FMS Entries & Reroutes

The following slides will introduce:

➤ FMS Waypoints

➤ FMS Tracking

➤ FMS Holding

FMS – Waypoints

Along Course Waypoints

1. Create the waypoint, 35 nm this side of APE in the scratchpad:
APE/-35
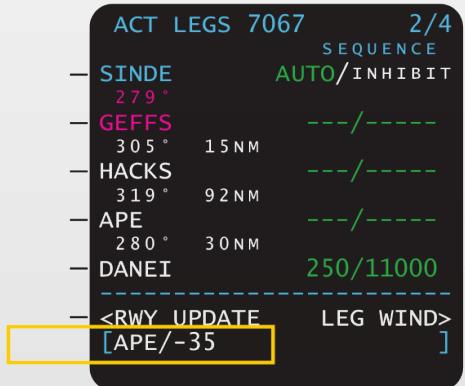
```
ACT LEGS 7067        2/4
                SEQUENCE
SINDE        AUTO/INHIBIT
279°
GEFFS            ---/-----
305°   15NM
HACKS            ---/-----
319°   92NM
APE              ---/-----
280°   30NM
DANEI        250/11000
-------------------------
<RWY UPDATE   LEG WIND>
[APE/-35           ]
```

2. Drop on top of the waypoint on which it was based:
The FMS will "auto-place" the waypoint where it belongs.

```
ACT LEGS 7067        2/4
                SEQUENCE
SINDE        AUTO/INHIBIT
279°
GEFFS            ---/-----
305°   15NM
HACKS            ---/-----
319°   57NM
APE01            ---/-----
319°   35NM
APE →Drop Here   ---/-----
-------------------------
<RWY UPDATE   LEG WIND>
[                  ]
```
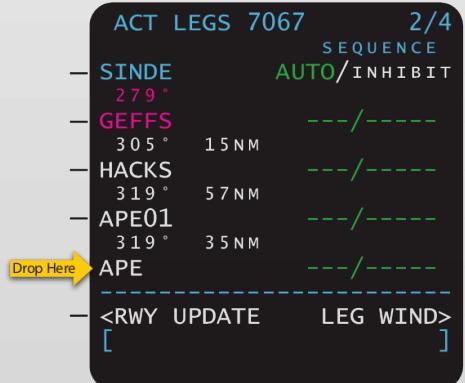
3. Create the waypoint, 10 nm on the other side of APE in the scratchpad:
APE/10
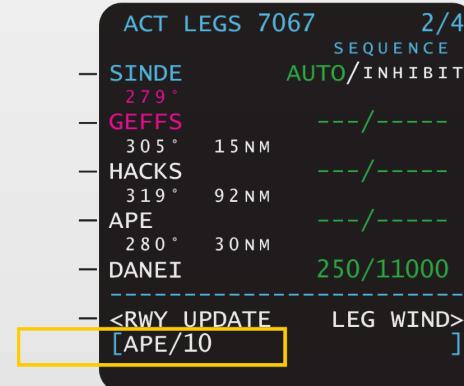
```
ACT LEGS 7067        2/4
                SEQUENCE
SINDE        AUTO/INHIBIT
279°
GEFFS            ---/-----
305°   15NM
HACKS            ---/-----
319°   92NM
APE              ---/-----
280°   30NM
DANEI        250/11000
-------------------------
<RWY UPDATE   LEG WIND>
[APE/10            ]
```

4. Drop on top of the waypoint on which it was based:
The FMS will "auto-place" the waypoint where it belongs.

```
ACT LEGS 7067        2/4
                SEQUENCE
SINDE        AUTO/INHIBIT
279°
GEFFS            ---/-----
305°   15NM
HACKS            ---/-----
319°   92NM
Drop Here→ APE   ---/-----
280°   10NM
APE01            ---/-----
-------------------------
<RWY UPDATE   LEG WIND>
[                  ]
```
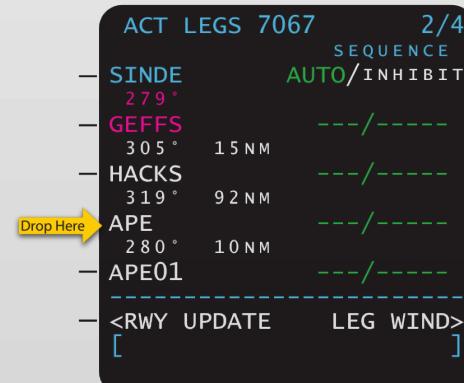
FMS – Waypoints

Place/Bearing/Distance

1. Create a waypoint on the IGB VOR Radial 290 at 45 DME:

   IGB290/45
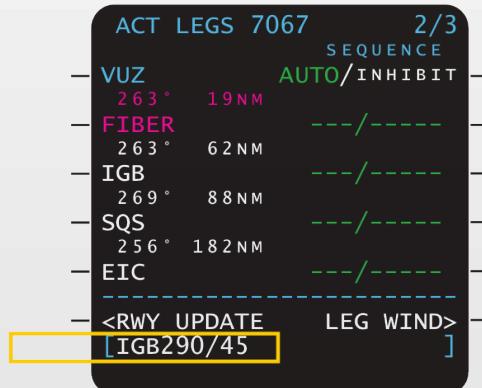
2. Drop the waypoint where it belongs:

   The FMS will **not** "auto-place" the waypoint.
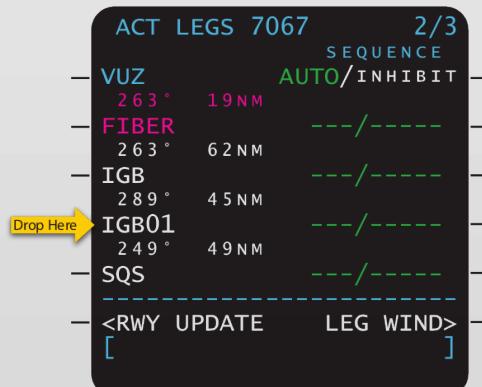
Place Bearing/Place Bearing

1. Create a waypoint at the crossing of the SGF VOR Radial 025 and the MKC VOR Radial 125:

   SGF025/MKC125
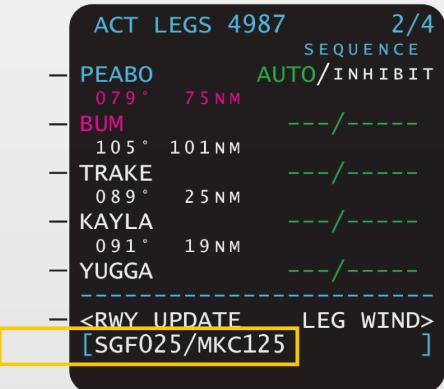
2. Drop the waypoint where it belongs:

   The FMS will not "auto-place" the waypoint.
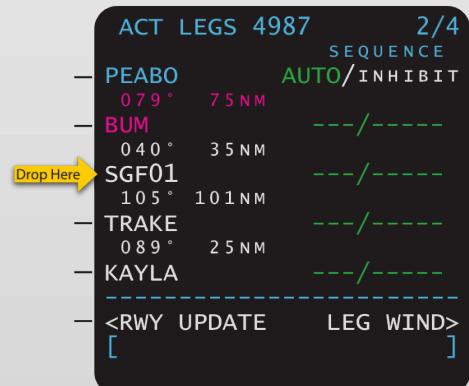
FMS – Tracking
## Track a Radial Inbound
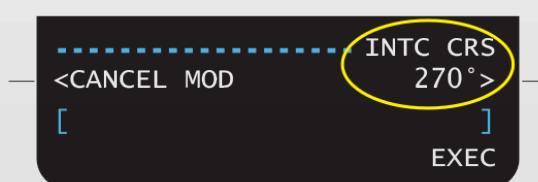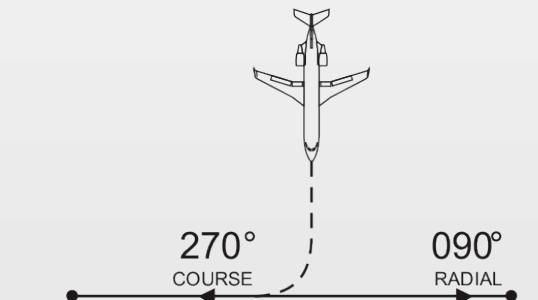
Example: "Fly heading 180. Intercept and track inbound on the ATL 090 degree radial."

1. On the LEGS page:

   Place the fix in the TO line (line select 2L).

2. On the INTC CRS line (line select 6R):

   Place the inbound course (in this case, 270).

Tracking the 090 degree radial inbound results in a 270 degree course.

When you first put something in the TO line (line select 2L), the FMS assumes you want to fly direct to that fix. If you do not want to fly direct, you must define how you want to arrive at that fix.

FMS – Tracking
Track a Radial Outbound
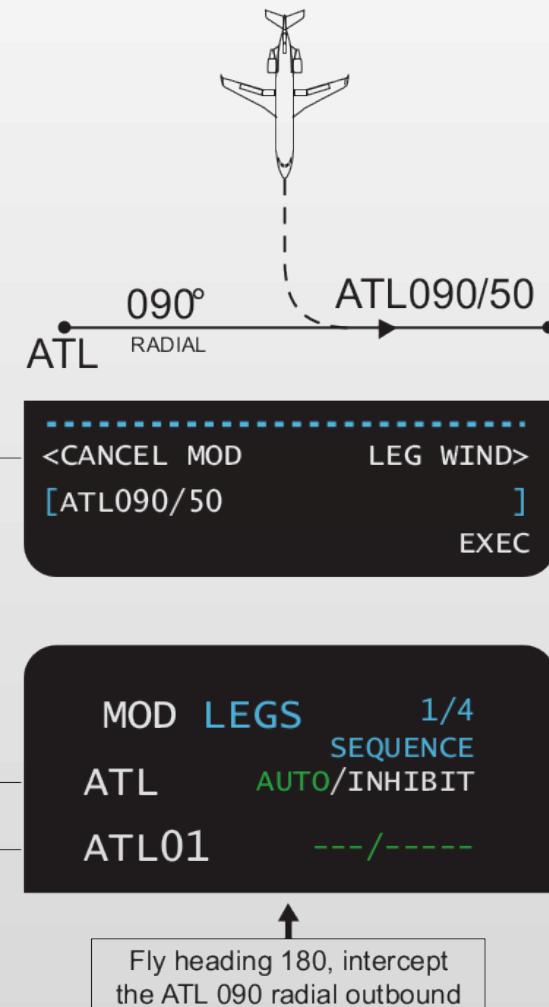
Example: "Fly heading 180. Intercept and track outbound on the ATL 090 degree radial."

On the LEGS page:

1. Create a waypoint on the intended radial that is far enough out that you will not reach it.

2. ATL090/50
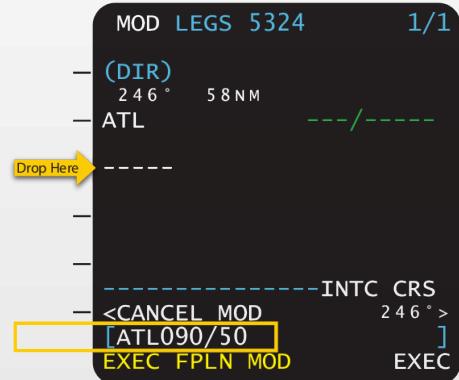
3. Insert the waypoint directly after the NAVAID upon which the radial is based.
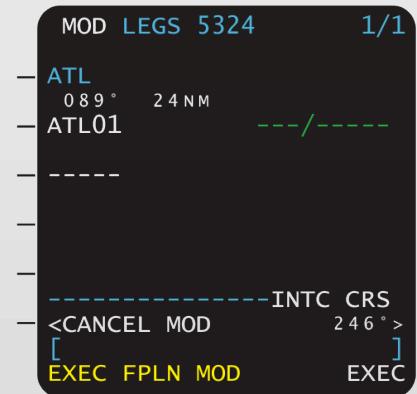
4. If the intercept will be after the NAVAID, put it behind you by dropping it in the FROM line (line select 1L).

The FMS cannot track away from a waypoint. To track outbound, you must create a fix that lies along the intended course. The distance is arbitrary, but must be far enough that it will never be reached.

FOR TRAINING USE ONLY

FMS – Holding
Holding at a Waypoint on the Flight Plan

The only holds pre-programmed into the FMS are those that are part of Instrument or Missed Approach Procedures. When a hold waypoint is selected, the FMS defaults to hold on the inbound or current heading, right-hand turns, and 1.0 or 1.5 minutes legs, depending on altitude. These defaults could appear very similar to the published hold.

Always verify that the selected holding course, turn direction, and leg length match your clearance.

S.A.F.E: Speed, Altitude, Fuel, EFC

From the LEGS page:

1. Select the HOLD function key on the CDU.
2. The HOLD AT field will display at line select 6L.


```
ACT LEGS 4963            1/2
                   SEQUENCE
— KCRW           AUTO/INHIBIT —
  266°     8NM
— HVQ             ---/----- —
  208°  166NM
— SOT             ---/----- —
  194°   67NM
— ODF             ---/----- —
  220°   29NM
— FLCON           ---/----- —
  -------- HOLD AT --------
— □□□□□         LEG WIND>  —
  [FLCON                  ]
```

If one or more holds are already programmed into the FMS, the ACT FPLN HOLD page or ACT HOLD LIST page will be displayed. In this case, push NEW HOLD.

- Select the waypoint from the flight plan (in this case FLCON) and drop it on the HOLD AT line (line select 6L).


```
MOD FPLN HOLD            1/1
  FIX      ENTRY
— FLCON   DIRECT    FAA/ICAO —
  QUAD/RADIAL      MAX KIAS
— --/---°              200 —
  INBD CRS/DIR      FIX ETA
— 220°/R TURN               —
  LEG TIME             EFC
— 1.0 MIN            --:-- —
  LEG DIST
— 3.4 NM        NEW HOLD>  —
  --------------------------
— <CANCEL MOD               —
  [                        ]
  EXEC FPLN MOD        EXEC
```

FMS – Holding
Holding at a Waypoints Not on the Flight Plan

From the LEGS page:

1. Push the HOLD key

2. If the ACT FPLN HOLD page or the ACT HOLD LIST page is showing, push NEW HOLD.

3. Insert the waypoint in the HOLD AT prompt.

4. Select the waypoint the HOLD will precede.

5. Change the defaults to match your clearance as required.

FMS – Holding
Present Position Holding

From the LEGS page

1. Push the HOLD key.

2. If the ACT FPLN HOLD page or the ACT HOLD LIST page is showing, push NEW HOLD.

3. Push the PPOS line select key to show the HOLD page with the present position as the holding fix.

4. Change the defaults to match your clearance as required.

FMS – Holding
Exit Holding

From the LEGS page:

1. Select EXIT HOLD (line select 6L); or

2. Place another waypoint in the flight plan on the TO line (line select 2L).