OPERATIONAL LETTER OF AGREEMENT

TMA HABANA – MARTI TOWER AND GROUND

MUHA_APP MUHA_TWR – MUHA_GND

1. Purpose:

The purpose of this document is to establish the operational procedures for coordination between TMA HAVANA (MUHA_APP) and the sectors of the José Martí International Airport (MUHA_TWR and MUHA_GND) while providing Air Traffic Services (ATS) to all aircraft operating under Instrument Flight Rules (IFR) and under Visual Flight Rules (VFR) that operate at that airport. (See Annex 1-a)

2. **Distribution:**

Cuba Division (CU) and all personnel providing Air Traffic Services at MUFH_CTR,

MUHA_APP, MUHA_TWR and MUHA_GND.

3. **Surveillance Code Assignment (Squawk):**

a) Departing aircraft will be assigned a radar identification code together with the authorization to your Flight Plan by MUHA_GND, MUHA_TWR or MUHA_APP in that order of priority and respecting the allocation by some lower sector.

b) Arriving aircraft will be assigned a code for radar identification by the MUHA_APP, respecting the code assigned by some superior sector.

c) If the MUHA_APP or MUFH_CTR sectors are not operational, MUHA_TWR can assign a code for radar identification to arriving aircraft, when convenient to guarantee the identification of each aircraft with a high density of operations; forever respecting the code assigned by some superior sector.

d) To arriving aircraft, which are already responding in a code previously assigned by MUFH_CTR or another sector belonging to another FIR, said code will be respected, unless represent conflict with another already assigned.

e) If there is a conflict with a surveillance code, the sector with the highest hierarchy will provide a new conflict-free code to the sector that must be assigned to the aircraft.

f) To assign said code, the Cuban Division Squawk Generator must be used. It is present at the following link:
https://www.scumari.nl/squawk/mufhsq.php?id=441685&send=Send

 or the function of generating Squawk of the AURORA program.

4. Activation of Flights (see Annex 1-b):

a) MUHA_GND will trigger flights departing to MUHA_APP when taxiing begins, specifying aircraft identification.

b) Said activation must be done via INTERCOM, or alternatively via text message, using the channels provided by the IVAC or AURORA control programs.

c) MUHA_GND will opportunely inform MUHA_APP, the Departure Sequence of the aircraft when it differs from the Activation Order.

d) It is not necessary to activate local VFR flights, since they are handled by MUHA_TWR only and will not be under the control of MUHA_APP.

5. Authorization of Flight Plans (See Annex 1-c):

a) MUHA_GND will issue the Clearances to the IFR flight plans to the departing aircraft.

Limited to directly assigning published SIDs/Departure Procedures and will coordinate with MUHA_APP the requests that deviate from said procedures by the aircraft; unless another procedure has been coordinated between said sectors.

b) MUHA_APP will coordinate with MUHA_GND any reauthorization or restriction for the departing aircraft, in order to guarantee the minimum separation established between the aircraft in the Terminal Area.

c) The authorization to the IFR Flight Plan will be delivered to the aircraft using the following format:

"[aircraft identification] cleared to [destination aerodrome] via [SID/Procedure

Departure Time/Departure Vector] initial climb to [initial flight level/initial altitude] squawk [assigned squawk]"

d) Aircraft departing under VFR will be issued the VFR Initial Clearance using the following format:

"[aircraft identification] provides [VFR Departure Procedure/traffic pattern] to

[flight level/altitude] squawk [assigned squawk]"

e) Authorizations for flights departing, both IFR and VFR, can be given at any phase of its ground operation; but no aircraft may be cleared to take off without having received and collated it.

f) All aircraft will be authorized to depart at Initial Level FL150 unless they request a Level

o Lower altitude in your Flight Plan, or MUHA_APP coordinates a restriction for departure.

g) If the MUHA_APP sectors are not open, MUHA_GND will be limited to assigning

only Departure Procedures and SID to departing aircraft, and climb will be authorized to

the Altitude/Flight Level requested in the flight plan.

6. Runway in use:

a) MUHA_TWR will establish the Runway in Use taking into account the direction and intensity of the wind and/or any operational or meteorological reason that limits the use of the runway for takeoff or landing, and will immediately report the decision to MUHA_GND and MUHA_APP, in such a way that it affects the sequence of arriving traffic as little as possible.

b) Frequent changing of the lane in use for short periods of time will be avoided as much as possible.

c) In case of change of Runway in Use while there is traffic leaving, MUHA_GND will coordinate with MUHA_APP, reauthorizations for departing aircraft or restrictions for those already were activated; as well as the output sequence.

d) In case of change of Runway in Use while there is traffic arriving, MUHA_APP will coordinate with MUHA_TWR, the sequence of arriving aircraft.

e) All sectors (MUHA_GND, MUHA_TWR, MUHA_APP), will inform the aircraft under your control over Runway In Use changes; and in the case of MUHA_APP it will assign to the arriving aircraft, the Instrument Approach Procedure and STAR/Arrival Procedure/Vector as applicable.

f) When an aircraft requests to take off using the Runway in Use in the opposite direction, MUHA_GND must coordinate this operation with MUHA_TWR, and this one with MUHA_APP. This operation can only be approved after being coordinated and approved by the Sector Superior and avoiding interfering with the traffic established by the Runway in Use. (See Annex 1-d)

7. Transfer of Control and Communications (See Annex 1-e):

a) MUHA_GND will transfer departing aircraft to MUHA_TWR reaching the holding point

assigned, unless otherwise coordinated.

b) MUHA_TWR will transfer the aircraft arriving at MUHA_GND when leaving the Active Runway unless another procedure is coordinated.

c) MUHA_TWR will transfer the departing IFR aircraft to MUHA_APP together with the authorization of take off, using the phraseology established for this purpose in the Division's documentation. If MUHA_APP is not available, the IFR aircraft will be instructed to monitor in UNICOM frequency 122.800Mhz. (See Annex 1-e)

d) MUHA_TWR will immediately transfer to MUHA_APP arriving IFR aircraft that start a Missed Approach Procedure, immediately informing MUHA_APP of the situation.

e) MUHA_TWR will transfer VFR aircraft departing to MUHA_APP reaching 10NM from

the center of the airfield. If MUHA_APP is not available, the aircraft will be instructed

VFR to monitor on UNICOM 122.800Mhz frequency, having given traffic information of any VFR aircraft that constitutes Factor. (See Annex 1-e)

f) Having previously coordinated with MUHA_APP, MUHA_TWR can transfer the VFR aircraft leaving the ATZ (3NM from the center of the aerodrome), while does not constitute a Traffic Factor for other VFR aircraft.

g) MUHA_APP will transfer IFR aircraft arriving at MUHA_TWR over the Approach Fix Final (FAF), established on the Approach Path not more than 7NM from the FAF, or in another position in the airspace that has been previously coordinated with MUHA_TWR.

h) MUHA_APP will transfer VFR aircraft arriving at MUHA_TWR reaching 10NM from the center of the airfield; having given him traffic information of any VFR aircraft that constitutes Factor; but MUHA_TWR will only be able to provide meteorological information and/or Traffic information to said aircraft until it reaches the ATZ limit (3NM from the center of the aerodrome), from which you can exercise control over the aircraft. (See Annex 1-c)

8. Separations

a) MUHA_APP will establish a minimum separation of 5NM between aircraft in the Terminal Area (TMA).

b) MUHA_APP will establish a minimum separation between aircraft reaching 5NM in the final approach to runway 06 and 7NM on final approach to Runway 24.

c) MUHA_TWR will establish a takeoff sequence with no less than 4NM or 1 minute of separation if the 2nd aircraft develops a speed equal to or less than the preceding one.

d) MUHA_TWR will establish a takeoff sequence with no less than 10NM or 2 minutes of separation if the 2nd aircraft develops a higher speed than the preceding one.

9. Communications.

a) The frequencies to be used by the Units will be the following:

Sector	Callsing		Frequency
	Spanish	English	
MUHA_GND	Superficie Martí	Marti Ground	121.900 Mhz
MUHA_TWR	Torre Martí	Marti Tower	118.100 Mhz
MUHA_APP	Terminal Habana	Havana Terminal	120.300 Mhz
MUFH_CTR	Centro Habana	Havana Center	133.700 Mhz

b) The frequencies can vary through coordination between the active dependencies.

10. Other Precisions:

a) In accordance with regulation A.2.1.1 of the IVAO Regulation, users must open the MUHA_TWR sector before MUHA_GND as long as the FRA allows it; being AS2 the Maximum FRA allowed to opening MUHA_GND without MUHA_TWR being open.

b) If there is no MUHA_GND, MUHA_TWR will assume its functions and obligations established in this Letter of Agreement.

c) If there is MUFH_CTR, but not MUHA_APP, MUFH_CTR will assume the functions and obligations of MUHA_APP established in this Letter of Agreement.

d) Permanent changes to this Letter of Agreement will be specified in the table of revisions at the end of the document.

e) Temporary changes to this Letter of Agreement will be informed and activated by NOTAM and the routes established for this purpose in IVAO.

f) At the end of this document, concepts and explanations relevant to the understanding, study and application of this Letter of Agreement as annexes.

_____
Luis Orlando Columbié Juliá
CU-AOC

This Letter of Agreement will come into effect on 01/October/2021 at 0000UTC.

ANNEXES

ANNEX 1 Concepts and explanations:

a) General considerations:

The Cuban Division of IVAO (CU-IVAO) is governed by the Guidelines, Procedures and Practices recommended by IVAO, but establishes its own Procedures and Recommended Practices for adjust and simulate as far as possible, feasible and permitted, to the Particularities, Procedures, Practices and Regulations established for the Cuban Civil Aviation (real); in order to provide its members and visitors, both Pilots and Controllers, a simulated experience asclose to reality.

b) Activation of flights:

The Activation of the Flights is a coordination procedure between the GND sectors or TWR with APP so that the latter knows the sequence of aircraft leaving an aerodrome and be able to plan these departures accordingly, insert them into the sequence of arrivals and issue some restriction for aircraft to be executed at takeoff.

Activation is generally done immediately after instructing the aircraft to taxi, as it is thus possible to establish a takeoff sequence for departing aircraft; although some airports require aircraft to "wake up" on start-up. this last is generally established at airports with very low traffic density and is always specified in their respective Letters of Agreement with the sector provided by the Approach Control Service (APP).

 For such activation, the following format must be used:

"Activate [aircraft identification] [SID/Departure Procedure/Departure Vector]"

Example: "Activate ODD211 KAVU5A"

In periods of high traffic density, the controller in the Approach Sector (APP) you have limited and sometimes no time to constantly check the traffic situation on the ground, therefore, it is necessary to use tools such as the Flight Activation to be able to plan the departure sequence and impart any reauthorization or restriction to the aircraft that may cause traffic conflicts. In this way, a better service can be provided, with more time to make decisions that if said tool is not used and APP finds out about the   Active Traffics when they are transferred TWR at takeoff.

When APP determines it is necessary to issue a reauthorization, it generally coordinates with GND if the aircraft has just started taxiing, but is considered to be about to take off, or advanced in the taxi operation, it coordinates directly with TWR as a restraint. In this case, TWR will add the restriction to the initial part of the takeoff clearance. as seen in the following example:

 "ODD211, when airborne maintain runway heading until further advice and contact Havana

Terminal on 120 decimal 3, wind 070 degrees 08 knots, clear for takeoff runway 06"

c) VFR flights:

In the Flight Information Region of the Republic of Cuba (MUFH-FIR), control is exercised on all aircraft regardless of the classification of the airspace in which they are located. For Therefore, aircraft operating under VFR will be provided with traffic information regarding other VFR and IFR aircraft, but in class E airspace, the controller may vector them by separation of traffic with respect to IFR aircraft that represent a risk of AIRPROX or collision when the transit information is not sufficient to resolve the conflict.

It will always seek to give priority to traffic information over a separation via vectors, the first being the corresponding service in Echo Class airspace.

For this purpose, they will be assigned a Squawk code for their radar identification and must keep the controller informed about your altitude or flight level, as well as any changes to the same.

Such control is only allowed above 3000ft AGL, although the aircraft must maintain your Squawk code below said height.

All aircraft under VFR rules flying above 3,000 feet AGL must maintain a VFR level corresponding to what is indicated in the AIP. Any descent or ascent to a level/altitude other

than the assigned must be informed to the controller who will authorize it as long as there is no possible conflict with other VFR and/or IFR traffic.

In case of conflict, the corresponding information will be provided and the traffic will be informed when possible proceed to requested altitude/level VFR aircraft must maintain assigned squawk code while in a sector active and until instructed to switch to VFR code.

For meteorological information, it is only necessary to indicate: Runway in Use, QNH and some relevant weather condition affecting the aerodrome.

d) Operations on Opposite Runways:

Operations along the runway in use always have priority over those using the Opposite Track; except in the case where the aircraft requesting the Opposite Runway has declared an EMERGENCY, or requests it to land and the one using the Runway in Use intends to take off.

When an aircraft requests to operate using a Runway Opposite the Runway in Use (direction opposite), it must be indicated that coordination is pending, coordinate the request with the sector immediate superior and if approved, instruct the aircraft to the requested operation together with the due reauthorization or restriction for departure.

It should be clarified that a request to operate on a runway not in use should not be denied, since the The Pilot in Command of the aircraft is the one who decides if it operates on the Runway in Use or not. In case said operation constitutes or generates a traffic conflict with another aircraft operating on the runway in use, the applicant must be given the information of the limiting traffic and the estimated time to wait for be able to execute the operation.

 If it is intended to carry out the operation interspersed between the traffic of the Runway in Use, must provide traffic information executing the Opposite Runway operation to any aircraft that may be affected or find itself at some point in opposite defeats with it.

e) Phraseology:

The phraseology to be used for communications with aircraft is that established by and

for the Cuban Division (CU-IVAO) and published in the Phraseology Manual present in the

following link:

https://cu.ivao.aero/download/doc/ADC-PP-Fraseologia.pdf

Posted on the Cuban Division website.

Creator: Luis Orlando CU-AOC

Translator: Ernesto Mesa CU-DIR