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**Coverage of ILS Facilities and
Warning of False Capture and Signal Deviation
At Hong Kong International Airport**

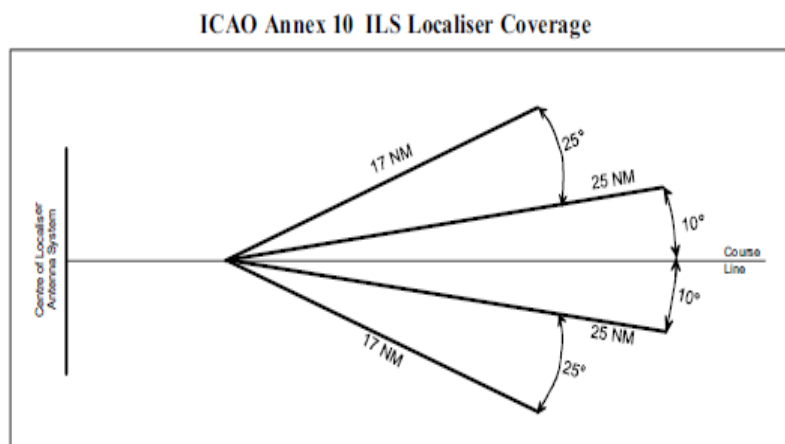
1. Introduction

1.1 Due to terrain, some of the ILS facilities at Hong Kong International Airport do not conform to Annex 10 Standards and Recommended Practices. The differences are listed in AIP Hong Kong (AD2-46, para. 18.8), and further information is provided here.

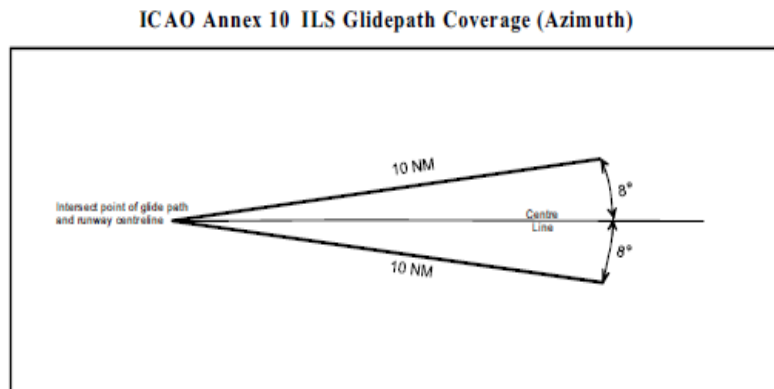
2. Coverage of ILS Facilities

2.1 In accordance with ICAO Annex 10, Vol.1, the standard coverage of ILS localizer and glidepath signals are indicated in the following diagrams:

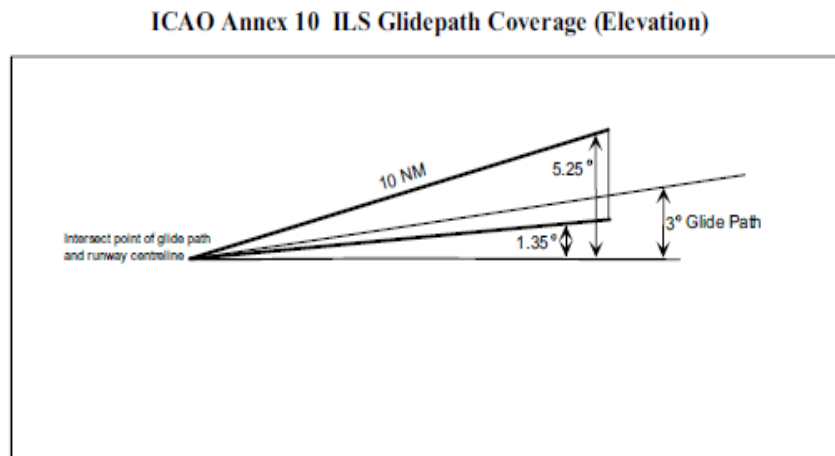
a) ILS Localiser



b) Glidepath (Azimuth)



c) Glidepath (Elevation)



2.2 The non-standard coverage areas of ILS facilities at Hong Kong International Airport are given in the following table:

RWY	LLZ Coverage	GP Coverage (Azimuth)
RWY 07L	17 NM within 28° right of LLZ course and 25 NM within 10° right of LLZ course	
RWY 07R	17 NM within 25° left of LLZ course and 25 NM within 10° left of LLZ course	
	17 NM within 19° right of LLZ course and 25 NM within 10° right of LLZ course	
RWY 25L	17 NM within 28° left of LLZ course and 25 NM within 10° left of LLZ course	Range 15 NM Azimuth within 7° left of RWY centreline
RWY 25R	25 NM within 10° right of LLZ course and between 20 NM – 25 NM within 4° right of LLZ course below 5 500 ft	Range 15 NM Azimuth within 6° right of RWY centreline

2.3 See Attachment for diagrams showing the ILS localizer coverage areas at Hong Kong International Airport.

3. False Capture of ILS Localizer

3.1 Flight crews are reminded that use of the ILS localizer signal outside of the coverage areas can lead to false capture and reverse sense indications.

3.2 The validity of the localizer capture should be confirmed by cross-checking with other sources of navigation information.

3.3 Certain combinations of localizer beam characteristics and modem receiver/autopilot combinations can cause premature localizer capture. Flight crews should be alert to this possibility and flight check procedures should be designed to reduce the risk of this type of event by not allowing the Flight Director/Autopilot capture modes to be armed too early.

4. ILS Signal Deviation

4.1 The use of an ILS in its promulgated category is subject to the signal-in-space being adequately protected from interference due to the reflection from objects illuminated by the localizer or glide path beam. Moving objects, particularly large ones like aircraft on the runway or manoeuvring in close proximity to the runway, may disturb the localizer and/or glidepath signal, resulting in signal fluctuation for the following landing aircraft.

4.2 During normal operations when ILS CAT I conditions are applicable, aircraft or vehicles entering the localizer and glidepath sensitive areas could cause interference to the ILS signals that may result in significant localizer and/or glide slope signal deviations. Therefore, pilots should anticipate the possibility of this interference, closely monitor their ILS profile, particularly the rate of descent, and be prepared to take immediate appropriate actions if excessive disturbances are experienced.

4.3 During periods of Low Visibility Operations for ILS CAT II/III, ATC will implement special procedures, (AIP Hong Kong, AD1.1, para. 8). These include increased separation between arriving and departing aircraft and the protection of the localizer and glidepath sensitive areas to prevent interference of the ILS signals in accordance with ICAO Doc. 9365 – Manual of All Weather Operations.

4.4 As per ICAO Annex 10 specifications, ILS signals for CAT II runways (i.e. 07L/07R/25L) below 50 feet Height Above Threshold (HAT) are not defined and thus are not assured in any scenario even when Low Visibility Procedures are in force at Hong Kong International Airport. Operators should therefore review their policies and procedures with a view to mitigating any associated risk for use of ILS signals below 50 feet HAT for CAT II runways. Pilot should also remain vigilant and be prepared to execute appropriate corrective actions when ILS signal fluctuation below 50 feet HAT is encountered during CAT II approach and landing.

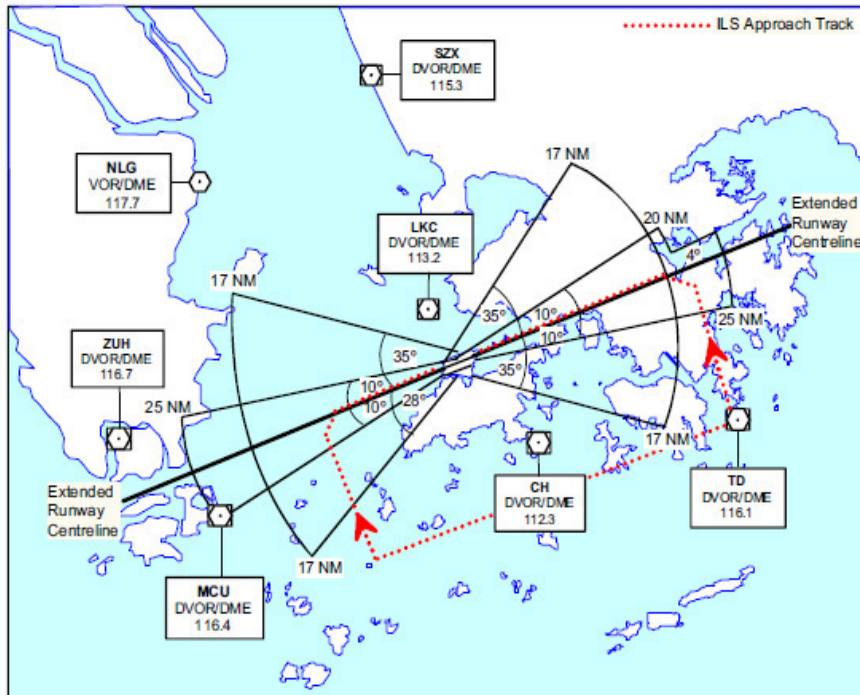
5. Filing of Reports

5.1 If a pilot experiences an ILS false capture or significant signal deviation, they should file an Occurrence Report, Form DCA 201 (available at www.info.gov.hk/cad/).

6. AIC 04/06 is hereby superseded.

This Circular is issued for information, guidance and necessary action
By direction of the Director-General of Civil Aviation
Norman LO

RWY 07L / 25R ILS Localizer Coverage Areas



RWY 07R / 25L ILS Localizer Coverage Areas

