



AIRSIDE DRIVING GUIDE BOOK

THEORY HANDBOOK

1st Edition



APPROVAL PAGE

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Published by
RAC
Airside Management

S/No	Fault/ Violations	Penalties
4.	Airline failing to escort passenger(s) embark onto or disembark from an aircraft	<ul style="list-style-type: none"> ✓ A written Warning for the 1st occurrence ✓ For further occurrences, the Airline will be fined 50,000 RWF
5.	Reversing vehicle towards an aircraft in the movement area, where the vehicle is used for servicing that aircraft	<ul style="list-style-type: none"> ✓ Vehicle Operator shall be fined 25,000 RWF ✓ For further occurrences, the operator shall be suspended and withhold his/her ADP. ✓ In addition to that, the servicing Company shall be liable for any damages caused
6.	Approaching an aircraft while its still engines are still running	<ul style="list-style-type: none"> ✓ Vehicle/ machine operator shall be fined 50,000 RWF ✓ If it was instructions from the vehicle/Machine company, the company shall be fined 100,000 RWF and warned in writing.
7.	Person walking within or crossing the movement area at any time, without permission from the airport licensee to do so	<ul style="list-style-type: none"> ✓ 1st time warning ✓ The person shall pay 20,000 RWF as fines for further occurrences.
8.	Failing to wear a high visibility safety vest at all times entering or performing work within the airside	<ul style="list-style-type: none"> ✓ The subject shall pay 10,000 RWF as fines. ✓ For the 2nd time, he/she shall pay 20,000 RWF and ✓ For 3rd time, the subject shall no longer have access to the Airside.
9.	Driver driving or permitting another person to drive, any vehicle within airside without ADP	<ul style="list-style-type: none"> ✓ Both drivers shall be fined by 50,000 RWF and other measures shall be taken depending on the case and its severity.
10	Vehicle crossing the movement area in front of the path of a taxiing aircraft or an aircraft on tow	<ul style="list-style-type: none"> ✓ Vehicle operator shall be fined with 25,000 RWF ✓ The Operator and his/her company shall be liable for any damage caused.
11	Using a mobile telephone while driving a vehicle or operating equipment within the airside	<ul style="list-style-type: none"> ✓ The driver/ Machine operator shall be fined with 25,000 RWF for the 1st time ✓ 50,000 RWF for the 2nd time and ✓ For 3rd time, he/she shall be suspended to operate at Airside for 3months.
12	Over speeding depending on the Airside area and its allowed speed	<ul style="list-style-type: none"> ✓ Waring for the 1st time. ✓ 25,000 RWF as fine for 2nd time and ✓ 50,000 RWF of fine for 3rd time with 3 months of suspension from driving at Airside.

Note: For the person(s) who will be fined, his/her permit shall be confiscated until the fines are paid to Rwanda Airports Company Account 00040-06948300-35 which is in Bank of Kigali (BK) and the subject represent the payment slip to the concerned RAC staff and be given back the permit.
..... END.....

INTRODUCTION

Purpose

The contents of this Airside Driving Handbook sets out the requirements, rules and standard operating procedures for any driver who operates within the Maneuvering area of Airside. The contents also include vehicular requirements for any vehicle operating in the Maneuvering area.

Considering that the Maneuvering area is a highly controlled and critical operating area with heavy movement of aircraft, the rules stated in this handbook, in addition to those published in the Aerodrome manual, shall be strictly adhered to in order to ensure the safety of passengers, working personnel, aircraft and vehicles.

Review and Revision of Contents

The contents of this handbook will be reviewed on a regular basis. Any supplement or revision to the contents of this handbook shall be published on the website of Rwanda Airports Company (RAC). www.rac.co.rw

” An Airside Operations Notice” shall also be published to keep the airside community informed of the supplement or revision notice.

Driver shall keep an active lookout for such updates and ensure they comply with the rules published in the supplement or revision notice

Jurisdiction

- All vehicles and handling operations at the airside, apron, and designated roadways are under the control and jurisdiction of Rwanda Airports Company (RAC), the airport Licensee. RAC has also authorized its contracted enforcements staff from Airport Police Unit to act on behalf of Rwanda Airports Company in respect of security matters and check vehicles and persons.
- The control of aircraft taxiing from runway to aircraft stands and vice versa in jurisdiction of Kigali International Airport are under Kigali tower control.

Related reference Documents

- a) International Standards and Recommended Practices for Aeronautical Communications in ICAO Annex 10 Vol 2(Procedures)
- b) ICAO Annex 14
- c) ICAO Document 9432 (Manual od Radio Telephony)
- d) ICAO Document 9870 (Manual on the Prevention of Runway incursions)
- e) Airport Aerodrome Manual (N0 1)
- f) RCAA Regulations *Annex XXVI (Part 26) - Aerodromes and Ground Aids*

TERMINOLOGY

Definitions

Accident: Means an occurrence associated with the operation or handling of an aircraft in which a person is fatally or seriously injured, or the aircraft sustains damage (adapted from the definition in ICAO Annex 13).

Aerodrome: Means the Rwanda airports Aerodrome, and any other aerodrome maintained or managed by the Authority and include any road or uncovered area which is within the limits of the aerodrome but does not include any road or uncovered area to which the public has access.

Aircraft stand: Means an area on an apron for parking of aircraft.

Airside driving permit: Means an airside driving permit issued to the airside drivers who operates at the airside.

Airside Vehicle Permit: Means an airside vehicle permit issued to the vehicles that operates at the airside.

Airside: Means the movement area of the airport and the adjacent terrain and building or parts thereof, access to which is controlled, but does not include the cargo handling area.

Apron: means that part of the airport, other than the Manoeuvring area, to be used for accommodating aircraft for the purposes of embarkation or disembarkation of passengers, loading or unloading of mail or cargo, or fueling, parking or maintenance of aircraft.

Authorized person: means –

- a) any person officer or employ of the airport licensee; or
- b) any person duly authorized by the airport licensee to act on its behalf

RCAA: Rwanda Civil Aviation Authority

RAC: Rwanda Airports Company

Airside Driving Permit: means driver of this permit is allowed to enter runway, Apron and taxiway subject to approval from KIA Tower

Follow me vehicle: means a vehicle to guide aircraft or other vehicle.

Incident: means an occurrence, other than an accident, associated with the operation or handling of an aircraft, which affects or could affect the safety of operation.

Maneuvering area: means that part of the airport to be used for the taking off, landing and taxiing of the aircraft, but does not include areas set aside to accommodate aircraft, for the embarkation

Mandatory Reporting

Mandatory reporting is required for:

- Any accident or event that results in a fatality, injury or illness to person or damage to property or the environment;
- An event which if not corrected would likely endanger people, property or the environment, or an incident involving circumstances indicating that an accident nearly occurred. The following are examples of these types of incidents:
 - Failure or significant malfunction of airfield lighting.
 - Runways or aircraft maneuvering areas obstructed by aircraft, vehicles or foreign objects, resulting in a hazardous or potentially hazardous situation.
 - Runway incursions.
- Errors or inadequacies in marking of obstructions or hazards on runway or aircraft maneuvering areas.
- Collision between a moving aircraft and any other aircraft, vehicle or other ground object. Jet or prop blast incidents that could have resulted in significant

RWANDA AIRPORTS PENALTIES

Any ADP holders who fails to comply with Rwanda Airports Company Airside rules and regulations as indicated in this Handbook by its law and will be issued notice of Offence for one or all of the applicable By-Laws below. Rwanda Airports company may also suspend the ADP if necessary.

The following table specifies penalties to be applied for any violation of the rules, regulations and procedures governing activities and movement of vehicles at the airside.

S/No	Fault/ Violations	Penalties
1.	Failing to allow free and uninterrupted passage to aircraft passenger within the airside	<ul style="list-style-type: none"> ✓ Driver shall be warned 2 times. ✓ For the 3rd time, shall pay 20,000 RWF ✓ 4th time, he/she will be suspended and ADP shall be confiscated
2.	Vehicle towing another vehicle within the airside without use of suitable tow bar	<ul style="list-style-type: none"> ✓ The operator shall be warned for the 1st time ✓ Shall be fined with 20,000 RFW for the 2nd time
3.	Failing to immediately remove equipment or vehicle from the aircraft stand and any other related parking space, after the servicing of an aircraft	<ul style="list-style-type: none"> ✓ The operator shall be warned in case no any other incident caused. ✓ A fine of 25,000 RWF shall be applied and he/she shall be liable for any damage caused. ✓ Suspension and direct dismissal shall also be applied depending on severity of the incident

Reporting of Airside Incidents/Accidents

If you are involved in an accident, report it immediately to the Airside Management. The Safety Manager must be notified of all accidents or incidents within 24 hours. If a collision occurred between a vehicle and an aircraft, it's critical that the aircraft not be moved until the damage can be inspected and repaired. (Find the form from Marshalls office for reporting incidents).

AERODROME INCIDENT REPORTING FORM

Section A: Location Details:			
Report Type	Incident	Location	Incident Severity
Section B: Incident Occurrence Details:			
Date of Incident	Time of Incident	Airside	Low
Section C: Reported by			
First Name			
Section D: Incident Details (Provide details as to the cause of the incident & why it occurred)			
Actual Location:			
Describe the Incident:			
Contributing Factors:			
What Actions were taken Immediately:			
Additional Notes:			
Section E: Incident Type:			
Completed form forwarded to Ag. Director Airport Operations	Yes		
If not please specify			
Signed by:	Signature:		Date:

or disembarkation of passengers, for the loading or unloading of mail or cargo, or for fueling, parking or maintenance of aircraft.

Movement area: means that part of airport to be used for the taking off, landing and taxiing of the aircraft, consisting of the maneuvering area and the apron.

Notice of offence: means Notice of Composition of Offences is a report of any violations of the Civil Aviation Authority of Rwanda (Composition of Offences)

Perimeter Roadway: means that road within the airside that allows vehicle to move around the airport clear of apron, taxiways and runways.

Primary Roadway: means roadways located in front of all aircrafts parking stands and baggage handling areas meant for movement of vehicles and equipment.

Runway: means a defined rectangular area prepared for the landing and take-off of aircraft.

Runway incursion: means occurrence at an aerodrome involving the incorrect presence of an aircraft for the landing and take-off of aircraft.

Runway Strip: means a defined area, including the runway and stop way, if provided, that is intended:

- a) To reduce the risk of damage to aircraft running off a runway; and
- b) To protect aircraft flying over the area during take-off and landing operations.

Secondary Roadway: means roadways located behind all aircraft parking standards meant for movement of vehicle and equipment that are not allowed or unable to access the primary roadways.

Vehicle: means any vehicle whether mechanically propelled or otherwise, and includes trailer, forklift, tractor, and any movable equipment.

Abbreviations

ATC	Air Traffic Control
ADP	Airside Driving Permit
AVP	Airside Vehicle Permit
FOD	Foreign Object Damage/Debris/Deposit
REP	Runway Entry/Exit Point
RT	Radio Telephony
SOP	Standard Operating Procedures
RAC	Rwanda Airports Company
RCAA	Rwanda Civil Aviation Authority
ERA	Equipment Restraint Area

REQUIREMENTS FOR DRIVING ON MANOEUVRING AREAS

Airside Driving Permit (ADP)

To enter and drive in the manoeuvring area, driver must have a valid official purpose and possess ADP. To qualify for the ADP, driver shall undergo training and pass tests (theory and practical) to demonstrate his/her competency in driving in the manoeuvring area.

Driver must not have committed any infringement, i.e. involved in accident/incident or issued any notice of offence during the duration of the driver's airside driving experience. Drivers application shall be supported by his/her employer.

Training

Driver shall attend training conducted by Rwanda Airports Company under Airside management prior to undergoing the tests. The training classroom shall base and will cover the rules and regulations operating procedures of driving at the airside.

In addition, driver shall go for familiarization trips in the manoeuvring area prior to undergoing tests.

Tests

Driver shall undergo and pass a written theory test, followed by an oral test on radio-telephony (RT) communication skills. Finally, driver has to undergo a practical test where he/she will be assessed on his/her competency to driver in the manoeuvring area.

Upon passing all of the above tests, the driver will be issued with ADP.

Refresher training

Driver shall undergo refresher training conducted by Rwanda Airports Company under Airside Management once in two years.

The refresher training is conducted once in two years. Airside Manager will notify the driver through the representative of each organization of the course schedule. If the driver fails to attend the refresher training, status in his/her ADP will be suspended.

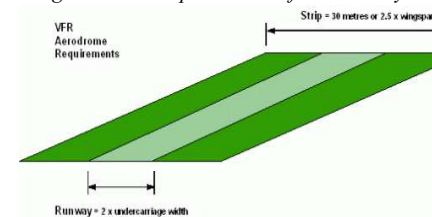
Airside Vehicle Permit (AVP)

Diagram1. Vehicle permit



Vehicle operating in the manoeuvring areas shall first possess a technical control certificate issued by Rwanda National Police. To qualify for an AVP, the following vehicular requirements shall be met.

Diagram 7. A sample extract of the Runway Strip



There are signs and markings to indicate an entry to a runway. Drivers and personnel must watch out for these and ensure they do not move beyond these points.

Unauthorized entry is considered as a 'RUNWAY INCURSION' and could result in serious safety issues.

Thus, all drivers and personnel must pay extra attention and ensure they keep out of the area unless permission to enter is obtained from Air Traffic Control.

Perimeter Roadway near Runway

There are several entry points to the runway located on the perimeter roadway. Driver shall ensure that permission to enter is obtained from Air Traffic Control before entry.

The signs are installed along perimeter roadway to act as boundary. All personnel shall not move beyond the edge of perimeter roadway. All personnel shall stay clear of the runway strip, including road access to runway and turf area.

Driver shall not use the secondary roadway as a short cut or to overtake. Only vehicles exceeding the height limit along the primary roadway shall be allowed to use the secondary roadway.

USEFUL CONTACT NUMBERS

RWANDA AIRPORTS COMPANY	
Air Traffic Control	0724123137
Head of Operations Office	0724123014
Operations office	0724123139
Airside Ground Controllers (RAC)	0724123153
Airside Management (AM)	0724123037
Airport Emergency Service Center	0724123078
Key Agencies	
KIA Medical Emergency	0788330204
Special Airport Police Unit (SAPU)	0724123158
Airport Operations Office	
Fire Fighting and Rescue	0724123014/0724123140

Latest Aerodrome Map

The latest aerodrome map can be downloaded from RAC Aeronautical Information Publication (AIP) website. Subscribe to the website to receive alerts on latest updates.

<https://www.rac.co.rw>

Stop Bar

The red stop bar lights on the roadway indicates the holding point and driver must stop and seek permission from Air Traffic Control before entering runway. Driver shall never cross the illuminated stop bar lights.

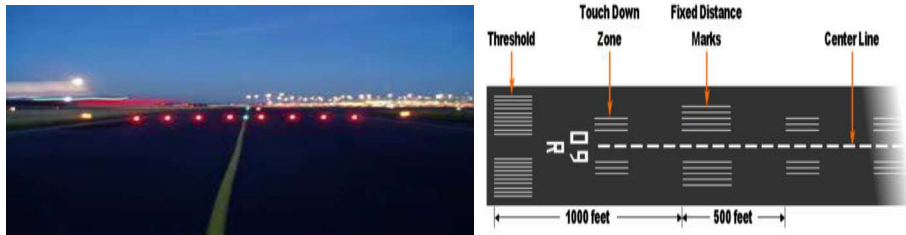


Fig 14. Threshold Marking on Runway

Taxiway Crossings

The Give Way to Aircraft sign painted on the roadway warns driver of taxiway crossing ahead and potential aircraft movement. Driver shall stop at the STOP marking and visually check that the area is clear of aircraft movement before moving onto the crossing.

If there are light signals at the roadway crossing, driver shall check the signals that indicate it is clear to proceed before moving.

This, the light signals provide supplementary warning. Driver is still required to visually check that the area is clear of aircraft movement, driver is not allowed to stop on any part of the crossing.

Runway Strip

Runway Strip means a defined area, including the runway and stop way. If provided, that is intended:

- To reduce the risk of damage to aircraft running off a runway; and
- To protect aircraft flying over the area during take-off and landing operations.

The runway strip represents the area which is 150m from to the left and right of the center line of the runway. All personnel and vehicles must keep clear of the runway strip at all times unless permission to enter is obtained from Air Traffic Control. The runway strips are demarcated by black dashes in the diagram below. Please refer to Annex A for the entire layout of the runway strip.

VEHICULAR REQUIREMENTS



Fig 1. Follow Me Car Picture

Note: The vehicle inspection will be conducted by Rwanda Airports Company (Airside Management) prior to issuance of AVP to

- Possess a valid official purpose for operating in the manoeuvring areas
- Possess a valid radio call sign assigned by Rwanda Airports Company and the call sign shall be displayed in black, each letter no smaller than 60cm (breadth) and 45cm (length), on the highest point of the vehicle.
- Equipped with a set of Radio-telephony (RT) equipment and transponder approved by Rwanda Airports Company

ensure all the necessary requirements listed in this section have been met.

- A warning sign that is no less than 15mm (breadth) and 10mm (length) bearing the following words to be displayed on the dashboard or any position conspicuous to the driver.

NO ENTRY INTO RUNWAY/TAXIWAY WITHOUT PERMISSION FROM AIR TRAFFIC CONTROL TOWER

- Air traffic control tower's frequency and contact number shall be displayed in the vehicle.

AIR TRAFFIC CONTROL operates on (127.00 MHZ), and can be contacted on (07241231372) in case the frequency is off.

- A set of flashing yellow lights to be fitted on top of the vehicle. The flashing yellow light shall comply with ICAO standards (Type C lights) listed below.
 - 60-90 flashes per minutes
 - Peak intensity at and below 50- 500 cd/ m² shall be 40 minimum 400 max
 - Vertical beam spread shall be at 12⁰ (peak intensity shall be located at approximately 2.5⁰ vertical)
- A copy of the latest KIA Aerodrome Layout map is to be placed in the vehicle during operations on the manoeuvring area.



Diagram 2. Aerodrome Map

Note: The latest aerodrome map can be downloaded from Rwanda Airports Company Aeronautical Information Publication (AIP) Website

Airside Vehicle Control

Traffic Rules

General Rules and Procedures

- (1) Each employer must ensure that his/her employees are capable and qualified to operate vehicles and equipment, which they are required to operate in the course of performing their duties on the airside.
- (2) The vehicle operator must ensure that his vehicle is operating satisfactorily and has the required safety equipment and markings.
- (3) All vehicle operators shall notify their immediate supervisor of any equipment malfunction.
- (4) No person shall operate a vehicle in the airside area unless the vehicle displays an identification pass or other means of identification issued or authorized by the RAC
- (5) No person shall operate a vehicle in the airside area while under a prohibition from operating the vehicle imposed by a court.
- (6) No person shall operate a vehicle in the airside area in a manner that, having regard to all the circumstances including the amount of traffic, is dangerous to aircraft, equipment, and persons or vehicles.
- (7) Headlights must be turned on whenever a vehicle is operating in the manoeuvring area
- (8) All vehicles operating on movement area shall have safety equipment and display markings.

Runway

The following are the markings, lights and signs found on a runway, as well as the holding point leading to a runway. Driver shall hold at these points, seek permission and obtain confirmation from Air Traffic Control before entering the runway. Otherwise, it will constitute a runway incursion which is a serious infringement.

Holding Point Markings

There are holding point marking and runway mandatory signs at all taxiways. Vehicles approaching holding points shall STOP before the holding point and get permission from Air Traffic Control before entering the runway.



Fig 12. Vehicle holding waiting to get permission



Fig 13. Holding Lines



Fig 10. Direction when taxiing in the south Apron.

Markings



Diagram 6. Allowed speed

Light



Fig 11. Runway lights

(9) No person shall park an aircraft fuel servicing vehicle within 15 meters of the terminal building, cargo building, aircraft hangar or any other airport structure designed to house the public that has windows or doors in any exposed walls.

(10) No person shall park a vehicle in any area designated by a sign as an area in which parking is prohibited.

(11) No person shall, without the permission of the Airside Manager park a vehicle in any area of the airside not intended for the use of vehicles.

(12) No person shall park a vehicle in any area of the airside designated by a sign as a loading area.

(13) Vehicles and equipment should be parked into parking areas. This is a particularly important around the terminal building for passenger's Bus, and other heavy machine and vehicles should park in the designated areas.

(14) Vehicle operators shall remain at a safe distance from areas affected by jet blast or prop wash of manoeuvring aircraft, and not pass in front of or closely behind aircraft with engines running unless the wheels of the aircraft are chocked or the Marshaller wave's permission.

(15) No person shall operate a vehicle on a road within Kigali International Airport airside at speed that exceeds the limit either marked on pavement or posted on vertical signs for that road.

(16) No person shall drive a vehicle or equipment at a speed in excess of:

- i) 20 km/h on the apron and associated service roads,
- ii) 20km/h on taxiway
- iii) 5 km/h for vehicles servicing aircraft while approaching or leaving the aircraft
- iv) 40 km/h on the perimeter and intervention roads

(17) Vehicle operators shall at all times give way to aircraft

(18) Every vehicle operator when in airside area shall also give way to:

- i) An emergency vehicle including RFFS vehicle and ambulance with warning devices operating.
- ii) Vehicles towing aircraft
- iii) Vehicles and equipment engaged in maintenance activities

(19) Every person operating a vehicle or equipment on the apron shall give the right of way to pedestrians being escorted between an aircraft and terminal building.

(20) Vehicles already in a designated vehicle corridor have the right of way over other vehicles attempting to enter it. Where corridors intersect, the operator shall give way to the vehicle on his right.

Driving on Airside Roadways

Table 1. Driving Speed at Airside

Location	Speed
Around the Aircraft Stands	5 km/h
on taxiway	20km/h
on the perimeter and intervention roads	40 km/h
On apron and associated roads	20km/h

VEHICLE REQUIREMENTS

- All vehicles operating airside must hold and display a current Airside permit unless the vehicle is under the supervision and escort of another Authorized vehicle.
- All vehicles operating airside shall have a clearly distinguishable company logo on both sides of the vehicle.
- All vehicles operating airside must be fitted with and operate an amber-colored flashing rotating beacon fixed to the highest point of the vehicle and visible from 360 degrees (hazard lights are not an acceptable alternative) except for rescue and fire fighting vehicles where a red colored beacon is mandatory. OR The vehicle is under supervision by another vehicle being operated in accordance with these Rules and displaying such beacon or flashing light.
- Un-roadworthy vehicles or vehicles leaking oil or fuel are not permitted to operate Airside.
- All loads and vehicle contents must be secured to reduce the risk of FOD.

Vehicles and equipment on the airside must be parked in accordance with parking signs or marked parking bays. On aprons, vehicles and equipment must be parked within the defined Equipment Storage Areas, marked with a single white line. Vehicles must not be parked where they will obstruct aircraft, other vehicles, pedestrian crossings, or over in-ground hydrant positions. Any unattended vehicle must also be parked at least 2m from the fence on airside and 3m from the fence landside



Fig 2. Equipment area

AIRSIDE MARKINGS, LIGHTS AND SIGNS

Taxiway

The following are the markings, lights and signs found on a taxiway, as well as the holding point leading to a taxiway. Driver shall not proceed beyond the holding point unless permission has been granted by Air Traffic Control. Failure to do so is a serious infringement of airside rules.

Signs



Fig 7. Taxiway Bravo, the north entrance at the Apron bravo at Kigali international airport.



Fig 8. Taxiway Alfa, the north-west entrance at the Apron Alfa.



Fig 9. Taxiway Charli, the south entrance at the Apron Charli.



Table 8. Request to Escort Convoy on Taxiway

Fox mike is escorting convoy to taxiway.		
Scenario	Air Traffic Control	Fox mike
		Air Traffic Control, Fox mike
	Fox mike, Air Traffic Control.	
Fox mike seeks movement request from Air Traffic Control.		Air Traffic Control, Fox mike. At taxiway Alpha. Escorting convoy of three vehicles. Request to proceed to south cross to dump soil at work site.
Air Traffic Control gives Fox mike instructions to proceed.	Fox mike, proceed to south apron via Alpha C.	
Prior to movement, Fox mike shall read back instructions to Air Traffic Control.		Air Traffic Control. Fox mike proceed to hanger one via taxiway bravo.

Note: if instructions is correct, Air Traffic Control is not required to acknowledge a correct read back.

AIRSIDE LAYOUT

Diagram 5. Airside layout



Vehicle Breakdown

Driver shall immediately inform Air Traffic Control and Operations office if the vehicle has stalled on the manoeuvring area.

Driver shall contact his/her company maintenance section to tow the vehicle away immediately

Towing

Driver shall not operate a tractor with a chain of rolling stock in excess of:

- i) 3 container trailers or baggage trolleys

3 pallet dollies

- Only 3 pallet dollies are allowed to be towed at any one time

Fig 3. Allowed Pallet dollies



Fig 4. Not allowed



AIRSIDE RULES AND REGULATIONS

Responsibilities of ADP Holder

- For the safe operations on the manoeuvring area, the driver shall first ensure that he/she possess the necessary qualification to drive in the manoeuvring area, i.e. **a valid ADP.**
- Next, driver shall ensure there is a valid official purpose to drive into the manoeuvring area, No one shall enter the manoeuvring area unless absolutely necessary. **Entry into manoeuvring area is also strictly subjected to approval from Air Traffic Control.**
- **Driver** shall also ensure that he/she is **familiar with the Airside layout** in order to move safely and orderly in the manoeuvring area. Driver shall check that the latest copy of the aerodrome map is available in the vehicle prior to driving into the manoeuvring area.
- All drivers shall use the standard RT phraseology and shall also ensure that they listen clearly to Air Traffic Control complete message and read back the complete message to Air Traffic Control.
- It is the responsibility of the driver, who has been trained during the course of obtaining the ADP, to ensure communication over the radio-telephony channel is clear and precise. Thus, only the driver, i.e. **ADP holder, is allowed to operate the radio-telephony set** and communicate with Air Traffic Control for all matters relating to driving on the manoeuvring area. Any exception to this rule shall only be allowed if authorization has been granted by Rwanda Airports Company.

Diagram 3. ADP Permit



- Lastly and very importantly, *driver shall adhere to the Standard Operating Procedures (SOP)* at all times when driving in the manoeuvring area.

STANDARD OPERATING PROCEDURES (SOP)

(a) Before commencing operations, driver shall:

- Check and ensure that the radio-telephony set is switched on and tuned to the correct frequency for Air Traffic Control (**127.00 MHZ**).
- Perform radio check with *Kigali International Airport procedures* to ensure equipment is working well and radio transmission is readable;
- Check that the flashing yellow light on the highest point of vehicle is switched on
- Check that there is a latest copy of the Airside aerodrome layout map in the vehicle.

(b) Before entering the manoeuvring area. Driver shall:

- Report current position to Air Traffic Control, as well as intended destination and purpose,
- Request permission from Air Traffic Control to enter the runway and/ or taxiway;
- Obtain permission from Air Traffic Control before entering any part of the runway and/or taxiway;
- Perform read-back of the permission received and enter only after acknowledgement by Air Traffic Control;
- Stop before stop bar of taxiway junctions and scan the horizon for aircraft and other vehicular movement at all times;
- The driver shall always **park** the vehicle facing the landing/take-off end of the runway when it is stationary on the runway.

Note:

- When in doubt or unclear, driver shall remain at current location and seek confirmation again from *Air Traffic Control*. If unable to clarify, driver should turn back, and
 - Ensure the flashing yellow light on top of the vehicle is switched on and remains illuminated at all times when the vehicle is on the runway and/or taxiway;
 - Ensure the transponder is working.
- Perform final visual check just before entering the runway and/ or taxiway to ensure that the area is clear of aircraft movement and always give way to taxiing aircraft on tow;

After instructions to proceed are clarified with Air Traffic Control.		Tango Zulu, Fox mike, proceeding to holding point Via Akagera, Hold short of Runway.
When fox mike is at designated holding point.		
		Tango Zulu, Fox mike. At holding point Via Akagera.
	Fox mike, Standby.	
Air Traffic Control gives Fox mike instructions to enter runway.	Fox mike, Tango Zulu. Enter Runway via Akagera.	
Prior to movement, Fox mike shall read back instructions to Air Traffic Control.		Fox mike entering Runway via Akagera

*Note: if the instruction is correct, Air Traffic Control is not required to acknowledge a correct read back. Air Traffic Control will not provide acknowledgement after permission to enter runway is given performed and the stop bar lights switched off.

Table 7. Vacate Runway

Air Traffic Control gives instructions to vacate Runway.		
scenario	Air Traffic Control	Fox mike
	Fox mike, Tango Zulu	
		Tango Zulu, Fox mike
Air Traffic Control gives instructions to vacate runway....	Fox mike, vacate Runway 28 via Hanger one	
Prior to movement, Fox mike shall read back instructions to Air Traffic Control.		Air Traffic Control, Fox mike. Vacating Runway 28 via hanger one
After vacating runway.		Air Traffic Control, Fox mike. Runway 28 vacated .
	Fox mike.	

Note: if the instructions is correct. Air Traffic Control is not required to acknowledge a correct read back.

** Note: Air Traffic Control will need to acknowledge receipt of the report that vehicle has vacated.

Say again	repeat all, or part, of you last transmission
Standby	wait and I will call you
Vacate	to leave the manoeuvring area

Note:

More can be found in the international standard and recommended practices for Aeronautical communication in ICAO Annex 10 vol 2 (comms/procedures)

Standard Phraseology

The following are standard phraseologies to be used during various operating scenarios on the manoeuvring area. Driver shall apply these standard phraseologies as closely as practicable.

Table 6. Request to Enter Runway

If the prevailing direction of aircraft landing/ take-off is 10 at Runway 28 (for Runway 1)...		
scenario	Tango Zulu/Air traffic controller	Fox mike/ Follow me
		Tango Zulu, Fox mike
	Fox mike , Tango Zulu	
		Tango Zulu, Fox mike holding at GP. Request to enter Runway for maintenance. Duration one Zero minutes.
	Standby.	
When movement instructions can be given, Air Traffic Control will contact fox mike.....	Fox mike, Tango Zulu	
		Tango Zulu. .
	Fox mike, proceed to Akagera Hold on short of Runway.	
Scenario	Air Traffic Control	Fox mike
Scenario 1: If Fox mike is unsure of instructions, request for confirmation from Air Traffic Control.		Tango Zulu, fox mike, please confirm proceed to holding point Akagera Holding short of Runway.
	Affirmative, Fox mike.	
Scenario 2: If Fox mike is unsure of instructions, request for a repeat of instructions from Air Traffic Control.		Tango Zulu, Fox mike. Say Again.
	Proceed to holding point Akagera. Hold short of Runway.	
Scenario	Air Traffic Control	Fox mike

- All drivers shall keep a strict lookout for aircraft and other vehicular movement and always maintain constant radio contact with Air Traffic Control.

(c) On the manoeuvring area, driver shall:

- Driver shall report Air Traffic Control that has vacated;
- Maintain listening watch on the radio-telephony channel (127.00MHz) or Channel 1 of MOTOROLA type of Radio telephone at all times;
- Never leave his/her vehicle unattended on the runway and/or taxiway.

Note:

- In the event of radio-telephony failure while operating on the manoeuvring area, driver shall vacate the area immediately and contact Air Traffic Control via mobile phone after driver and vehicle are out of the manoeuvring area. Air Traffic Control can be contacted at Tel: 0724123137.
- Alternatively, driver can contact Air Traffic Control via a working radio-telephony set of another vehicle.

iii) All drivers in the runways listen to their RT sets for any instructions from Air Traffic Control. If communication with Air Traffic Control is lost (after 5 tries), driver shall quickly vacate the runway and inform Air Traffic Control via phone or other means that he has vacated the runway.

(d) After completion of operations on the manoeuvring area, driver shall proceed to vacate the manoeuvring area, but, before exiting the manoeuvring area, driver shall:

- Stop before the stop bar marking and look to his left and right for any approaching aircraft. If all is clear, driver shall then exit the manoeuvring area.
- Report to Air Traffic Control. This is to be done only after the vehicle is out of the manoeuvring area.

Procedures for Push Back

When the pilot is ready for start-up and push back, he/she seeks confirmation from the ATC (KIA Tower).

Ground crew and push back operators notify Marshalls (Call sign: RAMP 1) that they are ready for push back. On being told by KIA Tower that pushback is approved, they co-ordinate with the ground crew and push back operator for the start-up and push back of the aircraft.

Ground crew and Marshalls ensure that the area behind an aircraft is clear of vehicles, equipment and other obstructions before the start-up or push back of aircraft commences. When the pilot is ready for start-up and push back, he/she seeks confirmation from the ground crew that there is no hazard to his aircraft starting up.

The table describing the procedures for the pushback of aircraft from the various aircraft stands is as appendix L. When it becomes necessary to vary a procedure to expedite aircraft movements, RAC through Airside Management will issue specific instructions to the pilot.

The lead-in lines are for aircraft nose-in guidance. For aircraft stands without dedicated pushback lines, crew shall follow Marshalls instructions.

If the push back procedures are not acceptable due to operational restrictions, the marshaller should inform ATC and pilot concerned immediately and alternative pushback arrangements will be given to meet safety standards.



Fig 5. Pushing Back an Aircraft

viii) There shall be no simultaneous push back of aircraft unless there is other alternative way otherwise provided.

Scheduled Runway Inspections

All ADP holders, i.e. drivers operating on the manoeuvring area, are to take note of the following procedures. These procedures are specific to entry into the runway.

- (a) During the arrival and departure of aircrafts runway inspections, only Bravo Charlie and follow me car are allowed to do runway inspections on daily basis.
- (b) For all drivers entering runway, prior to entry, driver is to seek permission from Air Traffic Control to enter
- (c) Refer to **Paragraph on Standard Operating Procedures** on operating in the manoeuvring areas.

Adhoc Entry into Runway

- (a) All ADP holders shall enter runway with valid reasons only.
- (b) Before entering, driver shall obtain permission from Air Traffic Control.
- (c) All drivers shall refer to **paragraph on "Standard Operating Procedures"** on operating on the manoeuvring areas.

Note: If the instruction is correct, Air Traffic Control is not required to acknowledge a correct read back. Air Traffic Control will not provide acknowledgement after permission to enter runway is given, performed and the stop bar lights switched off.

Pronunciation of Digits

The following words are used when transmitting single digits.

NUMBER	WORD	NUMBER	WORDS
0	ZERO	5	FIVE
1	WUN	6	SIX
2	TOO	7	SEVEN
3	TREE	8	AIT
4	FOWER	9	NINER

Table 3. Digits pronunciation

Note: digit 5 and 9 are spoken as FIVE and NINER respectively as they are easily confused when spoken normally.

Call Signs

Call sign Suffix	identification
Air Traffic Control	Rwanda Airports Company Air Traffic Control
Airside Management	Rwanda Airports Company Airside Management

Table 4. Call Signs

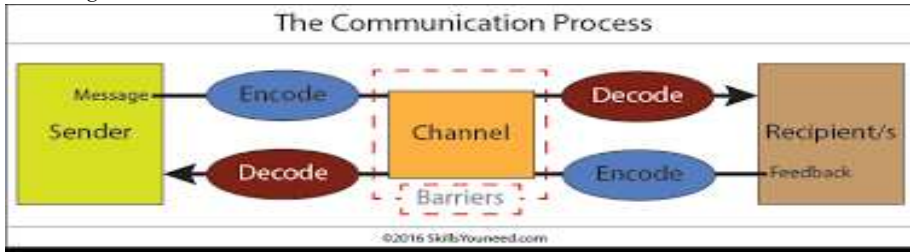
Standard Words

The following are the standard words used in the radiotelephony communications.

Table 5. Standards words

Word/phrase	Meaning
Acknowledge	Let me know you have received and understood the message
Affirmative	Yes
Approved	Permission for requested action is granted
Cancel	Withdraw the previously transmitted clearance
Contact	Establish radio contact with...
Correction	An error has been made in this transmission (or message indicate.
Enter	Permission granted to go to runway...
Give way	To allow the mentioned traffic (aircraft) to pass by
Hold short	To stop at the point and do not enter the specific area ahead.
How do read	What the readability of my transmission is?
Negative	No/ permission not granted / that is not correct.
Proceed	Clear to go to..... (Usually taxiway or holding point)
Read Back	repeat all, or the specified part, of this message back to me exactly as received
Request	I wish to know..... Or obtain
Report	pass me the following information

Diagram 4. Communication Process



Pronunciation of Letters

It is important to transit each word slowly and with clarity, avoid mispronunciation and omission of consonants.

LETTER	WORD	PRONUNCIATION IN ENGLISH
A	Alfa	Al fah
B	Bravo	Brah voh
C	Charlie	Char lee
D	Delta	Dell tah
E	Echo	Eck oh
F	Foxtrot	Foks trot
G	Golf	Golf
H	Hotel	Hoh tell
I	India	In dee ah
J	Juliet	Jew lee ett
K	Kilo	Key loh
L	Lima	Lee mah
M	Mike	Mike
N	November	No vem ber
O	Oscar	Oss Car
P	Papa	Pah Pah
Q	Quebec	Key Beck
R	Romeo	Row Me Oh
S	Sierra	See Air Rah
T	Tango	Tang Go
U	Uniform	You NEE Form
V	Victor	Vik Tah
W	Whiskey	Wiss KEY
X	X-ray	Ecks Ray
Y	Yankee	Yang Key
Z	Zulu	Zoo Loo

Table 2. Letter Pronunciations

Escort

i) Driver without a valid ADP who requires to drive into the manoeuvring area shall be escorted by a driver in a separate vehicle.

ii. Escorting is permissible only:

- (a) During scheduled Runway Closure of 90 minutes, planned night closures of more than 90 minutes (e.g. runway repair, clearing of rubber deposits) and ad hoc closures (day or night closures of more than 90 minutes (e.g. flushing of fuel spillage); and
- (b) For point to point movement in the manoeuvring area during short closures to escort vehicles to the closed area of works (e.g. replacement of runway edge lights and urgent patch-up works).

iii. Driver shall:

- (a) Inform ATC before the commencement of escort (purpose of escort, number of vehicles being escorted, etc.);
- (b) Maintain close listening watch on radio frequency at all times;
- (c) Be responsible and liable for the safe operations of the driver (s) and vehicle(s) that he/she escorts;
- (d) Escort a maximum of **two (2)** vehicle at any one time;
- (e) Ensure that he/she stays close to the escorted driver(s) and vehicle(s) and keep a close look-out on their operations;
- (f) Brief the escorted driver (s) prior to the commencement of escort on the route, objective of the mission, escort procedures, means of communication, airside rules and regulations and contingency procedures; and
- (g) Ensure that he/she has the mobile telephone number (s) of the escorted driver
 - (s) prior to the commencement of escort.

iv. Escorted driver shall:

- (a) Be responsible to follow and keep a look out on the driver at all times;
- (b) Never overtake or be ahead of the driver and strictly no breaking away from the convoy;
- (c) Comply with airside rules and regulations as briefed by driver; and
- (d) Ensure that he/she has the mobile telephone number of the driver prior to the commencement of escort.



Fig 5. Escorted vehicle

V. preferred means of communication between driver and escorted driver is by walkie-talkie followed by mobile telephone.

vi. In case of a break away from escort, the driver and escorted driver shall safely stop their vehicles and contact each other and inform Air Traffic Control by any means of communication.

Note: The contingency procedure during a full telecommunication failure:

The escorted driver may flash the vehicle headlights and/or sound the vehicle horn to alert the driver

Disruption of Operating at Air Traffic Control Due to Emergency

When aerodrome control services cannot be provided at Air Traffic Control due to unforeseen circumstance (e.g. fire, etc.), Air Traffic Control shall evacuate the Control Tower and proceed to the backup cabins and continue the provision of aerodrome control service from there. Prior to evacuation, all parties concerned (including Rwanda Airports Company) shall be notified.

Air Traffic Control shall inform aircraft on the ground (on the respective control frequencies) that Tower operations will be suspended due to (reason) and to maintain a listening watch on frequency 127.00 MHz (i.e. surface utility frequency) and await further instructions.

Aircraft on finals shall go around and contact Rwanda approach on frequency 127.00 MHz for further instructions. **As the emergency occurs they shall all follow the instructions on KIA Aerodrome Manuel.**

Aircraft committed for a landing shall be cleared to land and once vacated the runway, the aircraft to hold on the taxiway (clear of the runway) and maintain a listening watch on frequency 127.00 MHz to await further instructions.

Aircraft on take-off roll shall be allowed to continue and to contact Rwanda Approach after airborne.

Aircraft on the ground (e.g. taxiing for departure or awaiting take-off permission) to hold position until further notice and maintain a listening watch on frequency 127.00 MHz

Once notified by Air Traffic Control that evacuation is in progress, Rwanda Airports Company shall listen out on frequency 127.00MHz and inform aircraft on that frequency to hold position and standby for further instructions. When queried, the reason (i.e. Air Traffic Control operations is suspended until further notice due to evacuation) for delay to be transmitted to pilot.

Essentially, driver shall expect a higher volume of transmission on frequency 127.00MHz. Therefore, driver shall be more attentive and alert to ensure messages are properly conveyed and received.

COMPETENCY IN RADIO-TELEPHONY COMMUNICATIONS

The need to be Competent

Competency in radio-telephony communication is mandatory for driver as he/she is to maintain clear and concise communication with Air Traffic Control and Kigali International Airport. It is also very important in preventing miscommunication or misunderstanding of instructions or information in relation to driving on the manoeuvring area.

Language

English is used internationally for all ground radio telephony (RT) communications.

Time System

Start of a day is denoted by 0001H. End of a day is denoted by 2400H.

Communication Techniques

The effective use of radio-telephony equipment depends on:

- (a) Articulation
- (b) Microphone techniques
- (c) Choice of words

Poor delivery of RT communication techniques can cause confusion and may potentially lead to accidents.

Basic Guidelines

Before transmission, users shall:

- (a) Ensure they are tuned to the right frequency;
- (b) Ensure radio transmission is readable by performing a radio check,
- (c) Decide on the message to be transmitted.

During transmission, users shall:

- (a) Ensure transmit switch is on;
- (b) Speak into the microphone;



- (c) Speak normally and clearly;
- (d) Refrain from shouting or whispering and from varying pitch and tone;
- (e) Use standard words and phrases;
- (f) Be concise; and
- (g) Refrain from interrupting if another party is making a transmission and is expecting a reply; give priority to a distress call.

Fig 6. Use of Transmission Equipments.

5.5.3 After transmission, users shall ensure transmit switch is completely released to prevent jamming of the frequency.