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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 and obstacles, some of the Instrument Landing System (ILS) facilities at Hong Kong International Airport (HKIA) do not conform to the Standards and Recommended Practices promulgated by the International Civil Aviation Organization (ICAO).
- 1.2 The aircraft on ILS approach should adhere to the on-course, on-glide path/elevation angle position since a more than half course sector deflection or a more than half course fly-up deflection combined with other allowable system tolerances could place the aircraft in the vicinity of the edge or bottom of the protected airspace where loss of protection from obstacles can occur.

2. Coverage of ILS Facilities

- 2.1 Some of the ILS LOC and GP signals at Hong Kong International Airport do not have the standard ICAO protected areas. Flight crews of aircraft flying into the HKIA shall refer to the flight procedure charts for service volume restrictions of LOC and GP.
- 2.2 Using ILS signals outside of the coverage areas as stated on flight procedure charts may lead to false capture or reverse sense indications.

3. False Capture of ILS Localizer

- 3.1 Flight crews of arrival aircraft at HKIA are advised to confirm the validity of the localizer capture by cross-checking with other sources of navigation information.
- 3.2 Flight crews should exercise caution to possible false capture of localizer 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. It is recommended that the capture modes not be armed before SABOG for 25L and STELA for 07R.
- 3.3 Air operators and flight crews of aircraft arriving at the HKIA shall remain vigilant and adhere to the approach and descent procedures as promulgated in the AIP Hong Kong. **Raw data should be monitored as appropriate.**

4. ILS Signal Deviation

- 4.1 There have been reported localizer fluctuations at HKIA, particularly during single runway mixed-mode operations. Such observations are not unique to HKIA. Various contributory factors, such as lateral symmetry of departing aircraft and its climb rate, size of departing aircraft, and distance of following landing aircraft to touchdown, can contribute to the possibility of such fluctuations.
- 4.2 During normal operations when ILS CAT I conditions are applicable, pilots should anticipate the possibility of signal interference, closely monitor their ILS profile, particularly the rate of descent, and be prepared to take immediate appropriate action if excessive disturbances are experienced. A warning of possible interference is included in the ILS/LOC instrument approach charts for 07R/25L.
- 4.3 During periods of Low Visibility Operations for ILS CAT II/III, ATC will implement special procedures (AIP Hong Kong, VHHH AD 1.1, paragraph 8). These include increased separation between arriving and departing aircraft and the protection of the localizer and glide path 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. 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 not in force at HKIA. Air 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. Flight crews 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 an ILS false capture or significant signal deviation is experienced, relevant ATC unit should be notified as soon as practicable and an Occurrence Report should be filed by using the Form DCA201, available at:

<https://www.cad.gov.hk/english/applications.html>

6. AIC 32/21 is hereby superseded.

This Circular is issued for information, guidance and necessary action
by direction of the Director-General of Civil Aviation
Victor LIU