RNAV

Amongst VOR, NDB, ILS and a garden variety of other approaches most larger airports also feature RNAV procedures.

Within Flightgear at present these procedures can be simulated using the GPS and RouteManager in the absence of dedicated RNAV instruments apart from the KNS80.

RNAV waypoints may be located at a specific radial and dme distance or on GPS coordinates.

First up we need a chart. Unfortunately some charts do not feature the relevant info regarding longitude and latitude of the depicted waypoints.

However this info can be obtained from either SkyVector or Google Searches. Once lucky this info has to be converted into decimal format which Flightgear can read. There are plenty online tools like https://www.latlong.net/degrees-minutes-seconds-to-decimal-degrees

Once the coordinates are known we need to create our route (flightplan). This is demonstrated in Tutorial 027a (Fundamentals.pdf)

Now for the scenario:

Once you click the ready button the aircraft will be positioned frozen about 7000ft and 7nm short of waypoint T017 with VOR/DME TNT preset to 112.3 R018, altimeter set to 1025hpa and auto mixture enabled.

Our route has already been established, however it needs to be loaded prior to flying the approach.
To do so the following sequence of steps is required.

- Prior to unpause open the routemanager and load RNAV_MHTG_02 from the aircrafts resource folder – only load, then unpause by pressing p
- click the Activate button and close the dialog
- Change the NavSource for the AP to GPS clicking the blue GPS button
- Place the AP in Nav mode by clicking the grey Nav button

the aircraft will imediately turn towards waypoint T015. Now you can fly the route in line with your preparation in terms of groundspeed, vertical speeds, wca etc.

If things dont work out the first time you can use the Instant Replay option to trace possible errors.

Good luck and enjoy...