V. Vertical Navigation (cont'd)

Program the AFCS for Descent

> **NOTE:** In order for the autopilot to capture and track the defined vertical profile, two things are necessary: First, the Selected Altitude must be below the current altitude, and second, the VNAV button must be pressed within 5 minutes from the TOD. The order is not important. If both are not accomplished, the "VPTH" and the TOD alert messages will appear flashing in white which tells you something is wrong.

1. ROTATE the ALT knobs until "6000" is displayed above the altimeter.
2. PRESS [VNV] to program the AFCS. The white "VPTH" message appears next to 7000 FT in the AFCS Status Box on the PFD.

⊅► STONS	DIS 15.8NM	BRG 009°
GPS	AP	ALT 7000FT VPTH

When the white message "TOD within 1 minute" appears flashing, the Vertical Deviation Indicator (VDI) appears on the left side of the altimeter. It is a single, magenta chevron. Additionally, in the VSI, a single magenta chevron appears to indicate the rate of descent required for the programmed descent. The VNAV Target Altitude (6000 in this case) appears in a box at the top of the scale. The values for "VS REQ" and "V DEV" in the VNV Profile appear also.
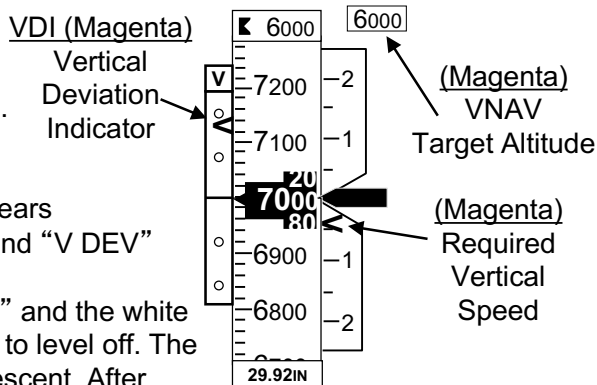
When the TOD point is reached, "ALT" changes to "VPTH" and the white "VPTH" changes to "ALTS" showing that 6000 ft is armed to level off. The Aircraft pitches down to achieve the programmed rate of descent. After the aircraft levels off at 6000 ft the green "VPTH" changes to "ALT" and the VDI, rate of descent chevron and the Target Altitude box all disappear.

Both the TOD and BOD points on the map disappear when passed. The programmed altitudes for the waypoints in the flight plan also disappear when the waypoint is passed.

> **NOTE:** Once a vertical profile has been defined the ONLY ETA source to the TOD is in the Current VNV Profile window. The normal ETE values are to the actual waypoint.

Change the Bottom of Descent (BOD)

Once a vertical profile has been established with a specified BOD, it may be moved by the following steps. The example changes the BOD "STONS -10NM" to "STONS -6NM ". With the Active Flight Plan page showing:

1. PRESS Small FMS Knob to turn cursor ON.
2. ROTATE Large FMS Knob **counterclockwise** to highlight the waypoint to be changed "STONS -10NM".
3. PRESS ⊅► button to open the Direct To window.
4. ROTATE Large FMS Knob to highlight the distance field in the VNV window. (-10NM)
5. ROTATE Small Knob **counterclockwise** until the desired offset distance is shown. (-6NM)
6. PRESS [ENT] twice. The flight plan waypoints have been modified showing the Direct-To operation and the new offset waypoint.
7. PRESS Small FMS Knob to turn cursor OFF.

> **NOTE:** If for some reason the automatic descent did not begin when the TOD is passed, PRESS [VS] and then [NOSE DN] buttons to establish a manual descent. Each push of the [NOSE DN] button equals 100 fpm. As long as the target altitude has been reset the aircraft will level off as desired.
> **NOTE:** If the altitudes in the flight plan are displayed in white as with GPS approaches, the autopilot will NOT automatically establish descents. They will have to be done manually as noted in the NOTE above.