User manual for

FS2004

Maule M/MT-7-260

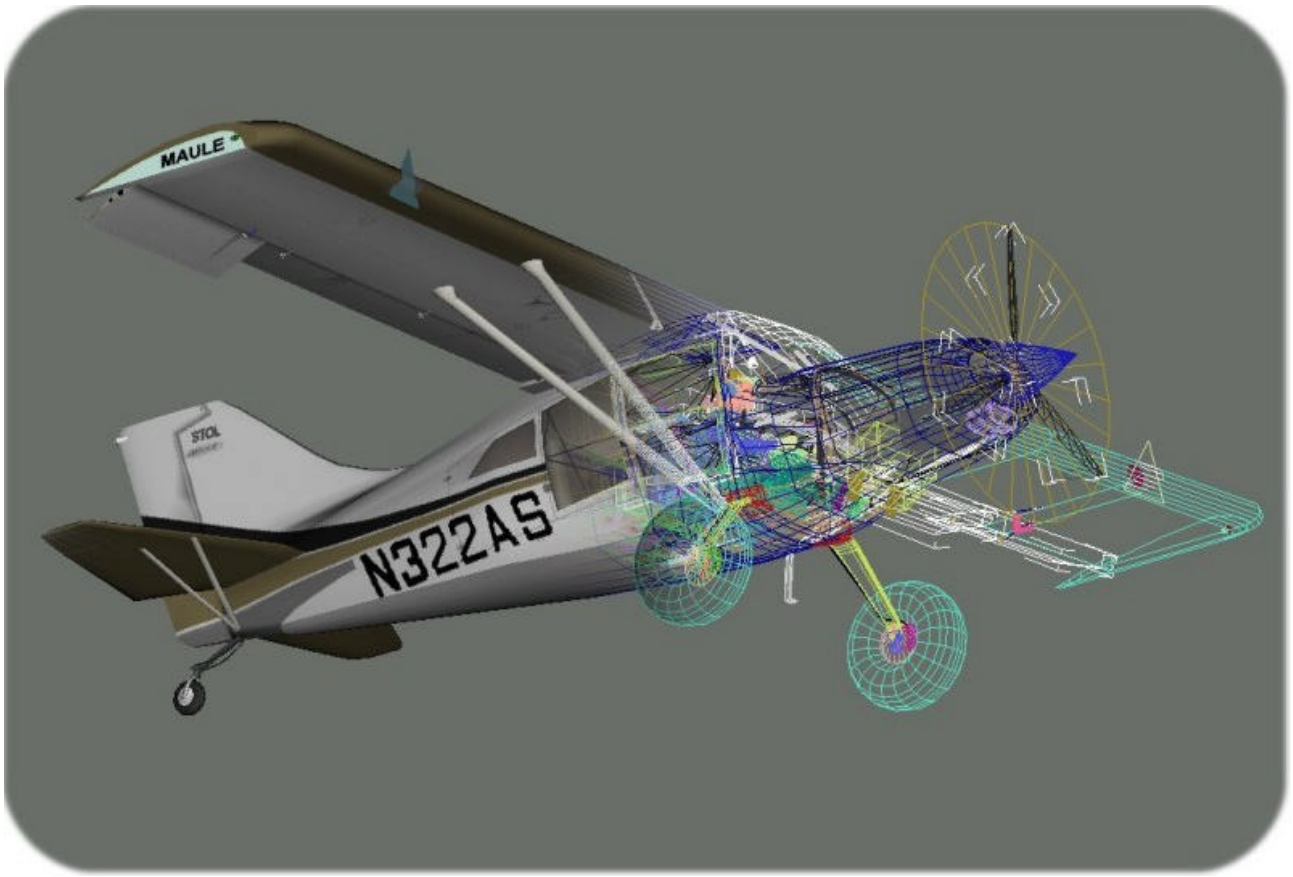


TABLE OF CONTEST

LITTLE BIT OF MAULE BACKGROUNDS

Specification:

Landing Gear Configuration:	Taildragger
Landing Gear Type:	Spring Aluminum or Oleo Strut Gear
Engine Type:	Lycoming IO-540-V4A5 (260hp)
Engine Model:	(see above) (fuel injected)
Propeller:	78" McCauley Constant Speed Prop - 2 blade 81" McCauley Constant Speed Prop - 3 blade (optional)
No. of Seats:	Five
Useful Load: (avg.)	890 lbs. (260) 829 lbs. (260C)
Cruising Speed: (75% power at optimum altitude):	164 mph
Wing Span:	32.9 feet
Wing Area:	165.6 sq. feet.
Length:	23.5 feet
Height:	8.3 feet
Cabin Width:	42 inches
Gross Weight:	2500 lbs.
Empty Weight:	1610 lbs. (260) 1671 (260C)
Fuel Capacity:	73 gal.
Stall speed (with full flaps, 1 pilot, 1/2 tank of fuel)	40 mph
Takeoff distance: (1 pilot, 1/2 tank of fuel)	250 feet
Takeoff distance at gross over 50' high obstacle:	600 feet
Rate of Climb: (1 pilot, 1/2 tank of fuel)	1650 fpm
Land at gross over 50' obstacle:	500 feet
Best Climb Speed:	90 mph
Service Ceiling:	20,000 feet
Fuel Consumption (65% power):	15 gph
Flap Settings:	-7, 0, 24, 40, 48 (degrees) on taildragger -7, 0, 24, 40 (degrees) on tricycle

I think Budd Davisson says it well in his Pilot Report:

"Love 'em or leave 'em. That seems to be the Maule's long term status in life. People either love them or spend undue amounts of time bad mouthing them. Of course, the usual answer when a pilot is asked how they feel about a Maule is, "What's a Maule?"

The Maule has always just been "there." Old Belford D. Maule, generally referred to as "B.D.", may not have built the classiest, fastest or most finely fitted airplane in the business, but the doors to the funky little assembly line located first in Napoleon, Michigan, then in a military surplus hangar on an ex-military field in Moutrie, Georgia have never been closed. B. D. recently passed away, leaving the family owned business in the hands of the rest of the Maules and it seems to be prospering.

Maules are usually among the least expensive airplanes in the market, new or used. Used, first generation M-4/5/6's (145/210/220 hp, 235 hp) run $30-$60,000 while the new, longer M-7 series for 1998 base out at $99,069 for the 160 hp MX-7-160 taildragger up to $159,278 for the 260 hp MT-7-260 nosedragger. In the new product line the reality is that the airframes are almost all the same, but the engine, seating arrangement and landing gear change.

It's a little hard to decipher the product code, but it seems as if, regardless of the model, you can get it with three flavors of landing gear: Taildragger with the traditional tri-pod oleo gear, taildragger with the new spring gear or nosedragger with springmains. Powerplant options include the 160 hp 0-320 B2D Lycoming, a number of different 180 hp 0-360's, and the six cylinder 0-540 in both carburated and injected 235 hp and 260 hp versions."

Maule M-7-260, equipped with 260 hp Lycoming IO-540-V4A5 engine, is the most powerful model in the Maule fleet (at least if we ignore the 420 hp, Allison turbo prop version). It can easily be outfitted for work and for luxurious cross-country cruising. With it's fast cruise speed and slow stall speed, the M-7-260 is a very comfortable and safe travel airplane. The 260hp engine also nicely enhances performance of amphibious float-equipped M-7's.

FS2004 MAULE M/MT-7-260

THE PACKAGE

First of all, this package has been developed for FS2004 only and it has not been tested in earlier versions of Microsoft Flight Simulator. Therefore we do not answer any e-mails or other kind of quories about why the package might not work for example in FS2002. You may test it in earlier versions, but if it doesn't work, then it simply doesn't.

The Maule package contains 6 different model variants of the Maule M/MT-7-260 family. Screenshots of each model can be seen on the previous page of this manual. Included are the following variants:

- Maule M-7-260 Taildragger with Oleo Gear Struts
- Maule M-7-260 Taildragger with Aluminum Spring Gear Struts
- Maule M-7-260 Taildragger with Tundra Wheels
- Maule M-7-260 Taildragger with Wheels Skis
- Maule M-7-260 Amphibian
- Maule MT-7-260 (T comes from tricycle)

Also included are two different panel variants, one for land planes and one for the seaplane. The panels have scratch built custom gauges, based on real Maule gauge photographs. The radios are Gerd R. Nehr's freeware Apollo radio series, available at http://www.flightsim.com.

The same two variant rule goes for the sounds as well. Included are two different sound sets, one for land planes and one for the seaplane.

INSTALLATION

First, some of you might wonder why we didn't use autoinstaller for this package. Well, the reason is simple. I hate auto installers. I hate the way how they create registry entries and Start-menu entries etc etc. Truth is that many fine addon out there simply has just not found their way on my computer after I have seen that they are using auto installers. But that's enough about that. Now let's go through the simple installation procedure step by step:

- Double click the Maule package icon so the package opens in your Winzip.
- Click on the EXTRACT-button on the top bar of the winzip
- Browse to your FS2004 MAIN directory
- Make sure you have the ALL FILES check box checked
- Make sure you have the USE FOLDER NAMES check box checked
- Click EXTRACT

After the package is extracted, close the winzip and fire up your FS2004 and you are ready. You will find the different variants under the Manufacturer-menu in the Select Aircraft menu. Enjoy!!

USING THE INSTRUMENT PANEL

The instrument panel contains two different main views, so called VFR-view and IFR-view, reaching from left corner all away to the radios. For both main views there are also matching ”engine areas”, which include the engine monitoring gauges, that are left outside of the main views. On the following are the screenshots of the views:

Main view aka VFR panel

Full view aka IFR panel

Popup windows

There are also a few popup windows. They are explained on the following:

1. Fuel selector window
2. Bigger radio stack
3. Default FS2004 GPS
4. Flap / Trim window

The click spots to open each popup window will be explained on the next section of this manual.

GAUGE EXPLANATIONS

On the following section I'll give a brief explanation of which gauge is which and what each clickspot does.

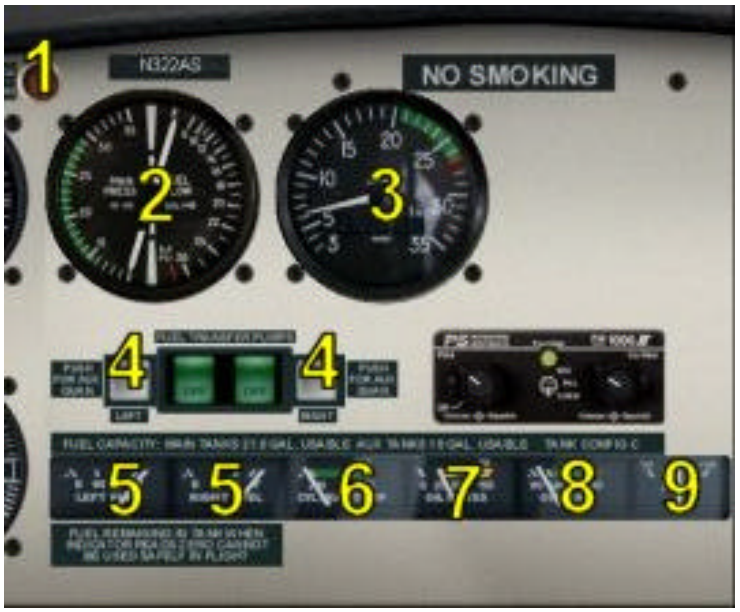
Main panel

1. Clock
2. Airspeed indicator MPH / KTS
3. Attitude indicator
4. Altitude indicator
5. VOR1
6. View Center *
7. Turn coordinator
8. Heading indicator
9. Vertical speed
10. Gear lever (Only on amphibian version)

11. Magnetic compass
12. Apollo SL15 Audio panel *
13. Apollo SL40 COM 2 radio *
14. Apollo SL30 NAV/COMM1 radio *
15. Apollo GX50 GPS *
16. Apollo SL70 Transponder *
17. Lower section 1 *
18. Lower section 2 *
19. Yoke *

Objects marked with * will be explained later

Engine monitor gauges



1. Stall warning light
2. Fuel Flow / Manifold Pressure
3. Tachometer
4. Selector buttons for fuel quantity gauges (AUX/MAIN)
5. fuel quantity gauges (AUX/MAIN)(Left/right)
6. Cylinder head temperature
7. Oil Pressure
8. Oil Temperature
9. Ammeter

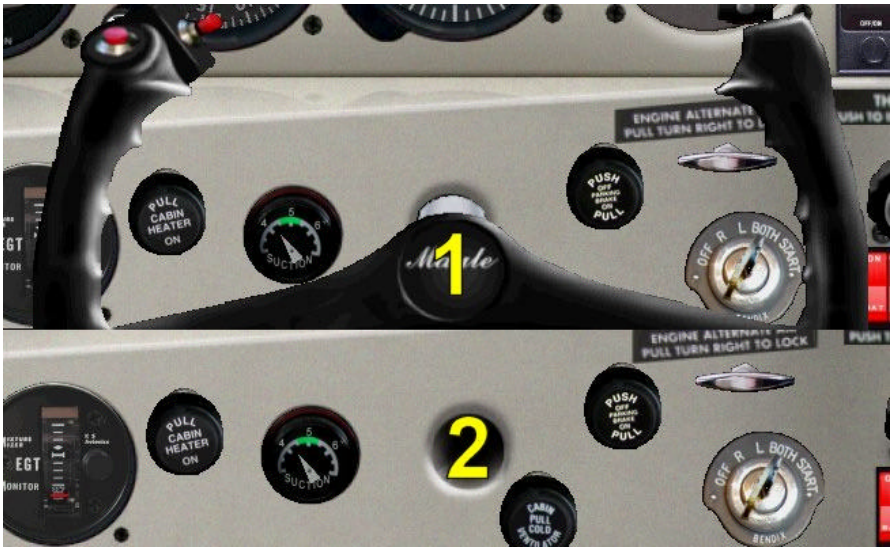
Lower section 1 (from main panel explanation)

1. Fuel selector click spot
2. ATC window click spot
3. Map window click spot
4. Electronic kneeboard click spot
5. EGT gauge
6. Cabin heatet (dummy switch)
7. Suction gauge

Lower section 2 (from main panel explanation)

1. Cabin ventilator (dummy switch)
2. Parking brake
3. Engine alternate air
4. Magnetos
5. Throttle lever
6. Prop pitch lever
7. Mixture lever
8. Alt/Bat switch
9. Boost pump
10. Pitot heat
11. Nav lights
12. Anti collision lights
13. Landing lights
14. Instrument panel lights

Yoke ON / OFF clickspots



1. Turn yoke OFF
2. Turn yoke ON

View Center

1. Change between IFR/VFR panels
2. Open/close engine monitor gauges
3. Open bigger radio stack
4. Open default GPS window
5. Open Flap/Trim window

Apollo radios

You will find the information how to use the Apollo Radio Stack from the following folder:

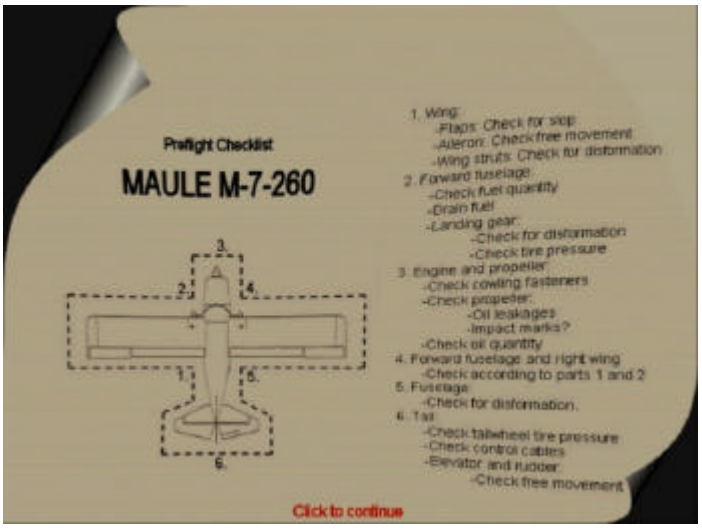
YourFS2004directory\aircraft\Maule M7-260 documents\Apollo radios stack

Virtual Cockpit clickspots

1. ATC window
2. Electronic kneeboard / Checklist
3. Map window

Also all the gauges and switches are clickable in the virtual cockpit.

Panel opening bitmap/Preflight checklist



To continue to the panel itself, simply click on that check list. It was made in order to get all the popup windows to show in correct order.

CREDITS

Since the project has had so many different people involved, I'll divide the credits by different developement sections:

3D modelling:
Tomas Foosnes - Basic 3D model
Mikko Maliniemi – All the additional modelling, VC, Pilot, Texturing

2D Panel bitmaps:
Ian Grant – Basic bitmap arts
Riku Horelli – The lower section of the panel bitmaps and the yoke

Gauge programming:
Gerd R. Nehr – Apollo radio stack
Ian Grant – Main six gauges, compass and clock
Kari Virtanen – All the rest of the gauges
Mikko Maliniemi – Some gauge graphics

Flight dynamics:
Steven Grant

Sounds:
Aaron Swindle

Manual/Readme:
Mikko Maliniemi

SPECIAL THANKS

Bob Tremblay and Jeridan Light:
For your work on the water landing effects.

Kimmo Hantula:
-For your answers on our sometimes stupid aviation related questions.

Steve Wilson, real life Maule owner:
-For your photographs and the most important information and help you have been providing us.

Kevin Griffin, real life Maule owner:
-For your photographs and the most important information and help you have been providing us.

Jari Mikkilä:
-For the manuals PDF translation.

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