

**VHHH AD 2.22 FLIGHT PROCEDURES****1 ATC Clearance, Engine Start-Up and Push-back Procedures**

- 1.1 All aircraft, other than helicopters and locally based light aircraft, shall obtain an ATC clearance prior to engine start. Pilots are to inform Hong Kong Ground/Delivery, as appropriate, of the following:
- callsign,
  - parking stand number/location,
  - Identifier of the latest ATIS received unless it has been included in the RCD (Request for Departure Clearance Downlink) message via data link,
  - proposed flight level if it is different from the filed flight plan, and
  - when applicable, special requirements (eg request for another departure runway or inability to comply with SID climb profile).

Additionally, departures for destinations in China routeing via BEKOL (A461) shall contact Hong Kong Delivery 15 minutes before estimated off-block time (EOBT) to obtain advance notification of any flow control restriction that may affect the flight.

Approved aircraft planning to fly the Radius-to-Fix SID (ATENA1E/F, LOGAN1E/F, RASSE1E/F, SKATE1E/F or TITAN1E/F) shall make request when obtaining ATC clearance, using recommended phraseology – “Request Radius-to-Fix SID”. Aircraft using 2-way Pre-Departure Clearance (PDC) data-link service shall make such voice request prior to sending ‘Request for Departure Clearance Downlink’ (RCD) message.

- 1.2 A 2-way Pre-Departure Clearance (PDC) data-link service is available to approved operators from Hong Kong Delivery between 2330 and 1630 UTC daily. Pilots should send a ‘Request for Departure Clearance Downlink’ (RCD) message to ATC not more than 20 minutes prior to EOBT. If the CLD message is not received within 5 minutes or there is any problem with data link exchanges, the pilot shall inform Hong Kong Delivery on frequency 129.9 MHz.
- 1.3 Pilots not participating in the PDC service shall contact Hong Kong Delivery on frequency 129.9 MHz between 2330 and 1630 UTC. All pilots shall contact Hong Kong Ground on frequency 122.55 MHz between 1630 and 2330 UTC 5 minutes prior to start to put their ATC clearance on request. Upon receipt of the ATC clearance the pilot shall read back the following information:
- aircraft callsign,
  - destination,
  - route,
  - SID and
  - transponder code.
- 1.4 Pilots shall comply with instructions issued by Hong Kong Delivery regarding when to contact the relevant Hong Kong Ground frequency.
- 1.5 Once an ATC clearance has been received, unless there is a specific time restriction included in the clearance, any delay in being ready to push-back, start engines or taxi may result in the clearance being cancelled.
- 1.6 Pilots shall contact Hong Kong Ground on frequency 122.55 MHz except when notified it is sectorised in which case pilots shall contact:
- Hong Kong Ground (North) for North and West Aprons on frequency 121.6 MHz;
  - Hong Kong Ground (South) for South, Cargo and Business Aviation Aprons on frequency 122.55 MHz.
- 1.7 Aircraft should not commence start-up, push-back, or any other manoeuvre on the apron, unless they have obtained approval from Hong Kong Ground.

- 1.8 Prior to requesting for push back or taxi from a parking stand, pilots of aircraft equipped with a 'weight-on-wheel' switch must ensure the transponder is operating (on 'AUTO' or 'XPNDR', and not 'STDBY' or 'OFF') and the assigned Mode A code is selected. Aircraft with Mode S transponder capable of reporting Aircraft Identification should have its identification in the ICAO flight plan format entered via FMS or Control Panel.
- 1.9 The majority of parking stands have two standard push-back procedures, Push-back BLUE and Push-back RED. The normal push-back procedure is to the taxi lane abeam the adjacent parking stand, but where this would result in the aircraft entering a critical area the push-back is extended to a Tug Stop Point clear of the critical area. A limited number of parking stands have a Push-back/Tow-forward procedure, Push-back GREEN. (The push-back procedures for each parking stand are shown on pages AD2-99A to AD2-99C for passenger aprons and on AD2-99D for the cargo apron.)
- 1.10 Under certain traffic conditions it may be necessary for Hong Kong Ground to issue non-standard push-back instructions to expedite the flow of traffic. Pilots will be issued a 'non-standard push-back' to a defined location and direction.
- 1.11 Pilots shall ensure that the push-back colour code or non-standard push-back instructions issued by Hong Kong Ground are accurately relayed to their ground crew before push-back or engine start commences.
- 1.12 There is a restriction to the starting of engines for aircraft in parking stands S103, S108 and W123. If aircraft in these stands are required to push-back through 180°, only one engine shall be started during the push-back, other engines shall only be started when the push-back manoeuvre has been completed.
- 1.13 When known conditions exist which necessitate that engine start-up is carried out in the parking stand prior to the commencement of push-back, or greater than idle engine thrust will be required during engine start, (e.g. cross-bleed start procedure), the pilot shall advise Hong Kong Ground of the fact when engine start or push-back clearance is requested.
- 1.14 Whilst push-back procedure is being conducted it is essential for safety reasons that communication contact is maintained between pilot and ground engineer in charge. ATC clearance will not normally be issued to aircraft whilst being pushed back, unless the pilot so requests.
- 1.15 To avoid delay to other traffic using the apron aircraft should be ready to taxi as soon as the push-back manoeuvre and engine start procedure are completed. The standard push-back for stands N68 and N70 is onto TWY B. Therefore to avoid delays to other traffic it is essential that the aircraft should be ready to taxi as soon as the push-back manoeuvre is complete. If aircraft are unable to comply with these procedures pilots shall immediately inform Hong Kong Ground in order that alternative taxi instructions may be issued to other traffic.
- 1.16 Pilots are reminded that they should always use minimum power when starting engines or manoeuvring within the apron area. It is especially important when commencing to taxi that break-away thrust is kept to an absolute minimum and then reduced to idle thrust as soon as practicable.

**2 Standard Instrument Departures (SIDs)****2.1 GENERAL**

- 2.1.1 Basic-RNP 1 SIDs have been introduced in Hong Kong TMA. (See pages AD2-97 for details of the SID procedures). In this regard, aircraft shall be equipped with appropriate systems and approved by the relevant State of Registry in accordance with ICAO Basic-RNP 1 standard. Carriage of a certified GNSS receiver is mandatory. (see GEN 1.5 para 3.5.2 on page GEN 1.5-2).
- 2.1.2 Basic RNP-1 navigation specifications are listed in ICAO Doc 9613, 'Performance-based Navigation (PBN) Manual'. The implementation procedures are given in Volume II, Part C, Chapter 3 of this document.
- 2.1.3 An operational approval issued in accordance with the ICAO 9613 assumes that the operator and flight crew take into account all communication and surveillance requirements related to the relevant routes and/or airspace. Operators must therefore observe the equipment requirements when they file a flight plan. (see ENR 1.10 para 12.2.1 on page ENR 1.10-9).
- 2.1.4 For airline operators having practical problems in obtaining the Basic-RNP 1 approval for their aircraft fleet before 10 July 2013 despite exerted genuine efforts, CAD will consider accepting their continued use of the conventional procedures with prior justifications provided. Otherwise, non-Basic RNP 1 flight plans will be rejected. Airline operators, who were unable to obtain Basic-RNP 1 approval before 10 July 2013, shall contact Hong Kong CAD and apply for the continued use of conventional procedures as soon as possible. To apply for the continued utilization of conventional procedures to operate out of HKIA, airline operators should write to the Director-General of Civil Aviation (Attention: Mr. Gabriel Cheng, Chief ATCO (Technical and Development) or by email to gpkcheng@cad.gov.hk). The conventional procedures contained in the SID charts are for use exclusively by airline operators which have been granted approval for the continued use of conventional procedures.
- 2.1.5 Due to the proximity of the FIR boundary to the west, pilots departing RWY 25L or RWY 25R are advised to maintain a careful cross-check of aircraft position after passing PRAWN. In the event of any weather avoidance manoeuvre, permission must be obtained from ATC prior to making any turn away from the prescribed departure track.

**2.2 TERRAIN CLEARANCE**

- 2.2.1 To maintain terrain clearance on the appropriate SID the following procedures must be applied to, except in the radius-to-fix SID (ATENA1E/F, LOGAN1E/F, RASSE1E/F, SKATE1E/F and TITAN1E/F) or when directed by ATC.

| Runway      | Flyover Point                                 | Rate of Climb<br>(under normal operating conditions) |
|-------------|---|--|
| RWY 07L     | <b>Do not</b> turn right before passing ROVER | 4.1% or 250 ft/NM until passing 1 400 ft             |
| RWY 07R     | <b>Do not</b> turn right before passing PORPA | 4.9% or 298 ft/NM until passing 1 400 ft             |
| RWY 25L/25R | <b>Do not</b> turn left before passing PRAWN  | 3.3% or 201 ft/NM                                    |

**2.3 DEPARTURE SPEED REQUIREMENT**

- 2.3.1 To comply with the speed requirement, crossing PORPA (RWY07R)/ ROVER (RWY07L) or PRAWN (RWY25L/R) at 180 KIAS or greater, it is recommended that

the Noise Abatement Departure Procedure 2 (NADP 2) (see VHHH AD2.21 for details) or the manufacturer's recommended procedure be used.

- 2.3.2 Pilots shall inform ATC prior to entering the runway if they will not be able to comply with the departure speed requirement due to aircraft performance limitations or other factors.

#### 2.4 CLIMB REQUIREMENT

- 2.4.1 To ensure separation of SID routes from STAR routes, aircraft on LAKES B/D or OCEAN B/D SIDs must cross TROUT at or above FL 140. Pilots unable to comply with this requirement must inform ATC as soon as possible so that alternative action can be taken.

- 2.4.2 To avoid conflict with traffic in the Guangzhou FIR, aircraft on BEKOL SIDs must cross BEKOL at 4 800 m or above. Track distance from take-off to BEKOL is approximately 48 NM. Pilots unable to comply with this requirement must inform Hong Kong ATC prior to departure.

#### 2.5 LOSS OF COMMUNICATION

- 2.5.1 In the event of a loss of communication aircraft shall comply with the last acknowledged clearance up to the next reporting point/waypoint in the SID/Transition procedure listed in para.5.2, then climb to the flight planned cruising level and follow the SID/Transition track to the TMA exit point.

### 3 Terminal Transition Routes

- 3.1 Within the Hong Kong TMA a number of Terminal Transition Routes are established. Operators departing from Hong Kong International Airport shall flight plan via the relevant Terminal Transition Route until exiting the Hong Kong TMA to join the appropriate ATS route. (See ENR 3.1 table 2 on page ENR 3.1-6 to 3.1-11 and chart page AD 2-85.)

**4 SID Navigation Aids**

| Navaid   | Frequency | Co-ordinates                 |
|----------|-----------|------------------------------|
| CH DVOR  | 112.3 MHz | 22 13 10.35 N 114 01 48.20 E |
| CH DME   | CH 70X    | 22 13 11.69 N 114 01 48.75 E |
| LC NDB   | 390 kHz   | 22 17 43 N 113 53 43 E       |
| NLG DVOR | 117.7 MHz | 22 31 54 N 113 33 48 E       |
| NLG DME  | CH 124X   | 22 31 54 N 113 33 48 E       |
| SMT DVOR | 114.8 MHz | 22 20 15.43 N 113 58 55.46 E |
| SMT DME  | CH 95X    | 22 20 15.43 N 113 58 55.46 E |
| TD DVOR  | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E |
| TD DME   | CH 108X   | 22 14 52.42 N 114 17 35.30 E |

**5 SID Locations**

- 5.1 SID FLYOVER WAYPOINTS (Note: PORPA and ROVER are **flyby** waypoints in the following radius-to-fix SIDs – ATENA1E/F, LOGAN1E/F, RASSE1E/F, SKATE1E/F and TITAN1E/F.)

| Flyover Waypoint       | Co-ordinates               | Cross Reference from Navaid                   |
|------------------------|----------------------------|---|
| RW07L<br>(RWY 07L DER) | 22 19 21.08N 113 56 02.35E | IZSL ILS DME 2.0 NM<br>SMT RDL 253/DME 2.8 NM |
| RW25R<br>(RWY 25R DER) | 22 18 34.27N 113 53 37.06E | ITFR ILS DME 2.0 NM<br>SMT RDL 253/DME 5.2 NM |
| PORPA                  | 22 20 09.10N 114 01 16.30E | ISR ILS DME 7.0 NM<br>LKC RDL 111/DME 8.1 NM  |
| PRAWN                  | 22 16 05.40N 113 48 40.10E | IFL ILS DME 7.0 NM<br>SMT RDL 248/DME 10.4 NM |
| ROVER                  | 22 20 35.58N 114 01 39.12E | IZSL ILS DME 7.3 NM<br>SMT RDL 085/DME 2.6 NM |

5.2. SID REPORTING POINTS / FLYBY WAYPOINTS

| Reporting Point / Flyby Waypoint | Co-ordinates |               | Cross Reference from Navaid   |
|----------------------------------|--------------|---------------|---|
| ALLEY                            | 21 05 11.2N  | 113 47 09.5E  | CH RDL 193 / DME 69.1 NM<br>TD RDL 204 / DME 75.0 NM                              |
| ATENA                            | 22 24 39.85N | 114 23 11.88E | CH RDL 060 / DME 22.9 NM<br>TD RDL 030 / DME 11.1 NM                              |
| BEKOL                            | 22 32 36.00N | 114 08 00.00E | CH RDL 019 / DME 20.2 NM<br>TD RDL 335 / DME 19.8 NM                              |
| BREAM                            | 21 46 46.00N | 114 03 28.00E | CH RDL 179 / DME 26.4 NM<br>TD RDL 207 / DME 30.9 NM                              |
| COLEY                            | 22 06 41.03N | 114 18 37.63E | CH RDL 113 / DME 16.9 NM<br>TD RDL 175 / DME 8.2 NM                               |
| DONKI                            | 20 32 58.0N  | 112 09 10.1E  | CH RDL 229 / DME 145.0 NM<br>TD RDL 232 / DME 157.1 NM                            |
| LAKES                            | 21 58 41.30N | 114 54 38.60E | CH RDL 108 / DME 51.1 NM<br>TD RDL 117 / DME 38.0 NM                              |
| LEMON                            | 20 56 16.6N  | 114 00 05.1E  | CH RDL 183 / DME 76.6 NM<br>TD RDL 194 / DME 80.0 NM                              |
| LOGAN                            | 21 59 16.17N | 115 16 08.46E | CH RDL 103 / DME 70.4 NM<br>TD RDL 108 / DME 56.6 NM                              |
| OCEAN                            | 21 48 43.00N | 114 48 48.00E | CH RDL 121 / DME 50.0 NM<br>TD RDL 134 / DME 39.0 NM                              |
| PECAN                            | 21 26 20.2N  | 114 02 05.6E  | CH RDL 182 / DME 46.7 NM<br>TD RDL 199 / DME 50.5 NM                              |
| PORSH                            | 22 17 40.38N | 114 05 03.56E | PBN Waypoint  |
| RAMEN                            | 22 09 39.22N | 114 05 09.89E | CH RDL 140 / DME 4.7 NM<br>TD RDL 248 / DME 12.6 NM                               |
| RASSE                            | 21 47 34.50N | 115 19 49.10E | CH RDL 111 / DME 76.9 NM<br>TD RDL 117 / DME 63.9 NM                              |
| ROBBE                            | 22 17 59.70N | 114 05 10.78E | PBN Waypoint  |
| ROVER                            | 22 20 35.58N | 114 01 39.12E | PBN Waypoint  |
| RUMSY                            | 22 04 56.94N | 113 48 16.79E | CH RDL 239 / DME 15.0 NM<br>TD RDL 252 / DME 28.9 NM                              |
| SAMON                            | 21 54 23.73N | 114 12 32.95E | CH RDL 154 / DME 21.2 NM<br>TD RDL 195 / DME 20.9 NM                              |
| SHELY                            | 22 05 26.65N | 114 39 13.94E | TD RDL 117 / DME 22.2 NM  |
| SKATE                            | 21 31 55.00N | 115 08 40.00E | CH RDL 125 / DME 74.5 NM<br>TD RDL 134 / DME 64.0 NM                              |
| SURFA                            | 19 18 51.0N  | 112 44 11.2E  | CH RDL 205 / DME 188.8 NM<br>TD RDL 209 / DME 196.5 NM                            |
| TITAN                            | 21 40 27.4N  | 114 03 02.5E  | CH RDL 180 / DME 32.6 NM<br>TD RDL 204 / DME 36.9 NM                              |
| TROUT                            | 21 47 54.87N | 114 16 12.74E | CH RDL 154 / DME 28.5 NM<br>TD RDL 185 / DME 26.9 NM                              |
| TUNNA                            | 21 47 25.00N | 113 57 54.00E | CH RDL 190 / DME 25.9 NM<br>TD RDL 216 / DME 32.9 NM<br>NLG RDL 155 / DME 49.7 NM |

**6 Hong Kong International Airport SIDs****6.1 RUNWAY 07 SIDS**

| <b>SID</b>           | <b>Runway</b> | <b>Remarks</b>  |
|----------------------|---------------|---|
| BEKOL <sub>n</sub> A | RWY 07R       | Between 1501-2300 UTC expect ATENA <sub>n</sub> A                         |
| BEKOL <sub>n</sub> C | RWY 07L       | Between 1501-2300 UTC expect ATENA <sub>n</sub> C                         |
| LAKES <sub>n</sub> A | RWY 07R       | Between 1501-2300 UTC expect LOGAN <sub>n</sub> A                         |
| LAKES <sub>n</sub> C | RWY 07L       | Between 1501-2300 UTC expect LOGAN <sub>n</sub> C                         |
| OCEAN <sub>n</sub> A | RWY 07R       | Between 1501-2300 UTC expect RASSE <sub>n</sub> A or SKATE <sub>n</sub> A |
| OCEAN <sub>n</sub> C | RWY 07L       | Between 1501-2300 UTC expect RASSE <sub>n</sub> C or SKATE <sub>n</sub> C |
| PECAN <sub>n</sub> A | RWY 07R       | May be used H24   |
| PECAN <sub>n</sub> C | RWY 07L       |   |

**6.2 RUNWAY 07 NOISE MITIGATING SIDS**

| <b>SID</b>           | <b>Runway</b> | <b>Remarks</b>   |
|----------------------|---------------|--|
| ATENA <sub>n</sub> A | RWY 07R       | Normally for use between 1501-2300 UTC                                       |
| ATENA <sub>n</sub> C | RWY 07L       |  |
| LOGAN <sub>n</sub> A | RWY 07R       |  |
| LOGAN <sub>n</sub> C | RWY 07L       |  |
| RASSE <sub>n</sub> A | RWY 07R       |  |
| RASSE <sub>n</sub> C | RWY 07L       |  |
| SKATE <sub>n</sub> A | RWY 07R       |  |
| SKATE <sub>n</sub> C | RWY 07L       |  |
| ATENA <sub>n</sub> E | RWY 07R       | Normally for use between 1501-2300 UTC<br>Radius-to-fix (RF) leg is required |
| ATENA <sub>n</sub> F | RWY 07L       |  |
| LOGAN <sub>n</sub> E | RWY 07R       |  |
| LOGAN <sub>n</sub> F | RWY 07L       |  |
| RASSE <sub>n</sub> E | RWY 07R       |  |
| RASSE <sub>n</sub> F | RWY 07L       |  |
| SKATE <sub>n</sub> E | RWY 07R       |  |
| SKATE <sub>n</sub> F | RWY 07L       |  |
| TITAN <sub>n</sub> E | RWY 07R       |  |
| TITAN <sub>n</sub> F | RWY 07L       |  |

**6.3 RUNWAY 25 SIDS**

| <b>SID</b>           | <b>Runway</b> | <b>Remarks</b>  |
|----------------------|---------------|-----------------|
| BEKOL <sub>n</sub> B | RWY 25L       | May be used H24 |
| BEKOL <sub>n</sub> D | RWY 25R       |                 |
| LAKES <sub>n</sub> B | RWY 25L       |                 |
| LAKES <sub>n</sub> D | RWY 25R       |                 |
| OCEAN <sub>n</sub> B | RWY 25L       |                 |
| OCEAN <sub>n</sub> D | RWY 25R       |                 |
| PECAN <sub>n</sub> B | RWY 25L       |                 |
| PECAN <sub>n</sub> D | RWY 25R       |                 |

## 7. Standard Instrument Arrivals (STARs)

### 7.1 GENERAL

- 7.1.1 Basic-RNP 1 STARs have been introduced in Hong Kong TMA. (See pages AD2-98 for details of the STAR procedures). In this regard, aircraft shall be equipped with appropriate systems and approved by the relevant State of Registry in accordance with ICAO Basic-RNP 1 standard. Carriage of a certified GNSS receiver is mandatory. (see GEN 1.5 para 3.5.2 on page GEN 1.5-2).
- 7.1.2 Basic RNP-1 navigation specifications are listed in ICAO Doc 9613, 'Performance-based Navigation (PBN) Manual'. The implementation procedures are given in Volume II, Part C, Chapter 3 of this document.
- 7.1.3 An operational approval issued in accordance with the ICAO 9613 assumes that the operator and flight crew take into account all communication and surveillance requirements related to the relevant routes and/or airspace. Operators must therefore observe the equipment requirements when they file a flight plan. (see ENR 1.10 para 12.2.1 on page ENR 1.10-9).
- 7.1.4 For airline operators having practical problems in obtaining the Basic-RNP 1 approval for their aircraft fleet before 10 July 2013 despite exerted genuine efforts, CAD will consider accepting their continued use of the conventional procedures with prior justifications provided. Otherwise, non-Basic RNP 1 flight plans will be rejected. Airlines operators, who were unable to obtain Basic-RNP 1 approval before 10 July 2013, shall contact Hong Kong CAD and apply for the continued use of conventional procedures as soon as possible. To apply for the continued utilization of conventional procedures to operate into HKIA, airline operators should write to the Director-General of Civil Aviation (Attention: Mr. Gabriel Cheng, Chief ATCO (Technical and Development) or by email to [gpkcheng@cad.gov.hk](mailto:gpkcheng@cad.gov.hk)). The conventional procedures contained in the STAR charts are for use exclusively by airline operators which have been granted approval for the continued use of conventional procedures.

### 7.2 LOSS OF COMMUNICATION

- 7.2.1 In the event of a loss of communication:
- a) if a STAR clearance has been issued and acknowledged, aircraft shall comply with the descent planning profile and the STAR track to TD/ LIMES as appropriate, join the relevant holding pattern and descend to 4 500ft, then carry out the ILS approach;
  - b) if a STAR clearance has not been issued or acknowledged, aircraft shall proceed in accordance with the STAR procedure appropriate for the ATS route and landing direction, (arrivals from SIERA should proceed in accordance with SIERA „A or SIERA „B STAR as appropriate), at TD/ LIMES as appropriate, join the relevant holding pattern and descend to 4 500 ft, then carry out the ILS approach.

### 7.3 UNSERVICEABILITY OF AIRCRAFT EQUIPMENT OR GROUND EQUIPMENT

- 7.3.1 Pilots shall inform ATC if they are unable to comply with the STAR procedure due to unserviceability of aircraft equipment or ground equipment and request radar assistance.



## 7.4 STAR COMMENCEMENT AND TERMINATION POINTS

7.4.1 Except for SIERA STARs, Hong Kong STARs commence from ABBEY, BETTY or CANTO and terminate at the Initial Approach Fix (IAF) (e.g. TD DVOR (RWY 25) or LIMES (RWY 07) as appropriate).

7.4.2 While the SIERA STARs commence directly from the TMA boundary point SIERA, other STARs are connected to the TMA boundary points by Terminal Transition Routes (TTR). (See ENR 3.1 table 2 on page ENR 3.1-6 to 3.1-11 and chart page AD2-87)

## 8. STAR Navigation Aids

| Navaid  | Frequency | Co-ordinates               |
|---------|-----------|----------------------------|
| CH DVOR | 112.3 MHz | 22 13 10.35N 114 01 48.20E |
| CH DME  | CH70X     | 22 13 11.69N 114 01 48.75E |
| TD DVOR | 116.1 MHz | 22 14 52.42N 114 17 35.30E |
| TD DME  | CH108X    | 22 14 52.42N 114 17 35.30E |

## 9. STAR and TTR Significant Points

| Significant Point | Co-ordinates               | Cross Reference from Navaid                        |
|-------------------|----------------------------|--|
| * <b>ABBEY</b>    | 22 16 11.00N 114 55 25.92E | TD RDL 090/DME 35.1 NM<br>CH RDL 089/DME 49.8 NM   |
| * <b>BETTY</b>    | 21 29 10.8 N 114 33 31.9 E | TD RDL 164/DME 47.9 NM<br>CH RDL 148/DME 52.8 NM   |
| BORDA             | 21 41 32.4N 113 24 29.0E   | TD RDL 238/DME 59.5 NM<br>CH RDL 230/DME 46.9 NM   |
| * <b>CANTO</b>    | 21 39 02.6N 113 42 25.1E   | TD RDL 225/DME 48.4 NM<br>CH RDL 210/DME 38.5 NM   |
| CARSO             | 19 00 00.0 N 114 42 37.8 E | TD RDL 175/DME 195.6NM<br>CH RDL 171/DME 196.2 NM  |
| CYBER             | 20 50 49.6 N 114 33 10.6 E | TD RDL 172/DME 85.0 NM<br>CH RDL 162/DME 87.1 NM   |
| DOTMI             | 22 43 06N 116 10 06E       | TD RDL 077/DME 107.9 NM<br>CH RDL 078/DME 122.5 NM |
| DOVAR             | 20 51 38.9 N 115 07 00.9 E | TD RDL 153/DME 94.9 NM<br>CH RDL 145/DME 101.5 NM  |
| ELATO             | 22 20 00N 117 30 00E       | TD RDL 090/DME 178.5 NM<br>CH RDL 089/DME 193.2 NM |
| FISHA             | 22 16 57.64N 115 20 11.61E | TD RDL 090/DME 58.1 NM<br>CH RDL 089/DME 72.8 NM   |
| GAMBA             | 21 19 08.1N 112 55 36.2E   | TD RDL 236/DME 94.4 NM<br>CH RDL 231/DME 81.8 NM   |
| GOODI             | 22 04 09.9N 113 59 48.6E   | TD RDL 239/DME 19.7NM<br>CH RDL 194/DME 9.2 NM     |

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                        |
|-------------------|------------------------------|--|
| # GUAVA           | 22 09 36.1N 114 03 36.3E     | TD RDL 250/DME 14.0 NM<br>CH RDL 157/DME 3.9 NM    |
| HOCKY             | 20 35 49.4N 114 34 28.5E     | TD RDL 173/DME 99.9 NM<br>CH RDL 165/DME 101.7 NM  |
| IDOSI             | 19 00 00N 112 30 00E         | TD RDL 210/DME 218.8 NM<br>CH RDL 205/DME 210.8 NM |
| # LIMES           | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM  |
| MAGOG             | 22 17 46 N 115 49 30 E       | CH RDL 089/DME 100.0 NM                            |
| MANGO             | 21 36 49.0N 114 30 53.0E     | TD RDL 164/DME 39.9 NM<br>CH RDL 145/DME 45.2 NM   |
| MAPLE             | 21 22 26.8N 113 05 42.8E     | TD RDL 234/DME 84.9 NM<br>CH RDL 228/DME 72.7 NM   |
| MONTY             | 22 10 06.3N 114 19 15.7E     | TD RDL 164/DME 5.0 NM<br>CH RDL 103/DME 16.5 NM    |
| MURRY             | 21 45 28.4N 113 48 42.0E     | TD RDL 225/DME 39.7 NM<br>CH RDL 206/DME 30.2 NM   |
| MUSEL             | 22 15 53.99N 114 46 52.13E   | TD RDL 090/DME 27.2 NM                             |
| NOMAN             | 20 00 00N 116 40 18E         | TD RDL 137/DME 189.4 NM<br>CH RDL 133/DME 198.9 NM |
| RAMUS             | 20 15 39.1 N 115 21 05.9 E   | TD RDL 155/DME 132.8 NM<br>CH RDL 150/DME 138.6 NM |
| ROCCA             | 21 31 55.4N 113 34 51.4E     | TD RDL 225/DME 58.4 NM<br>CH RDL 214/DME 48.1 NM   |
| SABNO             | 18 59 06N 115 50 42E         | TD RDL 158/DME 213.7 NM<br>CH RDL 154/DME 218.7 NM |
| * SIERA           | 21 59 12N 113 33 12E         | TD RDL 251/DME 44.1 NM<br>CH RDL 244/DME 30.0 NM   |
| SIKOU             | 20 50 36N 111 30 00E         | TD RDL 244/DME 177.4 NM<br>CH RDL 242/DME 163.7 NM |
| SILVA             | 21 51 04.5N 113 54 10.9E     | TD RDL 225/DME 32.2 NM<br>CH RDL 200/DME 23.1 NM   |
| SOKOE             | 22 04 41.2 N 113 50 38.1 E   | TD RDL 250/DME 27.0 NM                             |
| SONNY             | 21 01 03.7 N 115 03 18.8 E   | TD RDL 152/DME 85.0 NM<br>CH RDL 143/DME 91.9 NM   |
| TAMAR             | 22 15 21N 114 30 37E         | TD RDL 090/DME 12.1 NM                             |
| # TD              | 22 14 52.42N 114 17 35.30E   |  |

\* STAR commencement point

# IAF

**(Pages AD 2-35 to AD 2-44 and para 10 to 17 reserved)**

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**18. Instrument Landing System (ILS) - General**

- 18.1 RWY 07L, RWY 07R and RWY 25L ILS are equipped for CAT II landings. RWY 25R ILS is equipped for CAT IIIA landings. Operators must obtain approval prior to conducting CAT II/IIIA operations, (see page AD.1.1-3). Pilots wishing to make an ILS CAT II/IIIA approach shall notify Approach Control on initial contact.
- 18.2 The standard instrument approach at Hong Kong International Airport is the ILS approach procedure. Therefore the Arrival ATIS will not include the type of approach to be expected when the ILS approach procedure is in use. (When the ILS is not available, the type of approach to be expected will be specified in the Arrival ATIS.)
- 18.3 No marker beacons are provided. DME equivalents for Outer Marker Fix (OMF) and Middle Marker Fix (MMF) with glidepath reference altitudes are established.
- 18.4 Aircraft unable to receive DME information due to ground or airborne equipment failure will be provided equivalent DME ranges by the Precision Runway Monitor (PRM) radar controller (callsign 'Hong Kong Precision') on frequency 133.7 MHz. In the event of airborne DME receiver failure, pilots must inform ATC prior to commencing the approach. Range information will be provided at the following positions:

| ILS Approach   | Positions at which equivalent DME ranges are provided by PRM controller |                        |
|----------------|---|------------------------|
|                | Final Approach Point (FAP)  | Outer Marker Fix (OMF) |
| <b>RWY 07L</b> | IZSL DME 5.3 NM   | IZSL DME 4 NM          |
| <b>RWY 07R</b> | ISR DME 5.3 NM  | ISR DME 4 NM           |
| <b>RWY 25L</b> | IFL DME 14.1 NM   | IFL DME 4 NM           |
| <b>RWY 25R</b> | ITFR DME 14.1 NM  | ITFR DME 4 NM          |

- 18.5 Due to the proximity of the FIR boundary to the west, pilots carrying out RWY 07L or RWY 07R ILS approach are advised to maintain a careful cross-check of aircraft position after passing the initial approach fix LIMES by the use of appropriate navigational aids to ensure the aircraft remains on the prescribed track. In the event of any weather avoidance manoeuvre, permission must be obtained from ATC prior to making any turn away from the prescribed track.
- 18.6 The ILS approach procedures include specific speed restrictions. These speed restrictions are applicable to aircraft that are radar vectored to join the initial or intermediate approach as well as aircraft commencing the approach from the initial approach fix, (RWY 07L/07R IAF LIMES, RWY 25L/25R IAF TD DVOR). Pilots unable to comply with these speed restrictions should inform ATC prior to commencing the approach so that alternative action can be taken.
- 18.7 Pilots are warned that during ILS CAT I operations RWY 07R and RWY 25L GP signals may be liable to interference from aircraft taxiing in the vicinity of the GP aerial. Pilots should therefore closely monitor their ILS approach profile and rate of descent.

18.8 Due to terrain some of the ILS LOC and GP signals at Hong Kong International Airport do not have the standard protected areas. The standard ICAO protected areas for ILS signal coverage are:

- a) LOC signal 17 NM within 35° each side of the course line and 25 NM within 10° each side of the course line;
- b) GP signal 10 NM within 8° each side of the centreline.

Pilots are reminded that use of the ILS signals outside of the following coverage areas may lead to false capture or reverse sense indications:

| RWY     | LOC Coverage Area   | GP Coverage Area                          |
|---------|---|---|
| RWY 07L | Standard left of LOC course   | Standard left and right of RWY centreline |
|         | 17 NM within 28° right of LOC course and 25 NM within 10° right of the LOC course |   |
| RWY 07R | 17 NM within 25° left of LOC course and 25 NM within 10° left of the LOC course   | Standard left and right of RWY centreline |
|         | 17 NM within 19° right of LOC course and 25 NM within 10° right of the LOC course |   |
| RWY 25L | 17 NM within 28° left of LOC course and 25 NM within 10° left of the LOC course   | 15 NM within 7° left of RWY centreline    |
|         | Standard right of LOC course  | Standard right of RWY centreline          |
| RWY 25R | Standard left of LOC course   | Standard left of RWY centreline           |
|         | Between 20 NM - 25 NM within 4° right of LOC course below 5 500 ft                | 15 NM within 6° right of RWY centreline   |

18.9 If ground based navigational aids are not available, ATC will provide an alternative clearance or give radar assistance.

**19. RWY 07L ILS and LOC Approach**

19.1 Requests to proceed direct from a point within the TMA to LIMES for an ILS approach RWY 07L may be approved subject to traffic.

**19.2 RWY 07L ILS and LOC Approach Navigation Aids**

| Navaid/<br>Ident | Frequency | Co-ordinates                 | Remarks                  |
|------------------|-----------|------------------------------|--------------------------|
| Localizer/IZSL   | 111.1 MHz | 22 19 21.08 N 113 56 02.35 E | Course 073°              |
| Glide Path       | 331.7 MHz | 22 18 46.29 N 113 54 01.55 E | 3° glide slope           |
| DME/IZSL         | CH 48X    | 22 18 46.29 N 113 54 01.55 E | Co-located with GP       |
| CH DVOR          | 112.3 MHz | 22 13 10.35 N 114 01 48.20 E |                          |
| CH DME           | CH 70X    | 22 13 11.69 N 114 01 48.75 E | Co-located with CH DVOR  |
| LKC DVOR         | 113.2 MHz | 22 22 44.12 N 113 53 01.50 E |                          |
| LKC DME          | CH 79X    | 22 22 44.12 N 113 53 01.50 E | Co-located with LKC DVOR |
| NLG DVOR         | 117.7 MHz | 22 31 54 N 113 33 48 E       |                          |
| NLG DME          | CH 124X   | 22 31 54 N 113 33 48 E       | Co-located with NLG DVOR |
| SMT DVOR         | 114.8 MHz | 22 20 15.43 N 113 58 55.46 E |                          |
| SMT DME          | CH 95X    | 22 20 15.43 N 113 58 55.46 E | Co-located with SMT DVOR |
| TD DVOR          | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E |                          |
| TD DME           | CH 108X   | 22 14 52.42 N 114 17 35.30 E | Co-located with TD DVOR  |

**19.3 RWY 07L ILS Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                       |
|-------------------|------------------------------|---|
| LIMES             | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM |
| TONIC             | 22 12 47.88 N 113 43 21.85 E | NLG RDL 157/DME 21.0 NM                           |
| IF                |                              | IZSL DME 8.3 NM                                   |
| FAP               |                              | IZSL DME 5.3 NM                                   |
| DEDEE             | 22 23 12.70 N 114 01 03.67 E | SMT RDL 036/DME 3.5NM                             |
| LINGI             | 22 25 17.63 N 114 02 34.10 E | SMT RDL 036/DME 6.0NM                             |
| SAMPU             | 22 25 39.19 N 114 15 40.91 E | TD RDL 353/DME 10.9 NM                            |

19.4 **RWY 07L LOC Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                       |
|-------------------|------------------------------|---|
| LIMES             | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM |
| TONIC             | 22 12 47.88 N 113 43 21.85 E | NLG RDL 157/DME 21.0 NM                           |
| IF                |                              | IZSL DME 8.5 NM                                   |
| FAF               |                              | IZSL DME 6.0 NM                                   |
| MAPT              |                              | IZSL DME 0.2 NM                                   |
| DEDEE             | 22 23 12.70 N 114 01 03.67 E | SMT RDL 036/DME 3.5 NM                            |
| LINGI             | 22 25 17.63 N 114 02 34.10 E | SMT RDL 036/DME 6.0 NM                            |
| SAMPU             | 22 25 39.19 N 114 15 40.91 E | TD RDL 353/DME 10.9 NM                            |

19.5 **RWY 07L ILS and LOC Approach**

See AD2-93 A, B, C and D for procedure details.

20. **RWY 07L VOR Approach**

20.1 Requests to proceed direct from a point within the TMA to LIMES for a VOR approach RWY 07L may be approved subject to traffic.

20.2 **RWY 07L VOR Approach Navigation Aids**

| Navaid/ Ident | Frequency | Co-ordinates                 | Remarks                  |
|---------------|-----------|------------------------------|--------------------------|
| CH DVOR       | 112.3 MHz | 22 13 10.35 N 114 01 48.20 E |                          |
| CH DME        | CH 70X    | 22 13 11.69 N 114 01 48.75 E | Co-located with CH DVOR  |
| NLG DVOR      | 117.7 MHz | 22 31 54 N 113 33 48 E       |                          |
| NLG DME       | CH 124X   | 22 31 54 N 113 33 48 E       | Co-located with NLG DVOR |
| SMT DVOR      | 114.8 MHz | 22 20 15.43 N 113 58 55.46 E |                          |
| SMT DME       | CH 95X    | 22 20 15.43 N 113 58 55.46 E | Co-located with SMT DVOR |
| TD DVOR       | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E |                          |
| TD DME        | CH 108X   | 22 14 52.42 N 114 17 35.30 E | Co-located with TD DVOR  |

20.3 **RWY 07L VOR Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                       |
|-------------------|------------------------------|---|
| LIMES             | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM |
| TONIC             | 22 12 47.88 N 113 43 21.85 E | NLG RDL 157/DME 21.0 NM                           |
| IF                |                              | SMT RDL 253/DME 14.0 NM                           |
| FAF               |                              | SMT RDL 253/DME 11.0 NM                           |
| MAPT              |                              | SMT RDL 253/DME 6.5 NM                            |
| SOKOE             | 22 04 41.2 N 113 50 38.1 E   | TD RDL 250/DME 27.0 NM                            |

20.4 **RWY 07L VOR Approach Chart**

See chart AD2-93E and F for procedure details.



**21. RWY 07R ILS and LOC Approach**

21.1 Requests to proceed direct from a point within the TMA to LIMES for an ILS approach RWY 07R may be approved subject to traffic.

21.2 Pilots are warned that RWY 07R GP signals may be liable to interference from aircraft taxiing in the vicinity of the GP aerial. Pilots should therefore closely monitor their ILS approach profile and rate of descent.

**21.3 RWY 07R ILS and LOC Approach Navigation Aids**

| Navaid/Ident  | Frequency | Co-ordinates                 | Remarks                  |
|---------------|-----------|------------------------------|--------------------------|
| Localizer/ISR | 109.3 MHz | 22 18 29.89 N 113 56 07.90 E | Course 073°              |
| Glide Path    | 332.0 MHz | 22 17 47.64 N 113 54 09.59 E | 3° glide slope           |
| DME/ISR       | CH 30X    | 22 17 47.64 N 113 54 09.59 E | Co-located with GP       |
| CH DVOR       | 112.3 MHz | 22 13 10.35 N 114 01 48.20 E |                          |
| CH DME        | CH 70X    | 22 13 11.69 N 114 01 48.75 E | Co-located with CH DVOR  |
| LC NDB        | 390 kHz   | 22 17 43N 113 53 43E         | Coverage 10 NM           |
| LKC DVOR      | 113.2 MHz | 22 22 44.12 N 113 53 01.50 E |                          |
| LKC DME       | CH 79X    | 22 22 44.12 N 113 53 01.50 E | Co-located with LKC DVOR |
| NLG DVOR      | 117.7 MHz | 22 31 54 N 113 33 48 E       |                          |
| NLG DME       | CH 124X   | 22 31 54 N 113 33 48 E       | Co-located with NLG DVOR |
| TD DVOR       | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E |                          |
| TD DME        | CH 108X   | 22 14 52.42 N 114 17 35.30 E | Co-located with TD DVOR  |

**21.4 RWY 07R ILS Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                       |
|-------------------|------------------------------|---|
| LIMES             | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM |
| STELA             | 22 11 53.29 N 113 43 49.11 E | NLG RDL 157/DME 22.0 NM                           |
| IF                |                              | ISR DME 8.3 NM                                    |
| FAP               |                              | ISR DME 5.3 NM                                    |
| PORPA             | 22 20 09.1 N 114 01 16.3 E   | ISR DME 7.0 NM<br>SMT RDL 095/DME 2.2 NM          |
| SOKOE             | 22 04 41.2 N 113 50 38.1 E   | TD RDL 250/DME 27.0 NM                            |

21.5 **RWY 07R LOC Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid                       |
|-------------------|------------------------------|---|
| LIMES             | 22 06 25.60 N 113 46 32.60 E | NLG RDL 157/DME 28.0 NM<br>CH RDL 247/DME 15.7 NM |
| STELA             | 22 11 53.29 N 113 43 49.11 E | NLG RDL 157/DME 22.0 NM                           |
| IF                |                              | ISR DME 8.5 NM                                    |
| FAF               |                              | ISR DME 6.0 NM                                    |
| MAPT              |                              | ISR DME 1.0 NM                                    |
| PORPA             | 22 20 09.1 N 114 01 16.3 E   | ISR DME 7.0 NM<br>SMT RDL 095/DME 2.2 NM          |
| SOKOE             | 22 04 41.2 N 113 50 38.1 E   | TD RDL 250/DME 27.0 NM                            |

21.6 **RWY 07R ILS and LOC Approach Chart**

See AD2-91A, B, C and D for procedure details.

22. **RWY 25L ILS and LOC Approach**

22.1 Requests to proceed direct from a point within the TMA to MIRRS for an ILS approach RWY 25L may be approved subject to traffic.

22.2 Pilots are warned that RWY 25L GP signals may be liable to interference from aircraft taxiing in the vicinity of the GP aerial. Pilots should therefore closely monitor their ILS approach profile and rate of descent.

22.3 **RWY 25L ILS and LOC Approach Navigation Aids**

| Navaid/Ident  | Frequency | Co-ordinates                 | Remarks            |
|---------------|-----------|------------------------------|--------------------|
| Localizer/IFL | 108.9 MHz | 22 17 43.13 N 113 53 42.80 E | Course 253°M       |
| Glide path    | 329.3 MHz | 22 18 19.77 N 113 55 49.30 E | 3° glide slope     |
| DME/IFL       | CH 26X    | 22 18 19.77 N 113 55 49.30 E | Co-located with GP |
| SMT DVOR      | 114.8 MHz | 22 20 15.43 N 113 58 55.46 E | Co-located         |
| SMT DME       | CH 95X    | 22 20 15.43 N 113 58 55.46 E |                    |
| TD DVOR       | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E | Co-located         |
| TD DME        | CH 108X   | 22 14 52.42 N 114 17 35.30 E |                    |

22.4 **RWY 25L ILS Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid |
|-------------------|------------------------------|-----------------------------|
| TD (IAF)          | 22 14 52.42 N 114 17 35.30 E |                             |
| MIRRS             | 22 24 17.1 N 114 14 09.3 E   | IFL DME 18.0 NM             |
| LOTUS             | 22 23 18.26 N 114 11 05.60 E | IFL DME 15.0 NM             |
| FAP               | 22 23 05.39 N 114 10 20.18 E | IFL DME 14.1 NM             |

|        |                            |   |
|--------|----------------------------|---|
| Cont'd |                            |   |
| PRAWN  | 22 16 05.4 N 113 48 40.1 E | IFL DME 7.0 NM<br>SMT RDL 248/DME 10.4 NM |

22.5 **RWY 25L LOC Approach Significant Points**

| Significant Point | Co-ordinates                 | Cross Reference from Navaid               |
|-------------------|------------------------------|---|
| TD (IAF)          | 22 14 52.42 N 114 17 35.30 E |   |
| MIRRS             | 22 24 17.1 N 114 14 09.3 E   | IFL DME 18.0 NM                           |
| LOTUS             | 22 23 18.26 N 114 11 05.60 E | IFL DME 15.0 NM                           |
| FAF               | 22 22 25.10 N 114 08 11.31 E | IFL DME 12.0 NM                           |
| MAPT              | 22 18 46.65 N 113 56 59.23 E | IFL DME 1.0 NM                            |
| PRAWN             | 22 16 05.4 N 113 48 40.1 E   | IFL DME 7.0 NM<br>SMT RDL 248/DME 10.4 NM |

22.6 **RWY 25L ILS and LOC Approach Chart**

See AD2-92 A, B, C and D for procedure Details.

23. **RWY 25R ILS and LOC Approach**

23.1 Requests to proceed direct from a point within the TMA to PLOVE for an ILS approach RWY 25R may be approved subject to traffic.

23.2 **RWY 25R ILS and LOC Approach Navigation Aids**

| Navaid/Ident   | Frequency | Co-ordinates                 | Remarks            |
|----------------|-----------|------------------------------|--------------------|
| Localizer/ITFR | 110.9 MHz | 22 18 34.27 N 113 53 37.07 E | Course 253°M       |
| Glide path     | 330.8 MHz | 22 19 16.43 N 113 55 35.09 E | 3° glide slope     |
| DME/ITFR       | CH 46X    | 22 19 16.43 N 113 55 35.09 E | Co-located with GP |
| CH DVOR        | 112.3 MHz | 22 13 10.35 N 114 01 48.20 E |                    |
| CH DME         | CH 70X    | 22 13 11.69 N 114 01 48.75 E |                    |
| LKC DVOR       | 113.2 MHz | 22 22 44.12 N 113 53 01.50 E | Co-located         |
| LKC DME        | CH 79X    | 22 22 44.12 N 113 53 01.50 E |                    |
| TD DVOR        | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E | Co-located         |
| TD DME         | CH 108X   | 22 14 52.42 N 114 17 35.30 E |                    |

23.3 RWY 25R ILS Approach Significant Points

| Significant Point | Co-ordinates                 | Cross Reference from Navaid |
|-------------------|------------------------------|-----------------------------|
| TD (IAF)          | 22 14 52.42 N 114 17 35.30 E |                             |
| PLOVE             | 22 25 06.30 N 114 13 57.90 E | ITFR DME 18.0 NM            |
| RIVER             | 22 24 07.55 N 114 10 54.23 E | ITFR DME 15.0 NM            |
| FAP               | 22 23 54.68 N 114 10 08.81 E | ITFR DME 14.1 NM            |

23.4 RWY 25R LOC Approach Significant Points

| Significant Point | Co-ordinates                 | Cross Reference from Navaid |
|-------------------|------------------------------|-----------------------------|
| TD (IAF)          | 22 14 52.42 N 114 17 35.30 E |                             |
| PLOVE             | 22 25 06.30 N 114 13 57.90 E | ITFR DME 18.0 NM            |
| RIVER             | 22 24 07.55 N 114 10 54.23 E | ITFR DME 15.0 NM            |
| FAF               | 22 22 51.57 N 114 06 58.79 E | ITFR DME 11.0 NM            |
| MAPT              | 22 19 35.94 N 113 56 47.78 E | ITFR DME 1.0 NM             |

23.5 RWY 25R ILS and LOC Approach Chart

See AD2-94 A, B, C and D for procedure details.

24. RWY 25R VOR Approach

24.1 RWY 25R VOR Approach Navigation Aids

| Navaid/Ident | Frequency | Co-ordinates                 | Remarks    |
|--------------|-----------|------------------------------|------------|
| NLG DVOR     | 117.7 MHz | 22 31 54 N 113 33 48 E       | Co-located |
| NLG DME      | CH 124X   | 22 31 54 N 113 33 48 E       |            |
| SMT DVOR     | 114.8 MHz | 22 20 15.43 N 113 58 55.46 E | Co-located |
| SMT DME      | CH 95X    | 22 20 15.43 N 113 58 55.46 E |            |
| TD DVOR      | 116.1 MHz | 22 14 52.42 N 114 17 35.30 E | Co-located |
| TD DME       | CH 108X   | 22 14 52.42 N 114 17 35.30 E |            |

24.2 RWY 25R VOR Approach Significant Points

| Significant Point | Co-ordinates                 | Cross Reference from Navaid |
|-------------------|------------------------------|-----------------------------|
| TD (IAF)          | 22 14 52.42 N 114 17 35.30 E |                             |
| FAF               | 22 22 52.63 N 114 07 01.91 E | SMT RDL 073/DME 8.0 NM      |
| SMT               | 22 20 15.43 N 113 58 55.46 E |                             |
| MAPT              | 22 19 36.05 N 113 56 53.12 E | SMT RDL 253/DME 2.0 NM      |

24.3 **RWY 25R VOR Approach Chart** |

See AD2-94E and F for procedure details. |

**25 Procedures for Local Flights in Hong Kong Aerodrome Traffic Zone (ATZ) and Control Zone (CTR) Zones**

25.1 GENERAL

25.1.1 Local flights operating in the Aerodrome Traffic Zone (ATZ) are under the control of Hong Kong Aerodrome Control. During parallel runway operations the ATZ is split into two sectors. The Dividing line is mid-way between the two runways - the north runway (RWY 07L/25R) is under the control of AMC North, operating on frequency 118.2 MHz, call-sign 'Hong Kong Tower North', and the south runway (RWY 07R/25L) is under the control of AMC South, operating on frequency 118.4 MHz, call-sign 'Hong Kong Tower South'.

25.1.2 Non-IFR flights within the CTR Zones (see chart page AD 2-102), are under the control of Hong Kong Zone Control operating on frequency 120.6 MHz, call sign 'Hong Kong Zone'.

25.1.3 Flights within the CTR above 2 000 ft AMSL are under the control of Hong Kong Approach Control on frequency 119.1 MHz or Departure Control on frequency 123.8 MHz.

25.1.4 To enhance flight safety, it is recommended that all local operators display landing lights whilst entering, leaving or operating within the ATZ or CTR Zones.

25.2 VERTICAL LIMITS AND ALTITUDE RESTRICTIONS

25.2.1 The vertical limits are:

- a) ATZ surface up to 2 000 ft AAL;
- b) CTR Zones surface up to 2 000 ft AMSL (subject to paras. 25.2.2 and 25.2.3 below).

25.2.2 In the following CTR Zones ATC will apply an altitude restriction dependant on the runway in use at Hong Kong International Airport:

| CTR Zone  | RWY in Use | Altitude Restriction   |
|---|------------|--|
| South Outer Zone  | RWY 07L/R  | 500 ft   |
| Delta Zone  |            | As instructed by ATC   |
| Island Zone routes :                                    |            | 1 000 ft<br>800 ft<br>1 000 ft<br>1 000 ft<br>1 000 ft<br>1 500 ft |
| Green Island – Ma Wan Corridor                          |            |  |
| Green Island – Silvermine                               |            |  |
| Green Island – Cheung Chau                              |            |  |
| Green Island – Lamma                                    |            |  |
| Green Island – west of Star Ferry<br>East of Star Ferry |            |  |
| South Outer Zone  | RWY 25L/R  | 1 200 ft   |
| Delta Zone  |            | As instructed by ATC   |

25.2.3 In addition, flights requesting to operate in Ma Wan Zone above 500 ft AMSL, Tuen Mun Zone north of Line B above 1 000ft AMSL and Lantau Zone above 2 000ft AMSL, including operations at landing sites above these levels, are subject to specific approval from Hong Kong Zone.

### 25.3 ATZ AND CTR ZONES ENTRY AND EXIT ROUTES

25.3.1 Subject to ATC approval, pilots shall normally comply with the following standard exit and entry routes and altitudes within the ATZ and CTR Zones (see chart AD2-103):

| Radio Callsign                        | Route Direction                        | Routeing  |
|---------------------------------------|--|---|
| East Pass                             | In/Out                                 | Entering/Leaving Island Zone from/to UCARA Port Shelter<br>Single engine aircraft not permitted   |
| Fan Lau<br>(See Note 1)               | North/South<br>East/West               | Transiting to/from West Lantau Corridor and Island Zone and<br>Transiting to/from Island Zone and Delta Zone  |
| Gold Coast Corridor<br>(See Note 2)   | East/West<br>(one direction at a time) | Transiting Ma Wan Zone between Pearl Island and Brothers Point<br>Upper limit 500ft AMSL Width 0.5NM. Helicopters only  |
| Lei Yue Mun                           | In/Out                                 | Entering/Leaving Island Zone from/to Waglan Zone<br>Inbound to CTR 1 500ft AMSL<br>Outbound from CTR not above 1 000ft AMSL<br>(If weather precludes use of 1 500 ft AMSL inbound, operations shall be restricted to one direction at a time) |
| Ma Wan Corridor<br>(See Note 2 and 3) | In/Out                                 | Transiting from/to Ma Wan Zone and Island Zone<br>Upper limit 1000ft AMSL   |
| Pak Mong                              | In/Out                                 | Entering/Leaving ATZ for Ma Wan Zone  |
| Pillar Point                          | In/Out                                 | Entering/Leaving ATZ for Tuen Mun Zone  |
| Sha Chau                              | In/Out                                 | Entering/Leaving ATZ for Tuen Mun Zone  |
| Sham Shek                             | In/Out<br>(one direction at a time)    | Entering/Leaving ATZ for West Lantau Corridor   |
| Sha Tin Pass                          | In/Out                                 | Entering/Leaving Island Zone from/to UCARA New Town<br>Single engine aircraft not permitted   |
| Silvermine                            | In/Out                                 | Entering/Leaving ATZ and Ma Wan Zone for Lantau Zone<br>Helicopters only  |

|   |  |  |
|---|--|--|
| South Pass                                | In/Out                                 | Transiting Island Zone between Hong Kong South and Victoria Harbour<br>Fixed wing aircraft and single engine helicopters not permitted   |
| Toll Plaza Route<br>(see Note 2, 4 and 5) | East/West<br>(one direction at a time) | Transiting from/to North Lantau Expressway and Kap Shui Mun.<br>Upper limit 800ft AMSL for twin engine aircraft, 1 000 ft AMSL for single engine aircraft  |
| Toll Plaza Crossing                       | North/South                            | Between Yam O and Brothers Point<br>Upper limit 500ft AMSL   |
| Tung Chung Pass                           | In/Out                                 | Entering/Leaving ATZ for Lantau Zone<br>Helicopters only<br>Inbound to ATZ 2 000ft AMSL<br>Outbound from ATZ not above 1 500ft AMSL<br>(If weather precludes use of 2 000ft AMSL inbound, operations shall be restricted to one direction at a time) |
| West Lantau Corridor<br>(See Note 6)      | North/South                            | Transiting from/to Tai O and Fan Lau<br>Width 1NM between Fan Lau and Tai O, 0.5NM at Sham Shek<br>Upper limit 500ft AMSL north of Peaked Hill (Kai Yet Kok), 1 000ft AMSL south of Peaked Hill (Kai Yet Kok)  |

- Note 1: Pilots should note traffic information on non-IFR helicopters operating between Macao and Hong Kong routeing south of Lantau Island.
- Note 2: Operators should limit their requests for use of these routes to essential operations only due to the close proximity of the Hong Kong International Airport approach/departure routes.
- Note 3: Silvermine is the primary route for helicopters to transit between ATZ, Ma Wan Zone and Lantau Zone.
- Note 4: Helicopters with underslung load are not permitted.
- Note 5: The use of this route will be subject to ATC clearance - traffic at 1 000ft AMSL is not separated from RWY 25 arrivals or RWY 07 departures. Aircraft from Island Zone awaiting ATC clearance to transit the Toll Plaza route may hold to the west of Tsing Yi Island not above 500 ft AMSL, remaining clear of VHR12.
- Note 6: Radio coverage on the western coast of Lantau may be intermittent, pilots should note relevant traffic information prior to entering the West Lantau Corridor.

## 26 Helicopter Departure and Arrival Procedures

### 26.1 DEPARTURE FROM GFS/BAC TO PAK MONG OR SILVERMINE

- 26.1.1 **Kilo East Departure** Subject to ATC approval and when traffic permits, lift off from TWY K in an easterly direction, then turn south between TWY Z3 and the Fire Station to follow the airport coastline until abeam the western roundabout on Chun Wan Road (see chart AD 2-106, Route A).
- 26.1.2 **For departure in other directions** Turn south as soon as practicable after lift off and track along the airport coastline until abeam the western roundabout on Chun Wan Road.



26.1.3 From abeam the western roundabout, helicopters should keep 1000 m south of the runway extended centreline, may track direct to Silvermine or Pak Mong at not above 1500 ft AMSL (see chart AD 2-106, Route B).

26.1.4 During Special VFR operations pilots are required to report passing AFFC (radio c/s 'Freight Centre') to Hong Kong Tower when departing from the airport.

26.1.5 Helicopters departing from sites at the airport that require to cross the south runway, e.g. HAECO maintenance area, shall initially route as directed by ATC.

## 26.2 ARRIVALS FROM PAK MONG OR SILVERMINE TO GFS/BAC

26.2.1 Follow the reciprocal of para 26.1.3 above to AFFC at not above 1500 ft AMSL. From AFFC follow ATC instructions to commence an approach. ATC approval must be obtained before overflying or landing on TWY K.

26.2.2 Helicopters operating to sites on the airport that require to cross the south runway, e.g. Temporary Parking Apron, shall initially comply with para 26.2.1 above then the final approach route will be as directed by ATC.

26.2.3 If holding is required, follow ATC instructions and comply with para 26.3 below.

## 26.3 HELICOPTER HOLDING PROCEDURES

26.3.1 The following holding procedures shall be used by helicopters awaiting clearance for landing at the airport.

| Location       | VFR/SVFR     | Altitude AMSL      | Remarks   |
|----------------|--------------|--------------------|---|
| Tai O          | VFR and SVFR | Not above 1 000 ft | Over water west of Tai O.   |
| Sham Shek      | VFR          | Not above 1 000 ft |   |
| Pak Mong       | VFR and SVFR | Not above 1 000 ft |   |
| Tung Chung Bay | VFR          | 800 ft - 1 000 ft  |   |
| Freight Centre | VFR and SVFR | Not below 800 ft   | Bounded by roundabouts to the NE and W of AFFC building and Lantau coast.<br>Remain 1 000 m south of South Runway and have full length of runway in sight at all times. |

| Location    | VFR/SVFR     | Altitude AMSL    | Remarks  |
|-------------|--------------|------------------|--|
| Cathay City | VFR and SVFR | Not above 800 ft | Secondary hold when weather precludes use of Freight Centre hold.<br>Remain 1 000 m south of south runway.<br>Hold over water between Cathay City and Tung Chung Ferry Pier. |

## 27 Helicopter Runway Crossing Procedures

### 27.1 ROUTES

- 27.1.1 Helicopters shall cross the runways via one of the two Runway Crossing Corridors – Runway 25 Crossing Corridor at the eastern boundary of the airport and Runway 07 Crossing Corridor at the western boundary of the airport (see chart AD2-VHHH-105). Helicopters are not normally permitted to cross over the airport. During parallel runway operations helicopters are not permitted to hold between the runways.
- 27.1.2 Runway 25 Crossing Corridor is a direct track between Holding Point ECHO and Abeam Cathay City, passing over RWY 25L/25R approach lights and east of Sky City.
- 27.1.3 Runway 07 Crossing Corridor is a corridor between Holding Point WHISKEY and Sha Lo Wan, passing over RWY 07L approach lights, west of HAECO hangar and immediately west of RWY 07R threshold. Helicopters overflying the airport should use the eastern part of the corridor and helicopters approaching or departing the airport should use the western part of the corridor.
- 27.1.4 The recommended altitude for the Runway Crossing Corridors is 800 ft AMSL for wake turbulence avoidance. Runway 07 Crossing Corridor is wide enough to permit helicopters approaching or departing the airport to manoeuvre and cross above the glidepath profile of landing traffic.
- 27.1.5 ATC will normally issue a conditional crossing clearance with specific instructions to cross behind landing traffic. Pilots should be aware that there is normally a 5 mile spacing between arrivals. Once the relevant traffic has been visually identified, pilots should adjust their speed and track to ensure the crossing is completed with the minimum of delay after the landing aircraft has passed. Holding between the two runways is not permitted.
- 27.1.6 Because of the extra distance involved when crossing the north runway from the southern holding points, or crossing the south runway from the northern holding points, once a pilot has received a conditional crossing clearance and the relevant landing traffic has been positively identified, the helicopter may depart the holding point and position to cross behind the landing aircraft, but under no circumstances shall it proceed beyond the centreline of the airport until the landing aircraft has passed the applicable Crossing Corridor. (The centreline of the airport is taken as the spine of the Passenger Terminal Building and the north side of the HAECO hangar.)

27.1.7 Pilots unable to comply with these procedures, e.g. when operating with underslung loads, should provide adequate prior notification to ATC to facilitate alternative plans.

## 27.2 HELICOPTER HOLDING PROCEDURES FOR RUNWAY CROSSING

27.2.1 The following holding procedures shall be used by helicopters awaiting a runway crossing:

| Location     | VFR/SVFR     | Altitude AMSL      | Remarks                                       |
|--------------|--------------|--------------------|---|
| WHISKEY      | VFR          | Maximum 1 000 ft   | Remain at least 1 000 m north of north runway |
| ECHO         | VFR          | Maximum 1 000 ft   | Remain at least 1 000 m north of north runway |
| Sha Lo Wan   | VFR          | Not above 1 000 ft | Remain at least 1 000 m south of south runway |
| Cathay City  | VFR          | Not above 800 ft   | Remain at least 1 000 m south of south runway |
|              | SVFR         | Not above 500 ft   |   |
| Tai O        | VFR and SVFR | Not above 1 000 ft |   |
| Pillar Point | VFR and SVFR | Not above 1 000 ft |   |
| Sha Chau     | VFR and SVFR | 500 ft – 1 000 ft  |   |

27.2.2 Helicopter holding patterns are right hand orbits with a speed restriction of not more than 70 KIAS.

27.2.3 Helicopters operating SVFR may be subject to extensive delay in waiting to cross the runways. Therefore runway crossings should be limited to flights of an urgent nature only. Other flights should consider re-routing and crossing the extended runway centre-line via Yam O – Brothers Point route. (When planning a SVFR flight operators should make allowances for possible holding delays and the alternative routeing.)

## 28 Rejoining Procedures for Fixed Wing Aircraft

28.1 Three visual holding areas are established over prominent geographical features in the CTR to assist in the sequencing of VFR flights with other traffic. The holding areas are:

| Location                                  | Altitude AMSL    | Runway in Use | Routeing                   |
|---|------------------|---------------|----------------------------|
| Green Island<br>Left hand hold            | Maximum 2 000 ft | RWY 25        | For flights from the south |
| Soko Island<br>Left hand hold             | Maximum 2 000 ft | RWY 07        | For flights from the south |
| Lung Kwu Chau/ Sha Chau<br>Left hand hold | Maximum 1 500 ft | RWY 07        | For flights from the north |
|   | Maximum 1 000 ft | RWY 25        |                            |

- 28.2 A visual holding pattern is established within the ATZ to assist in the sequencing of VFR flights with other traffic. Details of the holding pattern are:

| Holding Pattern          | Altitude AMSL | Runway in Use |
|--------------------------|---------------|---------------|
| ATZ Hold Left hand hold  | 1000 ft       | RWY25         |
| ATZ Hold Right hand hold |               | RWY 07        |

**29. Procedures for Local Flights in Uncontrolled Airspace Reporting Areas (UCARAs)**

29.1 GENERAL

29.1.1 Special areas have been defined to permit aircraft operations to take place under VFR. The associated procedures have been developed to allow such flying to take place without interference to aircraft operating in accordance with IFR and/or in the Hong Kong Aerodrome Traffic Zone and Control Zone. The six areas are designated as Uncontrolled Airspace Reporting Areas (UCARAs ): Mirs Bay, North Border, New Town, Ninepins, Port Shelter and Tolo.

29.1.2 UCARA airspace is classified as Category G with an additional requirement for two-way radio communication.

29.2 LATERAL LIMITS

29.2.1 The lateral boundaries of the UCARAs are indicated on page AD2-102.

29.3 VERTICAL LIMITS

29.3.1 The vertical limits of the UCARAs are :

- a) New Town, Port Shelter and Ninepins      Surface to 2 000 ft AMSL
- b) Mirs Bay and Tolo                              Surface to 3 000 ft AMSL
- c) North Border                                      Surface to 2 000 ft AMSL \*

Note \* Normally aircraft will be restricted to 1 000 ft AMSL or below. For operations above 1 000 ft prior permission from Hong Kong ATC is required which will be subject to co-ordination with Zhuhai ATC.

29.4 FLIGHT NOTIFICATION

29.4.1 Flight notification shall be submitted to Hong Kong Aerodrome Control in accordance with Regulations for Local Flights in Hong Kong (page AD2-17 para 1.1.4).

29.4.2 Aircraft or helicopters landing at Shek Kong aerodrome or any other site in UCARAs shall report their arrival to 'Hong Kong Information' immediately prior to landing. If no radio contact is made with 'Hong Kong Information' or if outside the notified hours of operation, pilots shall report to Hong Kong Aerodrome Control by telephone (tel no 2910 6822) as soon as possible after landing.

29.4.3 Pilots must note that if no landing report is received within 30 minutes of the estimated time of arrival, alerting action will be initiated by ATC.

## 29.5 COMMUNICATIONS

29.5.1 Pilots shall establish and maintain two-way communication with 'Hong Kong Information' on entering and when operating within UCARAs.

29.5.2 Pilots shall report their position and altitude as follows:

- a) When entering /leaving each UCARA;
- b) Every 15 minutes if no other communication have been made within that period.

29.5.3 When 'Hong Kong Information' is not available, pilots should broadcast their positions on frequency 121.0 MHz at appropriate intervals and when crossing UCARA boundaries, for the information of other aircraft in the area.

29.5.4 Flights in North Border have to be coordinated with Zhuhai ATC. Therefore pilots must advise Hong Kong Information at least 2 minutes prior to entering North Border when operating at 1 000 feet AMSL and below, or give at least 3 minutes notice if operating above 1 000 feet AMSL.

29.5.5 In order to enhance flight safety in the vicinity of the entry/exit routes to/from the Shek Kong Aerodrome Reporting Area (SKARA), pilots are to include in their initial transmission on leaving the SKARA, the name of the entry/exit route, as well as the UCARA they are entering.

## 29.6 RADIO COMMUNICATION FAILURE PROCEDURES

29.6.1 Fixed wing aircraft shall proceed to Shek Kong Aerodrome, carry out a standard joining procedure to the circuit keeping a good look-out whilst making all normal transmissions. Carry out a standard circuit to land, at all times exercising extreme caution with respect to other aircraft in the vicinity. After landing pilots are to taxi clear of the runway and shutdown. Pilots shall contact Hong Kong Aerodrome Control by telephone (tel. no. 2910 6822) as soon as possible after landing.

29.6.2 Helicopters shall land at a suitable helicopter landing site and pilots shall contact Hong Kong Aerodrome Control by telephone as soon as possible after landing.

## 30 Aerobatic Area

30.1 An Aerobatic Area is established within the northern portions of MIRS BAY and TOLO UCARAs and the TMA airspace immediately above them (see chart page AD2-102). The vertical limits of the Aerobatic Area are SFC – 3 500 ft AMSL.

30.2 The Aerobatic Area is available daily from 0900 – 1700 (local time), subject to VMC within the area and the aircraft having a serviceable transponder with Mode C. Aircraft shall remain below 3 000 ft AMSL and request clearance to climb to 3 500 ft AMSL from Hong Kong Information on frequency 121.0 MHz. Pilots are reminded that they are responsible for maintaining their own separation from other traffic operating in the UCARAs.

### 31 Flight Information Service

- 31.1 Hong Kong Flight Information Service provides a flight information service and an alerting service between 0900 local time and sunset, daily, to non-IFR flights operating within the UCARAs. Between sunset and 0859 local time, alerting service only is available. The radio call-sign is 'Hong Kong Information' and the frequency is 121.0 MHz primary and 122.4 MHz secondary.
- 31.2 It is emphasised that the service offered by Hong Kong Flight Information Service is an information service only and collision avoidance is entirely the responsibility of the pilot-in-command. Traffic information will normally be provided to an aircraft only when it reports entering a UCARA sector or makes a periodic 'ops normal' report. Aircraft already operating within a UCARA are expected to maintain their own traffic watch between 'ops normal' reports by monitoring the FIS frequency for the transmissions of other aircraft.
- 31.3 Outside of the hours of operation of Hong Kong Flight Information Service pilots should make 'blind' transmissions on the Hong Kong Information frequency and maintain a particularly good look-out for any deterioration of weather conditions.

### 32 Procedures for Entry and Exit to/from Shek Kong Aerodrome Reporting Area (SKARA)

- 32.1 Prior permission must be obtained from the appropriate military authority for any flight intending to operate within the Shek Kong Aerodrome Reporting Area (SKARA). (Details of the flight procedures applicable within the SKARA will be provided by the military authority.)
- 32.2 Aircraft shall enter or exit the Shek Kong Aerodrome Reporting Area (SKARA) via the following routes:

| Radio Callsign   | Route                            | Co-ordinates (WGS 84) | Co-ordinates (UTM Grid) |
|------------------|----------------------------------|-----------------------|-------------------------|
| Kadoorie Gap     | SKARA to/from UCARA New Town     | 22 26 22N 114 07 23E  | KK 039843               |
| Fire Station Gap | SKARA to/from UCARA New Town     | 22 28 14N 114 06 38E  | KK 027878               |
| Mai Po           | SKARA to/from UCARA North Border | 22 27 41N 114 03 09E  | JK 973868               |
| Pagoda           | SKARA to/from CTR Tuen Mun Zone  | 22 27 48N 114 00 25E  | JK 920872               |
| Kam Tin Gap      | SKARA to/from CTR Tuen Mun Zone  | 22 26 00N 114 02 57E  | JK 963838               |

- 32.3 The SKARA reporting point 'PAGODA' is very close to the North Border boundary, therefore pilots exiting or entering the SKARA at this location should ensure they do not enter the North Border area without prior coordination.

(AD2-63 to AD2-74 reserved)

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