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PREAMBLE

The Auto Flight System is described in the volume 1 and volume 4. The Auto Flight System is described in the volume 1 and volume 4.

The volume 1 gives a general description of the system and its functions

- Architecture
- Function description
- Basic principle of systems
 - * Reversion
 - * Protection
 - * Managed and selected guidance modes
- Mode information
- Display characteristics (chapter 1.22 and 1.31)

The volume 4 is devoted to the FMGS operational information

- Operational principles
- Pilot interface (MCDU pages)
- Procedural material including :
 - * FMGS procedures on ground and in flight
 - * mode annunciation in flight
 - * typical flight profiles
- Irregularities
 - * Degraded modes of operations
 - * FMGS failures and procedures
 - * FMGS behaviour following failures of other systems

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GENERAL PHILOSOPHY

The Flight Management Guidance System (FMGS) operates as follows :

- During cockpit preparation the crew uses the Multifunction Control and Display Unit (MCDU) to insert a preplanned route from origin to destination. This route includes SID, EN ROUTE, WAYPOINTS, STAR, APPROACH, MISSED APPR, and ALTN route as available from the navigation data base.
- Subsequently the system defines a vertical profile and a speed profile, taking into account ATC requirements and performance criteria.

The FMGS computes the aircraft position continually, using stored aircraft performance data and navigation data. Therefore it can steer the aircraft along a preplanned route and vertical and speed profiles. This type of guidance is said to be “managed”.

If the pilot wants to modify any flight parameter (SPD, V/S, HDG, etc.) temporarily, he may do so by using the various Flight Control Unit (FCU) selectors. The FMGS then guides the aircraft to the target value of this parameter that he has selected. This type of guidance is said to be “selected”.

The two available types of guidance, then, are :

- Managed guidance guides the aircraft along the preplanned route and the vertical and speed/Mach profile. (The FMGS computes the target values of the various flight parameters).
- Selected guidance guides the aircraft to the target values of the various flight parameters the pilot selects by using the FCU selectors.

Selected guidance always has priority over managed guidance.

SYSTEM DESCRIPTION

Please refer to 1.22.10.