

FMGC - Flight Management Guidance Computer

Each FMGC is divided into two main parts:

- The Flight Management (FM) part controls the following functions:

- Navigation and management of navigation radios
- Management of flight planning
- Prediction and optimization of performance
- Display management.

- The Flight Guidance (FG) part performs the following functions:

- Autopilot (AP) command
- Flight Director (FD) command
- Autothrust (A/THR) command.

Each FMGC has its own set of databases. The individual databases can be independently loaded into their respective FMGC, or independently copied from one FMGC to the other.

Each FMGC contains these main databases:

1. The Navigation database (5 Mbytes) contains standard navigation data: Navaids, waypoints, airways, enroute information, holding patterns, airports, runways, procedures (SIDs, STARs, etc.), company routes, alternates.
The airline updates this part every 28 days, and is responsible for defining, acquiring, updating, loading, and using this data. The updating operation takes 20 min to complete or 5 min if cross loaded from the opposite FMGC.
 2. The Airline Modifiable Information (AMI), also described as the FM Airline Configuration file, contains:
 - Airline policy values: THR RED altitude, ACC altitude, EO ACC altitude, PERF factor, IDLE factor
 - Fuel policy values: Fuel for taxi, % of route reserve, maximum and minimum values of route reserve, etc.
 - AOC functions customization.
 3. The Aircraft Performance database includes the Engine model, Aerodynamical model, and Performance model. The airline cannot modify this database.
 4. The Magnetic Variation database.
 5. Each FMGC contains elements stored by the flight crew that enable them to create 20 waypoints, 10 runways, 20 navaids, and 5 routes.
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