

endpoint for that airway are selected, all waypoints that occur along the airway are automatically inserted into the flight plan. *Figure 3-11* shows a navigation unit that allows airways to be selected.

Entering Procedures

Every IFR-capable FMS offers a menu of published instrument procedures, such as departures, arrivals, and approaches. When you choose one of these procedures, the FMS automatically inserts all waypoints included in that procedure into the flight plan. *Figure 3-12* illustrates how you might choose an approach procedure using one popular FMS.

Risk: Taking Off Without Entering a Flight Plan

The convenience of the FMS, especially the “direct to” feature common to all units, creates the temptation to program only the first en route waypoint prior to takeoff and then enter additional waypoints once airborne. Keep in mind, however, that no matter how skilled you become with the avionics, programming requires “heads down” time, which reduces your ability to scan for traffic, monitor engine instruments, etc. A better strategy is to enter all of the flight data before you take off.

Reviewing the Flight Route

Once a route has been entered into the FMS, the next step is to review the route to ensure it is the desired route. It is particularly important to ensure that the programmed route agrees with the pilot’s clearance, the en route and terminal area charts, and any bearing, distance, time, and fuel calculations that have been performed on paper.

Catching Errors: Using the FMS Flight Planning Function To Cross-Check Calculations

Using the FMS’s flight planning function to check your own flight planning calculations is one example of how advanced cockpit systems can decrease the likelihood of an error. Alternatively, cross-check the computer’s calculations against your own. (Remember the old computer programmer’s adage, “Garbage in, garbage out (GIGO).”)

The flight planning page can also be used to review the route that you entered into the FMS, as illustrated in *Figure 3-13*. Be sure to check at least four things when reviewing your route.



Figure 3-11. Inserting an airway into a flight route.