



BRONZE example flight

NAVIGATION MODULE

TASK SUMMARY

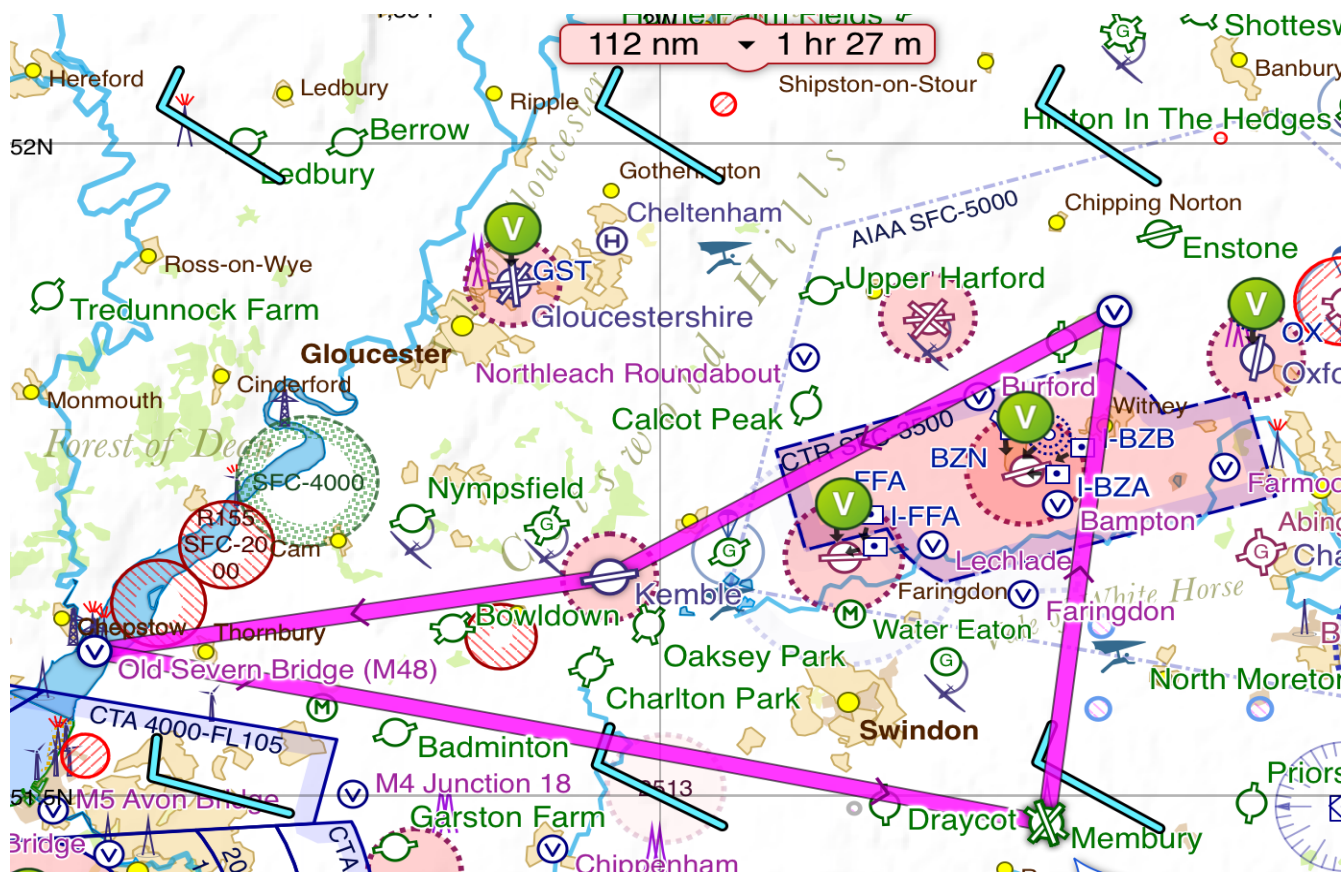
The **standard minimum distance** for the **BRONZE** task is **100NM**, unless you have a slower aircraft, in which case there is an accommodation for this.

The requirement is:

1. Take off from airfield A to waypoint B must be no less than 20NM.
2. Land at airfield B.
3. Take off from airfield B to waypoint C must be no less than 20NM.
4. Land back at airfield A.
5. Total distance must be 100NM or more OR as calculated minimum for your declared cruise speed (*see notes for more detail*).

EXAMPLE ROUTE

The route below is an example of a route suitable for the BRONZE navigation exercise:



NOTE: this route crosses Brize class D airspace and a clearance would be needed to complete the flight at the 2000ft level indicated on the following PLOG.

EXAMPLE PLOG

Membury - Membury Aircraft: G-SAMC (C42B) Pilot: Cameron Spence	Startup		Brakes Off		Fuel Required	33.5 ltr
	Takeoff		Landing		Planned Fuel	65.0 ltr
	Brakes On		Shutdown		Endurance	4 hr 21 m

Elevation 667 ft (24 hPa) SR 05:23 Z, MCT 04:49 Z	Level IAS TrkT Wind HdgM GS Dist Time
Membury 📍 Charlbury (EGVN)	2000 75 007 000/00 007 75 24 19
Charlbury (EGVN) 📍 EGBF Kemble	2000 75 240 000/00 240 77 25 19
EGBF Kemble 📍 Old Severn Bridge (M48) (EGGD)	2000 75 261 000/00 262 77 22 17
Old Severn Bridge (M48) (EGGD) 📍 Membury	2000 75 101 000/00 101 76 41 33
Elevation 667 ft (24 hPa) SS 18:52 Z, ECT 19:27 Z	112 1:27

EXAMPLE DETAIL

The **standard minimum distance** for the **BRONZE** task is **100NM**, unless you have a slower aircraft, in which case there is an accommodation for this. (See the main Bronze Navigation document for details of how to adjust for slower aircraft)

The requirement is:

- Take off from airfield A to waypoint B must be no less than 20NM.
In this case we flew from departure point at **Membury** to a waypoint at **Charlbury** which is a VRP and very easy to identify from the air. This is 24NM from the departure point.
- Land at airfield B. There is no min. distance from the waypoint to this airfield.
In this case we landed at **Kemble**.
- Take off from airfield B to waypoint C must be no less than 20NM in this case we left from **Kemble** to the VRP at the **Severn Bridge**, again very easy to identify. The distance for this leg is 22NM.
- Land back at airfield A.
We landed back at **Membury**. There is no min. distance for this leg.
NOTE: you could go on to a different airfield if the distance requirements were met.
- Total mileage declared must be 100NM or more OR as calculated minimum for your cruise speed.
The total distance of 112NM met the requirement for this aircraft with a cruise speed of 75kts which is 100NM.

NOTES: This task was planned using SkyDemon. Others have used stopwatch and chart methods for the same task. The only difference is that GPS logs can be submitted as evidence if used whereas you need to have the flight verified by an observer using chart/stopwatch methods. The observer can be any BMAA member and they don't need to fly with you (although they can if you'd enjoy their company!) In both cases the proposed route, timings and estimated fuel burn must be submitted in advance either by email to the BMAA prior to departure or a copy of your plan left with your observer.

If your aircraft cruises at 60 knots or faster, the minimum distance for the BRONZE navigation task is 100 NM. If you fly an aircraft with a lower cruise speed, then you may use a lower minimum distance for the flight. This figure is the cruise air speed that you choose multiplied by five then the result divided by three to give a distance in nautical miles.

Example

Cruise speed (kts)	X 5	/ 3	Distance
50 kts	250	83.3	83 NM

If the result of this calculation is less than **58 NM**, you must use the figure of **58 NM**