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AERONAUTICAL INFORMATION SERVICE
AIRPORTS AUTHORITY OF INDIA
RAJIV GANDHI BHAVAN
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NEW DELHI - 110003

AIP SUPPLEMENT

SI. No. 23/2008

Dt : 05/03/2008

File No. AAI/NAD/09-09/03/AIP-SUPP (Part-AIS)

Following Supplement regarding the VOR Procedure Rwy 27 – Bangalore International Airport Ltd. (BIAL) is issued for information, guidance and necessary action. The date of implementation shall be notified through G-Series NOTAM separately after the successful flight trials of the procedure.



K. RAMALINGAM
CHAIRMAN

AIRPORTS AUTHORITY OF INDIA

[Effective date - To be notified]

VOR Procedure Rwy 27 – Bangalore International Airport Ltd. (BIAL)
(DME REQUIRED)

All radials and distances are from VOR (112.3 BIA)

1.	Holding Procedures :-	
1.1	BIBDU (R-077/21D)	One minute right hand pattern inbound track 257 Deg M. Minimum holding altitude F85.
1.2	BEGRA (R-027/21D)	One minute right hand pattern inbound track 207 Deg M. Minimum holding altitude F85.
1.3	TAREX (R-310/21D)	One minute left hand pattern inbound track 130 Deg M. Minimum holding altitude F85.
1.4	EKVOG (R-282/21D) (NOTE : Simultaneous holding at EKVOG and TAREX at same level is not authorized)	One minute left hand pattern inbound track 102 Deg M. Minimum holding altitude F85.

2.	Procedure	(Note : Speed shall be restricted to 185 KT IAS maximum prior to crossing the lead radial.
2.1	ATS routes W42N/W43N/W118N/W81 BANGO 1 Arrival	Leave VOR (112.3 BIA) on track 052 Deg M (R-052) descending to 7000 feet. At 11D turn right to intercept 13 DME arc descending to 5500 feet. Crossing lead radial 081 turn right to establish final approach track 272 Deg M. At FAF 7.4D descend to MDA/H. (Note : Aircraft from ATS route W42N shall commence right turn at R-161/3 DME to intercept outbound track 052 Deg M (R-052).
2.2	From BIBDU BIBDU 1 Arrival	From BIBDU turn left to intercept 19DME arc descending to 5500 feet. Crossing lead R-086 turn right to intercept final approach track 272 Deg M. At FAF 7.4D descend to MDA/H. (Note : Aircraft from ATS route W117 may join holding at BIBDU via 26 DME arc.)
2.3	ATS route W57S/W47S BEGRA 1 Arrival	Leave BEGRA on track 207 Deg M (R-027 BIA) descending to 5500 feet. At 15D turn left to intercept 13 DME arc. Crossing lead radial 081 turn right to establish final approach track 272 Deg M. At FAF 7.4D descend to MDA/H.
2.4	ATS route W101E/W56S TAREX 1 arrival	Leave TAREX on track 130 Deg M (R-310) maintaining FL85. At 15D turn left to intercept 13 DME arc. Crossing R-025 descend to 5500 feet and crossing lead radial 081 turn right to establish final approach track 272 Deg M. At FAF 7.4D descend to MDA/H.
2.5	ATS route W117 AKAGA 1 Arrival	From AKAGA (R-088/21D) turn left to establish final approach track 272 Deg M (R-092) descending to 5500 feet. At FAF 7.4D descend to MDA/H.
2.6	From EKVOG EKVOG 1 Arrival	Leave EKVOG on track 102 Deg M (R-282) maintaining FL85. At 15 DME turn left to intercept 13 DME arc and thereafter, follow the procedure applicable to TAREX 1 arrival.
3	IF Altitude at IF FAF Altitude at FAF Descent gradient	13D 5500 feet 7.4D 5500 feet 5.24% (3 Deg)
4	OCA	Straight in 3420 feet Circling Cat A/B 3620 feet Cat C/D 3870 feet (Visual Manouvring (Circling) is restricted to North of Aerodrome Only). Page 2 of 4

5	MAPt	VOR (112.3 BIA)
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6. Distance (VOR DME)/ Altitude Information :

Distance (NM)	7.4D	6D	5D	4D	3D	2D	1D
Altitude (Feet)	5500	5030	4710	4390	4070	3750	3430

7 Rate of Descent / Ground Speed Information :

Ground Speed (Kt)	80	100	120	140	160	180
Rate of Descent (Ft./Min)	425	530	635	745	850	985

8 M.A. Procedure : Climb straight ahead until 2 DME (BIA). Then turn right climb on track 282 Deg M (R-282) to 5000 feet. Crossing 10 DME climb to 7000 feet and proceed to EKVOG to join holding at FL85 or as instructed by ATC.

9 MSA : Sector 025 – 180 5500 feet upto 25NM
Sector 180 – 025 5900 feet upto 25NM

(CAUTION : Aircraft operating at Military Airfield Yelahanka located at 240 Deg/7NM from ARP/ BIAL)

8. Aerodrome Operating Minima

Aerodrome Operating Minima	Category A (Visb.)		Category B (Visb.)		Category C (Visb.)		Category D (Visb.)	
	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT
Normal Minima Straight-in	1600	2400	1600	2400	2000	2800	2800	3600
Restricted Minima Straight-in	2000	2800	2000	2800	2800	3600	3200	4000
Normal Circling Minima		3600		3600		4000		4400
Restricted Circling Minima		3600		3600		4400		4800

INSTRUMENT
APPROACH
CHART

AERODROME ELEV. 3004ft.
HEIGHTS RELATED TO
THR RWY 27 ELEV.2917ft

APP. 121.250
TWR. 124.35
TAR. 119.45

BANGALORE INT.

INDIA

VOR RWY 27
78°00'

77°30'E

77°40'

77°50'

78°00'

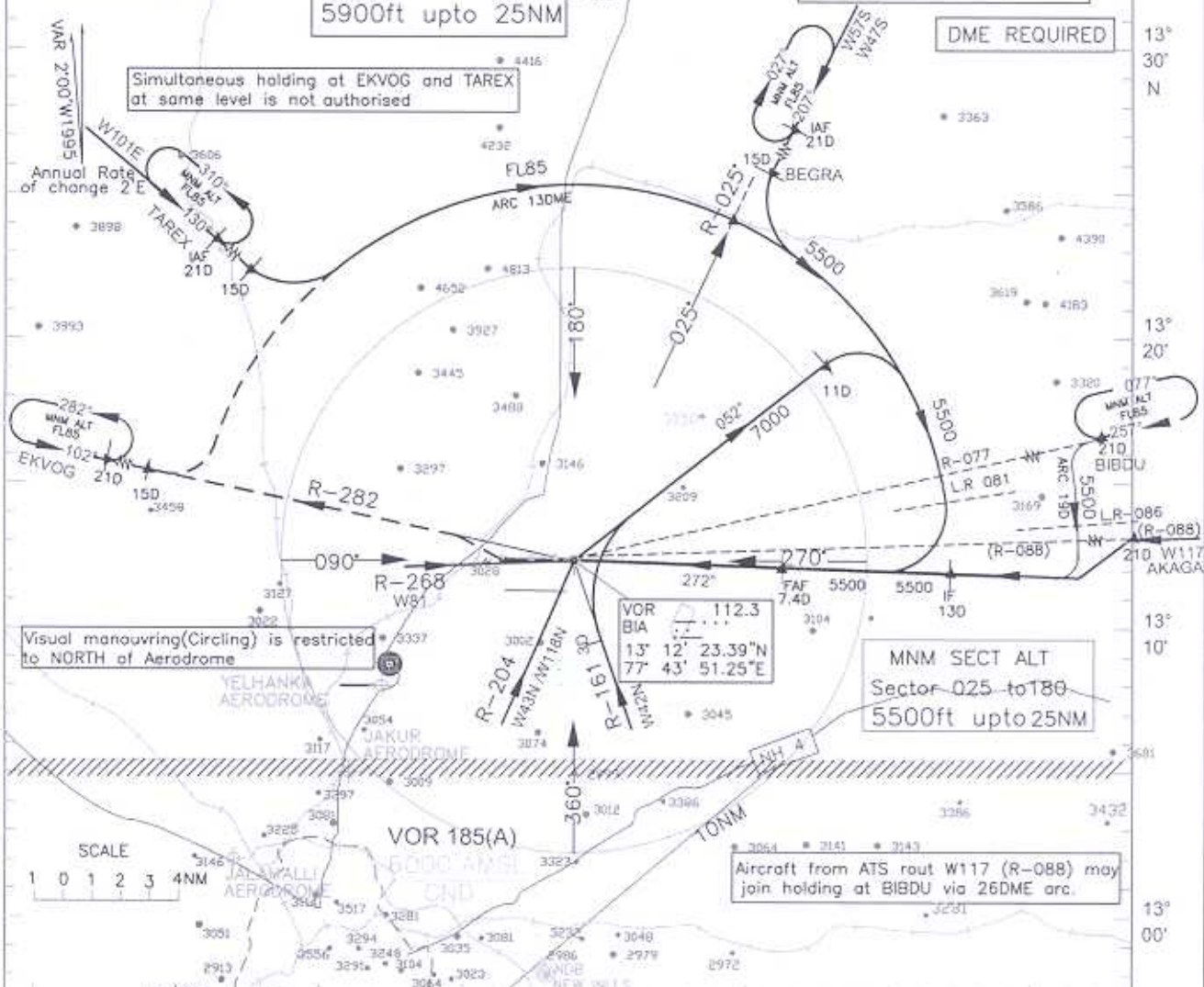
All Radials and Distances are from VOR (112.3 BIA) unless otherwise specified.
COORDS OF RADIO NAV AID WGS-84
BEARING ARE MAGNETIC
ALTITUDE, ELEVATIONS AND HEIGHTS IN FEET.

MNM SECT ALT
Sector 180 to 025
5900ft upto 25NM

NOTE:
Speed shall be restricted to 185kts IAS for Aircraft following DME arc procedure prior to crossing lead radial.

DME REQUIRED

Simultaneous holding at EKVOG and TAREX at same level is not authorized



Transition Alt 7000
FL85 OR ABOVE
Nautical miles from THR RWY 27

CATEGORY OF AIRCRAFT	O C A		Distance /Altitude information							
	A/B	C/D	Distance(NM)	7.4D	6D	5D	4D	3D	2D	1D
STRAIGHT-IN	3420	3420	Altitude (ft.)	5500	5030	4710	4390	4070	3750	3430
CIRCLING	3620	3870	Rate of Descent /Ground speed information							
			Ground speed (kt.)							
			Rate of descent (ft./min)							
				80	100	120	140	160	180	
				425	530	635	745	850	985	

AERODROME OPERATING MINIMA	CATEGORY A		CATEGORY B		CATEGORY C		CATEGORY D	
	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT
NORMAL MINIMA STRAIGHT-IN	1600	2400	1600	2400	2000	2800	2800	3600
RESTRICTED MINIMA STRAIGHT-IN	2000	2800	2000	2800	2800	3600	3200	4000
NORMAL CIRCLING MINIMA		3600		3600		4000		4400
RESTRICTED CIRCLING MINIMA		3600		3600		4400		4800

DRG. NO. AAI/07-IALC/08/05.03.08