

# VATSIM Havana ACC VATSIM Miami ARTCC

ORDER  
ZMA-MUFH LOA

**SUBJ: ZMA-MUFH LOA**

Effective: 02/01/2025

## **Purpose**

This order prescribes air traffic control procedures and phraseology for use by personnel providing simulated air traffic control services on the VATSIM Network. This is not intended for real-world use. Controllers are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

This agreement establishes inter-facility procedures between Miami Air Route Traffic Control Center (ZMA) and Havana Area Control Center (MUFH).

## **Responsibilities**

This agreement covers coordination procedures, route and altitude assignments, and delegation of airspace.

## **Cancellation**

This document replaces and cancels ZMA-MUFH LOA, dated March 25, 2019.



**Dan Leavitt**  
Air Traffic Manager  
VATSIM Miami ARTCC



**Miguel Armas Jr.**  
Air Traffic Manager  
VATSIM Havana ACC



**EJ Davis**  
Division Director  
VATCAR

## TABLE OF CONTENTS

**TABLE OF CONTENTS..... 2**  
**EXPLANATION OF CHANGES..... 2**  
**CHAPTER 1. ZMA-MUFH LOA.....3**  
 1-1. COORDINATION PROCEDURES..... 3  
 1-2. MIAMI ARRIVALS AND NORTHBOUND OVERFLIGHTS..... 4  
 1-3. HAVANA ARRIVALS..... 5  
 1-4. HAVANA DEPARTURES..... 6  
 1-5. NASSAU ARRIVALS AND DEPARTURES..... 6  
 1-6. SEPARATION..... 6

### Explanation of Changes

*Changes within the document are emphasized with a vertical line beside changed text.*

Version	Changes
REV 1	<ol style="list-style-type: none"> <li>1. Updated coordination and airway requirements.</li> <li>2. Updated ZMA arrival routings.</li> <li>3. Updated MUFH arrival altitude requirements.</li> <li>4. New MUFH departure altitude requirements.</li> <li>5. New MYNA departure/arrival altitude requirements.</li> <li>6. Updated separation information.</li> </ol>

## Chapter 1. ZMA-MUFH LOA

### 1-1. COORDINATION PROCEDURES

- A. Coordination and Transfer of Control Points (TCPs) for aircraft crossing the common CTA/FIR boundary are defined in Table 1-1.
  1. Assign altitudes and comply with the directional restrictions specified in the table.
- B. Miami Center and Havana Center release control for turns up to 15 degrees and beacon code change on aircraft 15 NM on either side of the CTA/FIR boundary.
- C. When necessary, the CTA/FIR boundary crossing point will be used as the coordination and transfer of control point.

Coordination and Transfer of Control Points (Table 1-1)			
Fix	Airway	Directional Altitude	
		Odd	Even
CANOA	B646 / UB646 / B879 / UB879 / Y196 / M346 / UM346	ICAO	
MAXIM	G765 / UG765 / Y262		
IKBIX	G448 / UG448 / UL471 / L471 / UL345 / L345 / Y183	N/A	North
FUNDI	Y442 / M335 / UM335	South	N/A
TANIA	R628 / UR628 / M328	South	North
URSUS	UL780 / A509 / Y319 / Y297 / G430 / R644 / UP406	South	N/A
ZEUSS	A899 / Y217 / Y329 / UM779 / Z539 / UZ539	N/A	North
BORDO	B760 / UL210 / UL417 / L417 / Y259 / UL218	South / West	North / East
DYNAH	G437 / UG437 / M329		
ENAMO	B503 / M218 / UM218 / M330 / UM330 / R625 / UR625 / R630 / Y307		
ERRCA	M595 / UM595	ICAO	
GHANN	M331 / UM331 / L347 / UL347		
MEDKO	M348 / UM348		
OVALU	G629 / UG629		
BYGON	UL599		

**1-2. MIAMI ARRIVALS AND NORTHBOUND OVERFLIGHTS**

- A. Miami Complex Airports (MIA CX): KMIA / KTMB / KHST / 07FA / X51
- B. Ft. Lauderdale Complex Airports (FLL CX): KFLL / KOPF / KFXE / KPMP
- C. Miami arrivals and northbound overflights must be routed as defined in Table 1-2.
- D. Miami Center will have control for descent 15 NM south of ZEUSS and BORDO, if there are no traffic conflicts. Miami Center must ensure 10 NM radar separation for traffic in Havana Center's Airspace.
- E. Aircraft entering Miami Center over TANIA must be routed TANIA direct ZOLLA next fix. Upon completion of a radar hand off, Miami Center may assume control for climb on all aircraft 15 NM southwest of TANIA. Miami Center must ensure 10 NM radar separation for traffic in Havana Center's Airspace.
- F. MMUN landing traffic filed over FUNDI or MAXIM must be routed via CANOA.

<b>Miami Arrivals and Northbound Overflights (Table 1-2)</b>					
<b>Fix</b>	<b>Aircraft Type</b>	<b>Destination</b>	<b>Route</b>	<b>Restriction</b>	
IKBIX	RNAV Jets	MIA CX	IKBIX SNDBR STAR	IKBIX AOB FL300	
		FLL CX	IKBIX BHHIA STAR		
	Other Arrivals	MIA CX / FLL CX	IKBIX Y183 PEAKY		IKBIX
		EYW	IKBIX	IKBIX AOB FL240	
		MTH			
	Overflights	N/A	IKBIX Y183 PEAKY	N/A	
CANOA	RNAV Jets	MIA CX	CANOA SNDBR STAR	N/A	
		FLL CX	CANOA BHHIA STAR		
	Other Arrivals	MIA CX / FLL CX	CANOA B646 FIS CANOA Y196 LULLS		CANOA
		EYW	CANOA	CANOA AOB FL240	
		MTH			
	Overflights	N/A	CANOA B646 FIS CANOA Y196 LULLS	N/A	

<b>Miami Arrivals and Northbound Overflights (Table 1-2)</b>					
<b>Fix</b>	<b>Aircraft Type</b>	<b>Destination</b>	<b>Route</b>	<b>Restriction</b>	
MAXIM	RNAV Jets	MIA CX	MAXIM SNDBR STAR	N/A	
		FLL CX	MAXIM BHHIA STAR		
	Other Arrivals	MIA CX / FLL CX	MAXIM EYW DVALL STAR		MAXIM
		EYW	MAXIM	MAXIM AOB FL240	
		MTH			
Overflights	N/A	MAXIM G765 FIS MAXIM Y262 LULLS	N/A		
ZEUSS	RNAV Jets	MIA CX	ZEUSS VIICE STAR	ZEUSS AOB FL340	
	Other Arrivals		ZEUSS FOWEE STAR		
BORDO	RNAV Jets	FLL CX	BORDO OLAHS STAR	BORDO AOB FL340	
	Other Arrivals		BORDO DEKAL STAR		

### 1-3. HAVANA ARRIVALS

- A. MUFH arrivals must be routed as defined in Table 1-3.
- B. Havana Center will advise Miami Center when Runway 24 is in use at MUHA, otherwise Runway 06 will be assumed to be the active arrival runway.

<b>MUFH Arrivals (Table 1-3)</b>			
<b>Airport</b>		<b>Fix / Route</b>	<b>Altitude Restriction</b>
MUHA	Runway 06	CANOA ENTRY4	CANOA AOB FL260
	Runway 24	CANOA EPMAR4	CANOA AOB FL220
MUCC		URSUS / DYNAH / ENAMO	FL270
MUCF / MUSC		FUNDI / URSUS / TANIA	FL290
MUCU		OVALU	FL280
MUHG		GHANN / ERRCA / OVALU	FL280
MUVR		FUNDI	FL210
		TANIA	FL290

**1-4. HAVANA DEPARTURES**

- A. MUFH departures must be routed as defined in Table 1-4.

<b>MUFH Departures (Table 1-4)</b>		
<b>Airport</b>	<b>Fix / Route</b>	<b>Altitude Restriction</b>
MUHA	MAXIM	AOB FL250
	TANIA	AOB FL280
MUCC	ZEUSS / DYNAH / ENAMO	AOB FL260
MUCF / MUSC	IKBIX / ZEUSS / TANIA	AOB FL280
MUCU	OVALU	AOB FL270
MUHG	GHANN / ERRCA / OVALU	AOB FL270
MUVR	IKBIX	AOB FL200
	TANIA	AOB FL280

**1-5. NASSAU ARRIVALS AND DEPARTURES**

- A. MYNN arrivals and departures must be routed as defined in Table 1-5.
- B. After completion of a radar handoff, if no traffic conflicts exist, Miami Center has control for descent 15 NM south of DYNAH.
- C. After completion of a radar handoff if no traffic conflicts exist, Miami Center has control for descent 20 NM south of ENAMO.

<b>Nassau Arrivals and Departures (Table 1-5)</b>		
<b>Fix</b>	<b>Type</b>	<b>Altitude Restriction</b>
DYNAH	Departure	AOB FL210
	Arrival	At FL220
ENAMO	Departure	AOB FL230
	Arrival	At FL240

**1-6. SEPARATION**

- A. All northbound aircraft entering the Miami CTA/FIR and all southbound aircraft landing within Havana CTA/FIR: 10 NM
- B. Over CANOA and MAXIM, KMIA and KFLI arrivals: 10 NM in trail per airport
- C. All other southbound aircraft: 10 NM at the same altitude, constant or increasing