

**STANDARD OPERATING PROCEDURE (SOP)
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SUBJECT: Hong Kong International Airport (VHHH) Standard Operating Procedure

EFFECTIVE DATE: 18 JUN 2020

SCOPE: Outlines standard techniques for VATSIM online ATC within the Hong Kong International Airport (VHHH) aerodrome

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1. PURPOSE

1.1. This Standard Operating Procedure (SOP) sets forth the procedures for all controllers providing aerodrome air traffic control service at Hong Kong International Airport (VHHH) to improve communication, techniques, and to distinguish procedures that are specific to the online environment.

2. ROLES AND RESPONSIBILITIES

2.1. The Office of Primary Responsibility (OPR) for this SOP is the team under the supervision of Manager (Standards and Publications). This SOP shall be maintained, revised, updated or cancelled by the Manager (Standards and Publications). Any suggestions for modification / amendment to this SOP should be sent to the Manager (Standards and Publications) for review.

3. DISTRIBUTION

3.1. This SOP is intended for controllers staffing aerodrome ATC positions at Hong Kong International Airport (VHHH) and other controllers who interface with aerodrome controllers at VHHH.

4. BACKGROUND

4.1. Over time, controllers have found that having aircraft arrive and depart via pre-approved runways provides for a more orderly traffic flow and reduces the need for communication among controllers at VHHH. Due to operational differences between this online environment on VATSIM and that in the real world, it is also necessary to define procedures that are specific to the online environment.

4.2. Prior to reading the remainder of this SOP document, controllers shall have a proficient understanding of the Standard Instrument Departure (SID) system and the airspace structure of Hong Kong FIR. A prerequisite of this SOP is SOP051 document.

5. REQUIREMENTS

5.1. FREQUENCIES

5.1.1. The following frequencies shall be used at all times for Hong Kong International Airport. Frequencies, other than listed below, may not be used. (Refer to AIP AD 2.18)

POSITION	TEXT CALL SIGN	VOICE CALL SIGN	FREQUENCY
Hong Kong Delivery	VHHH_DEL	"Hong Kong Delivery"	129.900
Hong Kong Ground (South)	VHHH_S_GND	"Hong Kong Ground"	122.550
Hong Kong Ground (North)	VHHH_N_GND	"Hong Kong Ground"	121.600
Hong Kong Ground (Midfield)	VHHH_C_GND	"Hong Kong Ground"	121.875
Hong Kong Tower (South)	VHHH_S_TWR	"Hong Kong Tower"	118.400
Hong Kong Tower (North)	VHHH_N_TWR	"Hong Kong Tower"	118.200
Hong Kong Zone Control	VHHH_Z_APP	"Hong Kong Zone"	120.600

(Note: when two sectors are combined, the callsigns marked with red colour shall be used)

5.1.2. Since Kai Tak Ground and Hong Kong North Ground use the same frequency, both stations cannot logon simultaneously. Whichever position logged on first has the right to stay on the network unless an event is going to begin at the other aerodrome, where controllers have the priority to logon.

5.1.3. When any position covering Hong Kong aerodrome is online, the controller may elect to set up **voice Automatic Terminal Information Service (ATIS)** at VHHH airport. In the real-world, there are two separate frequencies for ATIS, arrival ATIS and departure ATIS. However, on VATSIM, only one frequency broadcasting information regarding arrival and departure is needed. The following frequency shall be used:

POSITION	TEXT CALL SIGN	VOICE CALL SIGN	FREQUENCY
Hong Kong Information	VHHH_ATIS	N/A	127.050

5.2. While communicating over voice and broadcasting ATIS, controllers shall always refer to and follow the SOP document HKVACC-SOP-011 "**ATC Coordination**" and other VATSIM regulations governing the broadcast of ATIS.

6. RUNWAY-IN-USE

6.1. There are two runways at VHHH: the **north runway (RWY07L/25R)** and the **south runway (RWY 07R/25L)**.

6.1.1. PREFERENTIAL RUNWAY SYSTEM (DIRECTION OF OPERATIONS)

6.1.1.1. **Runway 07L/R** will be nominated as the runway in use whenever the **tailwind component**, include gust values, is 10kt or less when the runway is dry, or 5kt or less when the runway is not dry.

6.1.1.2. The final decision of direction of operations is always based on real-world operations. Controllers should visit Hong Kong Civil Aviation Department (CAD) Automatic Terminal Information Service (ATIS) website (<https://atis.cad.gov.hk/>) for the latest weather and runway-in-use information to determine runway-in-use. If such website is out of service, the controller shall determine runway-in-use based on wind and METAR information.

6.1.2. PARALLEL RUNWAY OPERATIONS

6.1.2.1. When both runways are available the operating mode is normally segregated operations (one runway for landings, one runway for take-offs). The **north runway (07L/25R)** is the normal **arrival runway** and the **south runway (07R/25L)** is the normal **departure runway**. The south runway is also used for **cargo and business jet arrivals** due to its proximity to the cargo terminals and Business Aviation Centre. Subject to ATC approval in the presence of unusually high traffic volume, aircraft may use the north runway for departure, and passenger aircraft may use the south runway for arrival.

6.2. All IFR arrival aircraft shall by default use **ILS approach** to land on the north runway. Cargo and business jet arrival aircraft shall use ILS approach to land on the south runway if approved by ATC. Other approach methods may be used with ATC approval if the pilot is unable to perform ILS approach.

6.3. See Section 7 of this SOP document for noise abatement procedures.

7. NOISE ABATEMENT PROCEDURES

- 7.1. As Per Hong Kong AIP AD 2.21 and AD 2.22, **Noise Abatement Procedures** are adopted on VATSIM for Hong Kong International Airport (VHHH). Controllers shall be familiar with these procedures controlling during noise abatement hours **(1501 to 2300 UTC)**.
- 7.2. During noise abatement hours, controllers shall refer to CAD ATIS website for the current runway-in-use. Should the website be unavailable, controller shall refer to Hong Kong AIP [AD 2.21 Section 2.3](#) for runway selection method and AIP [Supplement A05/20](#) for runway maintenance information.
- 7.3. [Radius-to-Fix SID procedures \(ATENA1E/F, RASSE1E/1F, SKATE1E/1F, TITAN1E/1F or VENGO1E/1F\)](#) are issued as the default procedures to all aircraft (applicable only to RWY 07L/07R).
- 7.4. Pilots who file an incorrect SID during noise abatement hours shall be requested to expect the appropriate noise abatement SID (applicable only to RWY 07L/07R).

8. HONG KONG DELIVERY (VHHH_DEL)

8.1. AREA OF RESPONSIBILITY

8.1.1. Hong Kong Delivery does not have its sector. All ground movements are handled by Hong Kong Ground (GND)

8.2. FLIGHT PLAN INSPECTION

8.2.1. Hong Kong Delivery shall examine each field of the flight plan submitted by the pilot and ensure that the **route and altitude** is sound and appropriate prior to issuing clearance. If an incorrect route or altitude is filed, the delivery controller shall remind the pilot and provide a correct alternative. If the pilot accepts the alternative, the DEL controller shall amend the flight plan accordingly. In the case when an amendment to a submitted flight plan is necessary, no Pre-departure clearance (PDC) shall be issued (Refer to SOP007 for details in PDC).

8.2.2. DEL controller may use Appendix A of this document for SID route reference and Appendix B for squawk code reference.

8.2.3. DEL controller should also check for the **runway-in-use** (this is determined by TWR and announced on ATIS), **noise-abatement procedures** and **runway closure**. If TWR is not online, DEL controller can & shall only recommend pilots to depart from a specific runway under consideration of **Section 6A** (-> current tail wind component, METAR and TAF). However, pilots have the final say whenever TWR is not online.

8.2.4. Normally, it is the **responsibility of the clearance delivery controller to issue SID** to departing IFR aircraft. In such situation, the route in the flight plan submitted by the pilot will begin with the transition route (e.g. V2, V3, V4 etc.) except for departure to BEKOL. Clearance delivery controllers shall add the cleared SID into pilot's flight plan after enroute clearance being given. It is not necessary to add departure runway to the route when a SID is used as all RNAV SID are specific to the departure runway. **Ensure that airfields are not included in the route.**

(for example: **OCEAN2A V3 ENVAR....** if cleared OCEAN2A departure)

8.2.5. IFR departing aircraft unable to follow a SID may be cleared for **radar vectors departure** subject to the approval of the terminal airspace controller (i.e. APP/DEP). If this is the case, "**RDVR**" and the **departure runway** shall be added to the flight plan to indicate that the aircraft needs radar vectors for departure.

(for example: **+RDVR/07R.** if cleared radar vectors departure via RWY 07R)

8.2.6. IFR departing aircraft following SID will have an initial climb altitude of **5000 feet**. To reflect this altitude, delivery controller shall set **the temporary altitude** of IFR departing aircraft to **5000 feet** prior to issuing clearance.

8.2.7. To check the cruising altitude of the flight plan, the delivery controller shall first identify the departure route under which the aircraft will fly within Hong Kong FIR. Generally, with the exception of aircraft departing via BEKOL to Guangzhou FIR (using Chinese RVSM metric altitudes), delivery controller shall assign an altitude according to the ODD-EVEN rule with reference to the altitude assignment within **Appendix A**. The ODD-EVEN rule within a RVSM airspace, simply put it, assigns altitude of flight according to the magnetic track of the aircraft.

SFC to 41000 ft (FL410)	
Magnetic Track	Altitude (Feet)
0 ⁰ -179 ⁰	Odd (100, 300, ..., 39000, 41000)
180 ⁰ -359 ⁰	Even (200, 400, ..., 38000, 40000)

41000 ft (FL410) and above	
Magnetic Track	Altitude (Feet)
0 ⁰ -179 ⁰	FL410, FL450, FL490 etc.
180 ⁰ -359 ⁰	FL430, FL470 etc.

- 8.2.8. Assignment of cruising altitude for aircraft departing via BEKOL shall base upon the metric RVSM system in China. Controllers may refer to the VATPRC division website for the Chinese RVSM Flight Level Allocation Scheme (<http://vatprc.net/index.php/en-chinese-rvsm>).
- 8.2.9. DEL shall check if the voice flag is set remark section and add or correct in pilots' flight plans:
/v for voice
/r for receive-voice
/t for text-only
- 8.2.10. **VHHH_DEL does not issue clearance to VFR departing aircraft.** VFR departing aircraft can contact Hong Kong Ground directly for taxi clearance.
- 8.2.11. In the real world, an IFR flight plan contains a variety of information. However, some of this information may not necessarily pertain to the work of virtual ATC on VATSIM. For VRC users, all fields within the flight plan window, except for alternative airfield, are considered essential. For Euroscope users, certain fields in the flight plan window are considered optional for the purpose of issuing IFR clearance. These fields are highlighted in yellow in Figure 8.1.

Flight plan setting dialog

Callsign: CPA935 IFR VFR AP data: H/B772/L OK
 Origin: VHHH Destination: RPLL Alternate: RPLB Cancel
 TAS: 480 Altitude: 39000 Squawk: 5301 Set squawk
 Dep. EST: 0 Z Actual: 0 Z Temp alt: Set temp alt
 Enroute: 0 H 0 M Fuel: 0 H 0 M RFL: Set RFL
 Route: OCEAN V4 NOMAN A461 AVMUP W16 OLIVA

Waypoint	Airway	Comment	Waypoint	ETA
VHHH	OCEAN2B	ok	PRAWN	15:06
PRAWN	OCEAN2B	ok	RUMSY	15:09
RUMSY	OCEAN2B	ok	TUNNA	15:12
TUNNA	OCEAN2B	ok	TROUT	15:14
TROUT	OCEAN2B	ok	OCEAN	15:18
OCEAN	V4	ok	SKATE	15:21
SKATE	V4	ok	GRUPA	15:28
GRUPA	V4	ok	NOMAN	15:36
NOMAN	A461	ok	MUMOT	15:46
MUMOT	A461	ok	AVMUP	15:57
AVMUP	W16	ok	TAREM	16:16
TAREM	W16	ok	BIGBI	16:17
BIGBI	W16	ok	TADEL	16:18
TADEL	W16	ok	CIA	16:20
CIA	W16	ok	OLIVA	16:23

Remarks: /

Figure 8.1: A sample Euroscope flight plan window. The fields highlighted in yellow are considered optional for issuing clearance.

8.3. EXAMPLES OF FLIGHT PLAN INSPECTION

8.3.1. The following flight plan is submitted by a pilot.

Callsign: GIA863 A/C Type: T/A332/F Flight Rules: IFR Amend Plan
 Depart: VHHH Arrive: WIII Alternate: WAHH Refresh Plan
 Cruise Alt: 38000 Scratchpad: Squawk: 0000 Assign Squawk
 Route: VHHH SID OCEAN V4 SKATE V5 SABNO A583 AKOTA M754 BRU R.223 BUTAX P648 AMB
 Remarks: /t/ XSquawkBox

One may easily notice that the beginning of the route does not match the requirement in Section 8.2. It shall begin with a SID rather than either the departure airfield (VHHH in this case) or the text “SID”. Furthermore, the requested cruising altitude FL380 is not an approved altitude according to Appendix A (see the field V5.SABNO). Therefore, in this case, the clearance delivery controller shall ask whether the pilot can accept the closest approved altitude, which is FL370.

VHHH_DEL: INDONESIA 863, UNABLE CRUISING ALTITUDE FL380. ABLE FL370?

GIA863: AFFIRM, INDONESIA 863.

VHHH_DEL: INDONESIA 863, EXPECT FL370.

After confirming the altitude change with the pilot, amend the flight plan to reflect the new cruising altitude FL370. At this point, SID may be assigned, and transponder code may be issued. Referring to Appendix A for SID and Appendix B for squawk code, the flight plan shall be modified to something like this:

Callsign: GIA863	A/C Type: T/A332/F	Flight Rules: IFR	Amend Plan
Depart: VHHH	Arrive: WIII	Alternate: WAHH	Refresh Plan
Cruise Alt: 37000	Scratchpad:	Squawk: 5301	Assign Squawk
Route: OCEAN2A OCEAN V4 SKATE V5 SABNO A583 AKOTA M754 BRU R223 BUTAX P648 AMB	Plot		
Remarks: /t/ XSquawkBox			

(Tip: to further simplify the transition routes, one may change it to OCEAN V5 SABNO, which is identical to OCEAN V4 SKATE V5 SABNO. This change is not mandatory, however.)

Now, departure clearance to this aircraft is ready to be issued. In this case, no PDC shall be issued as it requires necessary amendments.

8.3.2. The following flight plan is submitted by a pilot.

Callsign: CPA751	A/C Type: B77W	Flight Rules: IFR	Amend Plan
Depart: VHHH	Arrive: VTBS	Alternate: NONE	Refresh Plan
Cruise Alt: 38000	Scratchpad:	Squawk: 0000	Assign Squawk
Route: PECAN V12 LEMON V11 IDOSI P901 IKELA A1 UBL W1 KRT DCT MOCHI	Plot		
Remarks: /v/			

One may notice that the alternate airfield in this case reads "NONE". Although it is required to file an alternate airfield in the real world, on VATSIM this is not necessary (unless a diversion situation is simulated). With the first waypoint PECAN and the transition route V11 IDOSI already in the flight plan, one can easily check that the cruising altitude FL380 is acceptable. It appears that this flight plan is ready to be issued a SID and a squawk code. The amended flight plan should look something like this:

Callsign: CPA751	A/C Type: B77W	Flight Rules: IFR	Amend Plan
Depart: VHHH	Arrive: VTBS	Alternate: NONE	Refresh Plan
Cruise Alt: 38000	Scratchpad:	Squawk: 5301	Assign Squawk
Route: PECAN1A PECAN V12 LEMON V11 IDOSI P901 IKELA A1 UBL W1 KRT DCT MOCHI			
Plot			
Remarks: /v/			

Departure clearance or PDC is now ready to be issued. If pre-departure clearance is in use, the controller shall first set the initial climb altitude (5000 feet) as the temporarily altitude on the radar client and then issue the PDC (see SOP007 for details).

8.3.3. Last but not least, a flight plan for a very popular route is submitted.

Callsign: CPA401	A/C Type: H/A333/Q	Flight Rules: IFR	Amend Plan
Depart: VHHH	Arrive: RCTP	Alternate: RCSS	Refresh Plan
Cruise Alt: 35000	Scratchpad:	Squawk: 0000	Assign Squawk
Route: VHHH SID OCEAN V2 ELATO A1 MKG			
Plot			
Remarks: /v/			

There are two necessary amendments:

- (a) "VHHH SID" shall not be part of the route, and;
- (b) Referring to the field "V2 ELATO", the requested altitude FL350 is not available for the route.

In this case, there are two ways to correct (b):

- (i) As the highest available altitude for V2.ELATO is FL270, the clearance delivery controller shall ask the pilot if he/she is willing to accept an altitude change to FL270.
- (ii) If the pilot is unable to accept FL270, an alternative amendment is to ask the pilot if he/she can accept a route change to fly via V3 ENVAR (which is a RNAV route, by the way). The route is: OCEAN V3 ENVAR M750 TONGA.

VHHH_DEL: CATHAY 401, UNABLE CRUISING ALTITUDE FL270 FOR V2 TRANSITION DUE RESTRICTION. EITHER EXPECT FL270 OR ROUTE CHANGE TO V3 TRANSITION. ADVISE.

CPA401: UNABLE FL270, REQUEST ROUTE CHANGE, CATHAY 401.

VHHH_DEL: ROUTE CHANGE TO OCEAN2A DEPARTURE, V3 TRANSTION, THEN ENVAR. AIRWAY M750. THEN TONGA.

CPA401: ROUTE CHANGE TO OCEAN2A DEPARTURE, V3 TRANSTION, THEN ENVAR. AIRWAY M750. THEN TONGA, CATHAY 401.

The next thing is to modify the route of the flight plan. For V3.ENVAR, FL350 is an acceptable altitude, so that can be left unchanged.

Callsign: CPA401	A/C Type: H/A333/Q	Flight Rules: IFR	Amend Plan
Depart: VHHH	Arrive: RCTP	Alternate: RCSS	Refresh Plan
Cruise Alt: 35000	Scratchpad:	Squawk: 5201	Assign Squawk
Route: OCEAN2A V3 ENVAR M750 TONGA			
Plot			
Remarks:			

Departure clearance is now ready to be issued. In this case, no PDC shall be issued as it requires necessary amendments.

8.4. IFR CLEARANCE FORMAT

- 8.4.1. The format of the IFR clearance issued by VHHH_DEL shall follow the rules set forth by ICAO Doc 4444 Section 6.3.2.3.
- 8.4.2. As the initial altitude for all SID at VHHH is included as part of the SID (consistently 5000 feet), it is not necessary to include initial climb altitude or the departure runway in the clearance if the aircraft is cleared via a SID (see ICAO Doc 4444 6.3.2.3.d).
- 8.4.3. When radar vectors departure is used, the DEL controller shall specify “**radar vectors departure**”, the **departure runway** and the assigned **initial climb altitude** (usually 5000 feet, check with DEP controller) in the IFR clearance.
- 8.4.4. It is mandatory that VHHH_DEL ensures that pilot have received the latest **ATIS**. If pilots do not mention the latest or a wrong ATIS letter, VHHH_DEL shall ask pilots to (re-)check the ATIS. If ATIS is not available, e.g. when TWR is not online, VHHH_DEL shall state the latest QNH and recommended departure runway, for example:

*“CPA401, cleared to Taipei, flight plan route. OCEAN 2 Alfa departure, runway 07R. Squawk 5301. **Information Alpha**”*

8.5. PHRASEOLOGY

G: **CLEARED / PROCEED** *TO* (clearance limit) **FLIGHT PLAN ROUTE** (or description of route). (Details of route to be followed / instructions) *CLIMB (level)* ^RUNWAY XXX^ **SQUAWK** (four figures) *(instructions)*

Example 1: Cathay 401, cleared to destination, flight plan route. OCEAN 2 Alfa departure. Squawk 5301.

Example 2: Cathay 401, cleared to Taipei, flight plan route. Radar vectors departure, runway 07R. Initial climb 5000 feet. Squawk 5301.

General information:

- (1) The parts of the phraseology printed bold shall be used.
- (2) Parts of the phraseology marked by asterisks (*) shall be used additionally, as far as necessary.
- (3) Parts of the phraseology divided by diagonals (/) shall be used alternatively, as far as necessary.
- (4) Parts of the phraseology marked by ^ (i.e. departure runway) is optional when an aircraft is cleared via a SID
- (5) Parts of the phraseology marked by brackets shall be completed by the resp. statements.

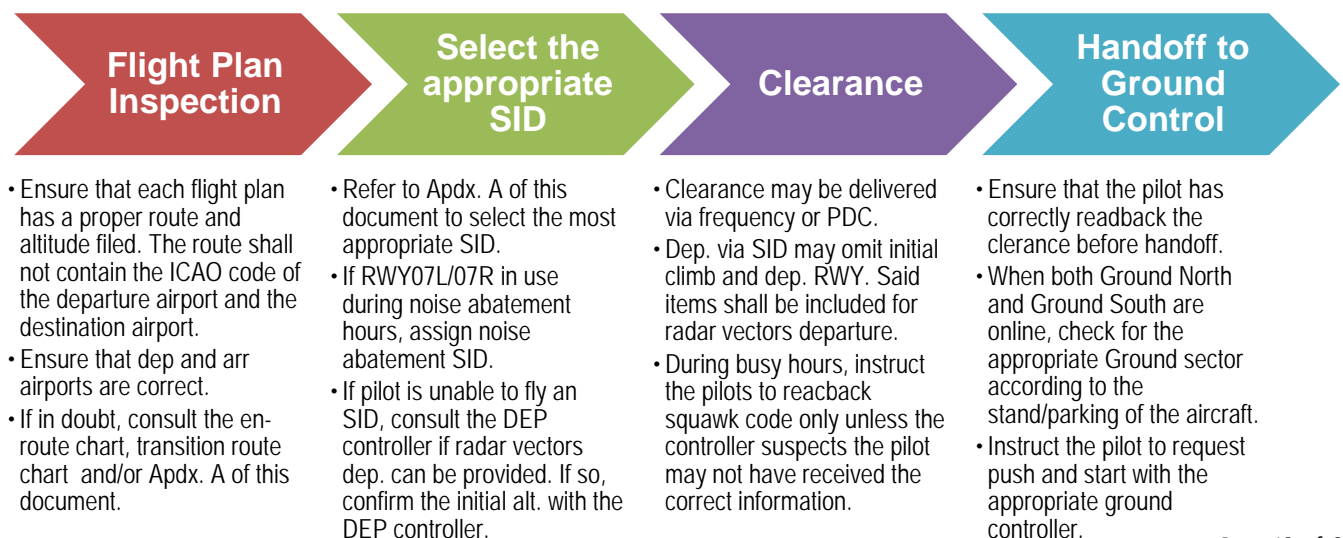
8.6. PRE-DEPARTURE CLEARANCE

8.6.1. In lieu of issuing clearance on Delivery frequency in the conventional manner, clearance delivery controller now has the option of issuing pre-departure clearance (PDC) via private text message. This reduces the communication needed over the frequency and can speed up the clearance delivery process. Clearance delivery controller shall refer to **SOP007** document for detailed procedures of issuing PDC.

8.7. RADAR TRACKING

8.7.1. VHHH_DEL controller shall not use radar tracking (F3 and F4 functions on the keyboard) at all times.

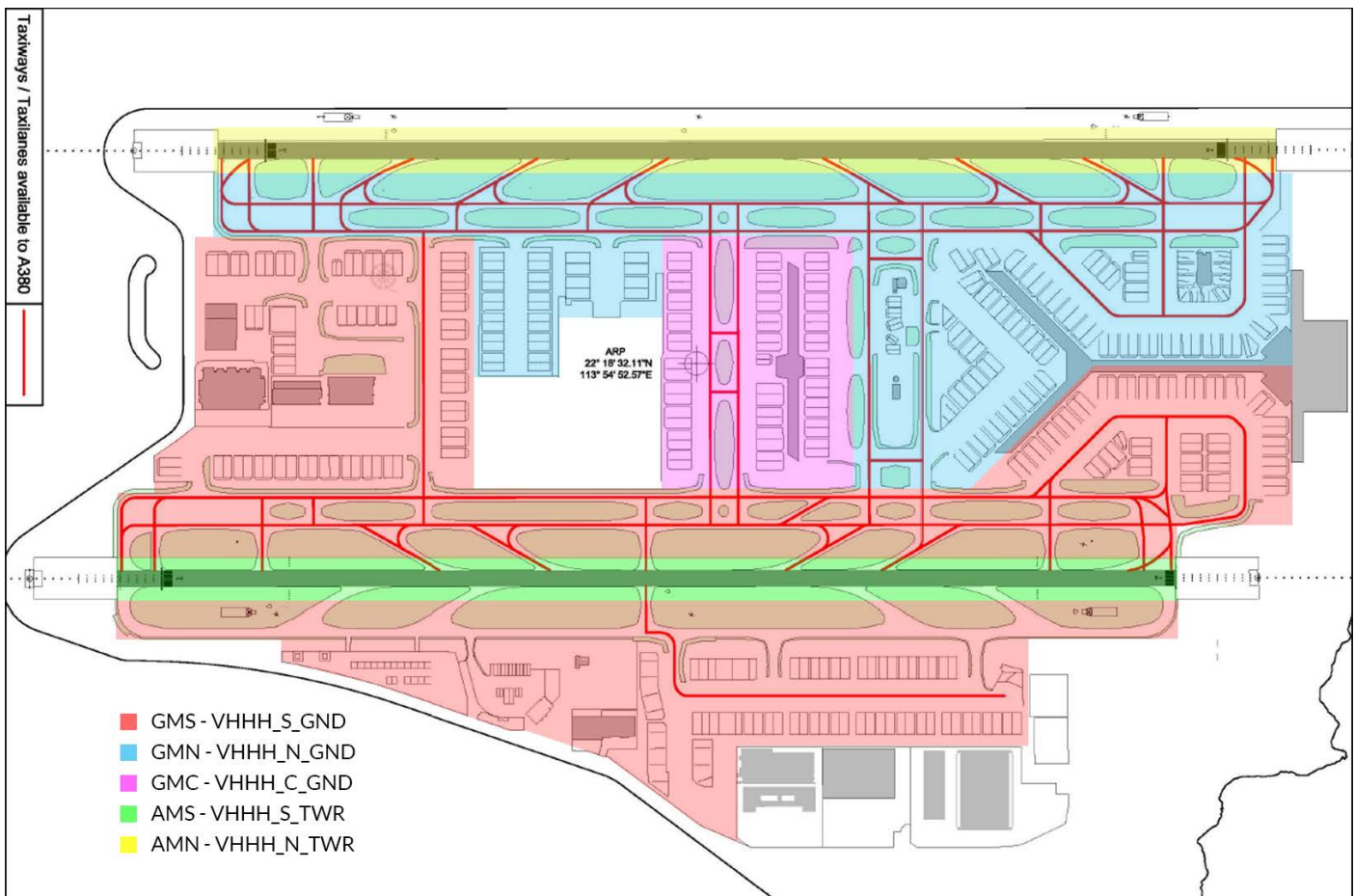
Summary of Work Procedures of DEL Controllers



9. HONG KONG GROUND (GND)

9.1. AREA OF RESPONSIBILITY

- 9.1.1. Hong Kong Ground (VHHH_N_GND, VHHH_S_GND & VHHH_C_GND) owns all ground movement areas of the airport, including all taxiways and *inactive or closed* runways. Ground control does not own any active runway, and may not taxi aircraft across an active runway without prior approval from the controller responsible for the Hong Kong Tower position.
- 9.1.2. Ground North (VHHH_N_GND) controls the ground movement areas north of the control tower; while Ground South (VHHH_S_GND) controls the ground movement areas south of the control tower. When there is only one ground controller present, such controller shall control both sectors and use the preferred frequency (122.550) and text call sign (VHHH_S_GND).
- 9.1.3. Pilots shall contact Hong Kong Ground on frequency 122.55 except when notified it is sectorised, in which case pilots shall contact: (a) Hong Kong Ground (North) for North and West Aprons on frequency 121.6 (b) Hong Kong Ground (South) for South, Cargo and Business Aviation Aprons on frequency 122.55 (c) Hong Kong Ground (Midfield) for Middle Concourse and adjacent apron on frequency 121.875.



9.2. PREPARATIONS

- 9.2.1. Ground controller shall ensure that the current weather condition meets **Visual Meteorological Condition (VMC)** before issuing taxi clearance for VFR aircraft
- Ground visibility more than 5000 meters
 - Ceiling (BKN and OVC clouds) not lower than 1500 feet AGL
- 9.2.2. The preferred **departure runway** is the **south runway (RWY 07R/25L)**. Ground control should issue taxi clearance to the appropriate departure runway-in-use as determined by TWR and announced on ATIS. If TWR is not available, the controller responsible for Hong Kong Tower position shall determine the departure runway in use based on weather condition. If Hong Kong Tower ATC service is not available, the ground controller shall determine the runway-in-use following the method Section 6A of this SOP document. The HKO ATIS website can be used as reference.
- 9.2.3. Ground controller shall be familiar with the **push back colour procedures** within Hong Kong **AIP AD2.99A to AD2.99D**. **Ground controllers shall use the colour-coded procedures when issuing push back and start up clearance.** Although memorization is not required, ground controller shall also be familiar with the parking/gate number arrangement according to the aerodrome charts.
- 9.2.4. The ground controller shall provide the current QNH to the pilot when giving taxi clearance to the runway, unless it has been confirmed that the pilot has received the latest ATIS information. If the ATIS information has changed between the time the aircraft received its departure clearance and the time the aircraft is issued push back clearance, the ground controller shall advise the pilot that new ATIS information is available.
- 9.2.5. For arrival traffic, **the ground controller shall ask the pilot if a specific parking or gate is requested.** If the pilot has no parking or gate preference, the ground controller shall assign a gate or parking based on the nature of the flight. (e.g. passenger aircraft should go to the gate, cargo aircraft should go to the cargo terminal, Government Flying Service aircraft should go to the GFS hangar)
- 9.2.6. There are two holding points at the end of each runway. When Hong Kong Tower ATC service is available and the airport is busy, Hong Kong Ground shall coordinate with the controller responsible for TWR service to assign aircraft into both holding points.
- 9.2.7. For helicopters parked anywhere south of the south runway, they should be instructed to taxi to **TWY K for departure**. Once reaching taxiway K, they shall be handed off to TWR controller.

9.3. PUSH BACK AND START UP

- 9.3.1. Prior to issuing push back and start up clearance, ground controller shall ensure that no other aircraft is in the immediate vicinity of that aircraft, and that such aircraft may not interfere with other aircraft taxiing on the taxiway after pushing back. **When a high volume of traffic is present at the aerodrome or within the airspace, it might be necessary for the ground controller to hold push back and start up activities for a specific amount of time to avoid over-crowding the manoeuvring area, subject to the coordination with other controllers on duty.** If holding is required, the ground controller shall use the

following phraseology to instruct the aircraft to hold at the gate or parking.
(Reference Document: ICAO Doc 9432 4th Edition, Section 4.3)

Phraseology:

G: (Callsign) **STANDBY. EXPECT** ____ **MINUTE(S) DELAY DUE** _____.

Example 1: BHHN, STANDBY. EXPECT ONE MINUTE DELAY DUE BOEING 777 TAXIING BEHIND.

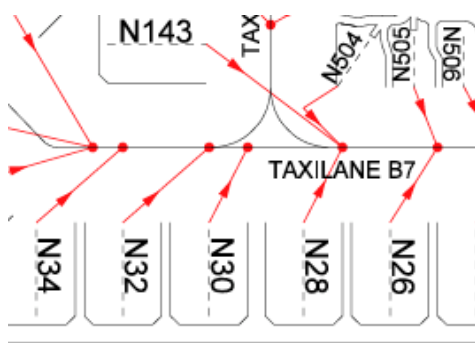
Example 2: BHHN, STANDBY. EXPECT THREE MINUTE DELAY DUE AIRBUS 330 ON YOUR RIGHT PUSHING BACK.

G: (Callsign) **STANDBY. EXPECT PUSH BACK AND START UP AT** ____ (TIME) ____ **DUE** _____.

Example 3: OASIS 101, STANDBY. EXPECT PUSH BACK AND START UP AT 1530 ZULU DUE FLOW CONTROL IN TERMINAL AIRSPACE.

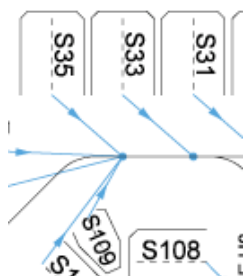
9.3.2. Once confirmed there is no potential interference, the ground controller shall refer to the aircraft pushback procedure **AD2.99A** to **AD2.99D** for the best and most logical pushback direction.

9.3.2.1. Example 1: An aircraft is parked at gate N28 requesting push back clearance to the south runway (RWY07R/25L). The best way is to have the aircraft facing west after pushing back. Therefore, in this case **RED** shall be used.



(Source: Hong Kong AIP AD2-99A)

9.3.2.2. Example 2: An aircraft is parked at gate S33 requesting push back clearance to the RWY07R. The best way is to have the aircraft facing west after pushing back. Therefore, in this case **BLUE** shall be used.



(Source: Hong Kong AIP AD2-99B)

9.3.3. The following phraseology shall be used for push back and start up clearance:

Phraseology:

G: (Callsign) **PUSH AND START APPROVED. PUSH BACK COLOUR** _____.

Example 1: CATHAY 401, PUSH AND START APPROVED. PUSH BACK COLOUR RED.

- 9.3.4. In case pilots are unfamiliar with the push back colour system, the ground controller may refer the pilot to the diagrams mentioned above, which are available on the Hong Kong AIP website. Alternatively, ground controller may remind the pilot of the direction of pushback **after** the push back colour is advised.

9.4. TAXI CLEARANCE

(Reference Document: ICAO Doc 9432 4th Edition, Section 4.4)

- 9.4.1. When issuing taxi clearance to aircraft, the ground controller shall consider any potential conflict that may occur. When needed, the controller shall instruct the aircraft to hold short certain taxiway(s).
- 9.4.2. When needed, aircraft may be instructed to follow other aircraft and/or give way to other aircraft.
- 9.4.3. Ground controller shall ensure that the transponder of all aircraft taxiing on active taxiways is on **squawk normal** (i.e. Mode Charlie) per AIP Hong Kong.

Phraseology:

G: (Callsign) **TAXI VIA TAXIWAY** (taxiway sequence) **TO** (Destination). (Additional Information)

*Example 1: BHHN, TAXI VIA TAXIWAY BRAVO SEVEN, BRAVO, WHISKEY, HOTEL TO HOLDING POINT JULIET ONE RUNWAY ZERO SEVEN RIGHT. *QNH ONE-ZERO-ONE-SEVEN* (* only add QNH if it changes or if ATIS has not been set up yet)*

Example 2: HELI 1, TAXI VIA TAXIWAY ZULU TWO, KILO, POSITION ON KILO. EXPECT KILO WEST DEPARTURE.

G: (Callsign) **TAXI VIA TAXIWAY** (taxiway sequence) **TO** (Destination). **BEHIND** (Aircraft Type) (Direction)

Example: BHHN, TAXI VIA TAXIWAY BRAVO SEVEN, BRAVO, WHISKEY, HOTEL TO HOLDING POINT JULIET ONE RUNWAY ZERO SEVEN RIGHT BEHIND AIRBUS A320 COMING FROM YOUR LEFT.

G: (Callsign) **TAXI VIA TAXIWAY** (taxiway sequence) **TO** (Destination). **GIVE WAY TO** (Aircraft Type) (Direction).

Example: BHHN, TAXI VIA TAXIWAY BRAVO SEVEN, BRAVO, WHISKEY, HOTEL TO HOLDING POINT JULIET ONE RUNWAY ZERO SEVEN RIGHT GIVE WAY TO AIRBUS A320 PASSING LEFT TO RIGHT.

G: (Callsign) **HOLD SHORT** (taxiway/runway).

Example 1: BHHN, HOLD SHORT TAXIWAY H.

Example 2: BHHN, HOLD SHORT RUNWAY 07 RIGHT.

... CROSS INACTIVE RUNWAY... (runway)

Example: ... CROSS INACTIVE RUNWAY 07R...

9.5. CROSSING THE SOUTH RUNWAY

9.5.1. Occasionally, it may be necessary for aircraft within the aerodrome to cross the south runway when the south runway is active. To prevent runway incursion, **all aircraft needing to cross the south runway (when the runway is active) is required to contact Tower South on 118.400 for authorization to cross the runway.**

9.5.2. It is required that aircraft crosses the south runway via the following pairs of taxiways:

J1-K1, J6-K4, J11-K7

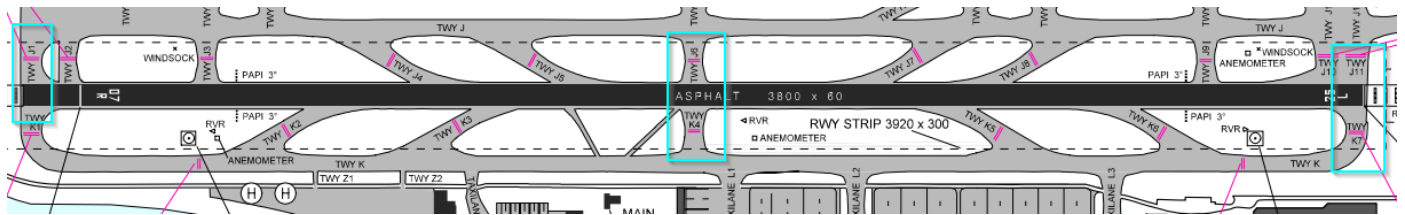


Figure 9.2: Locations for crossing the south runway. (Source: AIP Hong Kong AD2.80A)

9.5.3. When the aircraft approaches the intersecting taxiway, Ground controller shall instruct the aircraft to contact Tower South on 118.4 for authorization. Until such authorization is given, aircraft shall hold short of the runway at the holding point on the intersecting taxiway indicated on the aerodrome chart. Once the aircraft has crossed the runway and has COMPLETELY vacated the runway, Tower South controller shall instruct the aircraft to taxi onto the closest taxiway parallel to the south runway and contact the ground controller.

9.6. HANDOFF TO TOWER

9.6.1. Ground controller may handoff aircraft taxiing to active runways for departure as they approach the designated holding point. It is not necessary for the ground controller to wait until the aircraft reaching the designated holding point to perform the handoff. During high volume of departure traffic, ground controllers shall coordinate with tower controllers for a specific handoff point (e.g. after passing J* holding point for RWY 07R departure) to improve the control of flow. This also allows VFR/SVFR departure traffic to receive VFR clearance from TWR and be instructed to hold at a holding point in high traffic volume.

Phraseology:

GND: (Callsign) **HOLD SHORT** (Runway designator) **CONTACT TOWER ON 118.40.**

TWR (Callsign) **CROSS RUNWAY** (Runway designator).

After crossing the runway:

TWR: (Callsign) **TAXI VIA** (the nearest taxiway parallel to the runway). **CONTACT GROUND ON 122.55.**

9.7. FROM THE RUNWAY

9.7.1. Once an aircraft has landed, or if a departure aircraft has aborted takeoff, the TWR controller shall instruct such aircraft to:

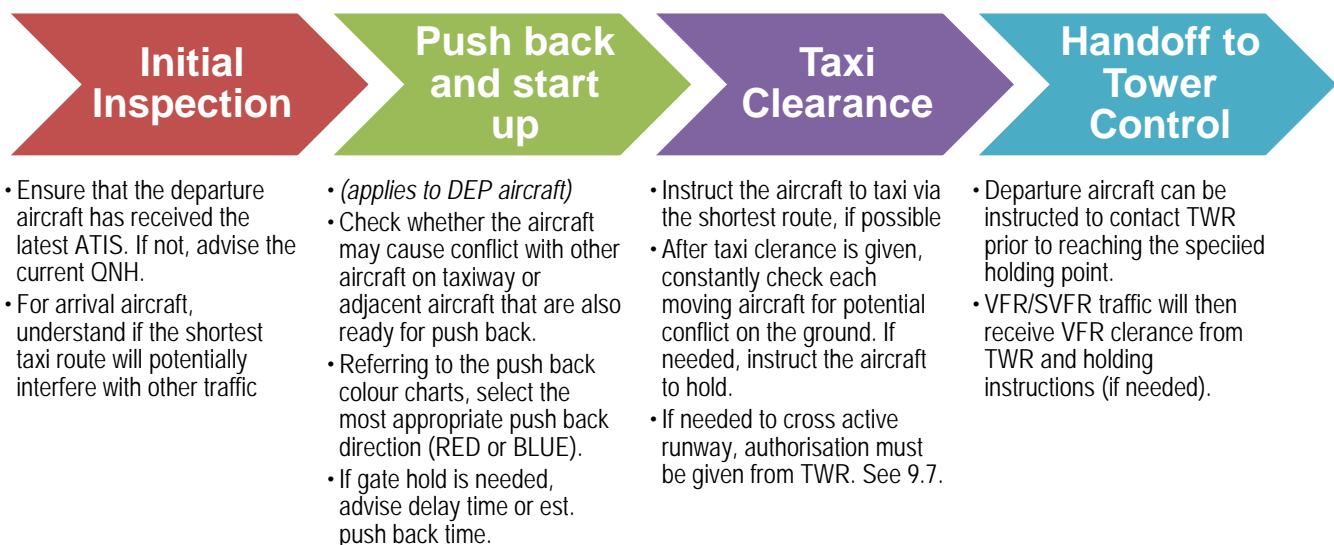
- (a). Taxi onto the nearest taxiway parallel to the runway-in-use
- (b). Contact the appropriate ground controller according to Ground control sectors

9.7.2. Once such aircraft has contacted the Ground controller, the controller shall instruct the aircraft the aircraft to taxi to the destination (e.g. gate, cargo ramp, BAC or a runway-in-use for aircraft aborted takeoff).

9.8. RADAR TRACKING

9.8.1. VHHH_S_GND, VHHH_N_GND and VHHH_C_GND shall not use radar tracking (F3 and F4 functions on the keyboard at all times)

Summary of Work Procedures of GND Controllers



10. HONG KONG TOWER (TWR)

10.1. AIRSPACE

10.1.1. Hong Kong Tower airspace is divided into two sectors: **Hong Kong Tower North (VHHH_N_TWR)** and **Hong Kong Tower South (VHHH_S_TWR)**. VHHH_N_TWR is responsible for the operation of the north runway (RWY07L/25R) and VHHH_S_TWR is responsible for the operation of the south runway (RWY07R/25L). When there is only one tower controller present, such controller shall control both sectors and use the preferred frequency (**118.400**) and text call sign (**VHHH_S_TWR**).

10.1.2. Hong Kong Tower is responsible for the **Category C airspace within Aerodrome Traffic Zone (ATZ) (SFC to 2000 feet)**, per Hong Kong AIP AD 2.17. Hong Kong Tower may provide radar control service to VFR flights within ATZ. Aircraft outside of ATZ shall be controlled by Hong Kong Zone Control (VHHH_Z_APP). Refer to chart AD 2-102 for details.

10.1.3. Due to radar coverage environment extending up to 9000 feet, controllers online as either VHHH_N_TWR or VHHH_S_TWR may not extend the coverage to Hong Kong Zone Control (VHHH_Z_APP) if the Zone Control position is offline. Such coverage may be provided by an APP/DEP/CTR controller only (refer to AIP AD 2.17).

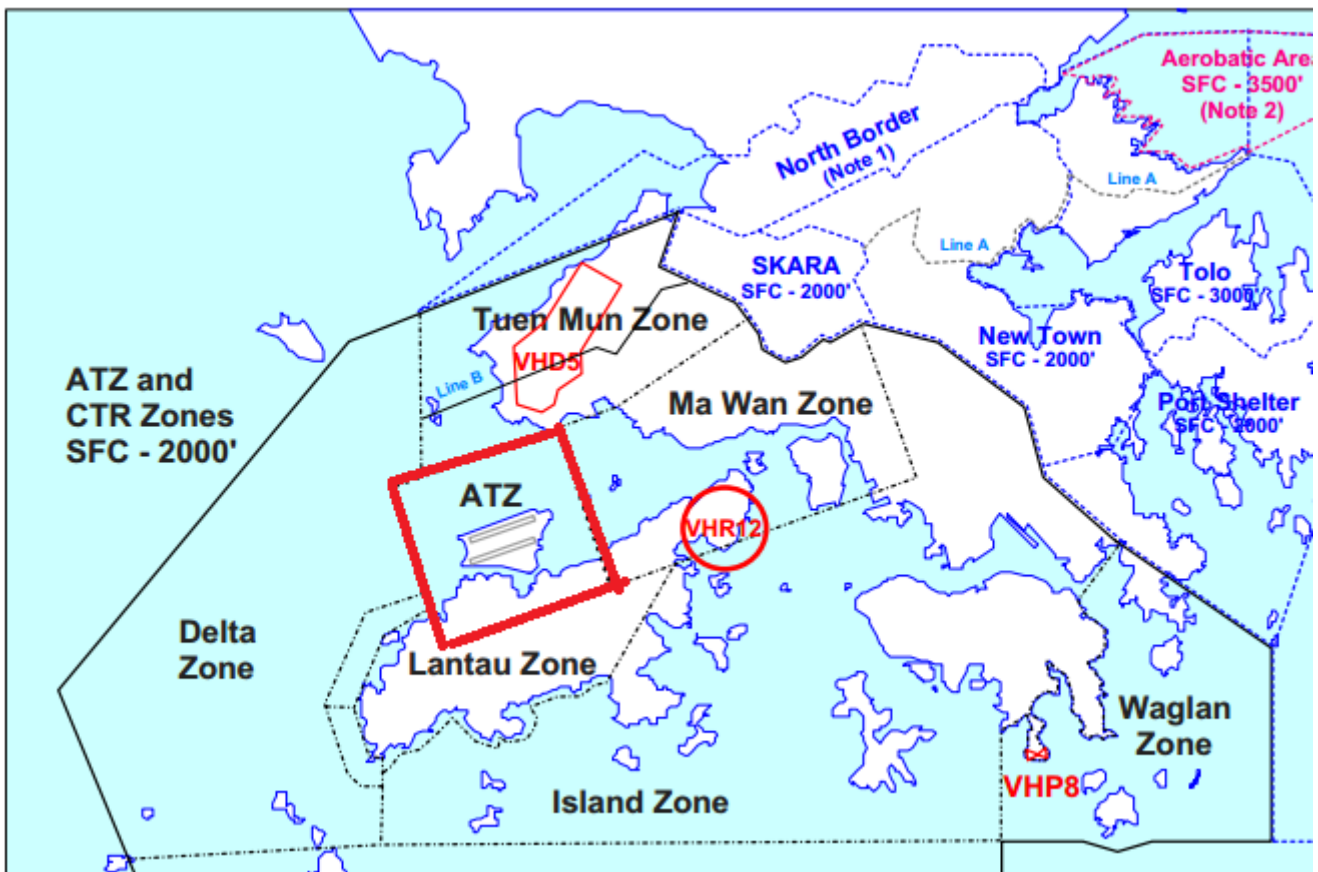


Figure 10.1: Location of VHHH ATZ in relations to other control zones. (Picture source: Hong Kong AIP AD2-102)

10.2. SPECIAL INSTRUCTIONS FOR VFR AND SVFR TRAFFIC

10.2.1. VFR and SVFR departing aircraft shall file a valid flight plan with a valid route prior to requesting for taxi clearance to the active runway. A valid route shall contain all CTR zones and entry/exit routes through the aircraft will fly after departure. A detailed discussion of this can be found in the SOP006 document. The only exception to providing a valid route is when an aircraft remains in circuit within the ATZ. For VFR traffic, Hong Kong Tower shall ensure that the current weather meets VFR minima prior to issuing clearance.

10.2.2. Hong Kong Tower shall **clear VFR and SVFR departing aircraft into the ATZ and assign an SSR transponder code** prior to granting takeoff clearance. For example, “*cleared VFR in ATZ at or below 2000 feet, squawk 5261.*” Controllers shall be aware of that this is **separate from the takeoff clearance**. It has been observed to be a common mistake made by TWR controllers in the past.

10.2.3. For aircraft entering the ATZ from CTR zones, the TWR controller shall provide essential information about runways-in-use and current local air pressure on initial call.

Phraseology:

G: **ENTER CONTROL ZONE**, *SPECIAL VFR* VIA (route) *(altitude)* **RUNWAY** (designator) **QNH** (figures) *(instructions)*

Example: BHHN, enter ATZ (Aerodrome Traffic Zone) via PAK (Pak Mong), altitude 2000 feet or below, runway 07R, QNH 1016.

Note: A clearance to enter control zone (ATZ) is no authorisation to join traffic circuit. If no clearance to join traffic circuit was issued the holding pattern has to be entered.

10.2.4. VFR pilots are self-responsible for being separated visually from all traffic. Since GA aircraft may not have radar, TWR controller must ensure that weather minima are fulfilled and give traffic information about arriving and departing aircraft.

10.2.5. VFR aircraft remaining in traffic circuit may be permitted to use the north runway (RWY07L/25R) for departure and shall fly left circuit if RWY07L is in use or right circuit if RWY25R is in use. This is to avoid terrain on Lantau Island south of the airport.

10.2.6. When the aerodrome is experiencing a high volume of traffic, if necessary, the TWR controller shall instruct the VFR traffic to stand by at runway holding points other than those at the ends of the runway in order to give way to IFR traffic.

10.2.7. **VFR/SVFR departing helicopter flights shall be instructed to use Kilo West or Kilo East for departure.** After departure, they should follow one of the helicopter departure routes. Controllers shall refer to SOP006 for details

10.3. DEPARTING TRAFFIC

10.3.1. Once an aircraft is handed off from the Ground controller and is approaching the specified holding point, depending on the traffic situation, the TWR controller may issue one of the following instructions to the aircraft:

Instruction	Situation
Hold short of runway	When there is activity on the runway or if the aircraft would cause conflict by entering the runway
Line up and wait	When entering the runway will not cause any conflict but the runway is not clear of preceding arrival aircraft or the separation between the aircraft in question and the preceding departure aircraft is not enough
Takeoff Clearance	When the runway is clear of activity and the spacing between the aircraft in question and the preceding aircraft is sufficient (VFR/SVFR traffic: VFR/SVFR clearance precedes the takeoff clearance)

10.3.2. **Prior to issuing takeoff clearance, except for aircraft remaining in ATZ, TWR controller shall obtain a release for each aircraft that will enter the terminal airspace after takeoff.** Alternatively, the TWR controller may obtain a blanket release for all aircraft entering the terminal airspace after takeoff, however, this practice is discouraged during high-volume traffic. Hong Kong Tower shall coordinate with the controller providing APP/DEP service prior the releasing departure aircraft into the terminal airspace. Such release shall be performed prior to takeoff and can be communicated via [Discord](#) or private message on the radar client. Conversely, controller providing APP service shall coordinate with the TWR controller and communicate with the TWR controller prior to the aircraft contacting tower.

10.3.3. For IFR departing aircraft requiring **radar vectors**, TWR controller shall provide a **heading along with the takeoff clearance**. For example, *“surface wind 100 degrees 9 knots, runway 07R, cleared for takeoff. After departure, fly runway heading.”*

10.3.4. VFR/SVFR clearance shall be given to VFR/SVFR departure aircraft PRIOR to the landing clearance. Controllers shall refer to SOP006 document for details.

10.3.5. If the departure aircraft has to abort takeoff, the TWR controller shall use the following phraseology and instruct the aircraft twice. After the instruction, the TWR controller shall confirm that the aircraft has acknowledged the cancel takeoff instruction. This is a common occurrence on VATSIM when aircraft randomly connects to the network while on an active runway. Once the condition permits, if the aircraft needs to return to the end of the runway for takeoff, the TWR controller shall instruct the aircraft to hold short of the closest taxiway parallel to the active runway and hand off the aircraft to the GND controller.

Cancelling takeoff clearance:

Phraseology:

(Takeoff roll commenced) T: (Callsign) **STOP IMMEDIATELY.** (Callsign) **STOP IMMEDIATELY. ACKNOWLEDGE.**

(Takeoff roll not commenced) T: (Callsign) **HOLD POSITION, CANCEL TAKE OFF. I SAY AGAIN CANCEL TAKE OFF DUE** (reason).

Example 1:

VHHH_S_TWR: Oasis 100, hold position, cancel take off. I say again cancel take off due aircraft connected online on runway.

10.3.6. Due to the routing of SID procedures of VHHH, **simultaneous departure from both runways is prohibited on VATSIM**. When TWR control is not under combined operation, the two TWR controllers shall sequence departure whenever necessary to avoid simultaneous departure. Moreover, when issuing takeoff clearance, the TWR controller shall consider on the probability of the subsequent arrival aircraft calling go-around (e.g. weather).

10.3.7. Once a departure aircraft is airborne, the TWR controller hand off the aircraft to the DEP controller.

10.4. ARRIVAL TRAFFIC

10.4.1. Once an IFR arrival aircraft is handed off from the APP controller to the TWR controller, the TWR controller may issue one of the following instructions:

Instruction	Situation
Continue approach	When there is activity on the runway or if the preceding arrival aircraft has not vacated the same runway
Landing clearance	When the runway is clear of activity

10.4.2. When a landing clearance cannot be granted, the TWR controller shall advise the traffic information to such aircraft, particularly the other aircraft that is preventing the landing clearance being issued.

Go around (requested by the pilot):

Phraseology:

P: **GOING AROUND.** (Callsign)

T: (Callsign) **ROGER.** (instruction if applicable).

Example 1:

OHK100: Going around, Oasis 100.

VHHH_S_TWR: Oasis 100, roger. Follow published miss approach procedure (if unsure aircraft will follow published missed approach) OR Oasis 100, roger. Fly runway heading. Climb to 5000 feet. (if a specific instruction is given by the APP/DEP controller)

Go around (requested by the controller):

Phraseology:

T: (Callsign) **GO AROUND.** (instruction, if requested by APP/DEP to deviate from published miss approach)

(Reason, if communication permits)

T: (Callsign) **GOING AROUND.**

Example 2:

VHHH_S_TWR: Oasis 100, go around. OR Oasis 100, go around. Flying runway heading. Climb to 5000 feet. Aircraft entered runway without permission (if a specific instruction is given by the APP/DEP controller)

OHK100: Going around, Oasis 100.

- 10.4.3. **MISS APPROACH:** A miss approach can be initiated by either the pilot or the controller. On VATSIM, a pilot may call for go-around at *Decision Height (DH)* or *Decision Altitude (DA)* primarily due to weather or unforeseen obstruction to the runway (Refer to Section 8.6.9 of the HKVACC Training Manual TM-GEN-001 for a detailed discussion). Only when necessary, a controller may ask the aircraft to go-around when there is unforeseen obstruction to the runway, or the runway is not clear of activity when the aircraft is at or below DH. The latter should be rare, and all controllers shall practice safe and sound separation to prevent that from happening. **Once an aircraft has started the go around, the controller cannot cancel the go around clearance.**
- 10.4.4. Aircraft is assumed to follow the published missed approach procedures when a go around is necessary. TWR controller shall advise landing aircraft on miss approach to follow the published miss approach procedures if unsure. This is especially important during major events online.
- 10.4.5. As IFR aircraft has priority over VFR/SVFR aircraft, TWR controller shall give priority to IFR arrival aircraft when there is VFR/SVFR in the ATZ or in circuit. When necessary, the TWR controller shall instruct the VFR/SVFR traffic to extend downwind in the circuit or hold at one of the designated holding points in the VFR charts.

Traffic Information

Phraseology:

T: *UNKNOWN* **TRAFFIC** (*direction, distance and other information*)

T: *UNKNOWN* **TRAFFIC** (*figure*) **O'CLOCK** bearing by clock reference and distance) **MILES** (*direction of flight information*)

T: (*traffic*) (*significant point*)

– **SLOW / FAST MOVING**

– **CLOSING**

– **OPPOSITE / SAME DIRECTION**

– **OVERTAKING**

– **CROSSING LEFT TO RIGHT / RIGHT TO LEFT**

T: If known:

– (*type of aircraft*)

– (*level*) / (*relative level*) (*figures*) * NOT CONFIRMED*

– **CLIMBING / DESCENDING**

Example:

- BHHN, landing Cathay-Pacific B777, 10 o'clock position, on 5 NM final RWY 07L.

- 10.4.6. Once an aircraft has landed, the TWR controller shall instruct the aircraft to **taxi onto** the nearest taxiway parallel to the runway-in-use and to contact the appropriate GND controller.

10.5. RADAR TRACKING

- 10.5.1. VHHH_S_TWR and VHHH_N_TWR shall not use radar tracking (F3 and F4 functions on the keyboard) for IFR aircraft. However, the TWR controller **shall use radar tracking for VFR aircraft flying within ATZ** when providing radar service.

11. DEVIATION FROM THE AIP OF HKSAR

While it is the goal of VATSIM to simulate real-world navigation environment, there are certain circumstances where strictly following real-world regulations may not fit the context or needs of the VATSIM online environment. In the interest of the VATSIM community, certain exemptions are granted to deviate from the AIP of Hong Kong or real-world operations.

AIRCRAFT RESTRICTION

Regarding AIP GEN 1.2, the noise certificate requirement for subsonic jet landing or departing Hong Kong International Airport (VHHH) is waived on VATSIM as this would prevent VATSIM members from using historic or older aircraft in the Hong Kong airspace.

In additional, non-jet aircraft may use Hong Kong International Airport (VHHH) without aircraft type restrictions on VATSIM.

Restriction pertaining foreign registered aircraft conducting local flights is waived on VATSIM (Refer to AIP AD 2.20 Section 1)

Restrictions on local flights at VHHH in AIP AD 2.20 Section 2 is not applicable on VATSIM

VFR FLIGHTS IN UCARA

Pilots conducting VFR flights in Uncontrolled Airspace Reporting Areas (UCARA) are to monitor VATSIM universal unicom (122.800) rather than any local unicom frequency.

APPENDIX A: REFERENCE GUIDE FOR VHHH SID ROUTES

INITIAL POINT	RWY07(R/L) 2300z-1500z	RWY07(R/L) 1500z-2300z	RWY25(L/R) 24H	TRANSITION ROUTE.EXIT POINT Altitude to cross FIR boundary points	TO FIR
OCEAN	OCEAN2A/C	RASSE1E/F RASSE3A/C	OCEAN2B/D	V2.ELATO <i>A1: at or below F270</i>	Taipei
				V3.ENVAR <i>M750: F270 or above at all times; No F290 2300-1159UTC</i> <i>G86: F290, F330, F370, F390, F410</i>	Taipei
		SKATE1E/F SKATE2A/C	OCEAN2B/D	V4.NOMAN <i>A461 & M501: F290, F330, F370, F410</i>	Manila
				V5.SABNO <i>A583: F290, F330, F370, F410</i>	
PECAN	PECAN1A/C	TITAN1E/F	PECAN1B/D	V10.SIKOU <i>A202: S0660(ZJHK), S0720(ZJHK), S0840(ZJSY), S1040, S1160, S1200</i> <i>R339: S0600(ZGZJ), S0720 (ZGNN), S0780(ZGNN), S0980, S1040, S1100, S1160, S1200</i>	Guangzhou
				V11.IDOSI <i>A1: F280, F300, F340, F380, F400, F430</i>	Sanya
				V12.EPDOS <i>L642: F280, F310, F320, F350, F360, F390, F400</i>	
LAKES	LAKES3A/B	VENGO1E/F VENGO3A/C	LAKES2B/D	V1.DOTMI <i>Landing ZGOW: S0450</i> <i>Transiting ZGZU and VHHK FIRs: S0660, S0720, S0780, F280, F320, F360, F380</i> <i>To ZSAM & ZSQZ: S0690, S0750</i> <i>To ZSFZ & ZSWY: S0690, S0750, S0810, F290</i> <i>From VHHK FIR: F290, F330, F350, F390</i>	Guangzhou
				V13.LELIM <i>Landing ZSPD: F330</i> <i>Landing ZSQD, ZSYT & ZYTL: F330, F350</i>	
BEKOL	BEKOL3A/C	ATENA1E/F ATENA2A/C	BEKOL2B/D	BEKOL <i>VHHK FIR to ZGGG: S0420, S0450</i> <i>VHHK FIR, transiting ZGZU FIR: S0690</i>	Guangzhou

(Reference document: Hong Kong AIP ENR 1.8 Section 8.2)

APPENDIX B: TRANSPONDER SQUAWK CODE ASSIGNMENT IN HONG KONG FIR

1. IFR Aircraft Departing Hong Kong International Airport (VHHH)

SSR Codes	Airport	Status
5301-5377	VHHH	IFR departure

2. Aircraft entering Hong Kong FIR without a squawk code

SSR Codes	Airport	Status
5201-5257	Any airports in VHHK FIR	IFR and VFR

3. VFR Aircraft Departing Hong Kong International Airport (VHHH)

SSR Codes	Airport	Status
5261-5277	VHHH	VFR departure

RECORD OF REVISION

DATE	REV.	REVISION CONTENT	APPROVAL
29 MAR 2015	1	<p>Added squawk code list to Appendix B</p> <p>Added Figure 10.1 to Section 10</p> <p>Relocate ATIS requirement and voice server requirement to HKVACC-SOP011 and HKVACC-SOP012</p> <p>Corrected RWY numbering in Appendix A</p> <p>Revise section numbering</p>	A. Tang
24 OCT 2015	2	<p>Revised Section 6.1.2.1.</p> <p>Revised 8.2.4 and 8.2.7.</p> <p>Added examples of flight plan inspections (now Section 8.3)</p> <p>Section 8.6 is added regarding the implementation of pre-departure clearance.</p> <p>Section 9.2.5 is modified to reflect the change that allows pushback colour system to be used on VATSIM.</p> <p>Section 9.3 regarding pushback procedures is added.</p> <p>Added Section 9.5 regarding hand off to TWR</p> <p>Omitted Section 11.3 in Revision 001</p>	A. Tang
17 JUN 2016	3	<p>Added Section 4.2, 9.5 “Crossing the South Runway”, 9.7 “From the Runway”,</p> <p>Revised Section 9.3.1, 9.5.1</p> <p>Rewrite Section 10.</p> <p>Updated Appendix A to include the recently added M503 airway</p>	A. Tang
3 AUG 2018	4	<p>Redone section 9</p> <p>Added new diagram</p> <p>Added position Midfield Ground to Frequency and section 9</p>	B. BROWN
14 JUN 2020	5	<p>Updated section 5</p> <p>Revised section 6.3</p> <p>Updated section 7</p> <p>Updated section 9 figure 9.1</p> <p>Updated section 9 phraseology</p> <p>Revised section 10.2.7 regarding helicopter departure</p> <p>Updated appendix A</p>	J. CHENG