

Nantucket, Mass. to Martha's Vineyard, Mass.

The flight begins at Nantucket Memorial airport, Nantucket, Mass. with Martha's Vineyard, Mass. the destination. The flight-information package is in ack-mvy.zip.

The zip-file includes the IFR chart, the approach plate for VOR Rwy 24 at Martha's Vineyard airport in Vineyard Haven, and this text description of the flight.

This is a straight-forward flight ending with an instrument approach at Martha's Vineyard, where the VOR is on the field. We proceed from Nantucket to the MVY VOR, fly outbound, execute a procedure turn, and return to MVY and Runway 24 at Martha's Vineyard.

There is a very difficult 128° right turn at MVY VOR when arriving from Nantucket to intersect the 067° radial to start the approach. We convert this into a simple maneuver with a left teardrop turn at MVY, coming back around to intercept the 067° radial.

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.

- Set the flight simulator weather conditions to 800 ft overcast, cloud tops at 10,000 ft., and three-quarter mile visibility. The wind is calm.
- Move the aircraft to Nantucket's Runway 24, airport KACK, and retract the flaps to 0°.
- Tune Nav-2 receiver to Martha's Vineyard VOR, 114.5 MHz., ident MVY.
- Set the VOR-2 OBS to 299°. Reset the timer to zero.
- Takeoff from Runway 24 with a climbing right turn to 345°. ATC has cleared you to 4000 ft.
- Intercept Martha Vineyard's 299° radial northwest-bound, indicated by the VOR needle centering. Cruise at 110 kts.
- Track inbound 299° to the MVY VOR.
- As the needle centers and the FROM flag appears indicating station passage, start the timer and *maintain your 299° heading* for one minute. Change the OBS setting to 067°.
- Don't worry if the needle slides off the gauge on station passage, and don't chase it by altering your heading. Stay on course and the needle will return to dead center in a moment.
- At one minute after station passage turn left and come back around to intersect the 067° radial inbound to MVY VOR. The TO flag should be showing when the needle again

centers.

- Stop and reset the timer on the return leg to MVY, but don't start it.
- At station passage, when the FROM flag appears, start the timer and fly outbound for three minutes descending to 1800 ft.
- Drop one notch of flaps and slow to 75 kts. while on the outbound leg.

It's vital to stabilize the approach well before beginning descent to the MDA.

- At three minutes, or slightly longer if you wish to be at 1800 ft. when beginning the procedure turn, turn right to 112°. If the outbound leg is more than three minutes, mentally note the time when starting the procedure turn. Be aware that you must remain within 10 nm. of the VOR during the approach procedure, which is only five minutes or so flying radius from the VOR at 110 kts. Time and distance allowances must be included for the procedure turn to stay within the 10 nm.
- Reset and restart the timer. Fly the 112° heading for one minute. Set the OBS to 247°, the inbound track to the VOR and to Runway 24.
- After one minute into the procedure turn, turn left to 292° to return to intercept the 247° inbound radial to the station.
- Reset but do not restart the timer.
- When the VOR needle centers, turn left and track inbound on the 247° radial.
- Start the timer, and descend to 500 ft., the MDA. Since you flew outbound for three minutes, expect station passage after three and a half minutes, or so, inbound. If the outbound leg was different than three minutes, add about a half-minute for the inbound leg to station passage. This will not be exact, but will provide a far better gauge of distance to the VOR than guessing.
- Keep the VOR needle centered with minor heading adjustments, but don't chase the needle.
- Be alert on this approach. With only one mile visibility, you will sight the approach end of the runway only 48 secs. before arrival at the threshold. The runway will be a bit off to the left because of the location of the VOR on the field.
- If the TO-FROM flag switches to FROM before or just as you sight the runway, immediately execute the Missed Approach Procedure shown on the approach plate—it's too late to land.
- Field elevation is 68 ft., hence you must descend 432 ft. after sighting the field. Chopping the power and dropping full flaps should put you in a good approach attitude, as well as allowing you to slow the aircraft even more. Do not point the nose of the aircraft down

and dive for the field. A crash may result or the speed will be so high that you will float past the end of the runway. Flare normally and touchdown.

- Time: 32 minutes.