

## Marshfield, Massachusetts to New Bedford, Massachusetts

We begin this last localizer-approach flight at 3B2 (although note from the approach plate that it is now KGHG), Marshfield Municipal Airport, in Marshfield, Mass. It's a short flight, only 29 nm, but this back course approach has a  $3.55^\circ$  approach angle to New Bedford's Runway 23, steeper than the normal  $3.00^\circ$ . We also provide you with a comfortable  $30^\circ$  intercept of the back course signal.

Because this is such a short flight, your "cruise" altitude will be 2000 ft, the initial approach altitude for New Bedford's Localizer back course approach to Runway 23. You will depart from Marshfield's Rwy 24, maintain Rwy hdg until your ADF points  $205^\circ$  to FFF NDB, then fly to FFF NDB on the  $205^\circ$  bearing and on to the  $30^\circ$  intercept of the back course localizer.

Click on the image in the main text to download the flight-information package, 3b2-ebw.zip. That zip-file includes the IFR chart, the approach plate for LOC-BC Rwy 23 at New Bedford, and this text description of the flight.

As usual, do nothing until you have gone through the step-by-step details of the flight with this text and your charts. Only by doing this will you both understand the purpose of each step, but you will visualize them in your mind, a critical part of instrument flight.

**NOTE: Fly the Instrument Approach portion with your Nav-2 Receiver for better needle visibility.**

- Set the flight simulator weather conditions to 700 ft overcast, cloud tops at 10,000 ft., and two miles visibility. The wind is calm.
- Move your aircraft to 3B2, Rwy 24.
- Tune Nav-2 to 109.7, New Bedford's localizer frequency.
- Set the VOR-2 OBS to  $234^\circ$  as a reminder of New Bedford's Rwy 23 heading.
- Switch your DME to Nav-2. You will need it during the approach.
- Tune your ADF to 257.0 kHz, for FFF NDB.
- Takeoff from Rwy 24 and maintain runway heading.
- Climb to 2000 ft.
- When the ADF nears  $205^\circ$  (about 5 nm after takeoff) turn left and fly the  $205^\circ$  bearing to FFF NDB (about 10 nm).
- Drop one notch of flaps and slow to 75 kts on the way to FFF NDB.
- Shortly after station passage of FFF NDB you will intercept the localizer for New Bedford's Rwy 23.
- Turn right to  $234^\circ$  and fly the localizer back course. Recall one more time that you fly

away from the needle to keep it centered.

- At DME 9.8 descend to 1900 ft.
- At DME 4.6, the FAF, descend to your MDA, 460 ft.
- When the approach lights or Rwy 23 becomes visible land normally.
- Flight time: about 22 minutes.