**Standard Jet Trainer for REFLEX XTR**

AERO L-39 Albatross

as a model powered by turbine or Electric Ducted Fan

The L-39 has to be the most widespread jet trainer aircraft in the world, over 2900 built by AERO in the Czech Republic. *Gerd Gunzenhauser* created a nice model for the REFLEX flight simulator, which is modeled after a real L-39. It's one of several L-39 used for air shows or air races in the USA, registered as N9YC and flown by *Allen Smith*.

From http://richard.ferriere.free.fr/3vues/3vues.html:
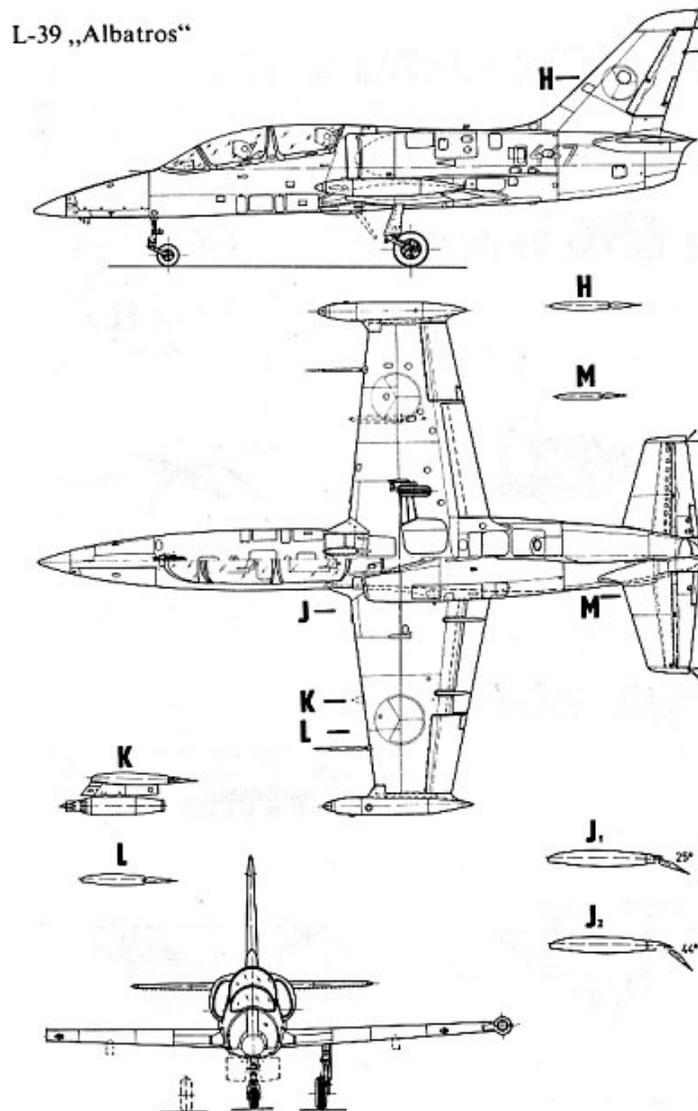
The REFLEX models

If you search for L-39 N9YC on airliners.net you'll find several pictures of this aircraft. The remarkable painting with eagle eyes, talons, and more is not fairly rendered on the REFLEX model. That's why I use the mod file version without drop tanks.

The L-39 was set up for REFLEX in three scales or sizes, respectively. All renderings correspond to real models for which some information is available in the Web. In addition to the manufacturers' pages there are threads in forums like flightforum.ch for the EDF version. The EDF versions were adjusted using Schübeler's measurements of his fan units. The airworld website has a L-39 model flight video.

Scale	Wingspan		Weight		Thrust	Drive	Manufacturer
1:5	75 in	1.90 m	35 lb	16 kg	26.5 lb	JET	Airworld
1:7	54 in	1.38 m	15.4 lb	7 kg	13.5 lb	JET	Airworld
1:7	54 in	1.38 m	15.4 lb	7 kg	11.2 lb	EDF	Airworld
1:7.5	50 in	1.27 m	8.8 lb	4 kg	5.6 lb	EDF	Schreiner

Despite the low trust/weight ratio between 0.64 and 0.86 the models fly quite fast (the original has a rather low ratio) because the thrust is still big at high speed. Big aerobatic maneuvers must be flown with speed, though, and the EDF versions are marginal in this respect. Half throttle is sufficient for normal flight in all versions. The model's longitudinal trim is set for that since there's not only a half-symmetrical wing airfoil but also a small decalage.

Unlike propeller-driven aircraft where the stabilizer is in the propwash, a jet-driven aircraft needs speed for sufficient control effectiveness. You should remember this when flying steep turns and on landing approach. In REFLEX, rudder and elevator deflection are set to 25 degrees (EDF versions 30 degrees), aileron deflection to 20 (25) degrees. Some expo is set for rudder to have better directional control with the nose-wheel during take-off run. Elevator and especially ailerons have even more expo for more precise flying. If you don't like that simply remove this setting (F5).

Despite the high flight speed the L-39 model's flight behavior turns out to be very good-natured, being proper for a trainer. There's no wing-dropping or nose-dropping tendency, and you may pull the elevator without thinking. The low wing aspect ratio makes for big angles of attack in slow flight, especially in turns. You should foresightedly fly fast enough to have the required lift and add substantial power to compensate the big induced drag. Otherwise there might yet be bad surprises, but after all that's why you're flying in the simulator…

All four versions are excellent jet trainers and can be used one after the other to step up the training.

The REFLEX Model Files

The installer program creates the folder (directory)
        ...\Flugzeug\AERO\
and stores the par files and some other files there. Also the file „AERO L139 Albatros.MOD" from the zip file published on RC-Sim has to be in this folder, renamed to „L-39.mod". If the original package by *Gerd Gunzenhauser* has been installed in the proper place before, the installer copies the mod file automatically from there.

The installer program installs two drive sounds, which both are created by other authors. The two files JetCat.wav and JetCat_.wav have only been processed by me. Years ago, they had been published with other jet models on http://www.rc-sim.de - creator unknown. They should fit better than other jet sounds recorded from real planes. The file edf.wav is a somewhat processed version of an EDF (Electric Ducted Fan) sound recorded by flyingbaer (www.flyingbaer.de, no longer available), who kindly permitted to pass it on. The file edf_.wav is simply a copy of the old AXI idle sound by REFLEX.

Now all should be available, including demo flights, and this text should be accessible in the program menu „Programs\REFLEX\models". The demo flight „AERO L-39" (hit F9 in REFLEX) shows the jet version, the demo flight „AERO L-39 EDF" (of course) the EDF version. Both flights are not really skillful but show the impressive flight performance of the models. That holds for another two demo flights which are installed for REFLEX versions 5.05.4 and newer, just to show the models in up-to-date quality.

Enjoy!

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http://time.hs-augsburg.de/~erd/Modellflug/textReflex.html

More REFLEX models and the latest versions are on my page
http://time.hs-augsburg.de/~erd/Modellflug/textDownloads.shtml

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