

Maule 9234N

Air Traffic Control Explained

General

This Aircraft is model number **M7-235**, built by Maule Air Inc. FAA registration number is **9234N**. It is a tail wheel airplane (small wheel in the back) and is specifically designed to operate out of short, rough landing strips.

The airplane has an intercom over which we can talk to each other. It also has a radio over which we can talk to ATC. We only **transmit on the radio** when a button on the one of the steering wheels is pressed. Normal conversation is not transmitted on the radio.

All **incoming radio** transmissions are heard by all passengers over the intercom. When taking off or approaching an airport it is important for the pilot to hear all transmissions and passengers should generally be quiet.

All **letters** are spoken as words: Alpha, Bravo, Charlie, ...

All **numbers** are spoken as the sequence of digits, except altitudes which are spoken as "X thousand, X hundred feet", never "XX hundred feet."

Time is officially given as Greenwich Mean Time (the time in Greenwich England at the 0° meridian. This is also commonly referred to as **zulu** which is 8 hours ahead of Pacific Standard Time (7 ahead of daylight savings).

Aircraft are referred by their type and registration number (aka "N" number). This one is called "Maule 9234N". Often this is abbreviated to the last 3 characters: "34N".

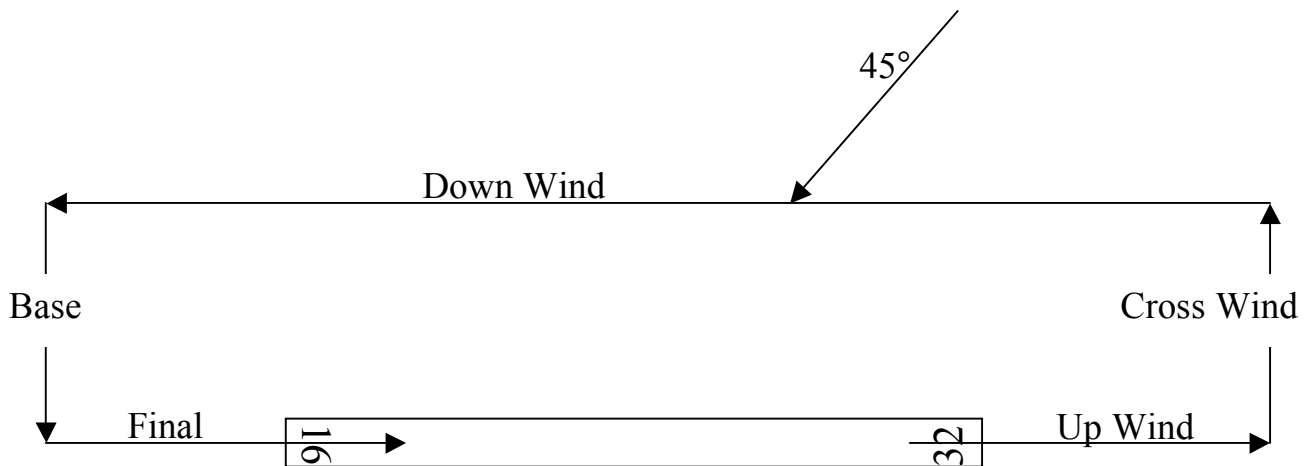
Runways, used for take off and landing, are labeled with the first two digits of their magnetic heading. Runway 16 points approximately 160°. Most runways can be used in both directions. Runway 32 is the same strip of pavement, used in the other direction. If there are two parallel runways they are called left and right. Paine has 3 runways: 16L-32R, 16R-32L, and 11-29.

Taxiways, used for ground travel, are labeled with letters and numbers: Alpha 1, Alpha 2, Gulf 5, etc.

Don't be alarmed when:

- The plane bounces around. Turbulance is common and the airplane can take a whole lot more turbulance than you may think. It won't stop flying.
- I decrease engine power before landing. This is natural. I can add it back.
- On approach to landing I'm not aligned with the runway. Only the last 3 ft count. I can easily add power and go around for another landing.

Planes fly a specific traffic **pattern** around airports:



By default, turns are done to the left in what is called “left traffic”. Shown above is the left traffic pattern for runway 16. Some runways are designated as having a “right traffic” pattern, which means turns to the right.

Patterns are flown 1,000ft **above ground**. Paine field is at 600ft above sea level so it’s traffic pattern is 1,600ft above sea level.

We generally enter the pattern on the “45” leg, fly the down wind, turn base, turn final, then land. On takeoff we will usually fly the up wind leg then depart the pattern. If I want to go in the opposite direction I may depart via the downwind leg.

To practice landings pilots “stay in the pattern, making multiple landings.

Departing Paine

ATIS: Before takeoff I listen pre-recorded information about the airport weather and operations known as the ATIS. Knowing this information before contacting the controllers saves time.

This is Paine Field information Bravo, Winds ..., Clouds ..., Barometer, Runways 16 Right and 16 Left in operation. Advise on initial contact you have information Bravo.

ATIS transmissions are updated about once an hour. Each one is tagged with a letter. When I call up I let them know that I have listened to the current ATIS by saying “with letter (Alpha, Bravo, etc.)”

Ground Control: Before taking off I must contact ground control to get clearance. Like most transmissions it starts with who I’m calling, who I am, what I’m requesting:

Paine Ground, Maule 9234N At West hangers, taxi for north departure with Bravo.

They give me taxi directions to a runway:

Maule 9234N taxi to runway 16 Left at Golf 1, via Charlie, cross runway 11-29.

I am to taxi to the end of runway 16 Left, where taxi way Golf 1 intersects, by way of taxi way Charlie, and I am cleared to cross runway 11-29 along the way.

I respond with the important items, the most important being the runway and the fact that I was cleared to cross a runway:

9234N, runway 16L, crossing 11-29.

At the runway I do pre-flight checks of the controls, instruments, gas, engine, passengers.

Tower: When ready, I change to the control tower frequency and ask permission to take off, usually reminding them where I'm going.

Paine Tower, Maule 9234N, 16 Left, Golf 1, for north departure.

When there is no conflicting traffic they will clear me for take off:

34N, Cleared for takeoff 16L, Left down wind departure approved.

I again acknowledge the important bits:

34N, runway 16L.

If there is conflicting traffic they may tell me to **hold short** (not enter the runway) or **position and hold** (enter the runway, get in position, then wait there).

AWOS

Many airports have automated weather information called **AWOS** or **ASOS**. When passing an airport with automated weather I'll frequently listen in. When approaching an airport with automated weather I'll always listen.

Friday Harbor automated weather 1517Zulu: Winds 04@140, Clouds Scattered 2,500 ft, Barometer 30.05.

The time is given in zulu but this is almost always current conditions, Winds are 4 knots, coming from 140 magnetic. There is a scattered cloud layer 2,500ft above ground. Barometric pressure at the airport, adjusted to sea level, is 30.05.

Uncontrolled Airports

Most airports do not have control towers. These are called "Uncontrolled" airports. At these airports pilots announce their positions to each other on a common traffic radio frequency. Calls approaching these airports will follow the pattern of who I'm talking to, who I am, where I am, where I'm going. Who I'm talking to is repeated at the end of my broadcast for clarity:

East Sound traffic, Maule 34N, 5 miles east, inbound for landing, East Sound.

East Sound traffic, Maule 34N, Right down wind for 34, East Sound.

East Sound traffic, Maule 34N, turning right base for 34, East Sound.

East Sound traffic, Maule 34N, turning final for 34, East Sound.

Other pilots will make similar announcement. I may be flying near another plane I'll let them know I have them in sight: "have the downwind traffic in sight".

Not all pilots have radios, or reliably announce their positions.

Approaching Paine

Returning to Paine I must first listen to the ATIS then call the tower before entering their air space:

Paine tower, Maule 9234N, over Everett, inbound for landing with Gulf.

They give me instructions for entering the pattern, and often ask me to report when reaching a specific position:

Maule 34N, Enter right down wind for 34R, report downwind.

When I'm at the position I'll call up again:

Maule 34N, downwind.

They usually clear me for landing, sometimes with directions to follow some other plane.

Maule 34N, Follow traffic on base, cleared to land 34R.

This is usually the last communication with the tower until I'm on the ground. Once clear of the runway I switch to ground control and ask for clearance to taxi back to my hanger.