Letter of Agreement

by and between Havana FIR and Miami ARTCC

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1. SUBJECT: Procedures for coordinating traffic flows between Miami ARTCC and Havana FIR.

2. PURPOSE: This document establishes the coordination and operational procedures to be applied by Miami ARTCC and Havana FIR, with respect to aircraft crossing the common FIR/CTA boundary as defined in Appendix B. These procedures are complementary to the ICAO, VATSIM, VATNA and VATCAR standards and recommended practices.

3. CANCELLATION: No previous Letters of Agreement exist, and thus, none are cancelled. The terms of this new Letter of Agreement may be suspended only by agreement of both the Havana FIR Air Traffic Manager (ATM) and Miami ARTCC Air Traffic Manager (ATM).

4. DISTRIBUTION: VATUSA, VATCAR, and all air traffic personnel at Miami ARTCC and Havana FIR.

5. GENERAL CONTROL

5.1. The clearance limit shall be the destination airport unless otherwise coordinated.

5.2. The Transfer of Control Point (TCP) is considered to be the common airspace boundary, as defined in Appendix B. Controllers shall not issue changes of altitude or heading prior to crossing the common airspace boundary, unless previous coordination has taken place.

5.3. Interfacility coordination may be accomplished through private message, ATC messages, TeamSpeak (or similar), or as described in Section 5.4.1.

5.4. Other than as described in Section 5.4.1 below, controllers shall clear aircraft scratchpads prior to initiating a radar handoff. Controllers shall not use the scratchpad to forward route information-- this must be accomplished by updating the flight plan route, or through manual coordination.

5.4.1. If an aircraft crossing the common airspace boundary has been assigned any heading or speed, controllers shall enter this information in the scratchpad prior to initiating a radar handoff. Controllers shall use the format of the first 2 digits of the value, followed by an H (heading), K (knots IAS), or M (mach). Plus and minus signs may be used at the end, with the understanding that VRC users may not see beyond 3 scratchpad characters (dependent on their selected radar mode). For example, “23H” for 230 heading, “82M” for Mach 0.82, “31K” for 310 knots, or “31K+” for 310 knots or greater. This shall be considered sufficient coordination to satisfy the requirements of Section 5.2. Controllers may elect to effect this coordination manually if they prefer.

5.5. Miami ARTCC and Havana FIR shall assign transponder codes allocated under the regional SSR allocation plan.

5.6. Upon completion of a radar handoff, Miami ARTCC and Havana FIR grant to each other mutual control for beacon code and speed changes, even while the aircraft has not yet left the transferring controller's airspace.

5.7. Unless otherwise coordinated on an individual basis, same-altitude aircraft on routes which are not laterally separated shall be delivered to the receiving facility at least 10 miles in trail, constant or increasing. If speeds must be assigned to achieve the in trail spacing, those speeds shall be coordinated in accordance with Section 5.4.1.

5.8. Upon sign on, Havana Center controllers shall advise the Miami Center controller of the landing direction of "Havana" (MUHA/MUVR and satellites). After this coordination, both controllers shall deliver aircraft in accordance with the stated landing direction, as specified by Table 2 and Table 3.

5.9 Controllers of both facilities should initiate a radar handoff for aircraft which will enter the other's airspace no later than 10 NM from the common airspace boundary. The transfer of control and communications shall be completed before the aircraft crosses the common airspace boundary.

5.9.1. Prior to initiating a radar handoff, the transferring controller shall ensure that any changes to the assigned routing occurring at or after the common boundary are reflected in the aircraft's flight plan.

5.9.2. Unless otherwise coordinated, all aircraft shall be transferred between facilities routed over one of the fixes along the common boundary, as listed in Table 1. Aircraft shall be delivered at altitudes correct for direction as described by Table 1.

5.9.3. If aircraft are requesting a different altitude than the altitude currently assigned, then the assigned altitude shall be entered in the data block as a temporary altitude, and the flight plan shall reflect the requested altitude.

5.9.4 Aircraft descending on arrival shall have the assigned altitude entered as a "hard" altitude (changing the filed cruise altitude), and all "temporary" altitudes shall be removed.

5.10. Miami ARTCC and Havana FIR shall issue routes and altitudes in accordance with Table 2 and Table 3, issuing routings in the following order of preference: RNAV STAR, Conventional STAR, NAVAID routing. Lists of satellite airports are available in Appendix A.

Table 1.

MUFH NORTHERN BOUNDARY			
Fix	**MUFH TO ZMA**	**ZMA TO MUFH**	**Fix**
CANOA	ODD	EVEN	**CANOA**
MAXIM	ODD	EVEN	**MAXIM**
IKBIX*	EVEN		**IKBIX***
FUNDI		ODD	**FUNDI**
TANIA	ODD	EVEN	**TANIA**
URSUS		ODD	**URSUS**
ZEUSS	EVEN		**ZEUSS**
BORDO	EVEN		**BORDO**
MUFH EASTERN BOUNDARY			
Fix	MUFH TO ZMA	ZMA TO MUFH	**Fix**
DYNAH	ODD	EVEN	**DYNAH**
ENAMO	ODD	EVEN	**ENAMO**
ERRCA	ODD	EVEN	**ERRCA**
GHANN	ODD	EVEN	**GHANN**
MEDKO	ODD	EVEN	**MEDKO**
OVALU	ODD	EVEN	**OVALU**
BYGON	ODD	EVEN	**BYGON**

* IKIBIX replaces the older fix TADPO. Aircraft routed over TADPO shall still be accepted, and the IKBIX procedures shall be applied.

Table 2.

Destination	Routing	Cross	Altitude	Notes
MUHA*	CANOA [ENTRY^{R} STAR]	CANOA	AOB FL260	Havana landing east → Departures routed via MAXIM
	TANIA [JUGAR^{R} STAR]	TANIA		Havana landing east →
	MAXIM [JUGAR^{R} STAR]	MAXIM	AOB FL220	← Havana landing west Departures routed via CANOA
	TANIA [AFFIL^{R} STAR]	TANIA		← Havana landing west
MUVR	FUNDI [GOLFO^{R} STAR]	FUNDI	AOB FL210	Havana landing east →
	TANIA [GOLFO^{R} STAR]	TANIA	FL300	Havana landing east →
	FUNDI [BANAO^{R} STAR]	FUNDI	AOB FL210	← Havana landing west
	TANIA [BANAO^{R} STAR]	TANIA	FL300	← Havana landing west
MUGM	BYGON [SOUTP^{R} STAR]	BYGON	AOB FL220	

^{R}Indicates RNAV procedures, which are preferred when aircraft are RNAV capable.

*Satellites of this airport shall be assigned the same altitude, and same routings with STARs deleted.

Table 3.

Destination	Routing	Cross	Altitude	Notes
KMIA & SATS	[CANOA/MAXIM] EADEN [CURSO[R] STAR]			
	[CANOA/MAXIM] EYW [DVALL STAR]			
	IKBIX MTH [CURSO[R]/DVALL STAR]	IKBIX	AOB FL320	
	ZEUSS FOWEE [FLIPR[R]/FOWEE STAR]	ZEUSS	AOB FL320	
KFLL & SATS	[CANOA/MAXIM] EADEN [CURSO[R] STAR]			
	[CANOA/MAXIM] EYW [DVALL STAR]			
	IKBIX MTH [CURSO[R]/DVALL STAR]	IKBIX	AOB FL320	
	BORDO ZBV [WAVUN[R]/DEKAL STAR]	BORDO	AOB FL300	
KEYW & SATS	CANOA DCT	CANOA	AOB FL210	
	MAXIM DCT	MAXIM	AOB 17,000	
	IKBIX DCT	IKBIX	AOB 14,000	

[R]Indicates RNAV procedures, which are preferred when aircraft are RNAV capable.

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Appendix A.

Havana FIR Satellite Groups	
MUHA	MUPB, MUNG
MUCU	MUHG, MUGT, MUBA, MUMO, MUMZ, MUBY, MUVT

Miami ARTCC Satellite Groups	
KMIA	KTMB, KHST, X51, 07FA
KFLL	KFXE, KOPF, KHWO, KPMP
KEYW	KNQX, KMTH, 7FA1, FD51

Appendix B.

-:> ZMA-MUFH BOUNDARY N000.00.00.000 W000.00.00.000 N000.00.00.000 W000.00.00.000
N024.00.00.000 W085.00.00.000 N024.00.00.000 W079.57.59.000
N024.00.00.000 W079.57.59.000 N024.00.00.000 W078.00.00.000
N024.00.00.000 W078.00.00.000 N022.35.17.652 W076.00.00.006
N022.35.17.652 W076.00.00.006 N022.00.00.000 W075.10.00.000
N022.00.00.000 W075.10.00.000 N020.00.00.000 W073.20.00.000