RA 3275 – Runway Visual Range

Rationale

The availability of accurate and up-to-date meteorological information is ►essential◄ for the safe conduct of flights, ►particularly during approach to or departure from an Aerodrome. The provision of accurate Runway Visual Range (RVR) readings will enable pilots to determine the likelihood of obtaining the required visual references to safely complete a landing or departure due to insufficient or inaccurate meteorological information potentially increasing Risk to Life (RtL). The provision of accurate, timely, and comprehensive RVR data to pilots, enables informed decision-making regarding visual references for landing or departure reducing the RtL.◄

Contents

3275(1): Provision of Runway Visual Range / Instrumented Runway Visual Range

3275(2): ►Withdrawn as MOD no longer holds this capability◄

Regulation 3275(1)

Provision of Runway Visual Range / Instrumented Runway Visual Range

3275(1) RVR / Instrumented RVR (IRVR) **shall** be provided under specified meteorological conditions.

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Provision of Runway Visual Range / Instrumented Runway Visual Range

RVR

1. RVR **should** be provided to pilots whenever:
   a. The reported meteorological visibility falls to 1500 m or less.
   b. The IRVR displays a value equal to or less than 1500 m.
   c. Shallow fog is being reported or during a period for which it is forecast.

2. RVR observations **should** be repeated at intervals, or when requested, during all stages of an Instrument Approach ►◄ and the RVR value passed to the pilot within 30 seconds of each observation. ►If RVR is being calculated by Meteorological Visibility (Met Vis) Conversion values it **should** be communicated in accordance with (iaw) para 10.◄

IRVR

3. IRVR values **should** be passed to pilots at the beginning of each approach and, thereafter, whenever there is a significant change[1] in the RVR until the Air System has landed. The IRVR value **should** also ►◄ be passed to the pilot before departure and when the IRVR goes below limits for an Air System to make an approach.

4. Unless a suppressed value is specifically requested by a pilot, the IRVR values transmitted **should** contain only those values that are displayed at full intensity. The value of the touchdown position is always displayed at full intensity and if no other values are at full intensity this is the only value which needs to be passed.

5. The three transmissometers are located one at each end of the Runway adjacent to the touchdown zone and the third near the Runway midpoint area. When available, all three positions **should** to be reported to the pilot, they **should** be passed as three numbers relating to touchdown, mid-point and stop end respectively, eg, **RVR 650 — 500 — 550.** If only two values are passed, they **should** be individually identified, eg, **Touchdown 650** — **Stop End 550.**

6. **Transmissometer Unserviceability.** If the touchdown transmissometer fails, the IRVR system can still be used providing the mid-point and stop end transmissometers remain Serviceable. In such circumstances the mid-point value **should** be passed to the pilot together with the stop end value. The pilot **should** be

[1] A significant change is defined as a change in value of one increment or more.

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informed that the touchdown transmissometer has failed, eg, **"Touchdown RVR not available — Mid-Point 600 — Stop End 400."**

7. If two transmissometers become Unserviceable the IRVR value for the remaining transmissometer, provided that it is not the stop end value, can be used. If the IRVR value for the stop end is the only one available, the system **should** be regarded as Unserviceable for that Runway. By changing the direction of use of the Runway it may become Serviceable again with the single available value representing the touchdown reading.

8. ►If, during RVR conditions, a pilot requests a reduced Runway edge light setting of less than 10%, they Controller **should** advise the Aircraft that an IRVR reading may not be available at this setting. Due to the equipment being likely to display three zeros as its reading at this setting.◄

Conversion of Met Vis to RVR.

9. Where IRVR is not available or Unserviceable, Controllers **should** ►◄ derive RVR by converting the reported met visibility iaw Table 1 ►◄.

10. ►RVR values derived by this method **should not** be passed to Aircrew. The Met Vis figure **should** be communicated.

Table 1. RVR Conversion Table for Met Vis to RVR

Lighting Elements Available at the Airfield	RVR = Reported Met Visibility Multiplied By:	
	Day	Night
High Intensity Approach and Runway Lighting	1.5	2.0
Any Type of Lighting other than Above	1.0	1.5
No Lighting Available	1.0	N/A◄

11. RVR conversion **should not** be used for calculating take-off minima, Category II or III minima ►if◄ IRVR is available.

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RVR

12. RVR has evolved to make available a more localised assessment of visual range in relation to a particular Runway when the meteorological report gives a visibility of less than 1500 m.

13. The RVR indicates the range over which the pilot of an Air System on the centreline of a Runway can expect to see the Runway surface markings, the lights delineating the Runway or identifying its centreline. The UK standard for reporting RVR extends from zero to 1500 m.

IRVR

14. ►◄

15. IRVR gives an automatic and continuous display of RVR values to Air Traffic Control (ATC). Transmissometers are used to measure atmospheric opacity from fixed points alongside a Runway, the number of units in any system being determined by the category of the Instrument Landing System installation and Runway length. In a three transmissometer system the units are linked by an associated data transfer system to a central processor.

16. The processor computes the RVR for each transmissometer position and displays it in digital form to ATC. For Radiotelephony transmission purposes the locations will be known as 'Touchdown', 'Mid-Point' and 'Stop End' and RVR values will relate to these positions.

17. IRVR Indications. There are a number of different IRVR systems, the processors in some systems are programmed to automatically reduce in intensity, or suppress, the

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display of the mid-point and / or stop-end readings when the values are not operationally significant.

18. IRVR readings extend from 25 m to 1500 m in the following steps:

a. 0 to 400 m in 25 m steps.

b. 400 to 800 m in 50 m steps.

c. 800 to 1500 m in 100 m steps.

►◄

Regulation 3275(2)

Provision of Human Observed Runway Visual Range

3275(2) ►Withdrawn as MOD no longer holds this capability.◄

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19. ►Withdrawn as MOD no longer holds this capability.◄

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20. ►Withdrawn as MOD no longer holds this capability.◄

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