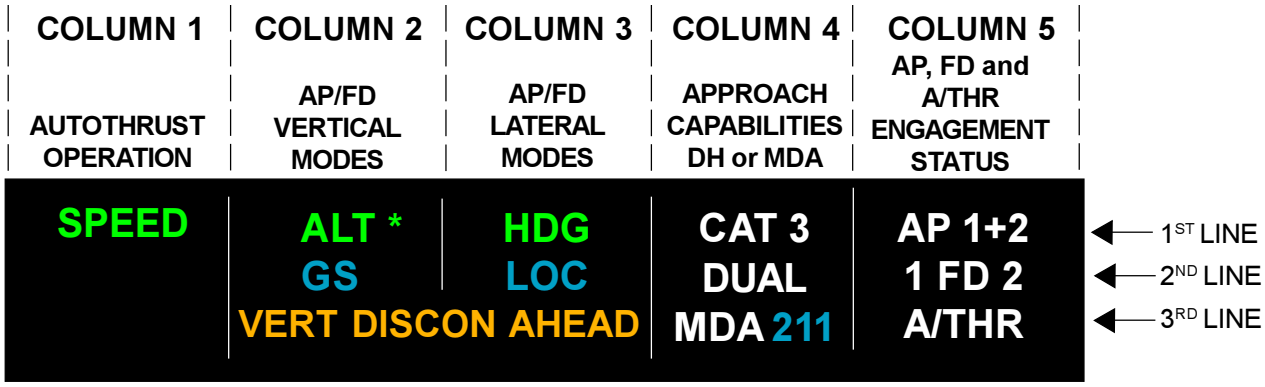


FLIGHT MODE ANNUNCIATOR (FMA)

The flight mode annunciator (FMA), which is just above the primary flight display (PFD), shows the status of the autothrust, vertical and lateral modes of the auto pilot and flight director, approach capabilities, and the engagement status of the autopilot (AP), flight director (FD) and autothrust (A/THR).

Columns 1, 2 and 3:

- The first line shows the engaged mode in green. (When autothrust is in the armed mode, Column 1 will display in white with a box around it.)
- The second line shows the armed modes in blue. (Magenta indicates that modes are armed because of a constraint.)
- The third line displays special messages. (Columns 2 and 3 only)

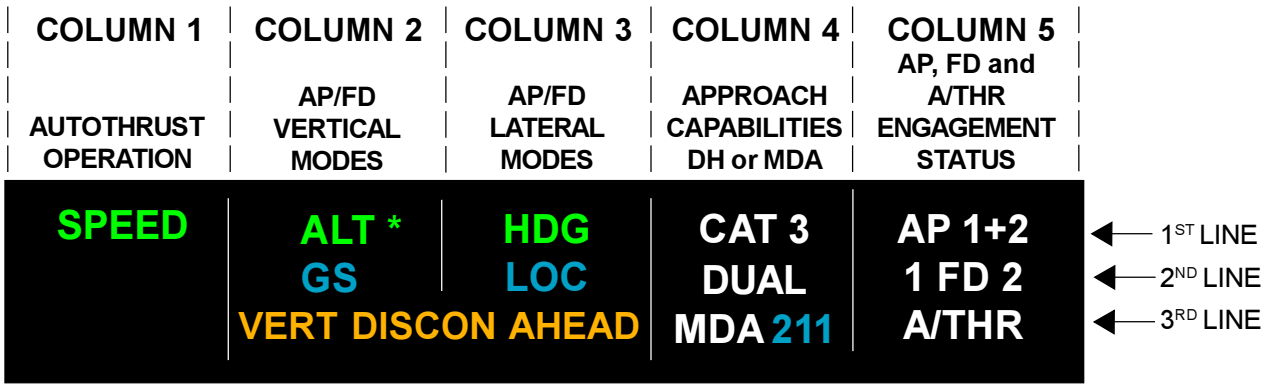
Column 4:

- Displays the approach capabilities in white.
- Displays DH or MDA with a blue value.

Column 5:

- Displays the engagement status of the autopilot, flight directors, and autothrust in white.
- Displays “A/THR” in blue when autothrust is in the armed mode.

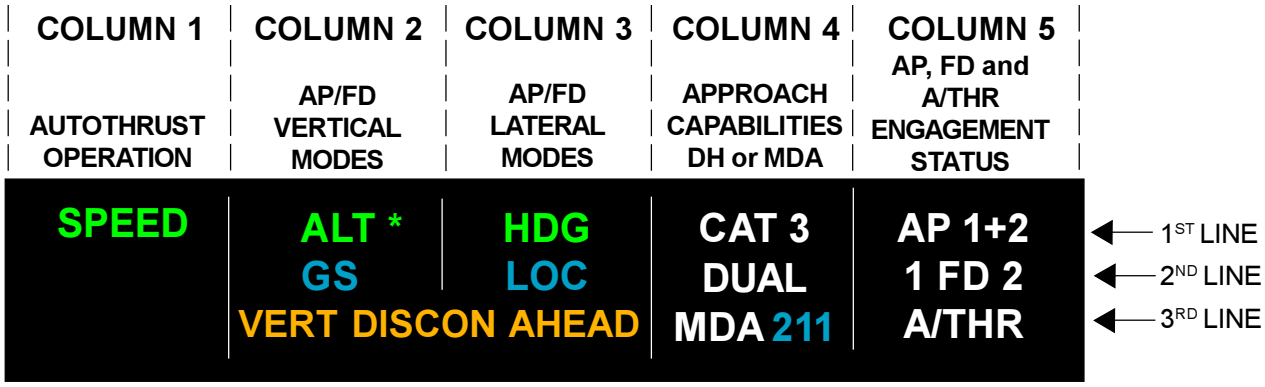
After each mode change, the FMA displays a white box around the new annunciation for ten seconds.



COLUMN 1

AUTOTHRUST OPERATION - FIRST LINE

INDICATION	DESCRIPTION
MAN TOGA	A/THR is armed. At least one thrust lever is in the TOGA detent.
MAN FLX 55	A/THR is armed. At least one thrust lever is in the MCT/FLX detent with FLX TO temp set at XX°. The other thrust lever is at or below the MCT/FLX detent.
MAN MCT	A/THR is armed. At least one thrust lever is in the MCT/FLX detent, the other being at or below this detent.
MAN THR	A/THR is armed, and the most advanced thrust lever is above CL detent (2 engines operative) or one above MCT/FLX (engine out) and not in a detent.
THR MCT	A/THR is active and the most advanced thrust lever is in the MCT/FLX detent (engine out).
THR CLB	A/THR is active and the most advanced thrust lever is in the CL detent.
THR IDLE	A/THR is active in thrust mode and commands idle thrust.
THR LVR	A/THR is active with both thrust levers below CL detent or the live thrust lever (engine out) below MCT.
SPEED MACH	A/THR is active in SPEED/MACH mode.
A. FLOOR	A/THR is active and commands TOGA thrust while ALPHA FLOOR conditions are met.
TOGA LK	A/THR is active and TOGA thrust is locked (ALPHA FLOOR conditions are no longer met).



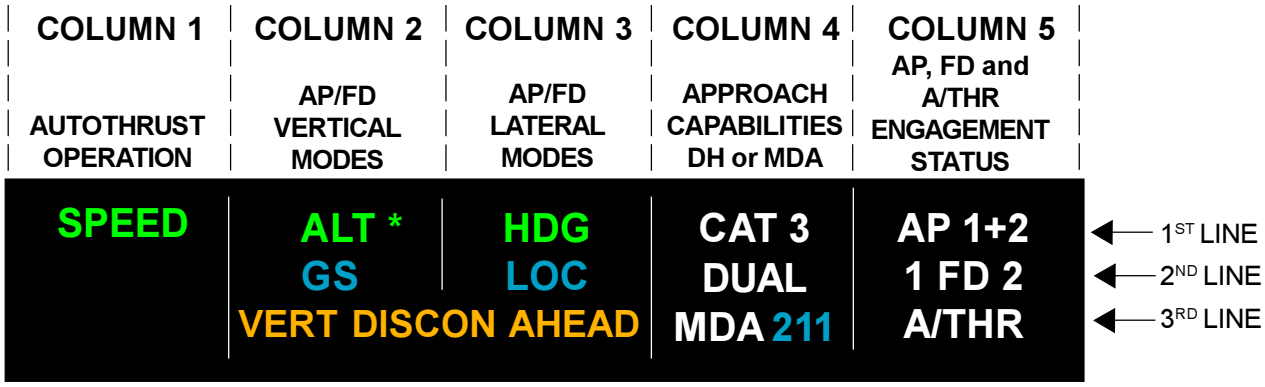
COLUMN 1

AUTOTHRUST OPERATION - THIRD LINE

INDICATION	DESCRIPTION
LVR CLB (Flashing)	Request to set the thrust levers in CL detent.
LVR MCT (Flashing)	Request to set the live thrust lever in MCT/ FLX detent (single engine).
LVR ASYM	(2 engines only). One thrust lever is in CL or MCT/FLX detent and the other one is not in this detent.
THR LK (Flashing)	After A/THR disconnection (pilot's action on FCU or failure) resulting in thrust being frozen. Both thrust levers being in CL detent or one in MCT/FLX (engine out) detent.

NOTE: The amber caution light flashes and a single chime sounds every five seconds as long as the pilot takes no appropriate action in the following cases:

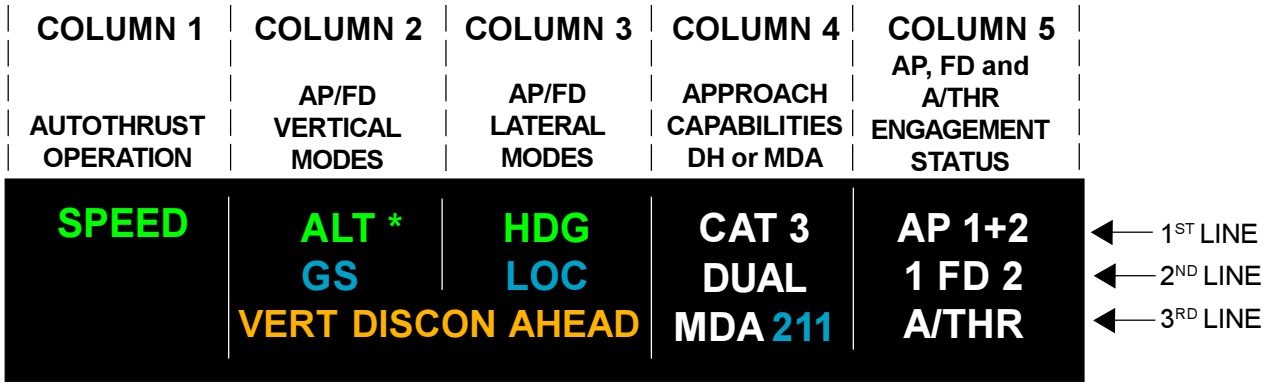
- THR LK
- LVR CLB (if the thrust levers are below the CL detent)
- LVR MCT (if the thrust levers are below the FLX/MCT detent)



COLUMN 2

AP/FD VERTICAL MODES - FIRST LINE

INDICATION	DESCRIPTION
SRS	Takeoff or go around mode is engaged.
CLB	Climb mode is engaged. The FMGS target altitude is higher than the actual altitude. ALT CSTR are taken into account.
OP CLB	Open Climb mode is engaged. The FCU selected altitude is higher than the actual altitude. ALT CSTR are disregarded.
ALT *	ALT CAPTURE is engaged; ALT* green in case of FCU selected altitude capture.
ALT CST *	ALT CAPTURE is engaged; ALT CST* green in case of ALT CSTR capture (vertical profile).
ALT	ALTITUDE HOLD mode is engaged; ALT is green when the FCU selected altitude is held.
ALT CST	ALTITUDE HOLD mode is engaged; ALT CST is green when an ALT CSTR is held (vertical profile).
ALT CRZ	ALT mode is engaged and CRZ FL is held.
DES	Descent mode is engaged. The FMGS target altitude is lower than the actual altitude. ALT CSTR are taken into account.
OP DES	Open Descent mode is engaged. The FCU selected altitude is lower than the actual altitude.
G/S *	Glide Slope capture mode is engaged.
G/S	Glide Slope mode is engaged.
V/S ± xxxx	Vertical speed mode is engaged to acquire and hold the V/S selected on the FCU. ALT CSTR are disregarded.
FPA ± xx	Flight Path Angle mode is engaged to acquire and hold the FPA selected on the FCU. ALT CSTR are disregarded.



COLUMN 2

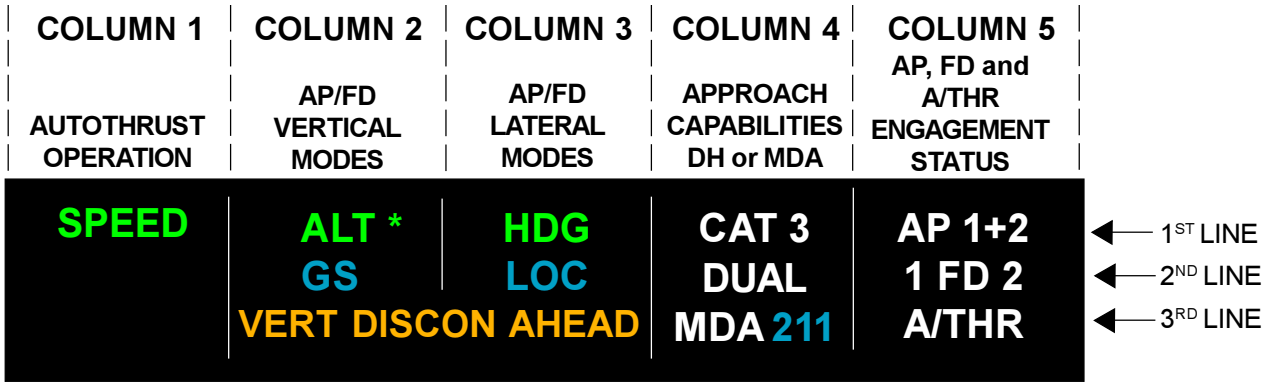
AP/FD VERTICAL MODES - SECOND LINE

INDICATION	DESCRIPTION
CLB	Climb mode is armed.
ALT	Altitude mode is armed when the target altitude is the FCU selected altitude.
ALT	Altitude mode is armed when the target altitude is an altitude constraint.
DES	Descent mode is armed for the descent phase.
G/S	Glide scope mode is armed.
FINAL	Final descent mode is armed.
ALT G/S	ALT and G/S modes are armed.
ALT G/S	ALT CSTR and G/S modes are armed.
ALT FINAL	ALT and FINAL modes are armed.
ALT FINAL	ALT CSTR and FINAL modes are armed.
DES G/S	DES and G/S modes are armed.
DES FINAL	DES and FINAL modes are armed.

AP/FD VERTICAL MODES - THIRD LINE

SPEED SEL: xxx	Indicates a preset speed associated with the cruise or climb phase.
MACH SEL: .XX	Indicates a preset Mach associated with the cruise or climb phase.

NOTE: These two messages use both the first and second columns (third line).



COLUMN 3

AP/FD LATERAL MODES - FIRST LINE

INDICATION	DESCRIPTION
RWY	RWY mode is engaged.
RWY TRK	RWY mode is engaged once airborne at or above 30 feet RA.
HDG	HEADING mode is engaged.
TRACK	TRACK mode is engaged.
NAV	NAV mode is engaged to guide the aircraft along the FM lateral F-PLN.
LOC *	LOC capture mode is engaged.
LOC	LOC track mode is engaged.
APP NAV	NAV mode is engaged during a NON ILS approach.
GA TRK	GO AROUND track mode is engaged.

AP/FD LATERAL MODES - SECOND LINE

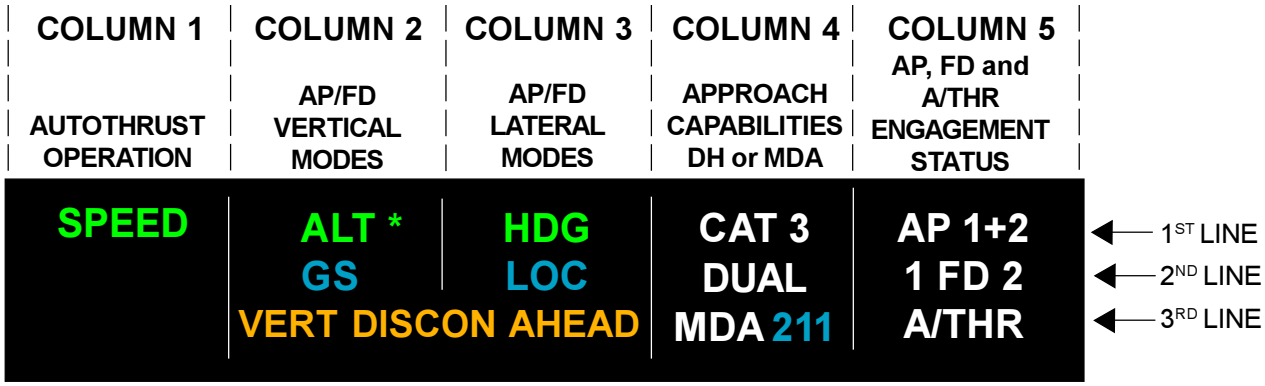
NAV	NAV mode is armed.
LOC	LOC mode is armed.
APP NAV	NAV mode is armed for a NON ILS approach.

COLUMNS 2 and 3

AP/FD COMMON MODES

These modes cover both the vertical and lateral AP/FD mode columns (columns 2 & 3)

LAND	Land mode is engaged below 400 feet RA.
FLARE	Flare mode is engaged.
ROLL OUT	Roll out mode is engaged.
FINAL APP	APP NAV and FINAL APP modes are engaged during an RNAV approach.



COLUMN 4

APPROACH CAPABILITIES - FIRST LINE

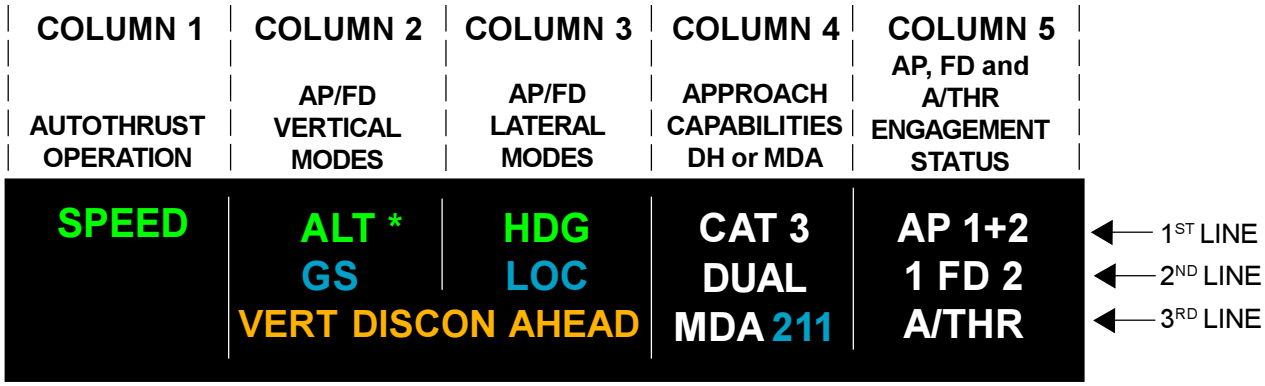
INDICATION	DESCRIPTION
CAT 1	CAT 1 capability available.
CAT 2	CAT 2 capability available.
CAT 3	CAT 3 capability available.

APPROACH CAPABILITIES - SECOND LINE

SINGLE	CAT 3 capability available with FAIL PASSIVE condition.
DUAL	CAT 3 capability available with FAIL OPERATIONAL condition.

APPROACH CAPABILITIES - THIRD LINE

MDA xxxx	Minimum descent altitude is inserted by the pilot on the MCDU PERF APPR page.
DH xxxx	Decision height as inserted by the pilot on the MCDU PERF APPR page (will be seen for either DH or AH).
NO DH	When NO inserted on PERF APPR page.



COLUMN 5

AP/FD A/THR ENGAGEMENT STATUS - FIRST LINE

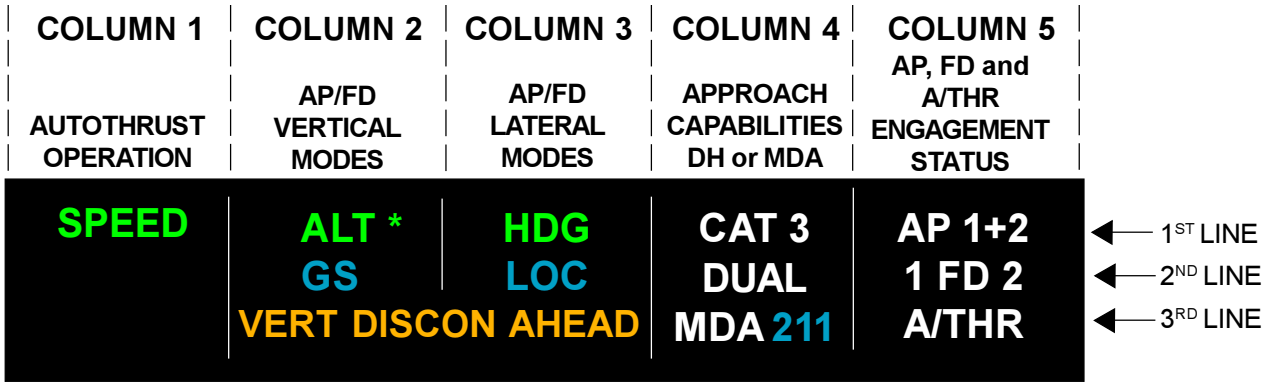
INDICATION	DESCRIPTION
AP 1+2	Autopilots 1 and 2 are engaged. • The LOC/GS, Roll-out or Go-around mode must be armed or engaged.
AP 1	Autopilot 1 is engaged.
AP 2	Autopilot 2 is engaged.

AP/FD A/THR ENGAGEMENT STATUS - SECOND LINE

X FD Y	X and Y give the FD engagement status on PFD1 and PFD2. X and Y can be 1, 2, or –. –: no FD is engaged on the corresponding PFD 1: FD1 is engaged on the corresponding PFD 2: FD2 is engaged on the corresponding PFD e.g.: the normal status (FD 1 and 2 engaged) is: 1 FD 2. A/THR is active

AP/FD A/THR ENGAGEMENT STATUS - THIRD LINE

A/THR	A/THR is activated by: • setting the thrust levers between the CL and IDLE detents (two engines running) if previously armed. • setting the thrust levers between the MCT and IDLE detents (one engine running) if previously armed. • depressing the A/THR pb on the FCU while the thrust levers are in the active range. • When ALPHA FLOOR is activated.
A/THR	A/THR is armed • on the ground - by setting the thrust levers at the FLX or TOGA detent when the engines are running. • in flight - by pushing the A/THR pushbutton on the FCU while the thrust levers are out of the active range; or - while A/THR being active (A/THR white on FMA), the pilot sets both thrust levers beyond the CL detent or one above the MCT detent; or - by engaging the go around mode.



SPECIAL MESSAGES (FMA COLUMNS 2 AND 3, THIRD LINE)

The priority of these messages are:

1. **Flight control messages**
2. **Flight Management messages**
3. **EFIS reconfiguration Messages**

INDICATION	DESCRIPTION
MAN PITCH TRIM ONLY	Displayed with the loss of the L+R elevators and indicates Mechanical Backup.
USE MAN PITCH TRIM	Flight Controls are in direct law.
CHECK APP SEL	The aircraft is in cruise at less than 100 NM from Top of Descent, in descent or in approach and • a non ILS approach has been selected. • an ILS frequency is tuned on the RAD NAV page.
SET MANAGED SPD	The SPEED target is selected but a preselected SPEED does not exist for the next flight phase.
SET GREEN DOT SPD	The aircraft is in Engine Out mode and the SPEED target is selected. This message is displayed if the FCU selected speed is • ≤ Green Dot - 10 kt or, • ≥ Green Dot + 10 kt except in ALT * or ALT mode.
SET HOLD SPD	The aircraft is in selected SPEED, a holding pattern is inserted in the F-PLN, and the aircraft is 30 seconds before the deceleration point to the precomputed HOLD SPEED.
DECELERATE	This message is displayed if the thrust is not reduced when passing the top of descent and the aircraft is above the descent profile.
MORE DRAG	DES mode is engaged, idle is selected, and: • either the aircraft is above the vertical profile and the predicted intercept point of the theoretical profile is at less than 2 NM from the next ALT CSTR; or • in auto speed control and the aircraft enters in a speedbrake decelerating segment.
VERT DISCON AHEAD	DES mode is engaged and: • a TOO STEEP path exists on the next leg. • the aircraft is less than 30 seconds from the TOO STEEP path.