

Kissimmee, Florida to Melbourne, Florida

An ILS approach doesn't get much simpler than this one. The flight originates at Kissimmee Municipal airport, Fla., KISM, with a destination of Melbourne Int'l airport, Fla., KMLB. The ILS approach is to Runway 9R. Click on the image above to download the flight-information package, [ism-mlb.zip](#).

The zip-file includes the IFR chart, the approach plate for ILS Rwy 9R at Melbourne, and this text description of the flight.

We proceed southeast from Kissimmee and intercept Melbourne's Localizer 21 NM from the field providing a nice long straight-in ILS approach to Runway 9R. The previous flights will make this seem very easy. Except that it's time for a real-world cross wind.

By now you should have downloaded and installed the virtual E6-B computer, and placed an icon on the desktop. This marvelous utility calculates Wind Correction Angle—WCA, and Ground Speeds in a matter of seconds. You should use it for every flight where a wind is present. Then you will know in advance what action is necessary to counteract the effects of the wind.

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 400 ft overcast, cloud tops at 10,000 ft., and one-mile visibility. Set the wind at 150° at 15 kts.
- Move the aircraft to Kissimmee's Runway 15, airport KISM, and retract the flaps to 0°.
- Tune the Nav-1 receiver to the Melbourne VOR, 110.0 MHz., ident MLB.
- Set the VOR-1 OBS to 089°.
- Tune the Nav-2 receiver to the Vero Beach VOR, 117.3 MHz., Ident VRB. Fly the first leg with Nav-2.
- Set the VOR-2 OBS to 129°.
- Turn Nav-2 Ident on, and leave it on, to recognize when that VOR becomes "active," which will be about 3000 ft. MSL.
- Switch the DME to Nav-2. This will monitor the distance to VRB VOR.
- Takeoff from Runway 15, climbing out left to 135°.

- Fly Nav-2. Intercept VRB's 129° radial when the VOR gauge becomes "active—hear ident and OFF flag no longer visible.
- ATC has cleared you to 5000 ft. Climb at 90 kts., then cruise at 110 kts. after reaching your assigned altitude.
- The Virtual E6-B calculates 3°R WCA for this cross wind and heading at 110 kts. TAS. The wind is almost directly on the aircraft nose during this first leg, slowing the ground speed to 96 kts.
- At about DME 42 the VOR-1 needle should be nearly centered.
- Near the intercept point of the 089° radial to MLB retune Nav-1 receiver to Melbourne's Localizer, 108.3 MHz., Ident I-MLB.
- Set the VOR-1 OBS to 090° as a reminder of the runway heading.
- Fly Nav-1. Turn left and intercept Melbourne's Localizer for Runway 9R.
- Inbound track is 090° but roll out on 097° heading to compensate for the cross wind
- You are about 17 NM from the FAF.
- Begin descent to 2100 ft.
- Maintain 110 kts. until instructed otherwise.
- Change Nav-2 to the Melbourne VOR, 110.0 MHz., ident MLB.
- Set the VOR-2 OBS to 089°.
- Drop one notch of flaps at DME 13 and slow to 75 kts.
- The Virtual E6-B calculates 10°R WCA for this cross wind and heading at 75 kts. TAS.
- The ground speed will be 66 kts. on final. Use the rule of thumb of five times ground speed for rate of descent on the glide slope, which is 330 fpm, a shallower rate of descent than you are accustomed to. Be attentive to this rate of descent while coming down the glide slope. Less power reduction will be needed than for a no-wind approach.
- The FAF, Outer Marker, is at 7.8 NM on the DME.
- Maintain 2100 ft. until intercept of the glide slope.
- Use this level-flight part of the approach to stabilize the air speed and WCA before reaching the FAF.

- Reduce power and descend down the glide slope upon intercept.
- Stay on the glide slope and localizer until you reach your DH of 233 ft. Don't look away from the gauges until very shortly before reaching the DH, about one-half mile from the runway.
- DH is 233 ft. Don't descend below that point if the runway is not in sight. You will reach the DH near the Middle Marker, amber light on the panel, alternating dots and dashes sounding from the speaker.
- Remember, your WCA is 10°R. Therefore you must look slightly left to spot the runway since you are crabbing down on the approach.
- Melbourne's Runway 9R TDZE, Touch Down Zone Elevation, is 33 ft., 200 ft. below you at the DH. It should be an easy coast in from there if you've stayed on top of the needles.
- Flight time: About 35 minutes.