

5.4 Signs

5.4.1 General

Note.— Signs shall be either fixed message signs or variable message signs. Guidance on signs is contained in the Aerodrome Design Manual (Doc 9157), Part 4.

Application

5.4.1.1 Signs shall be provided to convey a mandatory instruction, information on a specific location or destination on a movement area or to provide other information to meet the requirements of 9.8.1.

Note.— See 5.2.17 for specifications on information marking.

5.4.1.2 **Recommendation.**— A variable message sign should be provided where:

- a) the instruction or information displayed on the sign is relevant only during a certain period of time; and/or
- b) there is a need for variable predetermined information to be displayed on the sign to meet the requirements of 9.8.1.

Characteristics

5.4.1.3 Signs shall be frangible. Those located near a runway or taxiway shall be sufficiently low to preserve clearance for propellers and the engine pods of jet aircraft. The installed height of the sign shall not exceed the dimension shown in the appropriate column of Table 5-5.

5.4.1.4 Signs shall be rectangular, as shown in Figures 5-30 and 5-31 with the longer side horizontal.

5.4.1.5 The only signs on the movement area utilizing red shall be mandatory instruction signs.

5.4.1.6 The inscriptions on a sign shall be in accordance with the provisions of Appendix 4.

Table 5-5. Location distances for taxiing guidance signs including runway exit signs

Code number	Sign height (mm)			Perpendicular distance from defined taxiway pavement edge to near side of sign	Perpendicular distance from defined runway pavement edge to near side of sign
	Legend	Face (min.)	Installed (max.)		
1 or 2	200	400	700	5–11 m	3–10 m
1 or 2	300	600	900	5–11 m	3–10 m
3 or 4	300	600	900	11–21 m	8–15 m
3 or 4	400	800	1 100	11–21 m	8–15 m










Runway designation of a runway extremity (Example)		Indicates a runway-holding position at a runway extremity
Runway designation of both extremities of a runway (Example)		Indicates a runway-holding position located at taxiway/runway intersection other than runway extremity
Category I hold position (Example)		Indicates a category I runway-holding position at the threshold of runway 25
Category II hold position (Example)		Indicates a category II runway-holding position at the threshold of runway 25
Category III hold position (Example)		Indicates a category III runway-holding position at the threshold of runway 25
Category II and III hold position (Example)		Indicates a joint category II and III runway-holding position at the threshold of runway 25
Category I, II and III hold position (Example)		Indicates a joint category I, II and III runway-holding position at the threshold of runway 25
NO ENTRY		Indicates that entry to an area is prohibited
Runway-holding position (Example)		Indicates a runway-holding position (in accordance with 3.12.3)

Figure 5-30. Mandatory instruction signs

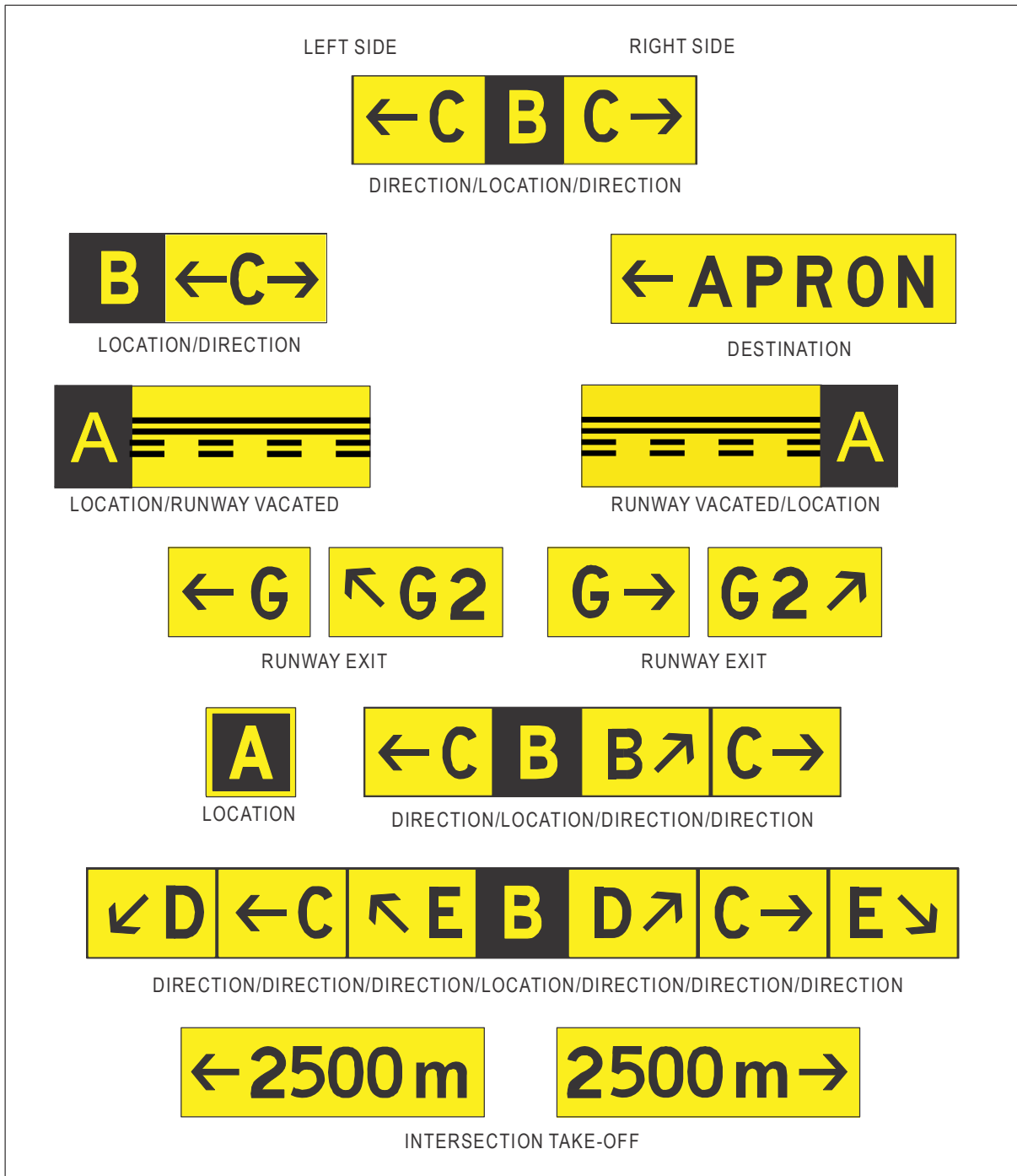


Figure 5-31. Information signs

5.4.1.7 Signs shall be illuminated in accordance with the provisions of Appendix 4 when intended for use:

- a) in runway visual range conditions less than a value of 800 m; or
- b) at night in association with instrument runways; or
- c) at night in association with non-instrument runways where the code number is 3 or 4.

5.4.1.8 Signs shall be retroreflective and/or illuminated in accordance with the provisions of Appendix 4 when intended for use at night in association with non-instrument runways where the code number is 1 or 2.

5.4.1.9 A variable message sign shall show a blank face when not in use.

5.4.1.10 In case of failure, a variable message sign shall not provide information that could lead to unsafe action from a pilot or a vehicle driver.

5.4.1.11 **Recommendation.**— *The time interval to change from one message to another on a variable message sign should be as short as practicable and should not exceed 5 seconds.*

5.4.2 Mandatory instruction signs

Note.— *See Figure 5-30 for pictorial representation of mandatory instruction signs and Figure 5-32 for examples of locating signs at taxiway/runway intersections.*

Application

5.4.2.1 A mandatory instruction sign shall be provided to identify a location beyond which an aircraft taxiing or vehicle shall not proceed unless authorized by the aerodrome control tower.

5.4.2.2 Mandatory instruction signs shall include runway designation signs, category I, II or III holding position signs, runway-holding position signs, road-holding position signs and NO ENTRY signs.

Note.— *See 5.4.7 for specifications on road-holding position signs.*

5.4.2.3 A pattern “A” runway-holding position marking shall be supplemented at a taxiway/runway intersection or a runway/runway intersection with a runway designation sign.

5.4.2.4 A pattern “B” runway-holding position marking shall be supplemented with a category I, II or III holding position sign.

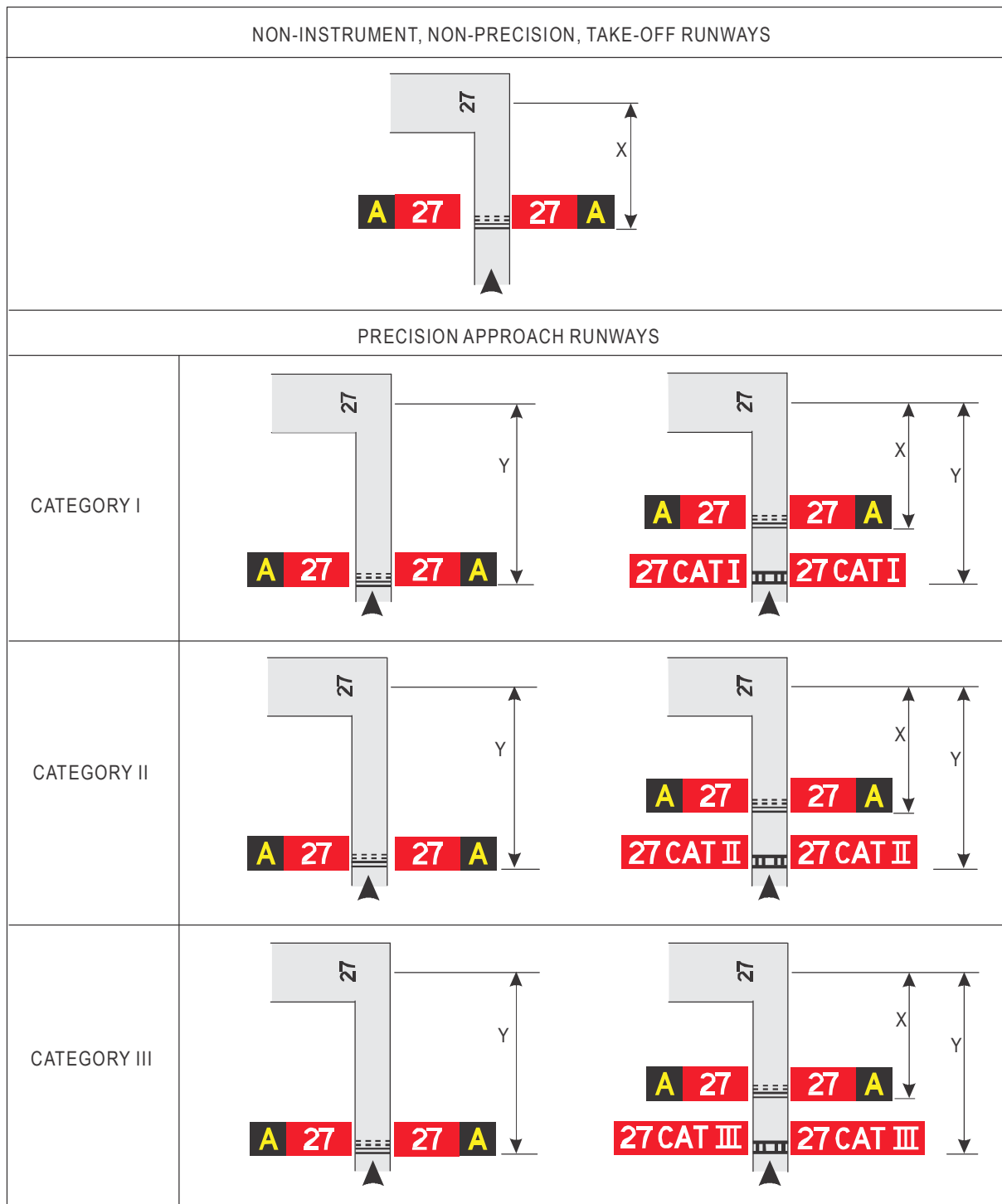
5.4.2.5 A pattern “A” runway-holding position marking at a runway-holding position established in accordance with 3.12.3 shall be supplemented with a runway-holding position sign.

Note.— *See 5.2.10 for specifications on runway-holding position marking.*

5.4.2.6 **Recommendation.**— *A runway designation sign at a taxiway/runway intersection should be supplemented with a location sign in the outboard (farthest from the taxiway) position, as appropriate.*

Note.— *See 5.4.3 for characteristics of location signs.*

5.4.2.7 A NO ENTRY sign shall be provided when entry into an area is prohibited.



Note.— Distance X is established in accordance with Table 3-2. Distance Y is established at the edge of the ILS/MLS critical/sensitive area.

Figure 5-32. Examples of sign positions at taxiway/runway intersections

Location

5.4.2.8 A runway designation sign at a taxiway/runway intersection or a runway/runway intersection shall be located on each side of the runway-holding position marking facing the direction of approach to the runway.

5.4.2.9 A category I, II or III holding position sign shall be located on each side of the runway-holding position marking facing the direction of the approach to the critical area.

5.4.2.10 A NO ENTRY sign shall be located at the beginning of the area to which entrance is prohibited on each side of the taxiway as viewed by the pilot.

5.4.2.11 A runway-holding position sign shall be located on each side of the runway-holding position established in accordance with 3.12.3, facing the approach to the obstacle limitation surface or ILS/MLS critical/sensitive area, as appropriate.

Characteristics

5.4.2.12 A mandatory instruction sign shall consist of an inscription in white on a red background.

5.4.2.13 **Recommendation.**— *Where, owing to environmental or other factors, the conspicuity of the inscription on a mandatory instruction sign needs to be enhanced, the outside edge of the white inscription should be supplemented by a black outline measuring 10 mm in width for runway code numbers 1 and 2, and 20 mm in width for runway code numbers 3 and 4.*

5.4.2.14 The inscription on a runway designation sign shall consist of the runway designations of the intersecting runway properly oriented with respect to the viewing position of the sign, except that a runway designation sign installed in the vicinity of a runway extremity may show the runway designation of the concerned runway extremity only.

5.4.2.15 The inscription on a category I, II, III, joint II/III or joint I/II/III holding position sign shall consist of the runway designator followed by CAT I, CAT II, CAT III, CAT II/III or CAT I/II/III, as appropriate.

5.4.2.16 The inscription on a NO ENTRY sign shall be in accordance with Figure 5-30.

5.4.2.17 The inscription on a runway-holding position sign at a runway-holding position established in accordance with 3.12.3 shall consist of the taxiway designation and a number.

5.4.2.18 Where installed, the inscriptions/symbol of Figure 5-30 shall be used.

5.4.3 Information signs

Note.— See Figure 5-31 for pictorial representations of information signs.

Application

5.4.3.1 An information sign shall be provided where there is an operational need to identify by a sign, a specific location, or routing (direction or destination) information.

5.4.3.2 Information signs shall include: direction signs, location signs, destination signs, runway exit signs, runway vacated signs and intersection take-off signs.

5.4.3.3 A runway exit sign shall be provided where there is an operational need to identify a runway exit.

5.4.3.4 A runway vacated sign shall be provided where the exit taxiway is not provided with taxiway centre line lights and there is a need to indicate to a pilot leaving a runway the perimeter of the ILS/MLS critical/sensitive area or the lower edge of the inner transitional surface, whichever is farther from the runway centre line.

Note.— See 5.3.17 for specifications on colour coding taxiway centre line lights.

5.4.3.5 **Recommendation.**— *An intersection take-off sign should be provided when there is an operational need to indicate the remaining take-off run available (TORA) for intersection take-offs.*

5.4.3.6 **Recommendation.**— *Where necessary, a destination sign should be provided to indicate the direction to a specific destination on the aerodrome, such as cargo area, general aviation, etc.*

5.4.3.7 A combined location and direction sign shall be provided when it is intended to indicate routing information prior to a taxiway intersection.

5.4.3.8 A direction sign shall be provided when there is an operational need to identify the designation and direction of taxiways at an intersection.

5.4.3.9 **Recommendation.**— *A location sign should be provided at an intermediate holding position.*

5.4.3.10 A location sign shall be provided in conjunction with a runway designation sign except at a runway/runway intersection.

5.4.3.11 A location sign shall be provided in conjunction with a direction sign, except that it may be omitted where an aeronautical study indicates that it is not needed.

5.4.3.12 **Recommendation.**— *Where necessary, a location sign should be provided to identify taxiways exiting an apron or taxiways beyond an intersection.*

5.4.3.13 **Recommendation.**— *Where a taxiway ends at an intersection such as a “T” and it is necessary to identify this, a barricade, direction sign and/or other appropriate visual aid should be used.*

Location

5.4.3.14 Except as specified in 5.4.3.16 and 5.4.3.24 information signs shall, wherever practicable, be located on the left-hand side of the taxiway in accordance with Table 5-5.

5.4.3.15 At a taxiway intersection, information signs shall be located prior to the intersection and in line with the intermediate holding position marking. Where there is no intermediate holding position marking, the signs shall be installed at least 60 m from the centre line of the intersecting taxiway where the code number is 3 or 4, and at least 40 m where the code number is 1 or 2.

Note.— *A location sign installed beyond a taxiway intersection may be installed on either side of a taxiway.*

5.4.3.16 A runway exit sign shall be located on the same side of the runway as the exit is located (i.e. left or right) and positioned in accordance with Table 5-5.

5.4.3.17 A runway exit sign shall be located prior to the runway exit point in line with a position at least 60 m prior to the point of tangency where the code number is 3 or 4, and at least 30 m where the code number is 1 or 2.

5.4.3.18 A runway vacated sign shall be located at least on one side of the taxiway. The distance between the sign and the centre line of a runway shall be not less than the greater of the following:

- a) the distance between the centre line of the runway and the perimeter of the ILS/MLS critical/sensitive area; or
- b) the distance between the centre line of the runway and the lower edge of the inner transitional surface.

5.4.3.19 Where provided in conjunction with a runway vacated sign, the taxiway location sign shall be positioned outboard of the runway vacated sign.

5.4.3.20 An intersection take-off sign shall be located at the left-hand side of the entry taxiway. The distance between the sign and the centre line of the runway shall be not less than 60 m where the code number is 3 or 4, and not less than 45 m where the code number is 1 or 2.

5.4.3.21 A taxiway location sign installed in conjunction with a runway designation sign shall be positioned outboard of the runway designation sign.

5.4.3.22 **Recommendation.**— *A destination sign should not normally be collocated with a location or direction sign.*

5.4.3.23 An information sign other than a location sign shall not be collocated with a mandatory instruction sign.

5.4.3.24 **Recommendation.**— *A direction sign, barricade and/or other appropriate visual aid used to identify a “T” intersection should be located on the opposite side of the intersection facing the taxiway.*

Characteristics

5.4.3.25 An information sign other than a location sign shall consist of an inscription in black on a yellow background.

5.4.3.26 A location sign shall consist of an inscription in yellow on a black background and where it is a stand-alone sign shall have a yellow border.

5.4.3.27 The inscription on a runway exit sign shall consist of the designator of the exit taxiway and an arrow indicating the direction to follow.

5.4.3.28 The inscription on a runway vacated sign shall depict the pattern A runway-holding position marking as shown in Figure 5-31.

5.4.3.29 The inscription on an intersection take-off sign shall consist of a numerical message indicating the remaining take-off run available in metres plus an arrow, appropriately located and oriented, indicating the direction of the take-off as shown in Figure 5-31.

5.4.3.30 The inscription on a destination sign shall comprise an alpha, alphanumerical or numerical message identifying the destination plus an arrow indicating the direction to proceed as shown in Figure 5-31.

5.4.3.31 The inscription on a direction sign shall comprise an alpha or alphanumerical message identifying the taxiway(s) plus an arrow or arrows appropriately oriented as shown in Figure 5-31.

5.4.3.32 The inscription on a location sign shall comprise the designation of the location taxiway, runway or other pavement the aircraft is on or is entering and shall not contain arrows.

5.4.3.33 **Recommendation.**— *Where it is necessary to identify each of a series of intermediate holding positions on the same taxiway, the location sign should consist of the taxiway designation and a number.*

5.4.3.34 Where a location sign and direction signs are used in combination:

- a) all direction signs related to left turns shall be placed on the left side of the location sign, and all direction signs related to right turns shall be placed on the right side of the location sign, except that where the junction consists of one intersecting taxiway, the location sign may alternatively be placed on the left-hand side;
- b) the direction signs shall be placed such that the direction of the arrows departs increasingly from the vertical with increasing deviation of the corresponding taxiway;
- c) an appropriate direction sign shall be placed next to the location sign where the direction of the location taxiway changes significantly beyond the intersection; and
- d) adjacent direction signs shall be delineated by a vertical black line as shown in Figure 5-31.

5.4.3.35 A taxiway shall be identified by a designator comprising a letter, letters or a combination of a letter or letters followed by a number.

5.4.3.36 **Recommendation.**— *When designating taxiways, the use of the letters I, O or X and the use of words such as inner and outer should be avoided wherever possible to avoid confusion with the numerals 1, 0 and closed marking.*

5.4.3.37 The use of numbers alone on the manoeuvring area shall be reserved for the designation of runways.

5.4.4 VOR aerodrome checkpoint sign

Application

5.4.4.1 When a VOR aerodrome checkpoint is established, it shall be indicated by a VOR aerodrome checkpoint marking and sign.

Note.— See 5.2.12 for VOR aerodrome checkpoint marking.

Location

5.4.4.2 A VOR aerodrome checkpoint sign shall be located as near as possible to the checkpoint and so that the inscriptions are visible from the cockpit of an aircraft properly positioned on the VOR aerodrome checkpoint marking.

Characteristics

5.4.4.3 A VOR aerodrome checkpoint sign shall consist of an inscription in black on a yellow background.

5.4.4.4 **Recommendation.**— *The inscriptions on a VOR checkpoint sign should be in accordance with one of the alternatives shown in Figure 5-33 in which:*

VOR is an abbreviation identifying this as a VOR checkpoint;

116.3 is an example of the radio frequency of the VOR concerned;

147° is an example of the VOR bearing, to the nearest degree, which should be indicated at the VOR checkpoint; and

4.3 NM is an example of the distance in nautical miles to a DME collocated with the VOR concerned.