RNAV GNSS Approach Dash 8

Flight EVRA EYVI
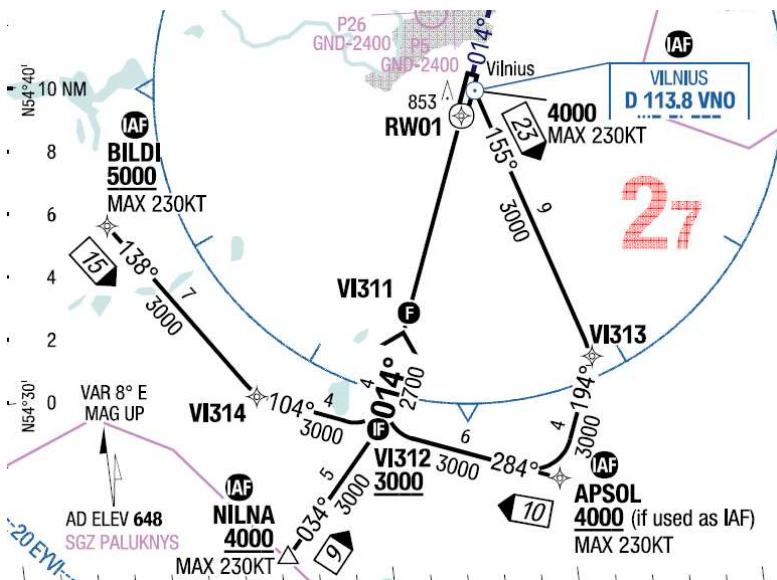
ATC ROUTE: N0315F190 ERIV5G ERIVA N994 MURUN MURU2A

This is a short flight, after reaching Cruise Level let's start preparing the approach.

1. Preparation T/D (is known for sure)

Approach Briefing (in relation to the RNAV approach, i.e. not everything that is otherwise considered or briefed)

2. Review of the entered approach and the waypoints and restrictions

```
          UNIVERSAL

   ARRIVAL      1/ 1
                   ARRIVE
                      EYVI
                   RUNWAY
                       01
                     STAR
          ------.MURU2A
                     APPR
        BILDI.R01 RNAV

                   FPL+
```

```
       FPL     2/ 5
       160°  5.2NM   ALT/FL
    5  MURUN  10:29  ------
       166°  31.9NM
    6  OBANO  10:35  ↑11000
       185°  8.2NM
    7  VI304  10:37  ↑10000
       185°  14.1NM
    8  BILDI  10:39  ↑ 5000
       138°  7.2NM
    9  VI314  10:40  ↑ 3000
```

```
       FPL     3/ 5
       138°  7.2NM   ALT/FL
    9  VI314  10:40  ↑ 3000
       105°  4.0NM
   10  VI312  10:41  ↑ 3000
   11  *R01*  10:41  ------
         CR8015*
   12  VI312  10:41  ↑ 3000
       014°  3.8NM
   13  VI311  10:42  ∅ 2700
```

```
       FPL     4/ 5
       014°  3.8NM   ALT/FL
   13  VI311  10:42  ∅ 2700
       014°  6.6NM
   14  RW01** 10:43     649
       014°  10.2NM
   15  VI315* 10:45  ↑ 2700
     * DIRECT
   16  VNO    10:47  ∅ 4000
   17         --:--  ------
```

3. Check required RNP on the approach charts, if specified. The Dash normally sets out of the navigation database for the Approach Phase 0.50 as RNP, the RNAV GNSS required 0.30. This value must therefore be set manually on the NAV page 1 / 4 before we activate the approach or it is activated automatically (to be recognized or controlled via the NAV 1 / 4).

4. Set DA / MDA 1070

5. Set Approach Speeds, Flap setting

6. 2 Min before T/D set the new altitude and arm VNAV (displays on the PFD)

There are now several options. We can look at 3 of them, some of which are only possible in the simulator, since they are really rather unrealistic:

* Sinking from T / D to DA / MDA on the programmed flight path

* Sinking step by step on the programmed flight path

* Approach with previous ATC flight guidance (vectoring)

Sinking from T / D to DA / MDA on the programmed flight path

set as new alt before T/D the altitude for the Final Approach Fix **(F)** (2700 ft) and ALT SEL

the Dash 8 sinks through to the **F**, taking into account all height restrictions, so will adjust the VS accordingly and, if necessary, briefly level it out. VNAV PATH is the active vertical mode that you should also keep an eye on, and of course the speed.

50 NM ARM APPR appears on the NAV Page 1 / 4. Confirm the sensors required for the selected approach are checked and an error message is issued if certain sensors are not available (real at least)

check and set the required RNP (0.30) in the Terminal Phase, before activate the approach (manually or automaticly)


before reaching the **F**, approach will activated automatically (see NAV Page 1 / 4 and PFD), if not previously activated manually. Is VNAV PATH active at this time, the VNAV APPR Mode engaged automatically but VNAV may be switched off in order to force a reactivation by means of the VNAV button on the MCP (make sure that you want to decrease further in the final approach). A new, lower height entry for the final approach is not necessary.

Image 1 (top):

PFD:
LNAV APPR | VNAV PATH
ALT SEL
AP
2700
20 20 V
10 10
30
178 60
40
2400
1070 MDA
▲148
△126 WPT ALRT VERT ALRT 1023 HPA TA/RA
HDG 015° FMS1 014°
VI311

ND:
TERR ON FMS1 014°
36 006 VI311
1.4 NM
33 3
EYVI VNO
4000
RA01 007
649 002
NAV
APT
5
TAS 178 VI311
GS 173 2200
VOR1 VOR2
DME1 8.7 NM R 0.1 NM DME2 8.7 NM

Image 2 (middle):

PFD:
LNAV APPR | ALT
AP
2700
20 20 V
10 10
30
171 60
40
2300
1070 MDA
▲148
△126 VERT ALRT 1023 HPA TA/RA
HDG 015° FMS1 015°
RWO1
7.0 NM

ND:
TERR ON FMS1 015°
36 010 RWO1
7.0 NM
00:02
33 3
EYVI VNO
4000
RA01 007
649 002
NAV
APT
5
TAS 172
GS 167
VOR1 VOR2
DME1 7.9 NM R 0.0 NM DME2 7.9 NM

Image 3 (bottom):

PFD:
LNAV APPR | VNAV PATH
AP
2700
20 20 V
10 10
30
171 60
40
2290
1070 MDA
▲148
△126 VERT ALRT 1023 HPA TA/RA
HDG 015° FMS1 015°
RWO1

ND:
TERR ON FMS1 015°
36 010 RWO1
7.0 NM
00:02
33 3
EYVI VNO
4000
RA01 007
649 002
NAV
APT
5
TAS 171
GS 166
VOR1 VOR2
DME1 7.8 NM R 0.0 NM DME2 7.8 NM

Sinking step by step on the programmed flight path

is initially the same as before, except that all heights are really set in the MCP as the respective flight section specifies. So it happens that the plane levels out at the preselected altitude and goes into ALT mode. VNAV remains armed in the background (can be seen on the displays in the PFD). To sink further, the new height must then be set again on the MCP and VNAV activated.
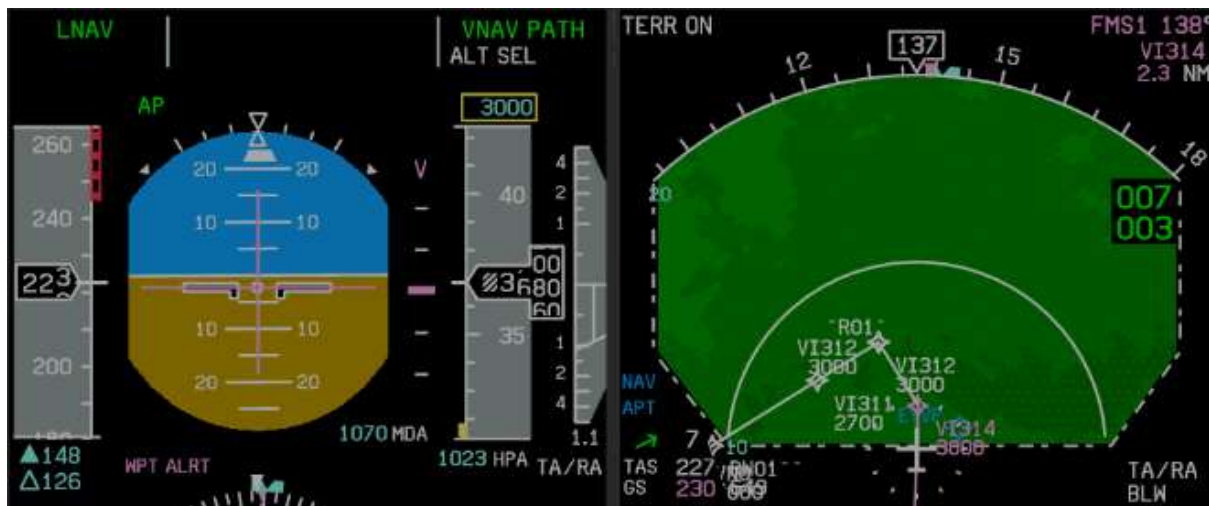
in this case VNAV is not disconnected again at the **F**, the airplane will sinking in the final approach