

IVAO INDONESIA DIVISION

**ATC STANDARD OPERATION  
PROCEDURE**

**JUANDA INTL (WARR)  
SURABAYA, INDONESIA**



International Virtual Aviation Organisation



## Background

Juanda International Airport (Indonesian: *Bandar Udara Internasional Juanda*) (IATA: SUB, ICAO: WARR), is an airport located in Sidoarjo, a small town near Surabaya, East Java. This airport serves Surabaya and surrounding areas. Juanda International Airport is operated by PT Angkasa Pura I. The airport takes its name after Djuanda Kartawidjaja, the last Prime Minister of Indonesia who had suggested development of this airport. Juanda International Airport is the second-largest and second-busiest airport in Indonesia after Jakarta Soekarno-Hatta International Airport based on the aircraft movements and passenger movements.

## General Info

Surabaya, IDN

S 07° 22.8' E112° 47.2' Mag Var: 0.0°W

Elevation: 9'

Time Zone Info: GMT+7:00 no DST

Transition level : FL130

Transition altitude : 11000ft

## Runway Info

Runway 10-28 9843' x 148' asphalt

Runway 10 (98.0°M) TDZE 11'

Lights: Edge, ALS

Stopway Distance 328'

Runway 28 (278.0°M) TDZE 8'

Lights: Edge, ALS

Right Traffic

Stopway Distance 328'

## Communications Info

### Juanda ATC:

Controler Name	Frequency	ATC code	Callsign
Juanda Ground	118.900	WARR_GND	Juanda Ground
Juanda Tower	118.100	WARR_TWR	Ngurah Tower
Surabaya Director	119.100	WARR_D_APP	Surabaya Director
Surabaya Approach	125.100	WARR_APP	Surabaya Approach

Bali Control	132.900	WAAZ_B_CTR	Bali Control
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## Duty Description

### General notes

1. N/A

## TOWER CAB

### Juanda Ground (WARR\_GND)

GND will also do clearance delivery.

### IFR Clearance

1. Squawk will be given in range 6300 - 6377
2. Initial altitude for RW10 is 5000', RW 28 is 7000'.
3. Assign SID based on table below. If the exit point is not valid, please amend the flight plan.

**Table 1: Runway 10 Operational SID**

SID Name	Exit point	Exit Airway
LASEM3A	LASEM	W16
RAMPY1A	RAMPY	W31
FANDO1A	FANDO	W32
ENTAS1A	ENTAS	W45

**Table 2: Runway 28 Operational SID**

SID Name	Exit point	Exit Airway
LASEM4A	LASEM	W16
RAMPY2A	RAMPY	W32
FANDO1A	FANDO	W32
ENTAS1A	ENTAS	W45

4. If traffic cannot perform SID, give fly runway heading clearance.
5. Clearance during taxi may be given when the traffic volume is high.

### **VFR Clearance**

1. Assign block altitude at or below 2500' for VFR traffic outbound WARR. If the pilot asks higher, tell to expect higher until instructed by APP.
2. Traffic requesting circuit pattern expect right pattern for RW28 or left pattern for RW10.
3. Traffic pattern altitude for props is 1000' and jets 1500'.
4. The maximum number of VFR traffic allowed is 3. If you want to depart more VFR traffic, coordinate with TWR.
5. Give VFR traffic squawk on range 1201-1277.

### **Taxi Clearance**

1. On the new terminal use taxiway N3 and N6 for inbound (arrivals) traffic. Use taxiway N4 and N5 for outbound (departing) traffic. Intersection departure from N3 is prohibited.
2. On old terminal, runway 10: Incoming exit S4 SP2 S3 SP1 or S3 SP1 and outgoing nearest path to SP2 and S1. Runway 10 Incoming exit S2, outgoing SP1 S3 SP2 S5 or SP2 S5 (SP2 between S2 and S3 is westbound).

### **Juanda Tower (WARR\_TWR)**

1. All departing traffic follows the SID given. If traffic cannot follow SID, it will fly runway heading, coordinate with Approach/Director for other alternative methods (avoid downwind traffic on southern side).
2. If traffic permits under coordination with APP, you may cancel SID and direct to exit point.
3. Airborne traffic is instructed to contact Surabaya Approach (WARR\_APP) on 125.100.
4. Instruct the missed approach traffic to follow missed approach procedure as published.

## **RADAR POSITION**

### **Surabaya Approach (WARR\_APP)**

1. Approach will handle all departure and sequence certain arrivals traffic flow from certain entry point to SBR VOR.
2. Give traffic separation 5nm or more. You may use altitude, speed, and heading adjustment to separate the traffic.

### **Departure**

1. When RW10 in use, traffic will depart on initial altitude of 5000'. When the traffic is clear, you may instruct to climb to 24000' then transfer to Bali Control (WAAZ\_B\_CTR) on 132.900.
2. When RW28 in use, traffic will depart on initial altitude 7000'. Be caution with the traffic with exit point RAMPY and FANDO when you give further climb. There may be conflict with

arriving traffic from ROPIA and ROBIT. You may instruct to climb to FL250 then transfer to Bali Control (WAAZ\_B\_CTR) on 132.900. With coordination with WAAZ\_B\_CTR you may instruct traffic to climb FL280 and hand off between FL200 and FL250.

3. Traffic incoming from ROPIA and ROBIT will be transferred from Bali Control descending to F160. Traffic from RABOL will be transferred from either Bali Control or Bali approach for traffic below FL240. Center may coordinate to clear descent to 10,000 – FL200, and pass traffic around FL250.

## **Arrival**

DOWNWIND for 10 or 28 is to the south of the airfield at 5 – 10NM from runway centerline.

### **RW10 Operation**

1. All arrivals from BA is the PRIMARY STREAM. ROPIA, ROBIT and RABOL arrivals are the SECONDARY STREAM.
2. Approach will handle incoming traffic from ROPIA, ROBIT, and RABOL from Bali Control at FL240.
3. Give traffic from ROPIA and ROBIT direct to SBR VOR and expect cross SBR at or above 8000'.  
Transfer to Surabaya Director prior to enter SBR or when separation is ensured between merging traffic from ROPIA and ROBIT.
4. Give traffic from RABOL vector to join left downwind RW10, descend to 8000'. Transfer traffic to Surabaya Director prior to enter SBR or when separation is ensured. Ensure traffic is vectored at downwind for a downwind path no further than 10DME from runway centerline.

### **RW28 Operation**

1. Approach will handle incoming traffic from BA, ROBIT and ROPIA from Bali Control at FL240.
2. Give vector for aircraft from BA to join right downwind RW28, descend to 8000'. Transfer to Surabaya Director prior to enter downwind or when separation is ensured. Ensure traffic is vectored at downwind for a downwind path no further than 10DME from runway centerline.
3. Give traffic from ROPIA direct to SBR VOR, expect crossing SBR at or above 8000'. Transfer to Surabaya Director prior to enter SBR VOR or when separation is ensured. If traffic permit and by coordination with DIR, you may give traffic from ROPIA to direct SABIT instead of going to SBR.

## **Surabaya Director (WARR\_D\_APP)**

1. The primary job of director is to merge the incoming traffic into single stream to enter the runway.

### **RW10 Operation**

1. Director will handle traffic from BA after transferred by Bali Control descending to 8000'. Descend the traffic to 2000' to enter ILS approach RW10.

2. Traffic from ROBIT and ROPIA will be handed off before SBR, maintaining at or above 8000'. After SBR vector traffic to fly heading 250, descend 4000', join the traffic to ILS RW10 at 2000'. If extended downwind is required, instruct the aircraft to fly heading 280 prior to join ILS RW10.
3. Traffic from RABOL will be transferred from Surabaya Approach prior to enter downwind. Vector the traffic to enter the downwind and merge with the other flow. Descend the traffic to 4000' then join to ILS RW10 at 2000'.
4. PRIMARY sequencing priority is for BA incoming stream.

#### **RW28 Operation**

1. Director will handle traffic from ROBIT and RABOL after transferred by Bali Control descending to 8000'. Give vector to SABIT for VOR DME Approach RW28, expect crossing SABIT at 2500'. Do not hesitate to give early intercept for final approach course VORDME28 if traffic density is high, when high density, clear traffic 2000 after SABIT, and 3000 – 4000 before SABIT.
2. Traffic from BA will be transferred from Surabaya Approach prior to enter downwind. Give descend to 4000' then 1700' - 2000 to intercept 281 course for VOR DME Approach RW28.
3. Traffic from ROPIA will be transferred from Surabaya Approach 8000'. After SBR give traffic heading 120, descend to 4000' then descend to 1700' – 2000 to intercept 281 course for VOR DME Approach RW28.
4. PRIMARY sequencing priority is for RABOL incoming stream.

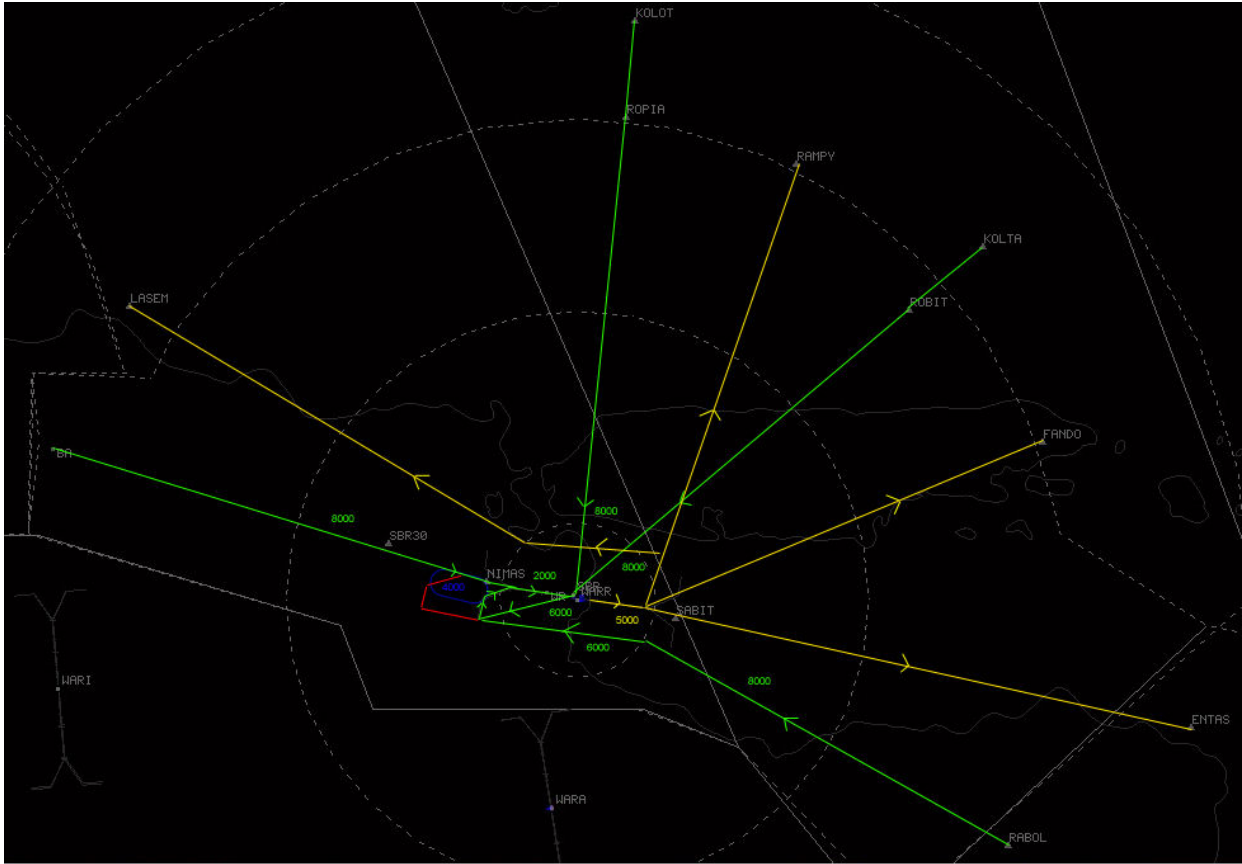
#### **Missed Approach Procedure**

Missed approach traffic will follow the procedure as published. Vector back to the stream when able.

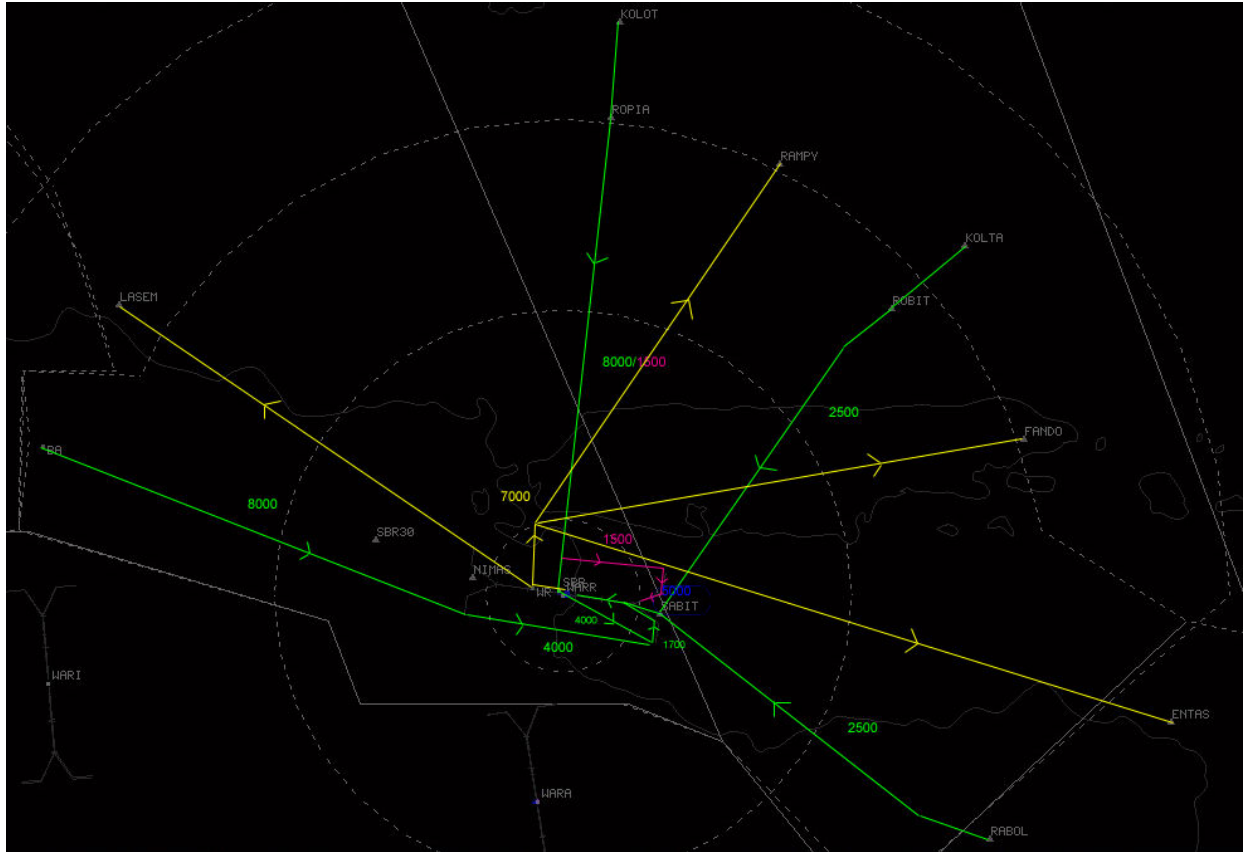
#### **Holding Procedure**

When RW10 in use, give holding to NIMAS at 4000' or above. When RW28 in use give holding at SABIT at 5000' or above. Approach will instruct the traffic to hold then transfer to Director for exit the hold and vector to final.

#### **Flow Chart RW10**



**Flow Chart RW28**



**Bali Control (WAAZ\_B\_CTR)**

1. Give traffic the STAR based on table below.

**Table 3: STAR - Runway 10 in use**

STAR Name	Clrd Alt	Entry point	Entry Airway
BLORA1A	8000ft	BLORA	W45
RABOL1A	FL240	RABOL	W33
ROBIT1A	FL240	ROBIT	W32N
ROPIA1A	FL240	ROPIA	W31W

**Table 4: STAR - Runway 28 in use**

STAR Name	Clrd Alt	Entry point	Entry Airway
BLORA2A	FL240	BLORA	W45
RABOL2A	8000ft	RABOL	W33

ROBIT2A	8000ft	ROBIT	W32N
ROPIA2A	FL240	ROPIA	W31W

2. When runway 10 in use, transfer traffic from BA to Surabaya Director (WARR\_D\_APP) at 119.1 descend to 8000'. Incoming from RABOL, ROBIT, ROPIA transfered to Surabaya Approach at FL240.

When runway 28 in use, transfer traffic from RABOL and ROBIT to Surabaya Director (WARR\_D\_APP) at 119.1 descend to 8000'. Incoming from BA and ROPIA transfered to Surabaya Approach at FL240.