

## **Manchester, N.H. to Beverly, Mass.**

This flight is somewhat shorter than the first flight but a little busier during the final approach. The flight begins at Manchester airport, KMHT, in Manchester, N.H. with a destination of Beverly, Massachusetts, KBVY. The localizer approach is to Runway 16. The flight-information package is mht-bvy.zip.

The zip-file includes the IFR chart, the approach plate for LOC Rwy 16 at Beverly, and this text description of the flight.

We proceed south-east bound from Manchester to the Lawrence VOR, then intersect the localizer to Beverly's Runway 16., making a right turn to track inbound to the airport with a straight-in landing to Runway 16. A VOR intersection is the FAF for this approach.

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.**

You'll use your DME to identify the FAF.

- Set the flight simulator weather conditions to 800 ft overcast, cloud tops at 10,000 ft., and two miles visibility. The wind is calm.
- Move the aircraft to Manchester's Runway 17, airport KMHT, and retract the flaps to 0°.
- Tune the Nav-1 receiver to the Lawrence VOR, 112.5 MHz., ident LWM.
- Set the VOR-1 OBS to 145°. Fly the first leg with Nav-2.
- Tune the Nav-2 receiver to Beverly's localizer, 110.5 MHz., ident I-BVY.
- Set the VOR-2 OBS to 157°, the localizer track to the runway.
- Reset the timer to zero.
- Switch your DME to Nav-1 receiver to monitor progress to LWM VOR.
- Fly Nav-1. Takeoff from Runway 17, climbing out with a modest left turn to intercept LWMs 145° radial. A TO flag should appear. Ident the VOR.
- ATC has cleared you to 3000 ft. Climb at 90 kts., then cruise at 110 kts. after reaching your assigned altitude.

- Be alert for station passage at LWM as things will get busy.
- On station passage at LWM, when the FROM flag appears, continue on your 145° heading.
- Begin your descent to 1800 ft.
- Switch your DME to Nav-2 receiver.
- Fly Nav-2. Turn right to 157° as you intercept the Runway 16 localizer.
- Slow to 75 kts. and drop one notch of flaps.

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

- The FAF is 5.8 DME from KBVY, on Nav-2 .
- Maintain 1800 ft. until the FAF.
- At 5.8 DME, the FAF, start your timer and start your descent to the 580 ft. MDA.
- Hold your rate of descent between 500 fpm and 700 fpm.
- Don't chase the needle; it will be very sensitive as you near the runway. Just try to keep it from moving.
- At 75 kts., 4 min., 00 secs. will elapse to fly the 5.0 nm. to the MAP or Runway 16 threshold.
- With two-miles visibility, Runway 16's threshold or approach lights should become visible in 2 min., 24 secs.
- Beverly's field elevation is 108 ft., so you will have about one and a half minutes to descend 472 ft. for touchdown. Slow the aircraft for a normal landing by reducing power and further lowering the flaps.
- Safe landing, the runway will be wet.
- Flight time: About 19 minutes.