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		23 <sup>rd</sup> July 2008

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

Following Supplement regarding the ILS Procedure (Z) Rwy 27 – Bangalore International Airport (BIAL) is issued for information, guidance and necessary action.



**K. RAMALINGAM**  
CHAIRMAN

AIRPORTS AUTHORITY OF INDIA

[Effective Date: 28 AUGUST 2008]

**ILS Procedure (Z) Rwy 27 – BANGALORE INTERNATIONAL AIRPORT (DME REQUIRED)**

1.	Holding Procedures :-	
1.1	SILGAT VOR (114.5 BIB) <b>13 24 02.90 N</b> <b>77 54 56.0 E</b>	One minute right hand pattern inbound track 224 Deg M. Minimum holding altitude FL85.
1.2	EKVOG (R-282/21D BIA)	One minute left hand pattern inbound track 102 Deg M. Minimum holding altitude FL85.
2.	Procedure  SILGAT 1 Arrival  Note: Transition from enroute to SILGAT VOR shall take place as given below:- 1. Aircraft from ATS route W56S/W101E (R-310 BIA) shall proceed to VOR (BIB) from TAREX(R-310/21D BIA) via R-274 (BIB).	(Note: Speed shall be restricted to 185 KT IAS Maximum prior to crossing 9.5D (BIB).  Leave VOR (114.5 BIB) on track 180 Deg M (R-180) descending to 5500 feet. At 9.5D (BIB) turn right to intercept localizer (108.3 IDEV) inbound track 272 Deg M. Descend on glide path to DA/H.

	<p>2. Aircraft from ATS route W57S/W47S (R-027 BIA) shall proceed to VOR (BIB) from BEGRA(R-027/21D BIA) via R-347 (BIB).</p> <p>3. Aircraft from ATS route W81 (R-268 BIA), W43N/W118N (R-204 BIA), W42N (R-161 BIA) shall proceed to VOR (BIB) from VOR (112.3 BIA) via R-044 (BIA).</p> <p>4. Aircraft from ATS route W117 (R-088 BIA) shall proceed to VOR (BIB) from AKAGA (R-088/21D BIA) via R-136 (BIB).</p>	
3	<p>IF Altitude at IF Altitude at 4D (IDEV) Altitude at 1D (IDEV) Glide path angle ILS RDH</p>	<p>12D (IDEV) 5500 feet 4350 feet 3270 feet 3.4 Degree 50 feet</p>
4	OCA	<p>Straight in                      3120 feet</p> <p>Circling Cat A/B                              3620 feet Cat C/D                              3870 feet</p> <p>(Visual Manouvring (Circling) is restricted to North of Aerodrome Only).</p>
5	<p>GP In-operative Procedure FAF Altitude at FAF Descent gradient MAPt</p>	<p>7.2D (IDEV) 5500 feet 5.94% (3.4 Degree) 1D (IDEV)</p>
5.1	OCA	<p>Straight in                      3420 feet</p> <p>Circling Cat A/B                              3620 feet Cat C/D                              3870 feet</p> <p>(Visual Manouvring (Circling) is restricted to North of Aerodrome Only).</p>

5.2 Distance (IDEV)/ Altitude Information:

Distance (NM)	7.2D	7D	6D	5D	4D	3D	2D
Altitude (Feet)	5500	5440	5080	4710	4350	3990	3630

5.3 Rate of Descent / Ground Speed Information:

Ground Speed (Kt)	80	100	120	140	160	180
Rate of Descent (Ft./Min)	480	600	720	840	960	1080

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

(Note : From EKVOG aircraft may proceed to SILGAT VOR (114.5 BIB) via R-258 (BIB) to join the holding.)

7 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./RVR)		Category B (Visb./RVR)		Category C (Visb./RVR)		Category D (Visb./RVR)	
	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT	ALS	ALS OUT
Normal Minima (ILS)	800(550)	1200	800(550)	1200	800(550)	1200	800(550)	1200
Restricted Minima (ILS)	1000	1600	1000	1600	1000	1300	1000	1300
Normal Minima (GP IN-OP)	1600	2400	1600	2400	2000	2800	2800	3600
Restricted Minima (GP IN-OP)	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. 3001ft.  
HEIGHTS RELATED TO  
THR RWY 27 ELEV.2917ft

APP. 121.25  
TWR. 124.35  
TAR. 119.45

**BANGALORE INT.**

INDIA

ILS (Z) RWY 27  
78°00'

77°30'E

77°40'

77°50'

78°00'

COORDS OF RADIO NAV AID WGS-84  
BEARING ARE MAGNETIC  
ALTITUDE ELEVATIONS MNM SECT ALT  
AND HEIGHTS IN FEET

Sector 180 to 025  
5900ft upto 25NM

Visual manoeuvring (Circling) is restricted  
to NORTH of Aerodrome only

SILGAT  
VOR/DME 114.5  
BIB  
13° 24' 02.90"N  
77° 54' 56.0"E

DME REQUIRED

GP In-Operative procedure  
FAF 7.2D (IDEV)  
Altitude at FAF 5500ft  
Descent Gradient 5.94% (3.4')  
MAPS 1D (IDEV)

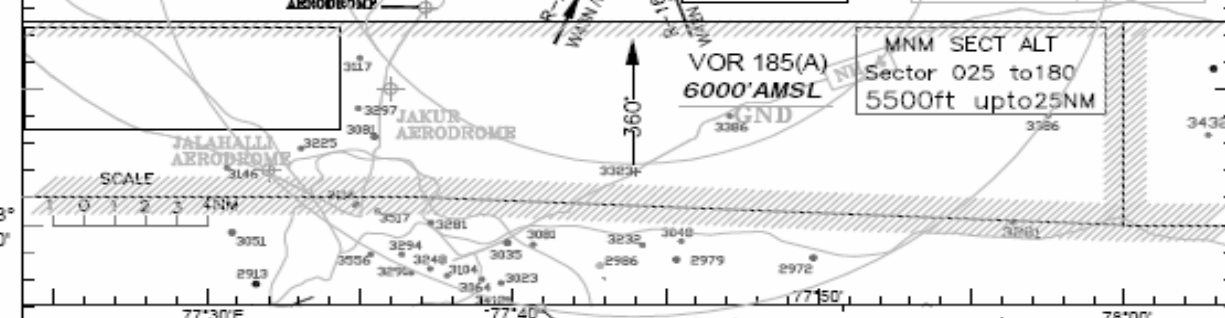
282°  
MNM ALT  
FL85  
102  
EKVOG  
21D(BIA)

**CAUTION**  
Aircraft operating at Military  
Airfield Yelahanka located 3.57  
at 240°/7NM from ARP  
BIAL Airfield

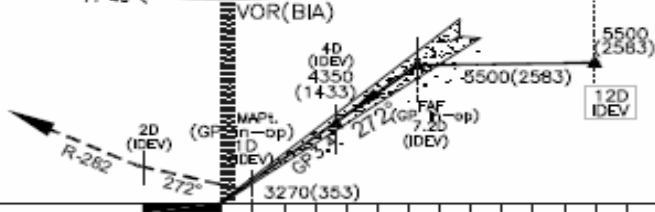
VOR BIA  
112.3  
13° 12' 24.63"N  
77° 43' 55.90"E

**NOTE:**  
Speed shall be restricted to  
185kt IAS Max. prior to  
crossing 9.5D (BIB).

MNM SECT ALT  
Sector 025 to 180  
5500ft upto 25NM



Transition Alt. 7000  
Missed Approach  
Climb straight ahead until 2D (IDEV).  
Then turn right climb on track 282°M  
(R-282) to 5000ft. Crossing 10D(BIA)  
climb 7000ft, and proceed to EKVOG  
to join holding at FL85 or as  
instructed by ATC.



Nautical miles from THR RWY 27										
O C A. (H)			Distance (IDEV)/Altitude information for GP in-op Procedure:							
CATEGORY OF AIRCRAFT	A/B	C/D	Distance(NM)	7.2D	7D	6D	5D	4D	3D	2D
STRAIGHT-IN	3120	3120	Altitude (ft.)	5500	5440	5080	4710	4350	3990	3630
CIRCLING	3620	3870	Rate of Descent /Ground speed information							
GP in-op Procedure:			Ground speed (kt.)		80	100	120	140	160	180
STRAIGHT-IN	3420	3420	Rate of descent (ft/min)		480	600	720	840	960	1080
CIRCLING	3620	3870								

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 (ILS)	800(550)	1200	800(550)	1200	800(550)	1200	800(550)	1200
RESTRICTED MINIMA (LS)	1000	1600	1000	1600	1000	1300	1000	1300
NORMAL MINIMA (GP INOP)	1600	2400	1600	2400	2000	2800	2800	3600
RESTRICTED MINIMA (GP INOP)	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/17-IALC/08/18.07.08