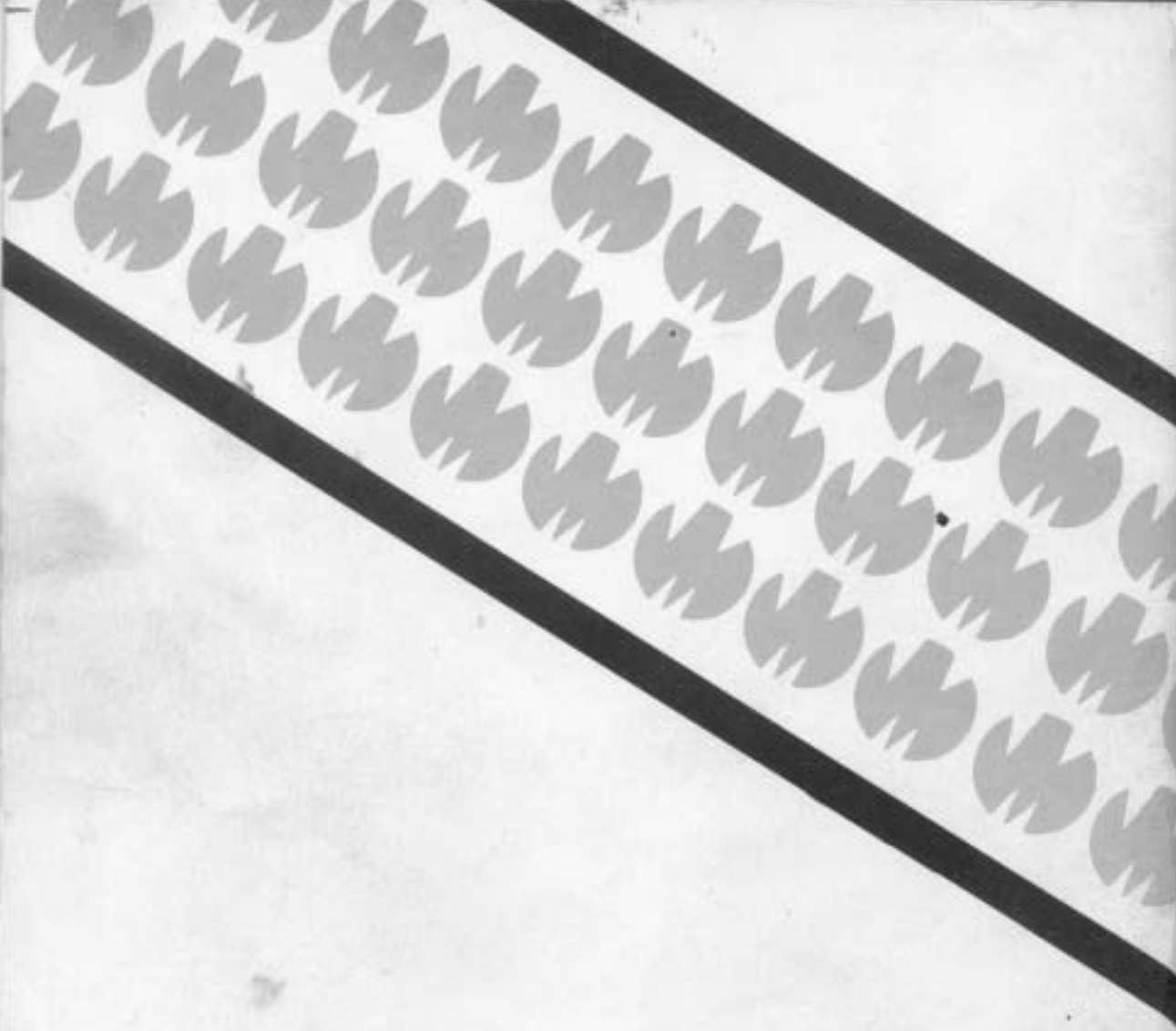
Pilot _____

Present Owner:

1. Name _____

Address _____

Date _____



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