

VOR accuracy testing

	REQUIRED RECEIVER ACCURACY
If the system does not meet these requirements then it may not be used for IFR navigation and it probably should not be used for VFR navigation either!	<ul style="list-style-type: none"> • VOT - $\pm 4^\circ$ • 2 VOR comparison - $\pm 4^\circ$ • Airborne geographic location check - $\pm 6^\circ$ • VOR checkpoint - VOR should indicate within $\pm 4^\circ$ of the posted radial while the DME should indicate within 0.5nm of the posted distance.

The VOR test facility or VOT radiates the signal for the 360° radial in all directions. The USUAL FREQUENCY of the VOT is 114.8MHz and the indications from the VOT which you will see on your VOR indicator will be as indicated in the table below:

Conventional display indications

OBS	TO / FROM FLAG INDICATION	NEEDLE POSITION
360	FROM	CENTRED
090	OFF	FULL RIGHT
180	TO	CENTRED
270	OFF	FULL LEFT

RMI indications when conducting an accuracy check using a VOT

If your aeroplane is equipped with an RMI indicator, it will point to the station indicating a direction of **180° TO THE STATION** irrespective of your heading when you tune the VOR receiver to the VOT frequency.



NOTE:

If your equipment seems to pick up the VOR and the indications seem normal but you cannot hear an identifier signal there is a problem!

VOR stations have a self monitoring system. If the monitoring system detects that the station has gone out of calibration then it will remove the identification signal from the station's transmission providing an indication to pilots that the station is faulty.

- 1) When testing the VOR equipment on board an aircraft using a VOT facility, selecting 090 on the OBS will result in?
 - a) TO/FROM indicator showing OFF and needle full LEFT
 - b) TO/FROM indicator showing OFF and needle full RIGHT
 - c) TO/FROM indicator showing FROM and needle full LEFT
 - d) TO/FROM indicator showing TO and needle full RIGHT

- 2) When doing a VOT test, the following serviceability limits apply:
 - a) $\pm 2^\circ$
 - b) $\pm 4^\circ$
 - c) $\pm 5^\circ$
 - d) $\pm 10^\circ$

- 3) During a VOT test of your VOR equipment, you can expect the RMI needle to point:
 - a) To the 12 o'clock position
 - b) To a bearing of 180°
 - c) To a bearing of 360°
 - d) To the 3 o'clock position

- 4) VOR accuracy limits are _____ for a VOT test, _____ for a VOR check point and _____ for an airborne VOR check
 - a) $\pm 4^\circ, \pm 6^\circ, \pm 6^\circ$
 - b) $\pm 4^\circ, \pm 6^\circ, \pm 4^\circ$
 - c) $\pm 4^\circ, \pm 4^\circ, \pm 4^\circ$
 - d) $\pm 4^\circ, \pm 4^\circ, \pm 6^\circ$

- 5) During a valid VOR VOT check the pilot should see the following indications?
 - a) 180 Degrees - From Indication – Centered
 - b) 180 Degrees - To Indication – Centered
 - c) 360 Degrees – To Indication – Centered
 - d) 360 Degrees – OFF Flag – Centered

- 6) The usual frequency for a VOT is:
 - a) 108.1
 - b) 110.9
 - c) 117.0
 - d) 114.8

- 7) The airport from which you are planning to depart does not have a VOT nor does it have a VOR checkpoint. To test your on board VOR receiver, you therefore plan to do an internal comparative test between the two VOR receivers on your aeroplane. When you centre the needles of both VOR receivers, the OBS's must be within _____ in order for the VOR receivers to be considered sufficiently accurate for IFR flight
- a) $\pm 2^\circ$
 - b) $\pm 4^\circ$
 - c) $\pm 6^\circ$
 - d) $\pm 10^\circ$
- 8) Prior to an IFR flight, you perform a VOR test using the VOT facility at the aerodrome. You find that in order to centre the needle on your VOR, you need select 005° on the OBS. Choose the most appropriate action in these circumstances.
- a) You should not use the VOR for IFR flight until you have had your on board equipment repaired/ recalibrated
 - b) Your VOR is within the $\pm 6^\circ$ limit for IFR flight and you can proceed to go flying
 - c) You can proceed with your planned IFR flight but you should correct the VOR indication by subtracting 5° from any OBS setting
 - d) You can proceed with your planned IFR flight but you should correct the VOR indication by adding 5° to any OBS setting

**Answer Key for
VOT Questions**

1) b)

2) b)

3) b)

4) d)

5) b)

6) d)

7) b)

8) a)