

STANDARD ARRIVAL PROCEDURE FOR ATS ROUTE R473

1. Arrival Procedure

Traffic destined for Kai Tak via ATS Route R473 shall proceed from TAMOT to holding point CHARLIE via way-point MIKE (2217.8N 11315.5E) at “CH” VOR radial 220/DME70 NM. Aircraft will be sequenced into the arrival order by radar vectoring or instructed to enter the holding pattern if necessary.

VISUAL APPROACH PROCEDURES: KAI TAK AIRPORT

1. Weather Minima

For IFR flights, visual approaches to Runway 31 or 13 will only be permitted if the cloud ceiling is not less than 3500ft and the visibility is not less than 9km.

2. Runway 31 Visual Approach

When the pilot has reported that the approach can be executed with visual reference to terrain, an IFR flight approaching 'TH' TVOR/'TP' NDB for Runway 31 may be cleared for a visual approach to track via Tathong Point.

3. Runway 13 Visual Step Down Approach

When the pilot has reported that the approach can be executed with visual reference to terrain, an IFR flight approaching 'CH' VOR/'CC' NDB for Runway 13 may be cleared for a Visual Step Down Approach to track via Cheung Chau Island and Stonecutters Island, descending not below 2000ft until 'KL' DME 7 NM. (See Notes)

Notes:

(1) The 2000-foot descent restriction is designed to enable non-IFR local traffic to operate in the CTR below the flight paths of IFR traffic. Requests for cancellation of the altitude restrictions are not normally approved.

(2) Pilots making night approaches should be aware that there is a possibility of mistaking lights on the southern part of Hong Kong Island for light along the mainland coast to the northwest of the runway. They are therefore advised to maintain a careful cross-check of the aircraft position by use of appropriate navigational aids.

4. General Condition

Visual Approach to Runway 31 or 13 will only be cleared if they will not cause interruption to other aircraft carrying out instrument approach/departure procedure.

RUNWAY 31 INSTRUMENT DEPARTURE VIA ‘SC’ NDB AND ‘CH’ VOR

1. Nav aids

Navaid	Frequency	Co-ordinates	BRG/DIST from ARP
“RW” NDB	377 kHz	219.68N 11411.31E	313°M/0.82 NM
“SC” NDB	136kHz	2219.28N 11407.78E	273°M/3.9NM
“CH” VOR	112.3MHz	2213.27N 11401.65E	240°M/11.38 NM
“CC” NDB	360kHz	2212.18N 11401.45E	236°M/12 NM

2. Procedure

2.1. Climb on track 315° M to “RW” NDB. At “RW” NDB commence a climbing left turn to establish on track 251° M to “SC” NDB (See Note 1). After crossing “SC” NDB continue on track 251° M to intercept “CH” VOR radial 031 (See Note 2) to proceed to “CH” VOR. Cross “CH” VOR not below 300 ft and continue in accordance with ATC clearance.

Note 1:

For the purpose of applying the operating limitations in ICAO Annex 6, it is essential to refer to ICAO Type A Chart (MAP 13-2) for normal radius of turn, locations and heights of obstacles in the take-off flight path area.

Note 2:

In the event that “CH” VOR is unserviceable, “CC” NDB may be used instead. In this case, track 251° M from “SC” NDB until “CC” NDB. Cross “CC” NDB bears 214° M, then turn left to track 211° M to “CC” NDB. Cross “CC” NDB not below 3000 ft and continue in accordance with ATC clearance.

RUNWAY 13 INSTRUMENT DEPARTURE ON ILS

1. General

- 1.1. The ILS may be used for departures on Runway 13 by operators who have notified the Director of Civil Aviation of their intention to use the procedure and have submitted weather minima.

2. Nav aids

2.1.

Localiser	109.9 MHz “I-HK”
Glide Path	333.8MHz at 3° slope
Middle Maker	75 MHz 1.83 NM from Runway 31 threshold and 1189ft offset from runway extended centreline
Outer Maker	75 MHz 5.66 NM from Runway 31 threshold.

3. Procedure

- 3.1. Climb on localiser to 2500 ft or altitude specified by ATC and after crossing Outer Marker continue in accordance with ATC clearance.

4. Monitoring by PAR

- 4.1. Departures on the ILS will be monitored by PAR when the cloud ceiling is 1000 ft or less and/or the visibility 5 km or less. Pilots are reminded that PAR monitoring service can only be given after the controller has advised that radar contact is established. For PAR equipment limitations, see Notes 2 on COM 2-1.4.
- 4.2. Aircraft will be instructed to call “Hong Kong Precision” on 133.7 MHz for take-off clearance and monitoring.

5. Duties of PAR Controller

- To advise the pilot that his ILS departure will be monitored by PAR, and to advise when radar contact has been established after departure.
- In the event of loss of radar contact, e.g. due to rain clutters, etc, to advise the pilot that radar monitoring service is not available.
- To monitor the flight path until it is handed over to APP.
- To warn the pilot if a dangerous situation seems likely to develop and to give assistance if possible in such a contingency.
- To be prepared to take over control for a Precision Departure at pilot’s request.
- To pass any supplementary information which may be considered helpful.

RUNWAY 13 INSTRUMENT DEPARTURE PRECISION RADAR CONTROLLED

1. General

1.1. Departure through the Lei Yue Mun Gap in IMC is governed by the terrain clearance and aircraft performance requirements of the State in which the aircraft is registered. It is the operator’s responsibility to ensure that their State requirements are met if they wish to use this procedure.

2. Nav aids

2.1. Primary: Hong Kong PAR callsign “Hong Kong Precision” on 133.7MHz.

Secondary:

Navaid	Frequency	Co-ordinates	Location
“TH” TVOR	115.5MHz	2214.43N 11417.18E	135°M/5.72 NM from Runway 31 THR
“TP” NDB	280kHz	2214.45N 14417.12E	135°M/5.67 NM from Runway 31 THR
“RW” NDB	337kHz	2219.68N 11411.32E	313°M/0.82 NM from ARP.

3. Procedure

3.1. Prior to take-off tune into “TH” TVOR/”TP” NDB. (Aircraft fitted with twin ADFs should also tune into “RW” NDB).

3.2. After take-off the PAR controller advises the pilot that radar contact has been established (for PAR equipment limitation, see Note 2 on COM 2-1.4) and gives headings to keep the aircraft on the extended centre-line of the runway.

3.3. Climb is continued to 2500 ft or until the PAR controller advises that the aircraft is clear of terrain before continuing in accordance with ATC clearance.

3.4. Elevation information is given in relation to a 3° glidepath (climb gradient). If it appears that the aircraft is unable to maintain a safe climb gradient, it will be routed clear of high ground at Tung Lung Island (Tathong).

3.5. Transmission shall not be continuous, but sufficiently frequent to warn of radio failure.

4. Radio/Radar Failure Procedure

4.1. Climb on track 135°M to “TH” TVOR/”TP” NDB to 2500 ft or altitude specified by ATC and after crossing “TH” TVOR/”TP” NDB continue in accordance with ATC clearance. Change frequency to 119.1 MHz and contact Hong Kong approach.

5. Terrain Clearance

5.1. To maintain terrain clearance aircraft must achieve a climb gradient of at least 200 ft per mile.

STANDARD DEPARTURE ROUTES (SDRs) – INSTRUMENT

1. General

1.1.SDRs (Instrument) described hereunder in paragraphs 2.1 to 2.2 are designed to be followed by departing aircraft to achieve an orderly flow of air traffic. An SAR clearance, identified by a plain language designator, e.g. ELATO ONE ALFA DEPARTURE, constitutes authority for the pilot to fly in accordance with the instructions contained in the corresponding paragraph.

2. Procedure

2.1.RWY 13 SDRs-Instrument

2.1.1. Nav aids

VOR “CH” 112.3 MHz 2213.27N 11401.65E

DME “CH” Channel 70X 2213.28N 11401.67E

TVOR “TH” 115.5 MHz 214.43N 11417.18E

NDB “TP” 280 kHz 2214.45N 11417.12E

2.1.2. Except SDR BEKOL 1A (see para 2.1.3 below), runway 13 SDRs (Instrument) utilize position WHISKEY (2202.6N 11430.4E) at “CH” VOR radial 114/”CH” DME 29 NM (RWY 31 ILS LLZ/”I-HK” DME 23 NM).

2.1.3. In the following runway 13 SDRs (Instrument) pilots shall report: -

- a) Crossing “TH”/”TP”;
- b) Maintaining 7000 ft;
- c) Leaving 7000 ft;
- d) Maintaining FL140; and
- e) Established on assigned radial from “CH” VOR.

ELATO ONE ALFA DEPARTURE (“CH” Radial 104) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn left and track 090°M to intercept “CH” radial 104, climbing from 7000 ft to FL140. When established on “CH” radial 104 and “CH” DME reads at least 40 NM, climbing from FL140 to assigned cruising level. After reaching cruising level proceed direct to ELATO.

DOTMI ONE ALFA DEPARTURE (“CH” Radial 104) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn left and track 090°M to intercept “CH” radial 104, climbing from 7000 ft to FL140. When established on “CH” radial 104 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level. After reaching cruising level or “CH” DME 100 NM, whichever is later, proceed direct to DOTMI.

AKERO ONE ALFA DEPARTURE (“CH” Radial 117) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKRY at or below 7000 ft. After passing WHISKEY, continue on track 135°M to establish on “CH” radial 117, climbing from 7000 ft to FL140. When established on “CH” radial 117 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level. After reaching cruising level proceed direct to AKERO.

AKERO ONE BROVO DEPARTURE/DOVAR ONE ALFA DEPARTURE (“CH” Radial 132) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKRY at or below 7000 ft. at WHISKRY turn right and track 180°M to intercept “CH” radial 132, climbing from 7000 ft to FL140. When established on “CH” radial 132 and “CH” DME reads at least 40 NM, climbing from FL140 to assigned cruising level. After reaching cruising level proceed direct to the TMA boundary reporting point of the airway for which clearance has been issued.

DOVAR ONE BRAVO DEPARTURE (“CH” Radial 154) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 180°M to intercept “CH” radial 154, climbing from 7000 ft and FL140. When established on “CH” radial 154 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level.

ISBAN ONE BRAVO DEPARTURE (“CH” Radial 175) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 235°M to intercept “CH” radial 175, climbing from 7000 ft to FL140. When established on “TH” radial 175 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level.

ISBAN ONE BRAVO DEPARTURE/ IDOSI ONE ALFA DEPARTURE (“CH” Radial 190) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 235°M to intercept “CH” radial 190, “CH” radial 190 and “CH” DME reads at least 40 NM, climb cruising level proceed direct to the TMA boundary reporting point of the airway for which clearance has been issued.

DAGON ONE ALFA DEPARTURE (“CH” Radial 199) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKRY turn right and track 235°M to intercept “CH” radial 199, climbing from 000 ft to FL140. When established on “CH” radial 199 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level. After reaching cruising level proceed direct to DAGON.

IDOSI ONE BRAVO DEPARTURE (“CH” Radial 205) –

Depart one track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 235°M to intercept “CH” radial 205, climbing from 7000 ft to FL140. When established on “CH” radial 205 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level.

DAGON ONE BRAVO DEPARTURE (“CH” Radial 214) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 235°M to intercept “CH” radial 214, climbing from 7000 ft to FL140. When established on “CH” radial 214 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level.

BEKOL ONE ALFA DEPARTURE –

Depart on track 135°M as defined by ILS, “TH” or “TP” to way-point LIMA at 2208.2N 11424.4E (“I-HK” DME 15 NM on Runway 31 ILS localiser); cross LIMA at or below 7000 ft. At LIMA turn left to way-point JULIETT at 2220.0N 11428.8E (“CH” VOR radial 077/DME 26 NM), maintain or continue climb to 7000 ft. From JULIETT proceed direct to BEKOL, climbing from 7000 ft to 3600 m or an altitude specified by ATC.

SIKOU ONE ALFA DEPARTURE (“ch” Radial 190) –

Depart on track 135°M as defined by ILS, “TH” or “TP” to position WHISKEY; cross WHISKEY at or below 7000 ft. At WHISKEY turn right and track 235°M to intercept “CH” radial 190, climbing from 7000 ft to FL140. When established on “TH” radial 190 and “CH” DME reads at least 40 NM, climb from FL140 to assigned cruising level. After reaching cruising level or “CH” DME 100 NM, whichever is later, proceed direct to SIKOU.

2.2. RWY 31 SDRs – Instrument

2.2.1. NAVAIDS

VOR “CH” 112.3MHz 2213.27N 11401.65E

DME “CH” Channel 70X 2213.28N 11401.67E

NDB “SC” 236 kHz 2219.28N 11407.78E

Certain runway 31 SDRs (Instrument) utilize a position designed OSCAR (2151.1N 11414.3E) at “CH” VOR radial 154/”CH” DME 25 NM.

2.2.2. All aircraft should depart via “SC” NDB and “CH” VOR. At “CH” VOR fly in accordance with the routeing instructions given below, and pilots should report: -

- a) Crossing “CH” VOR;
- b) Maintain 9000 ft;
- c) Leaving 9000 ft;
- d) Maintaining 11000 ft;
- e) Established on assigned radial from “CH” VOR.

ELATO TWO CHARLIE DEPARTURE (“CH” Radial 104) –

Depart “CH” VOR on radial 154 to position OSCAR, to maintain 9000 ft until OSCAR. At OSCAR turn left and track 090°M to intercept “CH” radial 104, climbing from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level and continue tracking 090°M to establish on “CH” radial 104. Continue on “CH” radial 104 to assigned cruising level. After reaching cruising level proceed direct to ELATO.

DOTMI TWO CHARLIE DEPARTURE (“CH” radial 104) –

Depart “CH” VOR on radial 154 to position OSCAR, to maintain 9000 ft until OSCAR. At OSCAR turn left and track 090°M to intercept “CH” radial 104, climbing from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level and continue tracking 090°M to establish on “CH” radial 104. Continue on “CH” radial 104 to assigned cruising level. After reaching cruising level, continue on “CH” radial 104 until “CH” DME reads 100, then proceed direct to DOTMI.

AKERO TWO CHARLIE DEPARTURE (“CH” Radial 117) –

Depart “CH” VOR on radial 154 to position OSCAR, to maintain 9000 ft until OSCAR. At OSCAR turn left and track 090°M to intercept “CH” radial 117, climbing from 9000 ft to 11000 ft. when established on “CH” radial 117 and “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level proceed direct to AKERO.

AKERO TWO DELTA DEPARTURE (“CH” Radial 132)

Depart “CH” VOR on radial 154 to position OSCAR, to maintain 9000 ft until OSCAR. At OSCAR turn left and track 090°M to intercept “CH” radial 132, climbing from 9000 ft to 11000 ft. When established on “CH” radial 132 and “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level.

DOVAR TWO DELTA DEPARTURE (“CH” Radial 154) –

Depart “CH” VOR on radial 154 to maintain 9000 ft until “CH” DME 25 NM (OSCAR). When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. when “CH” DME reads at least 50 NM, climb 11000 ft to assigned cruising level.

DOVAR TWO CHARLIE DEPARTURE/ ISBAN TWO DELTA DEPARTURE (“CH” Radial 175) –

Depart “CH” VOR on radial 175 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level proceed directed to the TMA boundary reporting point of the airway for which clearance has been issued.

ISBAN TWO CHARLIE DEPARTURE/ IDOSI TWO CHARLIE DEPARTURE (“CH” Radial 190) –

Depart “CH” VOR on radial 190 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 50 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level proceed direct to the TMA boundary reporting point of the airway for which clearance has been issued.

DAGON TWO CHARLIE DEPARTURE (“CH” Radial 199) –

Depart “CH” VOR on radial 199 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level proceed direct to DAGON.

IDOSI TWO DELTA DEPARTURE (“CH” Radial 205) –

Depart “CH” VOR on radial 205 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level.

DAGON TWO DELTA DEPARTURE (“CH” Radial 214) –

Depart “CH” VOR on radial 214 to maintain 9000 ft until ‘CH’ DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level.

BEKOL TWO CHARLIE DEPARTURE –

Depart “CH” VOR on radial 154, climb to maintain 11000 ft. on passing 9000 ft, turn left to “TD” DVOR or “TH” VOR. At “TH”/”TH”, climb from 11000 ft to 3600 m or altitude specified by ATC.

SIKOU TWO CHARLIE DEPARTURE (“CH” Radial 214) –

Depart “CH” VOR on radial 214 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level proceed direct to SIKOU.

SIKOU TWO ECHO DEPARTURE (“CH” Radial 190) –

Depart “CH” VOR on radial 190 to maintain 9000 ft until “CH” DME 25 NM. When “CH” DME reads at least 25 NM, climb from 9000 ft to 11000 ft. When “CH” DME reads at least 50 NM, climb from 11000 ft to assigned cruising level. After reaching cruising level or “CH” DME 100 NM, whichever is later, proceed direct to SIKOU.

3. Outbound aircraft intending to cruise at a level at /below the transition level are also required to follow the specified SDR procedure to either: -
 - a) 40 NM (RWY 13 DEP)/ 50 NM (RWY 31 DEP) as appropriate from “CH” DME, or
 - b) Reaching the assigned flight level (or altitude as per RAC 2-2 para. 5.2) whichever is later. Pilots are also to report maintaining the assigned level (or altitude) in this case.
4. Aircraft not receiving DME information shall substitute DR distances for DME ranges. Such aircraft should request radar distances from ATC when necessary.

5. SDR procedure may be temporarily discontinued due to any of the following circumstances: -
- a) Prevailing weather conditions and/ or non-availability of navigational aids dictate landings on RWY 31 and departures on RWY 13;
 - b) Insufficient radar coverage of SDRs;
 - c) Unserviceability of navigational aids necessary to operate SDRs;
 - d) Weather, emergencies or airspace restriction.