Australian Government
Civil Aviation Safety Authority

Australian Operational Colour Vision Assessment - Eligibility and Test Components

PART 1 - AOCVA

The aim of this AOCVA flight test is to assess the impact of an individual's congenital colour vision deficiency on their ability to correctly recognise, interpret and react to colour-coded visual cues in an operational environment.

AOCVA is the test as described in the Flight Examiner Handbook (FEH) in force at the time this instrument is made. Material changes to the content, conduct or outcomes of the AOCVA as described in the FEH must be subject to regulatory processes including advice from the ASAP.

Successful completion of AOCVA confirms that the pilot meets the medical standard, and they can be issued with a Class 1 or Class 2 aviation medical certificate with no restrictions related to congenital colour vision deficiency.

If the applicant fails the AOCVA, they are confirmed as not meeting the standard for colour vision. They may be considered for a restricted medical certificate based on an operational assessment determined in consultation with the Aviation Medicine Section ("AvMed").

An applicant with congenital colour vision deficiency who passes AOCVA or CAD may be required to undergo re-assessment with AOCVA or CAD if they develop another medical condition that can affect the visual system. This will be determined by CASA AvMed in consultation with a specialist ophthalmologist.

Acquired colour vision deficiencies are managed through individual case review due to the differences in causes and progression of medical conditions that cause acquired colour vision deficiency.

Eligibility

Applicants are not required to hold a Pilot Licence to attempt the AOCVA but are encouraged to have a basic level of exposure and understanding of the operational environment in daylight and night conditions prior to undertaking the AOCVA.

Applicants shall hold a current CASA Class 1 or Class 2 medical certificate and must have documented unsuccessful results from the pseudo-isochromatic plate test and the Farnsworth lantern test.

Test requirements

There are three mandatory components to the AOCVA, each of which must be completed in accordance with this schedule (Ground Components, Flight Components– General, Flight Components – PAPI).

The AOCVA must be conducted independently and cannot be combined with any other flight training, testing or proficiency checking activity. It must be conducted in an aircraft. The use of a flight simulation training device (FSTD) is not permitted unless in exceptional circumstances and must be approved by CASA.

The ground component of the flight test must be completed and passed before conducting the pre-flight briefing and flight components of the flight test.

The examiner must conduct the assessment in accordance with the instructions and conditions and guidance in the CASA Flight Examiners Handbook.

If the applicant fails the AOCVA twice, they are not eligible for assessment using the CAD.

If the applicant is assessed using the CAD and does not meet the required thresholds, they can subsequently undergo AOCVA assessment.

The results of all completed elements of the AOCVA are to be recorded on the AOCVA assessment form CASA-04-5213 published by CASA.

Examiner requirements

The AOCVA flight test is required to be administered by a CASA examiner or an industry examiner approved by CASA, who holds the authority to conduct the AOCVA.

Ground Component

The examiner must ensure the testing conditions and resources meet the requirements detailed in the flight examiner handbook.

The ground component element of the AOCVA comprises reading and interpretation of **aeronautical charts** and of **flight instruments and displays**. The process of the assessment is detailed in the flight examiner handbook.

If the applicant does not pass the ground component of the AOCVA on their first attempt, they are eligible for one further attempt to pass the ground component of the AOCVA. If they do not pass the ground component, they may not proceed to the flight component and the AOCVA result is recorded as “fail”.

Flight Component – General

Flight Component – General comprises **recognition and interpretation of aerodrome lights, aircraft lights and other colour-based aeronautical signals** in day and night conditions. The process of the assessment is detailed in the flight examiner handbook.

If the applicant does not pass the Flight Component - General of the AOCVA on their first attempt, they are eligible for one further attempt to pass the Flight Component - General component of the AOCVA. The second attempt must be conducted as a separate assessment (that is, not during the same flight). If they do not pass the second attempt, the AOCVA result is recorded as “fail”.

Flight Component – PAPI

The Flight Component – PAPI element of the AOCVA comprises interpretation of PAPI lights in daylight conditions using a structured assessment and specified flight profiles. The assessment must be conducted in the sequence outlined in the Flight Examiner Handbook. Any deviation from the standard sequence will invalidate the assessment result.

If the applicant does not pass the Flight Component – PAPI element of the AOCVA on their first attempt, they are eligible for one further attempt to pass the Flight Component – PAPI element of the AOCVA. If they do not pass after two attempts at Flight Component – PAPI element of the AOCVA, the AOCVA result is recorded as “fail”.

PART 2 – CAD TEST

The Colour Assessment and Diagnosis (CAD) test is a computer-based test of the ability of the retina to detect colours in the red-green axis and the yellow-blue axis of colour perception. The threshold for safe detection of these colours has been determined scientifically by City University (London) using ICAO-compliant operational PAPI lights. The results are expressed in Standard Normal Units (SNU). The normal colour vision CAD threshold for young healthy people is 1 SNU.

The CAD test is accepted as a valid assessment for the purpose of paragraphs 67.150(6)(c) and 67.155(6)(c) of the *Civil Aviation Safety Regulations 1998* if it is conducted in the following manner:

- The CAD test device is operated in accordance with the manufacturer's instructions including device calibration, testing environment and supervision
- The CAD test result is interpreted and reported by a consultant ophthalmologist

The thresholds for CAD test pass for the purpose of 67.150 6c and 67.155 6c are:

- For tritanopia (Yellow-Blue axis): less than 2 SNU (a score of 2 or more is a fail)
- For protanopia (Red-Green axis): less than 12 SNU (a score of 12 or more is a fail)
- For deuteranopia (Red-Green axis): less than 6 SNU (a score of 6 or more is a fail)

Pilots who have failed AOCVA are not eligible for issuance of an aviation medical certificate based on passing the CAD test.

Acknowledgement of country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and the places to which we travel for work. We also acknowledge the Traditional Custodians' continuing connection to land, water and community. We pay our respects to Elders, past and present.

Artwork: James Baban.