fp propeller

DUAL MODE GOVERNOR

FOR IN-FLIGHT
VARIABLE PITCH PROPELLER

DUAL MODE

The governor for the maximum of the propeller efficiency in all the flight condition envelope

- OLED Display for the best of brightness
- Fully compensated for altitude
- User friendly interface
- Compatible with a wide variety of engines
- Automatic RPM offset for take-off

Classic "*constant speed*" mode

Pilot "***decides***" the value of engine RPM.
Governor "***adjust***" the propeller pitch for this RPM target

Automatic "*MDP driven*" mode

Governor "***measures***" RPM , MAP and static pressure.
Governor "***decides***" the value of engine RPM on the basis of MDP (*)
Governor "***adjust***" the propeller pitch for this RPM target

(*) MDP = Manifold Differrential Pressure, differnce between Manifold Absolute Pressure and atmosphere static pressure

DUAL MODE GOVERNOR

Classic "Constant Speed" Mode

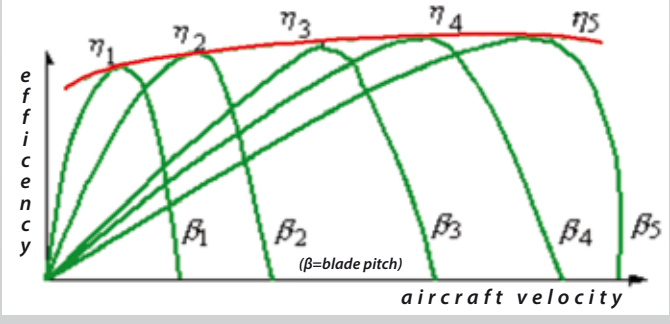
Automatic "MDP Driven" Mode

Manual Mode with Current measure

Easy Setup

Core of the governor
is a last generation CPU, operating with the engine constant RPM target. Embedded firmware acquires continuously data from sensors, process these data and decide on this basis.
In order to do this job at high speed, firmware is splitted in blocks processed in multitasking.

Main features of Dual Mode governor are:
- ***Classic "constant speed" mode***, where pilot is selecting the RMP target by the rotating selector (CNS)
- ***Automatic "MDP driven" mode***, where the engine rpm target is obtained by the pressure difference (MDP) between the engine manifold and the atmosphere static pressure, external to the airplane.
This pressure difference is changing with the throttle position or with the airplane altitude. In other words, when the engine power is modified or, when the altitude is changed.
In this fully automated operating mode, no action on the propeller is required to the pilot.



The use of the embedded characteristic diagrams of the engine, assure the achievement of the best efficiency of engine / propeller couple.
As well known, athmosferic pressure is decreasing with altitude. The highest MAP value available at the ground level are no more available at 2000ft or more.
Dual Mode Governor, by using Manifold Differrential Pressure, is automatically compensated for altitude.
In practical terms, engine maintains the target RPM with the changing altitude.
Of course, Manual Mode control, is also available on the panel. Manual Mode bypasses all the electronic and acts on the propeller directly for the highest security
For the best of simplicity, the automatic take-off is also included: according to the engine manufacturer instructions, an RPM offset is provided during the take-off phase and just for 3 minutes, in order to achieve the maximum power available.

Dual Mode Governor runs in MDP Driven Mode with the most known engines in the Ultralight application: Rotax, UL Power, MWFLY, Jabiru.
The CPU contains in memory all the characteristic data of the different engines. An easy initial setup is to be done in order to select the installed engine.

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