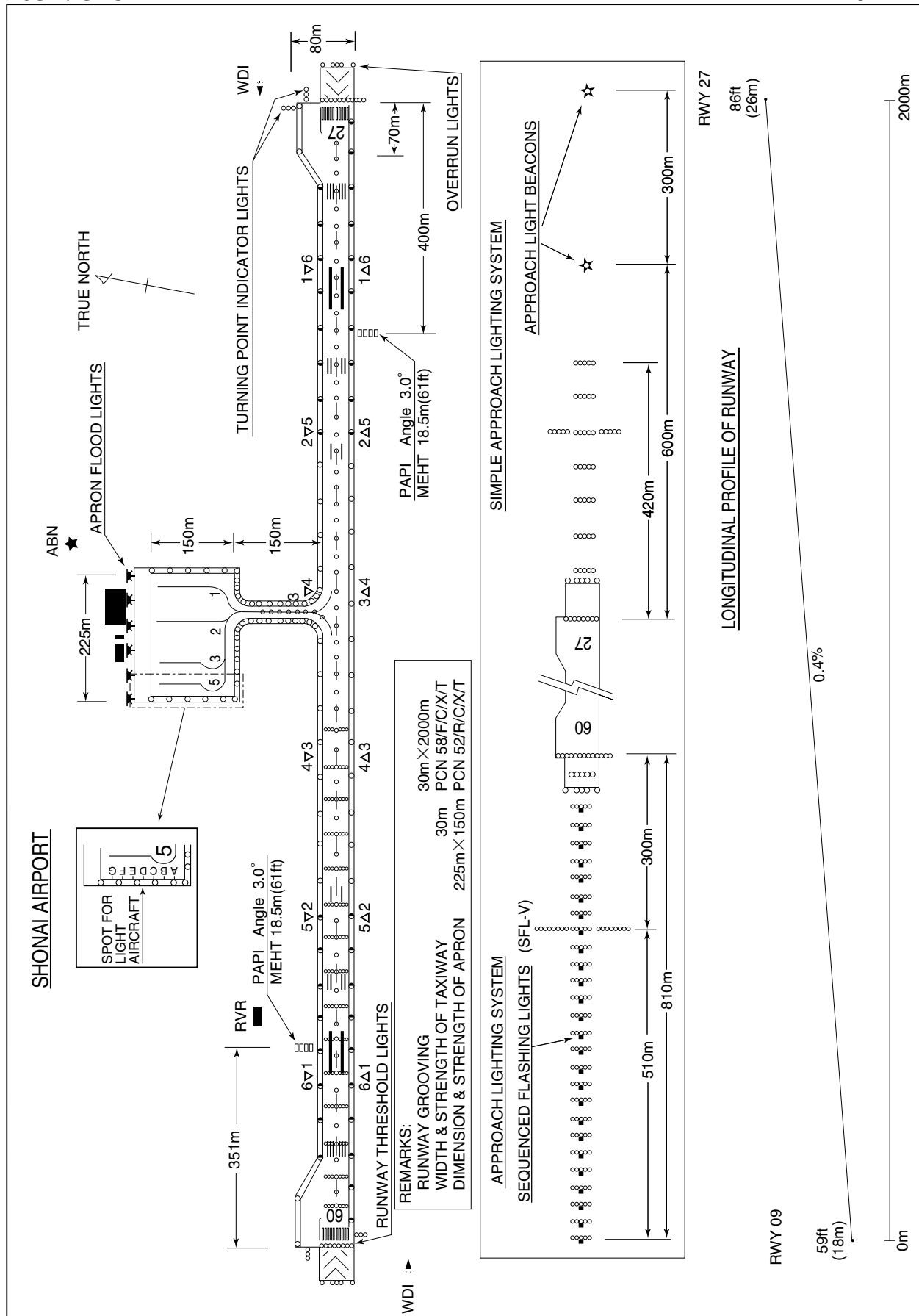


RJSY / SHONAI

AD CHART



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STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

SID

SHONAI REVERSAL THREE DEPARTURE

RWY 09 : Climb RWY HDG to 600FT, turn left HDG 285° to intercept and proceed via YSE R330 to YSE R330/8.5DME, turn left,...

RWY 27 : Climb via YSE R278 to YSE R278/7.0DME, turn right,...
...direct to YSE VOR/DME.
Cross YSE VOR/DME at or above 6000FT.



SHONAI REVERSAL THREE DEPARTURE

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 8°W (2013)

ZUNDA ONE DEPARTURE

RWY09 : Climb on HDG 088° at or above 500FT, turn right direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

RWY27 : Climb on HDG 268° at or above 900FT, turn left direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

NOTE RWY09 : 4.8% climb gradient required up to 5000FT.
OBST ALT 4758FT located at 17.2NM 150°FM end of RWY09.

RWY27 : 4.4% climb gradient required up to 3500FT.
OBST ALT 1117FT located at 3.1NM 212°FM end of RWY27.

STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA ONE DEPARTURE

RWY09

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	088 (079.5)	-8.1	—	—	+500	—	—	Basic RNP1
002	DF	SY900	—	—	-8.1	—	R	—	—	—	Basic RNP1
003	TF	TADAT	—	142 (134.0)	-8.1	11.2	—	+11000	—	—	Basic RNP1
004	TF	YTE	—	142 (134.1)	-8.1	10.3	—	—	—	—	Basic RNP1
005	TF	ZUNDA	—	169 (161.1)	-8.1	13.7	—	+FL200	—	—	Basic RNP1

RWY27

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	268 (259.5)	-8.1	—	—	+900	—	—	Basic RNP1
002	DF	SY900	—	—	-8.1	—	L	—	—	—	Basic RNP1
003	TF	TADAT	—	142 (134.0)	-8.1	11.2	—	+11000	—	—	Basic RNP1
004	TF	YTE	—	142 (134.1)	-8.1	10.3	—	—	—	—	Basic RNP1
005	TF	ZUNDA	—	169 (161.1)	-8.1	13.7	—	+FL200	—	—	Basic RNP1

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

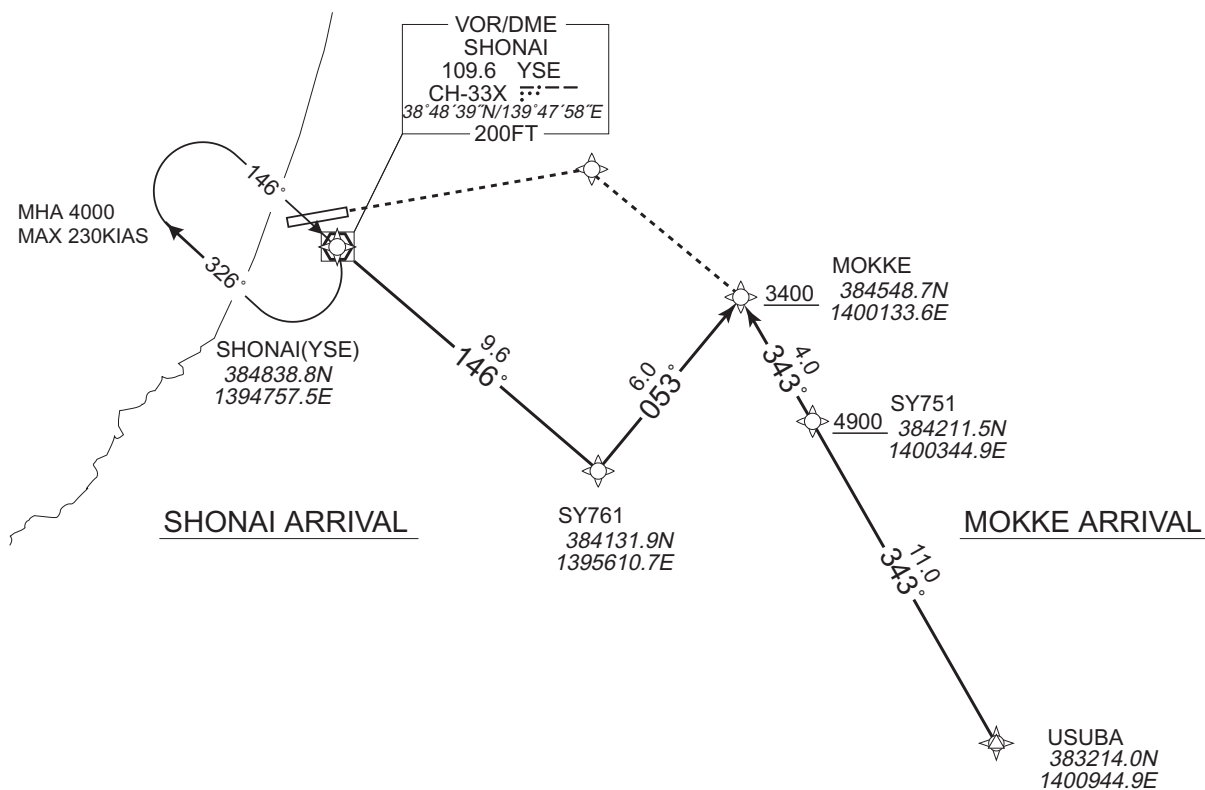
RNAV STAR RWY27

MOKKE ARRIVAL
SHONAI ARRIVAL

Basic RNP1

Note GNSS required.

VAR 8°W (2013)



STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

MOKKE ARRIVAL

From USUBA, to SY751 at or above 4900FT, to MOKKE at or above 3400FT.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	USUBA	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY751	—	343 (334.8)	-8.1	11.0	—	+4900	—	—	Basic RNP1
003	TF	MOKKE	—	343 (334.8)	-8.1	4.0	—	+3400	—	—	Basic RNP1

SHONAI ARRIVAL

From YSE, to SY761, to MOKKE at or above 3400FT.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	YSE	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY761	—	146 (137.9)	-8.1	9.6	—	—	—	—	Basic RNP1
003	TF	MOKKE	—	053 (044.4)	-8.1	6.0	—	+3400	—	—	Basic RNP1

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

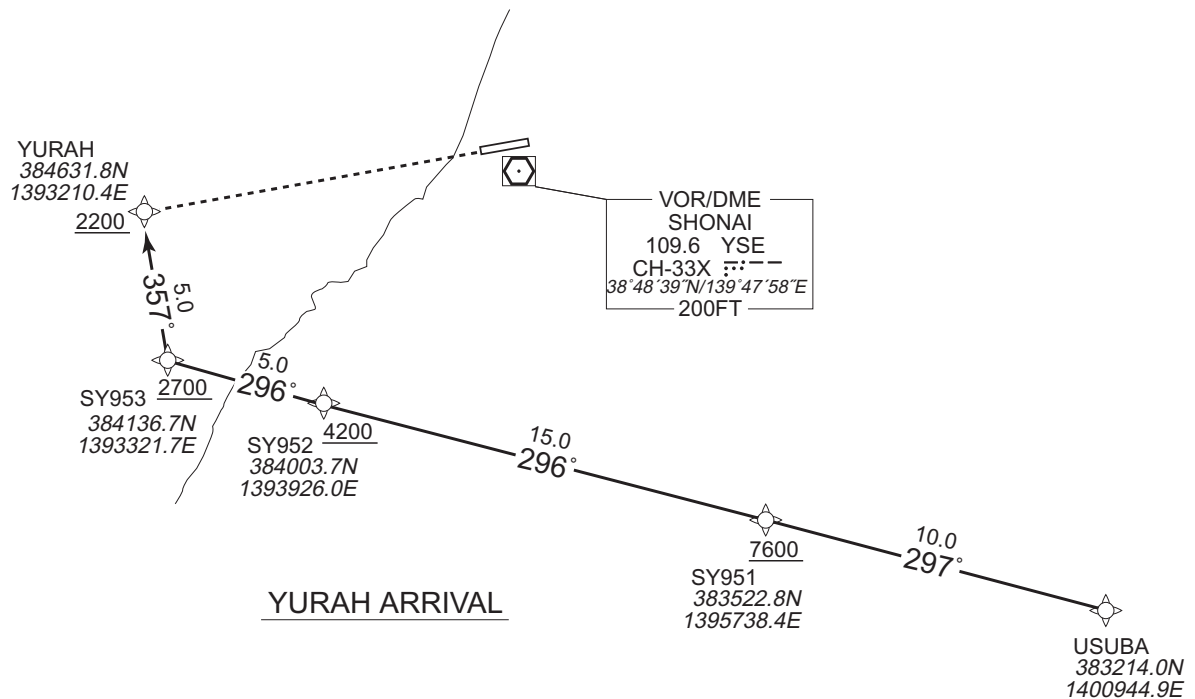
RNAV STAR RWY09

YURAH ARRIVAL

Basic RNP1

Note GNSS required.

VAR 8°W (2013)

YURAH ARRIVAL

From USUBA, to SY951 at or above 7600FT, to SY952 at or above 4200FT, to SY953 at or above 2700FT, to YURAH at or above 2200FT.

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	USUBA	—	—	-8.1	—	—	—	—	—	Basic RNP1
002	TF	SY951	—	297 (288.4)	-8.1	10.0	—	+7600	—	—	Basic RNP1
003	TF	SY952	—	296 (288.3)	-8.1	15.0	—	+4200	—	—	Basic RNP1
004	TF	SY953	—	296 (288.1)	-8.1	5.0	—	+2700	—	—	Basic RNP1
005	TF	YURAH	—	357 (349.3)	-8.1	5.0	—	+2200	—	—	Basic RNP1

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INSTRUMENT APPROACH CHART

RJSY / SHONAI

ILS Z or LOC Z RWY09



Missed APCH climb gradient MNM 5.0%

MINIMA		THR elev. 59		AD elev. 72	
CAT	CAT I		LOC		CIRCLING
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H) VIS
A	259 (200)	550	380 (321)	900	530 (458) 1600
B				1000	
C				1400	2400
D					3200

MINIMA with Missed APCH climb gradient of 2.5% are not established.

Circling to NORTH side of RWY only.

RJSY / SHONAI

[illegible]

Climb to 500FT on HDG088°, turn left HDG244° to intercept and proceed via YSE R289 to 4000FT, turn left, direct to YSE VOR/DME and hold. Contact SHONAI REMOTE.

Timing not authorized for defining the MAPt.

Missed APCH climb gradient MNM 5.0%

MINIMA		THR elev. 59		AD elev. 72		
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	259 (200)	550	380 (321)	900	530 (458)	1600
B				1000		
C						
D				1400	700 (628)	3200

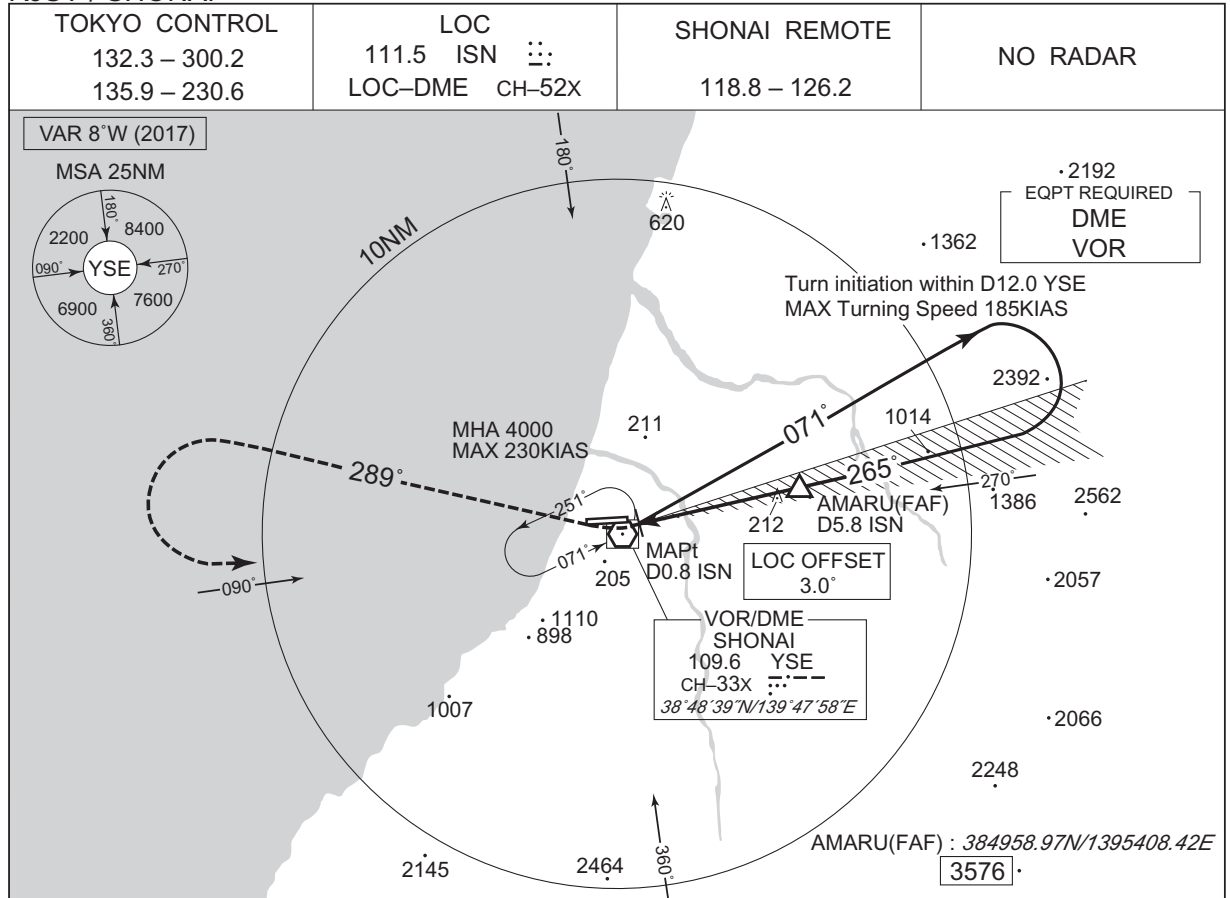
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to NORTH side of RWY only.

CHANGE : MINIMA.

INSTRUMENT APPROACH CHART

RJSY / SHONAI

LOC RWY27

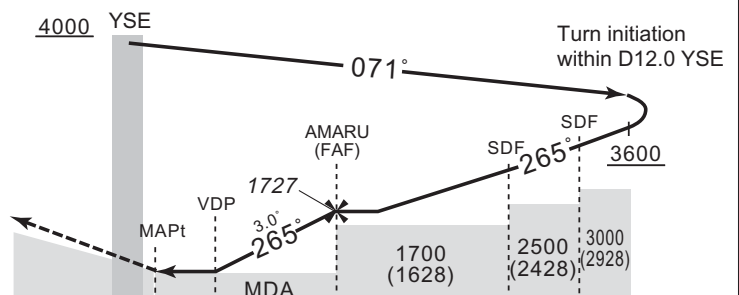


NM to ISN	MAPt	2	3	4	5	FAF
ALT (3.0° APCH Path)	–	511	830	1148	1467	1727

MISSED APPROACH

Turn right, climb to 4000FT
via YSE R289, turn left, direct
to YSE VOR/DME and hold.
Contact SHONAI REMOTE.

Timing not authorized for defining the MAPt.



DME to ISN	0.8	1.9	5.8	10.8	12.8
NM to THR	0	1.0	5.0	10.0	12.0

MINIMA		THR elev. 86		AD elev. 72	
CAT			CIRCLING		
	MDA(H)	CMV	MDA(H)	VIS	
A	460 (388)	1200	530 (458)	1600	
B		1300			
C		1400			
D		1600	700 (628)	3200	

Circling to NORTH side of RWY only

CHANGE : MINIMA.

INSTRUMENT APPROACH CHART

RJSY / SHONAI

VOR RWY09



CHANGE : MINIMA.

MINIMA		THR elev. 59	AD elev. 72	
CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	470 (411)	900	530 (458)	1600
B		1000		
C				2400
D		1400	700 (628)	3200

Circling to NORTH side of RWY only

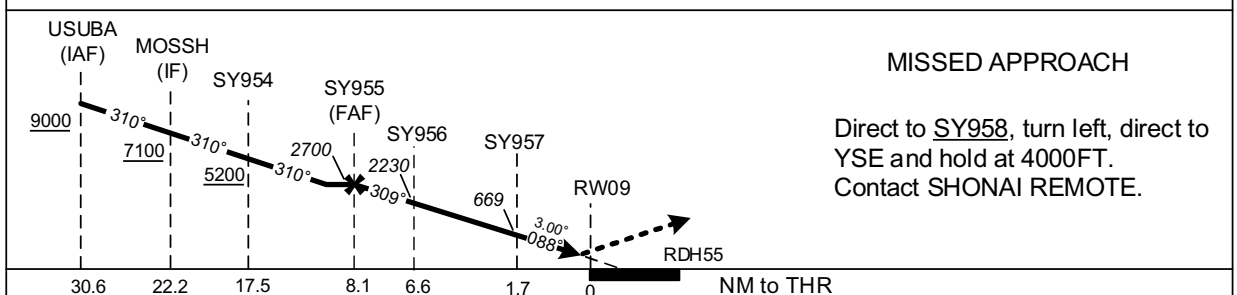
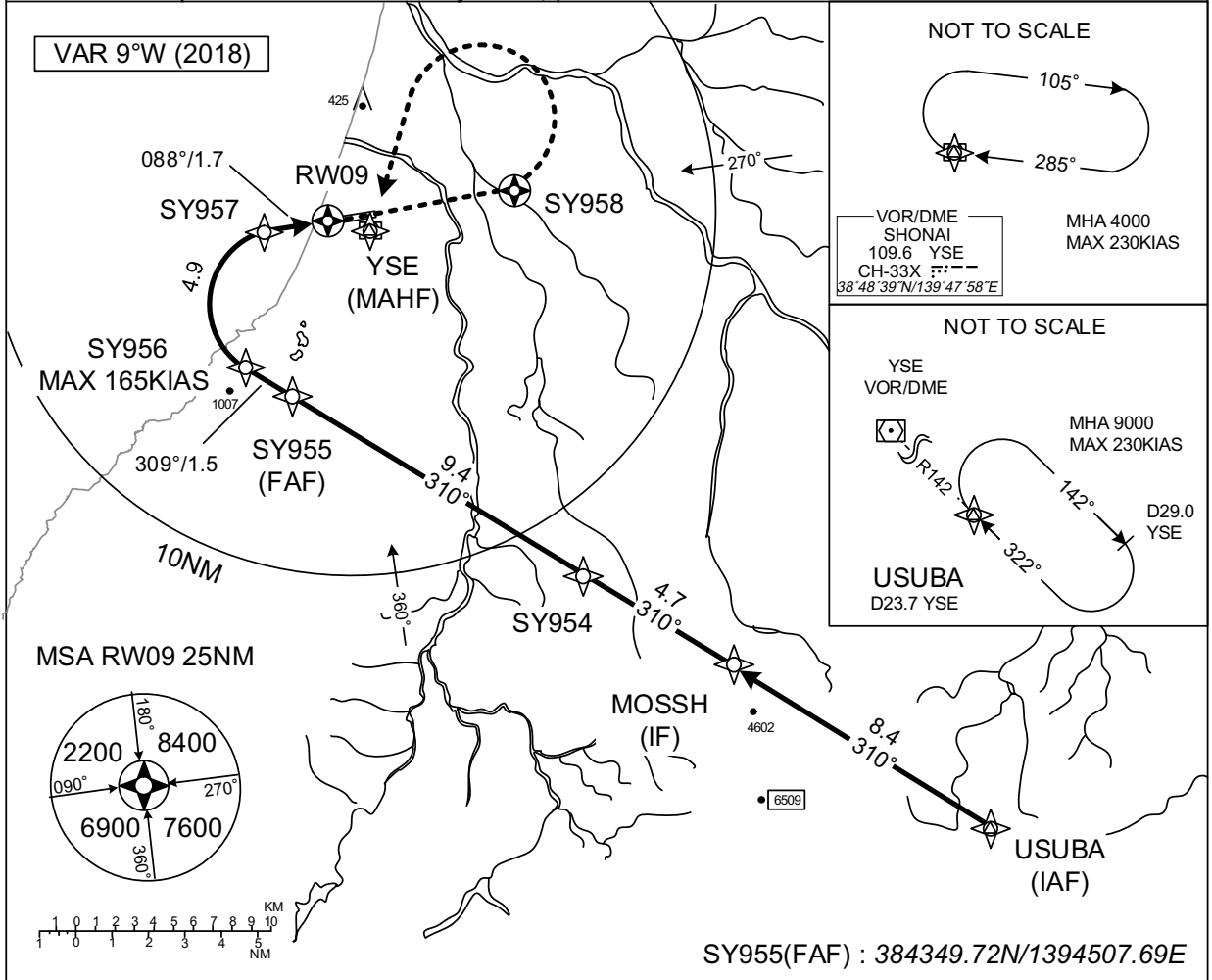
INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) RWY09

TOKYO CONTROL 132.3 - 300.2 135.9 - 230.6	GNSS and RF required	SHONAI REMOTE 118.8 - 126.2	NO RADAR
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For uncompensated Baro-VNAV systems, procedure not authorized below -10°C / above 45°C



Missed APCH climb gradient MNM 5.0%				
CAT	THR elev. 59		AD elev. 72	
	RNP 0.10		RNP 0.30	
	DA(H)	RVR/CMV	DA(H)	RVR/CMV
A	—	—	—	—
B	—	—	—	—
C	372 (313)	1000	424 (365)	1000
D	372 (313)	1400	424 (365)	1400

MINIMA with Missed APCH climb gradient of 2.5% are not established.

CHANGE : New PROC

RNP AR
Special Authorization Required

INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) RWY09

RNAV(RNP) RWY09Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	USUBA	-	-	-8.5	-	-	+9000	-	-	-
002	TF	MOSSH	-	310 (301.2)	-8.5	8.4	-	+7100	-	-	1.0
003	TF	SY954	-	310 (301.1)	-8.5	4.7	-	+5200	-	-	1.0
004	TF	SY955	-	310 (301.1)	-8.5	9.4	-	2700	-	-	1.0
005	TF	SY956	-	309 (301.0)	-8.5	1.5	-	2230	-165	-3.00	0.1 0.3
006	RF Center: SYRF1 r=2.03	SY957	-	-	-8.5	4.9	R	669	-	-3.00	0.1 0.3
007	TF	RW09	Y	088 (079.4)	-8.5	1.7	-	114	-	-3.00/55	0.1 0.3
008	DF	SY958	Y	-	-8.5	-	-	-	-	-	1.0
009	DF	YSE	-	-	-8.5	-	L	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
USUBA	383214.02N / 1400944.88E	SYRF1	384619.71N / 1394450.17E
MOSSH	383634.00N / 1400035.10E		
SY954	383858.43N / 1395528.53E		
SY955	384349.72N / 1394507.69E		
SY956	384435.19N / 1394330.47E		
SY957	384819.37N / 1394421.61E		
RW09	384838.58N / 1394633.12E		
SY958	384943.40N / 1395359.19E		
YSE	384838.81N / 1394757.51E		

CHANGE : Correction of misdescription (9Y957 → SY957)

RJSY / SHONAI

RNAV(GNSS) Z RWY27



INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) Y RWY27



CHANGE : Correction of misdescription (Notes on plan view)

RNP AR

Special Authorization Required

INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) Y RWY27

RNAV(RNP) Y RWY27Coding Table

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/RDH (°/FT)	RNP Value
001	IF	USUBA	-	-	-8.5	-	-	+9000	-	-	-
002	TF	ANNON	-	333 (324.8)	-8.5	6.8	-	+5400	-	-	1.0
003	TF	SY754	-	333 (324.7)	-8.5	6.1	-	+4200	-	-	1.0
004	TF	SY755	-	333 (324.7)	-8.5	5.9	-	2400	-	-	1.0
005	TF	SY756	-	333 (324.6)	-8.5	1.4	-	1967	-165	-3.00	0.12 0.30
006	RF Center: SYRF2 r=2.01	SY757	-	-	-8.5	2.3	L	1240	-	-3.00	0.12 0.30
007	TF	RW27	Y	268 (259.5)	-8.5	3.5	-	136	-	-3.00/50	0.12 0.30
008	TF	SY758	-	268 (259.4)	-8.5	0.6	-	-	-	-	0.12 0.30
009	CF	SY753	Y	268 (259.4)	-8.5	2.4	-	-	-	-	1.0
010	DF	YSE	-	-	-8.5	-	R	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
USUBA	383214.02N / 1400944.88E	SYRF2	384729.55N / 1395244.67E
ANNON	383745.37N / 1400445.25E		
SY754	384245.22N / 1400013.26E		
SY755	384733.27N / 1395551.21E		
SY756	384839.83N / 1395450.54E		
SY757	384928.52N / 1395216.49E		
RW27	384850.46N / 1394754.61E		
SY758	384843.80N / 1394708.93E		
SY753	384817.41N / 1394408.18E		
YSE	384838.81N / 1394757.51E		

CHANGE : New PROC

RJSY / SHONAI

Visual REP



※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE : Map updated. BRG/DIST from ARP.

Call sign	BRG / DIST from ARP	Remarks
吹浦 Fukura	014°T / 16.0NM	吹浦港 Harbor
酒田 Sakata	009°T / 8.1NM	酒田港 Harbor
最上 Mogami	089°T / 9.1NM	最上川橋 Bridge
鶴岡 Tsuruoka	153°T / 4.9NM	JR駅 Station
波渡崎 Hatozaki	225°T / 10.6NM	岬 Cape
あさひインター Asahi Inter	167°T / 11.9NM	山形自動車道 庄内あさひインターチェンジ Interchange

RJSY / SHONAI

LDG CHART



RJSY / SHONAI

Minimum Vectoring Altitude CHART

