



MIAMI-DADE AVIATION DEPARTMENT AIRSIDE OPERATIONS DIVISION

MOVEMENT AREA DRIVER TRAINING MANUAL



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Miami Dade Rules and Regulations Chapter 25

25-9.4 Crossing Runways & Taxiways

No person at an airport with an operating control tower shall operate a motor vehicle beyond the hold bars of an active runway, or (i) closer than two hundred eighty (280) feet from the centerline of an active runway, or (ii) closer to an active taxiway than as may be provided in the specific Operational Directives for the Airport, or as may subsequently be required by regulations; without first having received clearance to proceed from the control tower.

25-9.6 Two-way Radio requirements

The operator of a motor vehicle requiring clearance to operate on or across an active taxiway or runway at an airport with a control tower shall maintain two-way radio contact with the control tower; or in the event a two-way radio is inoperable or unavailable, shall operate said vehicle only under the escort of an authorized motor vehicle equipped with a two-way radio in contact with the control tower. This requirement shall not apply, however, to operators of vehicles authorized by the Department to receive pre-established visual signals from the control tower, or to operators of vehicles following pre-established special procedures of the Department, which have been approved by the Federal Aviation Administration.

Taxiing

25-10.14(a)

No person shall taxi an aircraft until he has ascertained that there is no danger of collision with any person or object in the immediate area by visual inspection of the area, and when available, through information furnished by attendants.

25-10.14(b)

No person shall taxi an aircraft except at a safe and reasonable speed.

25-10.14(d)

No person shall taxi an aircraft near buildings, parked aircraft, or ground equipment, unless an attendant is present on the ground to assist the operator thereof.

25-10.14(e)

No person shall taxi an aircraft other than in accordance with the taxiing patterns and procedures prescribed for the particular runway to be used or, where applicable, in accordance with the instructions of the control tower.

25-10.14(f)

No person shall push, tow or back an aircraft away from a designated parking position, in the terminal area or on the apron without assuring that conditions are safe to do so, and in accordance with operational directives.

25-10.19 Radio Ground Control

The operator of an aircraft taxiing or being towed at an airport having a control tower shall monitor the ground control frequency being used by the control tower and shall remain in direct communication with the control tower at all times when so operating anywhere on the AOA. In addition, all persons taxiing or towing an aircraft at Miami International Airport, other than pilots licensed to operate the particular aircraft being taxied, must be certified as having successfully completed the Movement Area Driver's Training Program given by the Department.

Communication

Ground & Gate Control Techniques

All operators must use proper radio terminology and techniques during all types of movement on taxiways and runways.

Operators must be properly familiarized with the airfield through Movement Area Driver's Training and should obtain on the job training through their employer prior to initiating any activity onto a Movement Area.

Before initiating any movement with FAA Ground Control, the operator should ensure that their radio is on the correct frequency and determine the direction of the airport's runways operation. This information, especially when a runway crossing is necessary, directly affects the route that Ground Control will choose for your movement.

The tug operator is the only individual responsible for all Ground Control communications. Four number, tug identifiers have been assigned to all equipment designated to move aircraft at Miami International Airport. During tugging operations these identifiers must be used as assigned (i.e. AAR Tug 6542).

Before contacting Ground Control, identify your location and destination on the airfield, the type of aircraft, and how the aircraft will be repositioned (under power or under tow). Determine the proper Ground Control frequency for your location on the airfield, monitor that frequency before transmitting and keep your request simple. Monitoring the proper Ground Control frequency is mandatory at all times while in the Movement Areas. You are not allowed to switch frequencies without prior approval from Ground Control.

All instructions given by Ground Control must be acknowledged and read back as received to the controller in all Movement Areas. (No exceptions).

As determined by the International Civil Aviation Organization (ICAO), English is the international language for aviation. The proper phonetics must always be used for the number and letter identifiers with Ground Control along with the proper terminology as outlined in the Glossary of Terms and Phonetics Section of this manual.

For clarity in radio communications, each digit in the runway name is pronounced individually: runway eight left, runway two six right, etc.

When broadcasting on any Ground Control frequency, Ground Control must be identified followed by the operator's call sign. The following is an example of the procedures and techniques:

Tug Operator contacted Miami Gates to push off of Gate F-7. Miami Gates instructed the Tug Operator that they were cleared to push back, proceed to Spot 17 and contact Miami Ground Control for permission to enter the Movement Area.

Operator: "Miami Ground, AAR Tug 6542."

Controller: "AAR Tug 6542, Miami Ground."

Operator: "Miami Ground, AAR Tug 6542, request permission to relocate a 737, under tow, from Spot 17 to Techniport ramp."

Controller: "AAR Tug 6542, Miami Ground, proceed westbound on Papa, right on Whiskey, and hold short of November"

Operator: "Miami Ground, AAR Tug 6542. Will proceed westbound on Papa, right on Whiskey, and hold short of November, AAR Tug 6542."

Controller: "AAR TUG 6542, Miami Ground, turn right on Mike and hold short of runway 8R (pronounced eight right) at M6 (pronounced Mike six)."

Operator: "Miami Ground, AAR Tug 6542, right on Mike and will hold short of 8R at M6, **AAR Tug 6542.**"

Operator: "Miami Ground, AAR Tug 6542, holding short of runway 8R at M6 **AAR Tug 6542.**"

Controller: "AAR Tug 6542, Miami Ground, cross runway 8R, hold short of runway 8L (pronounced eight left)."

Operator: "Miami Ground, AAR Tug 6542, cleared to cross runway 8R and will hold short runway 8L, AAR Tug 6542."

Operator: (Upon clearing runway 8R hold bar) "Miami Ground, AAR Tug 6542, clear of runway 8R."

Operator: "Miami Ground, AAR Tug 6542, holding short of runway 8L at L6 (pronounced Lima six)."

Controller: "AAR Tug 6542, Miami Ground, cross runway 8L, left on taxiway K (pronounced Kilo) and proceed direct to the ramp."

Operator: "Miami Ground, AAR Tug 6542, cleared to cross runway 8L, left on Kilo, and direct to the ramp, AAR Tug 6542."

Operator: (upon clearing the runway hold bar) "Miami Ground, AAR Tug 6542, clear of runway 8L."

Operator: (Upon clearing the taxiways) "Miami Ground, AAR Tug 6542, is clear of all taxiways."

Controller: "AAR Tug 6542, Miami Ground, thank you, good day."

Ground & Gate Control Frequencies

Miami International Airport has three Ground Control frequencies. During peak operational periods, Ground Control operates as many as three frequencies. Frequency 121.8 is identified as primary Ground Control. When only one frequency is operational, other than if a stuck-mic situation, 121.8 is the frequency used. During the peak times the field is divided north (121.8) and south (127.5) for Ground Control Operations. Concourse "E" (or as directed by the controller) is used as a dividing line between North and South Ground. When operators are directed to switch frequencies they should immediately identify themselves on the new frequency.

During an emergency or a stuck-mic situation, an alternate frequency will be used at the discretion of the Tower. Ground Control frequency 120.35 is identified as West Ground, however, in most cases is used as the alternate frequency during peak times, emergency or in a stuck-mic situation.

The below, lists are radio frequencies and areas of control at MIA.

FAA Ground Control

<i>Frequencies</i>	<i>Areas of Control</i>
121.8 (Primary)	North Ground
127.5	South Ground
120.35	West Ground / Emergency

Miami-Dade Aviation Department / Miami Gates

<i>Frequencies</i>	<i>Areas of Control</i>
128.025 D-Tower	Spots 0 - 4
130.5 E-Tower	Spots 11&12 16-20 and the Blast Fence
132.37 J-Tower	Spots 21, 22, 23, 24, 25, 26 and 27
129.075 J-Tower/Cargo Assignment	Spots 52 & 53 and NE Corner

American Airlines

<i>Frequencies</i>	<i>Areas of Control</i>
130.325 Ramp	Spots 5, 6, 7, 8, 9, 10 0600 hrs. To 2200 hrs.
130.95 Ramp	Spots 13,14,15
131.4 Operations	Operations Only

All traffic from 2200hrs to 0600hrs for spots 5, 6, 7, 8, 9, 10, 13, 14 and 15 are control by 130.95

Light Gun Signals:

If communications should happen to fail while a vehicle or aircraft is in the Aircraft Movement Area, the control Tower will have two methods of contacting the vehicle. First the Tower will raise and lower the runway and/or taxiway lighting to get the attention of the operator. Secondly, the Tower will use the light gun signals to give instructions.

When the Tower is using light gun signals, operators should check the Tower for changes

Color & Type of Signal	Movement of Vehicles, Equipment & Personnel
Steady Green	Cleared to cross, proceed or go
Steady Red	Stop
Flashing Red	Clear the Taxiway/Runway.
Flashing White	Return to starting point on Airport
Alternating red and green	Exercise extreme caution

Airfield knowledge

Movement Areas

Runways and taxiways are FAA controlled areas requiring constant two-way radio communication with Ground Control on the proper frequency. Specific instructions from FAA Ground Control during all movements are required and all instructions must be acknowledged. Certification in Movement Area Driver's Training is also a requirement at MIA for all operators using moving areas. Blue edge lights and/or green centerline lights identify taxiways. Runway lights are generally white except at the ends where they are amber and red.

Non-Movement Areas

Taxilanes, Ramps and Aprons are part of the Non-Movement Area and are not controlled by the FAA. These areas do not require two-way communication with Ground Control. Miami Gates and American Airlines do require radio communications to access the

concourse areas. Aircraft taxi and maneuver in these areas along with vehicles and service equipment. All drivers when operating in these areas must use extreme caution. The Non-Movement Area Boundary Line divides the Non-Movement Area and the Movement Area. It consists of a six inch solid yellow line, separated by a six inch dashed/broken yellow line.



Fig 1. Non-Movement Area Boundary Line

Runway Hold Position Marking

Runway hold position markings identify the outer boundary of the runway safety areas where a taxiway intersects with a runway. They consist of two (six inch) parallel solid yellow lines and two (six inch) parallel broken yellow lines. The two solid yellow lines identify the outer boundary of the safety area while the two broken parallel lines will always be within the safety area of the runway. Personnel and equipment must always hold short of all runway hold position markings until properly cleared to cross by the FAA Ground Control.



Fig 2. Runway Hold Position Marking

When crossing a runway, the Tower must be notified when you are all clear. Never call clear of a runway until the aircraft and all equipment are clear of the runway hold position markings on the opposite side. Violation of these areas would be considered a **Runway Incursion**.

Runways

MIA has 4 runway surfaces with each surface having two established designations, one for each end of the runway. The direction of the aircraft traffic (landing and takeoff) is based on wind direction and defines the operation for each runway. For example; Runway 8L-26R is an east-west facing runway and if aircraft traffic is flowing in a westerly direction the runway designation in use will be 26R.

Penalty Box

The Penalty Box is identified on the airfield map and is located at the center of the field, north of the fire station and south of taxiway November. This is the designated aircraft parking area for remote emergency parking.

Taxiway "AA" (Alpha-Alpha)

Taxiway "AA" is a loop taxiway positioned at the departure end of runway 8R. All aircraft with a wing span greater than 143 feet are restricted from using "AA" taxiway. Taxiway "AA" is only available for use during an eastbound runway operation (8R) and only when approved by the Tower.

Taxiway "AA" contains two sets of hold bars. The first set of hold bars will be easily identified as you first approach "AA" either on the north side or south side of the runway (26L). These hold bars are used when taxiway "AA" is closed for use (during a westbound operation). When approved to use taxiway "AA", all operators will treat this taxiway as if actually crossing an active runway. The second set of hold bars are located where taxiway "AA" loops to a north-south direction, parallel to the safety area of runway 8R. All operators must hold short of the second set of hold bars when told to hold short of "AA" by the Tower.

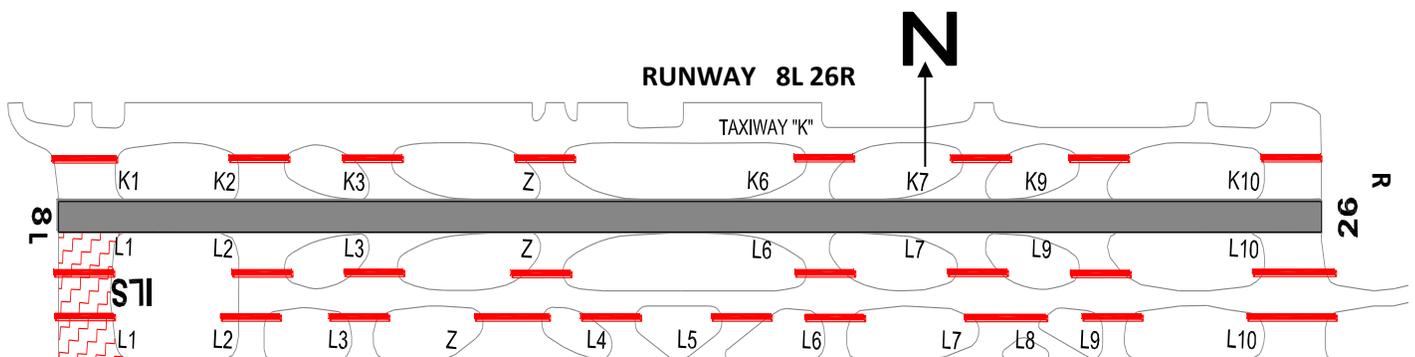
Spot Numbers

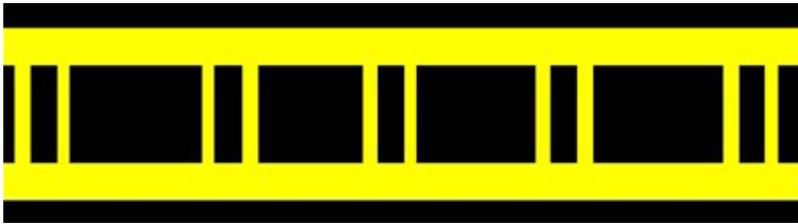
Spot numbers are reference points located at the outer edge of the taxilanes between the concourses on the terminal side of the field. These spot numbers are quick reference points used by operators and the Tower to identify exact locations in the terminal non-movement areas. These numbers can be easily identified on your airfield map.

Runway Turnoffs / Taxiway Intersections

Runway turnoffs, also referred to as taxiway intersections have a numbered sequence so all these areas can be easily identified. The numbered sequence identifies the smallest numbered intersection, i.e. L1, on the west side of the field while the numbered intersections increase in eastbound direction.

Number Sequence: in all cases the numbered intersections increase in an eastbound direction.





ILS Critical Area Hold Position Marking



Sign Array with Taxiway Location and Direction to other Taxiways. Yellow lettering on black background, show current location. Black lettering on yellow background shows direction to other taxiways. Sign is read from the outside inward. Example: M Taxiway being the first right turn and Y Taxiway being the second.



Inbound Destination Sign



Runway Hold Position Sign



Outbound Destination Sign



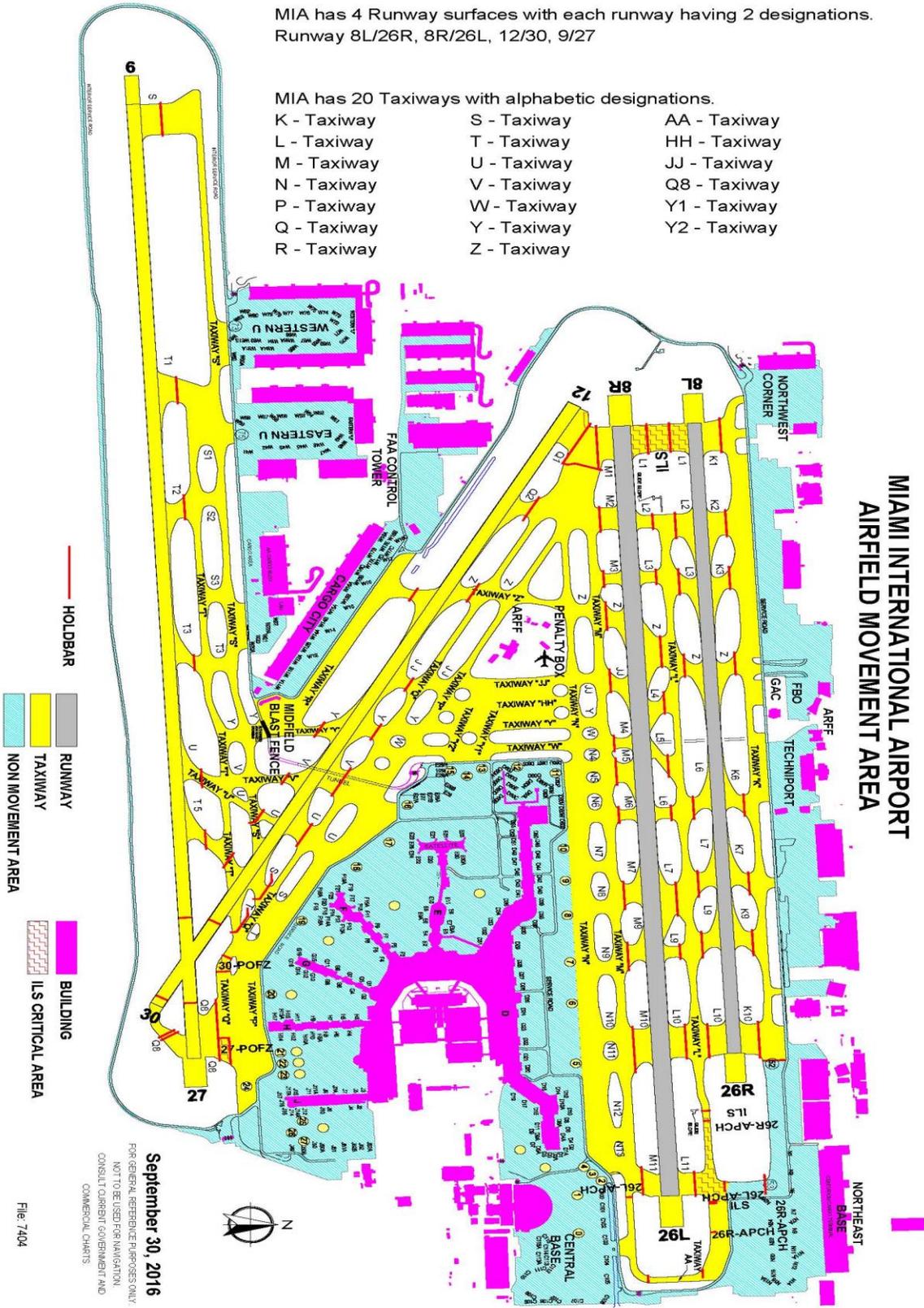
Mandatory Hold Position Sign for Runway Approach

MIAMI INTERNATIONAL AIRPORT AIRFIELD MOVEMENT AREA

MIA has 4 Runway surfaces with each runway having 2 designations.
Runway 8L/26R, 8R/26L, 12/30, 9/27

MIA has 20 Taxiways with alphabetic designations.

- | | | |
|-------------|-------------|--------------|
| K - Taxiway | S - Taxiway | AA - Taxiway |
| L - Taxiway | T - Taxiway | HH - Taxiway |
| M - Taxiway | U - Taxiway | JJ - Taxiway |
| N - Taxiway | V - Taxiway | Q8 - Taxiway |
| P - Taxiway | W - Taxiway | Y1 - Taxiway |
| Q - Taxiway | Y - Taxiway | Y2 - Taxiway |
| R - Taxiway | Z - Taxiway | |



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NOT TO BE USED FOR NAVIGATION.
CONSULT CURRENT GOVERNMENT AND
COMMERCIAL CHARTS.

File 7404

Glossary

Terms

Acknowledge: Let me know that you have received my message.

Advise Intentions: Tell me what you plan to do.

Affirmative: “yes” or “that is correct”

Final: Commonly used to mean that an aircraft is on the final approach course or is aligned with a landing area.

Hold: Stay in place: where you are currently located.

How do you hear me? A question relating to the quality of the transmission or to determine how well the transmission is being received.

Expedite: Used by ATC when such action compliance is required to avoid an imminent situation.

Negative: “no”, or “permission not granted”, or “that is not correct”.

Out: The conversation is ended; and no response is expected.

Over: My transmission is ended: I expect a response.

Proceed: Authorization to begin/continue on authorized routes.

Read back: Repeat my message back to me.

Roger: I have received all the transmission. It should not be used to answer a question requiring a “yes” or “no” answer. (See affirmative and Negative).

Say again: Used to request a repeat of the last transmission or portion thereof not understood or received.

Speak slower: Used in verbal communication as a request to reduce speed rate.

Stand by: Mean that the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in “standby for clearance”.

That is correct: The understanding you have is correct.

Unable: Indicates inability to comply with a specific instruction, request or clearance.

Verify: Request confirmation of information; e.g., “verify assigned altitude”.

Without delay: With a sense of urgency, proceed with approved instructions in a rapid manner.

Wilco: I have received your message, understand it, and will comply with it (see Roger).

ICAO Phonetics

Character	Word	Pronunciation
0	Zero	Ze-ro
1	One	Wun
2	Two	Too
3	Three	Tree
4	Four	Fow-er
5	Five	Fife
6	Six	Six
7	Seven	Sev-en
8	Eight	Ait
9	Nine	Nin-er
A	Alpha	Alfah
B	Bravo	Bravoh
C	Charlie	Charlee
D	Delta	Deltah
E	Echo	Eckoh
F	Foxtrot	Fox-trot
G	Golf	Golf
H	Hotel	Hohtell
I	India	Indee-ah
J	Juliet	Jewlee-ett
K	Kilo	Keyloh
L	Lima	Leemah
M	Mike	Mike
N	November	November
O	Oscar	Osscah
P	Papa	Pahpah
Q	Quebec	Kehbeck
R	Romeo	Rowme-oh
S	Sierra	See-ai-rah
T	Tango	Tan-go
U	Uniform	You-nee-form
V	Victor	Vik-tah
W	Whiskey	Wisskey
X	X-Ray	Ecksray
Y	Yankee	Yangkey
Z	Zulu	Zooloo