



ROIG / NEW ISHIGAKI

SID

GUSUK ONE DEPARTURE

RWY04: Climb RWY HDG to 600FT, turn right,...

RWY22 : Climb RWY HDG to 600FT, via IGE R214 to IGE R214/2.8DME,turn left HDG027°...

... to intercept and proceed via IGE R072 to GUSUK.

Cross GUSUK at or above 3000FT.

MIYAKO TWO DEPARTURE

RWY04: Climb RWY HDG to 600FT, turn right HDG175°...

RWY22: Climb RWY HDG to 600FT, via IGE R214 to IGE R214/2.8DME, turn left HDG085°...

... to intercept and proceed via IGE R130 to IGE 14.0DME, turn left, via MJC R241 to MJC VORTAC.



ROIG / NEW ISHIGAKI SID

ISHIGAKI REVERSAL ONE DEPARTURE

RWY04: Climb RWY HDG to 800FT, turn left to intercept and proceed via IGE R040 to 2000FT,

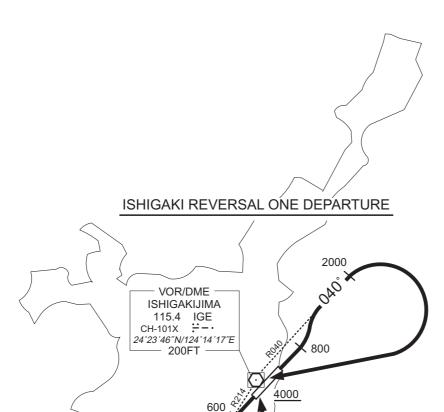
turn right, direct to IGE VOR/DME.

Cross IGE VOR/DME at or above 4000FT.

RWY22 : Climb RWY HDG to 600FT,via IGE R214 to IGE R214/5.5DME,turn left, direct to IGE VOR/DME.

Cross IGE VOR/DME at or above 4000FT.

D5.5 IGE



ROIG / NEW ISHIGAKI

SID

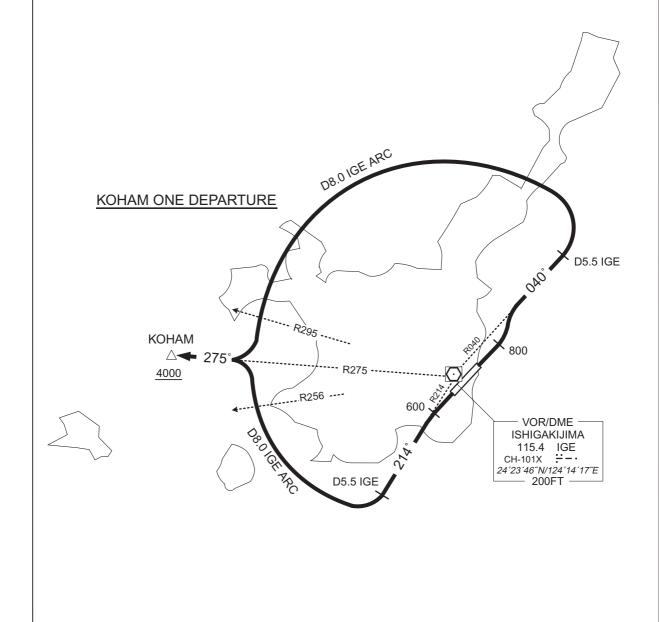
KOHAM ONE DEPARTURE

RWY04 : Climb RWY HDG to 800FT, turn left to intercept and proceed via IGE R040 to IGE R040/5.5DME, turn left, via IGE 8.0DME counterclockwise ARC,turn right to intercept and proceed via IGE R275 to KOHAM.

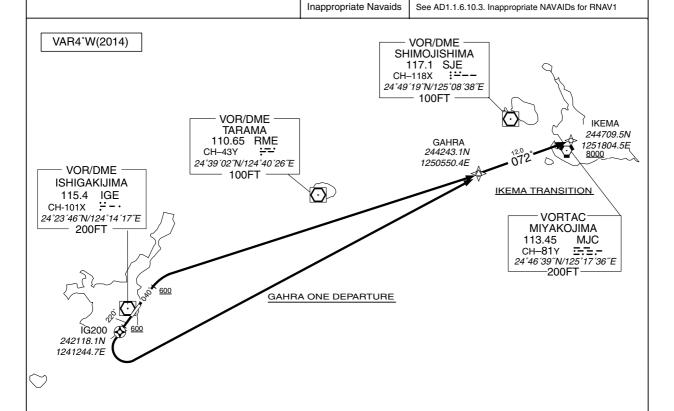
Cross KOHAM at or above 4000FT.

RWY22 : Climb RWY HDG to 600FT,via IGE R214 to IGE R214/5.5DME,turn right, via IGE 8.0DME clockwise ARC,turn left to intercept and proceed via IGE R275 to KOHAM.

Cross KOHAM at or above 4000FT.



RNAV SID and TRANSITION **ROIG / NEW ISHIGAKI GAHRA ONE DEPARTURE** RNAV1 **IKEMA TRANSITION** RWY22: IGE: 52NM to GAHRA - 47NM to GAHRA Critical DME MJC: 52NM to GAHRA - 50NM to GAHRA NOTE 1) DME/DME/IRU or GNSS required. RWY04: DER - GAHRA The aircraft equipped with only DME/DME/IRU RWY22: DER - IG200 must be able to update its position without delay DME GAP IG200 - 52NM to GAHRA at the starting point of take-off roll. 47NM to GAHRA - GAHRA 2) RADAR service required. IKEMA TRANSITION: GAHRA - IKEMA



GAHRA ONE DEPARTURE

RWY04: Climb on HDG 040° at or above 600FT, turn right direct to GAHRA.

RWY22: Climb on HDG 220° at or above 600FT, direct to IG200, turn left direct to GAHRA.

IKEMA TRANSITION

From GAHRA, to IKEMA at or above 8000FT.

ROIG / NEW ISHIGAKI

RNAV SID and TRANSITION

GAHRA ONE DEPARTURE

RWY04

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation		Turn Direction		' '		Navigation Specification
001	VA	_	_	040 (035.9)	-4.1	_	_	+600	_	_	RNAV1
002	DF	GAHRA	_	_	-4.1	_	R	_	_	_	RNAV1

RWY22

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)		Navigation Specification
001	VA	_	_	220 (215.9)	-4.1	_	_	+600	_	_	RNAV1
002	DF	IG200	Υ	1	-4.1	_	1	1	1	_	RNAV1
003	DF	GAHRA	_	_	-4.1	_	L	_	_	_	RNAV1

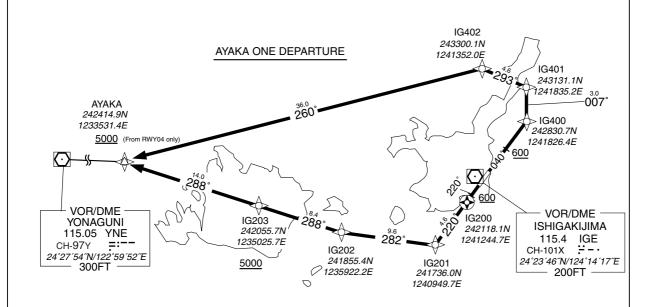
IKEMA TRANSITION

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	GAHRA	_	_	-4.1	_	_	_	_	_	RNAV1
002	TF	IKEMA	_	072 (068.2)	-4.1	12.0	_	+8000	_	_	RNAV1

**The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.

2) RADAR service required.

VAR4°W(2014)



AYAKA ONE DEPARTURE

RWY04: Climb on HDG 040° at or above 600FT, direct to IG400, to IG401, to IG402, to AYAKA at or

above 5000FT.

RWY22: Climb on HDG 220° at or above 600FT, direct to $\underline{\text{IG200}}$, to IG201, to IG202, to IG203

at or above 5000FT, to AYAKA.

NOTE RWY04 : 4.0% climb gradient required up to 2000FT.

OBST ALT 836FT at 9.53NM 021° FM end of RWY04.

ROIG / NEW ISHIGAKI

RNAV SID

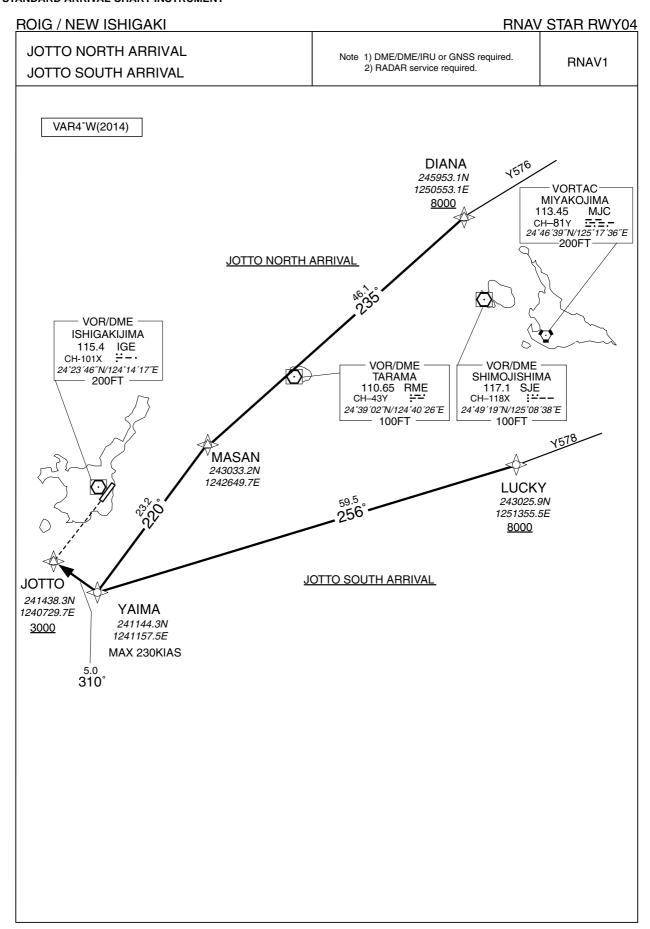
AYAKA ONE DEPARTURE

RWY04

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	_	_	040 (035.9)	-4.1	_	_	+600	_	_	RNAV1
002	DF	IG400	_	_	-4.1	_	_	_	_	_	RNAV1
003	TF	IG401	_	007 (002.6)	-4.1	3.0	_	_	_	_	RNAV1
004	TF	IG402	_	293 (289.1)	-4.1	4.6	_	_	_	_	RNAV1
005	TF	AYAKA	_	260 (256.1)	-4.1	36.0	_	+5000	_	_	RNAV1

RWY22

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	Serial	Path	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical	Navigation Specification
l	Number	Descriptor	identiller	Ovei	IVI(I)	variation	(INIVI)	Direction	(Г1)	(NIAS)	Angle	Specification
	001	VA	_	_	220 (215.9)	-4.1	_	_	+600	_	_	RNAV1
	002	DF	IG200	Υ	_	-4.1	_	_	_	_	_	RNAV1
	003	TF	IG201	_	220 (215.7)	-4.1	4.6	_	_	_	_	RNAV1
	004	TF	IG202	_	282 (277.9)	-4.1	9.6	_	_	_	_	RNAV1
	005	TF	IG203	_	288 (283.9)	-4.1	8.4	_	+5000	_	_	RNAV1
	006	TF	AYAKA	_	288 (283.8)	-4.1	14.0	_	_	_	_	RNAV1



ROIG / NEW ISHIGAKI

RNAV STAR RWY04

JOTTO NORTH ARRIVAL

From DIANA at or above 8000FT, to MASAN, to YAIMA, to JOTTO at or above 3000FT.

Critical DME	MJC: DIANA - 21NM to MASAN 14NM to YAIMA - 10NM to YAIMA IGE: 36NM to MASAN - 21NM to MASAN 14NM to YAIMA - 13NM to YAIMA
DME GAP	21NM to MASAN - 14NM to YAIMA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

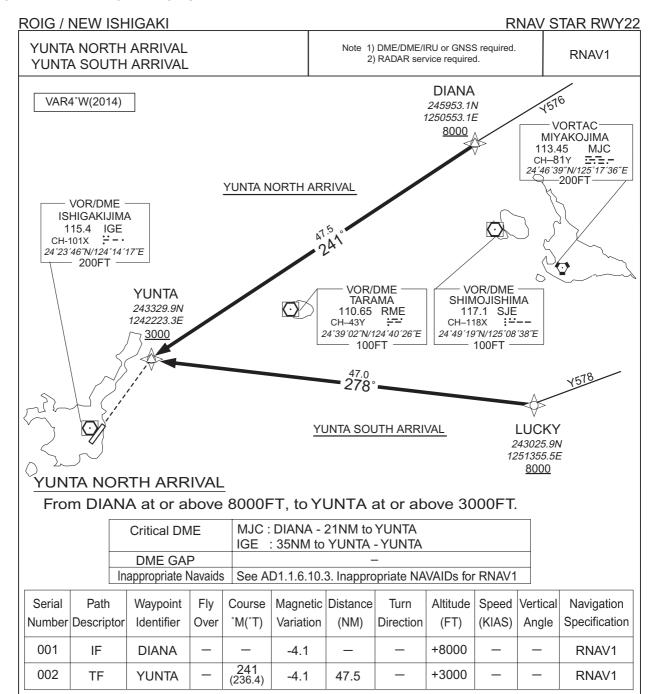
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	
001	IF	DIANA	_	_	-4.1	_	_	+8000	_	_	RNAV1
002	TF	MASAN	_	235 (230.5)	-4.1	46.1	_	_	_	_	RNAV1
003	TF	YAIMA	_	220 (215.8)	-4.1	23.2	-	_	-230	1	RNAV1
004	TF	JOTTO	_	310 (305.5)	-4.1	5.0	_	+3000	_	_	RNAV1

JOTTO SOUTH ARRIVAL

From LUCKY at or above 8000FT, to YAIMA, to JOTTO at or above 3000FT.

Critical DME	MJC : LUCKY - 6NM to YAIMA IGE : 53NM to YAIMA - 6NM to YAIMA
DME GAP	_
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Numbe	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	LUCKY	_	_	-4.1	_	_	+8000	_	_	RNAV1
002	TF	YAIMA	_	256 (251.9)	-4.1	59.5	_	_	-230	_	RNAV1
003	TF	JOTTO	_	310 (305.5)	-4.1	5.0	_	+3000	_	_	RNAV1

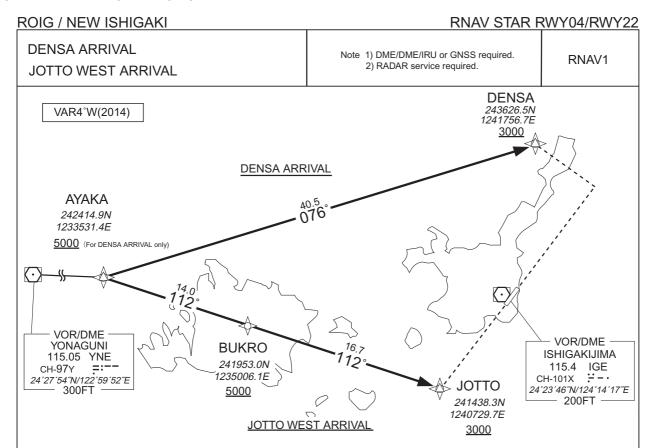


YUNTA SOUTH ARRIVAL

From LUCKY at or above 8000FT, to YUNTA at or above 3000FT.

Critical DME	MJC: LUCKY - 32NM to YUNTA IGE: 33NM to YUNTA - 32NM to YUNTA YNE,IGE: 6NM to YUNTA -YUNTA
DME GAP	32NM to YUNTA - 6NM to YUNTA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	$^{\circ}M(^{\circ}T)$	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	LUCKY	_	_	-4.1	-	_	+8000	_	_	RNAV1
002	TF	YUNTA	_	278 (273.9)	-4.1	47.0	_	+3000	_	_	RNAV1



DENSA ARRIVAL

From AYAKA at or above 5000FT, to DENSA at or above 3000FT.

Critical DME	IGE : 23NM to DENSA - DENSA
	MJC: 23NM to DENSA - 18NM to DENSA
DME GAP	AYAKA - 23NM to DENSA
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

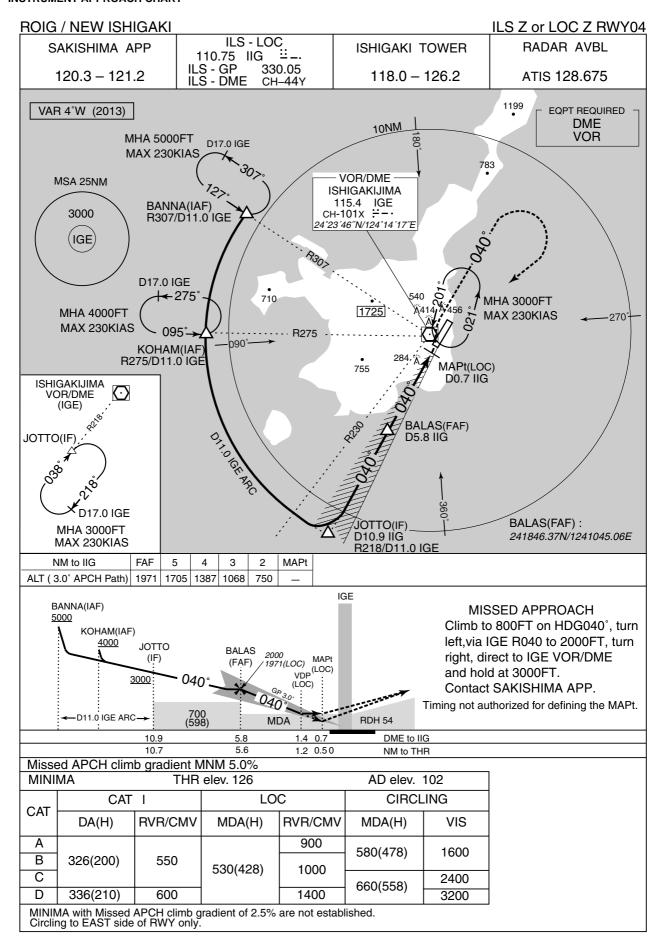
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	AYAKA	_	_	-4.1	_	_	+5000	_	_	RNAV1
002	TF	DENSA	_	076 (072.3)	-4.1	40.5	_	+3000	_	_	RNAV1

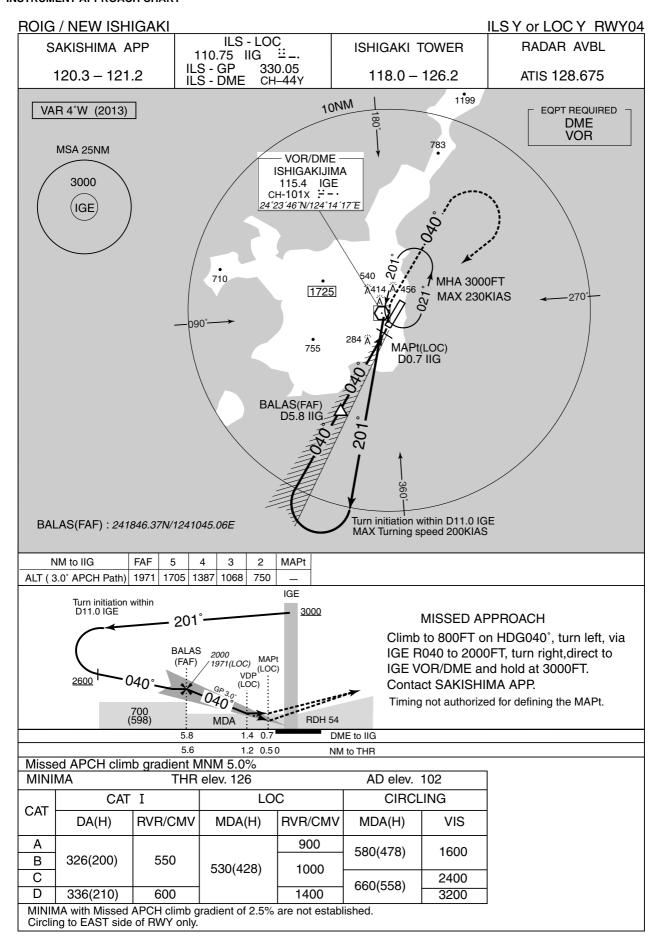
JOTTO WEST ARRIVAL

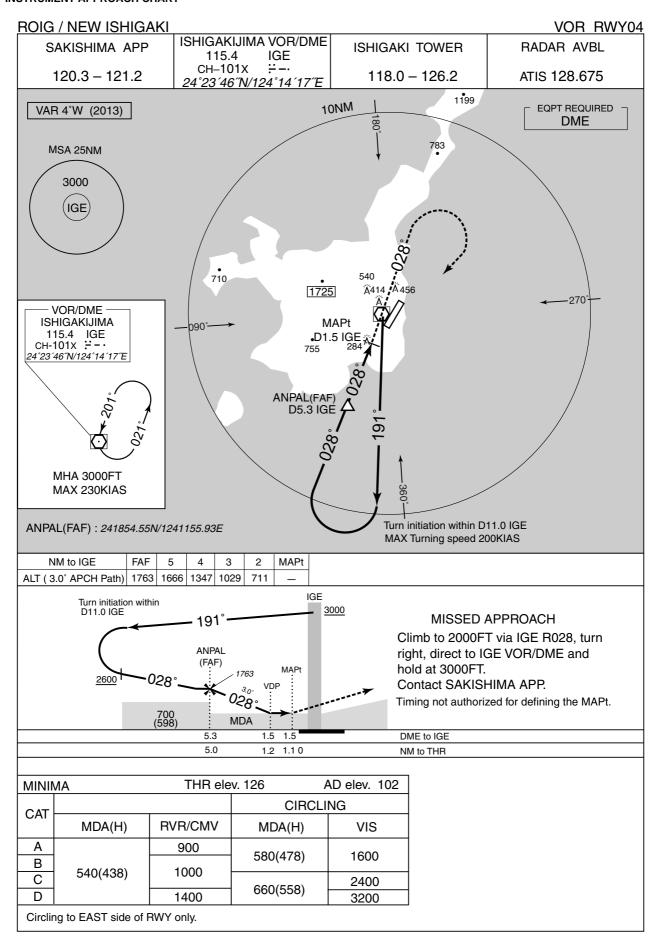
From AYAKA, to BUKRO at or above 5000FT, to JOTTO at or above 3000FT.

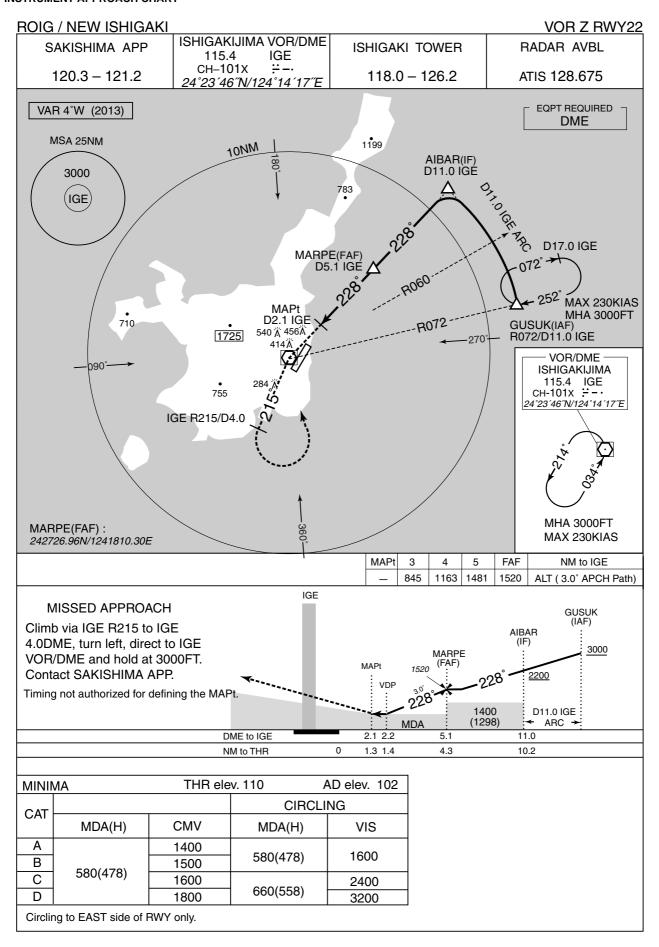
Critical DME	MJC: 14NM to JOTTO - 10NM to JOTTO YNE: 14NM to JOTTO - JOTTO
DME GAP	AYAKA - 14NM to JOTTO
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

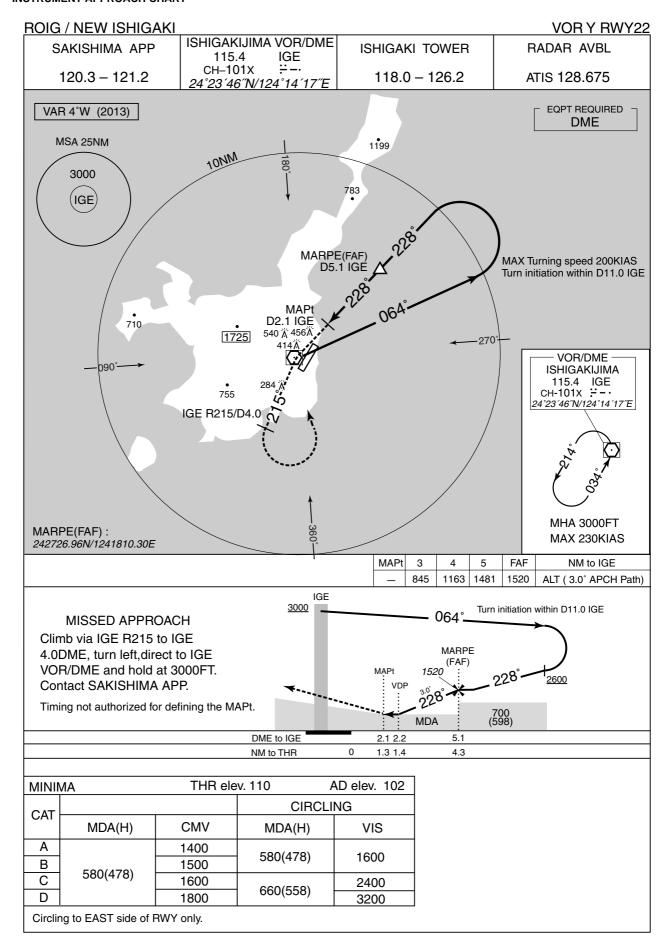
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	
001	IF	AYAKA	_	_	-4.1	_	_	_	_	_	RNAV1
002	TF	BUKRO	_	112 (108.1)	-4.1	14.0	_	+5000	_	_	RNAV1
003	TF	JOTTO	_	112 (108.2)	-4.1	16.7	_	+3000	_	_	RNAV1

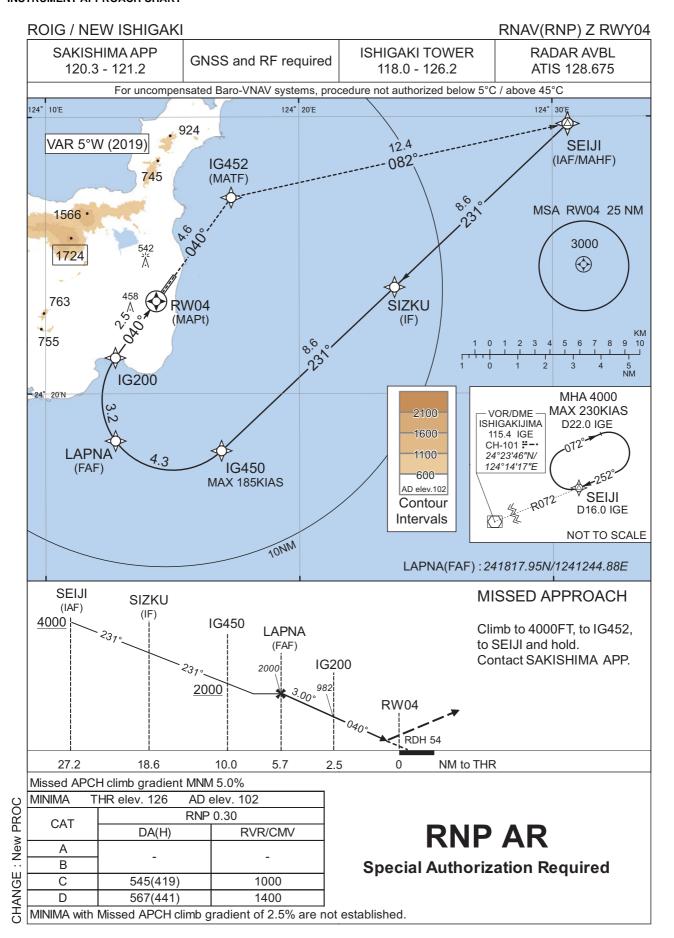












ROIG / NEW ISHIGAKI

RNAV(RNP) Z RWY04

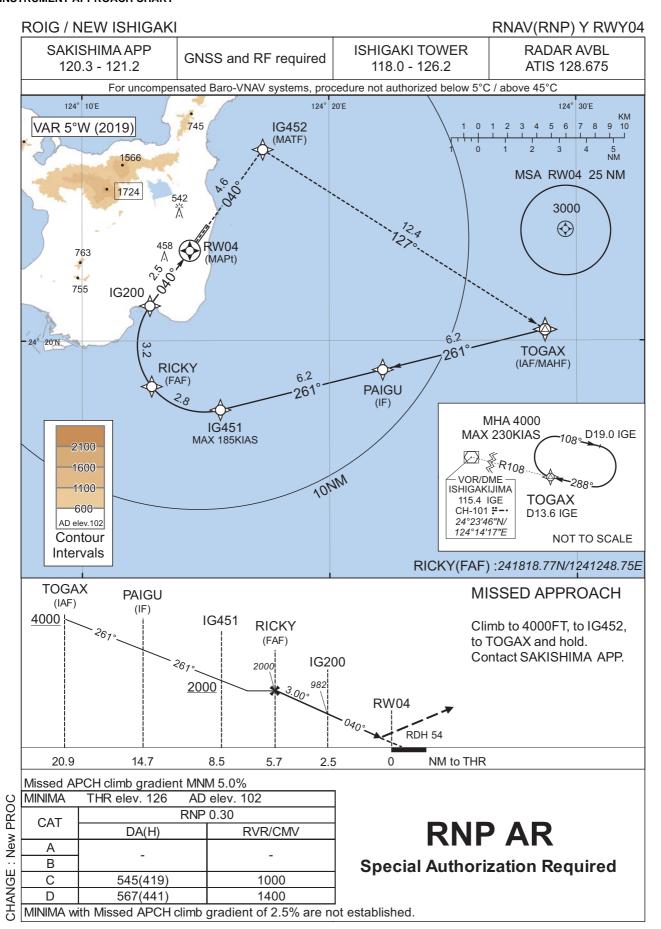
RNAV(RNP) Z RWY04

Coding 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	SEIJI	1	1	-4.7	1	1	+4000	1	-	-
002	TF	SIZKU	-	231 (226.6)	-4.7	8.6	ı	ı	1	1	1.0
003	TF	IG450	-	231 (226.6)	-4.7	8.6	ı	+2000	-185	1	1.0
004	RF Center: IGRF1 r=2.55NM	LAPNA	ı	1	-4.7	4.3	R	2000	1	ı	1.0
005	RF Center: IGRF1 r=2.55NM	IG200	ı	ı	-4.7	3.2	R	982	ı	-3.00	0.3
006	TF	RW04	Υ	040 (035.7)	-4.7	2.5	ı	180	ı	-3.00/54	0.3
007	TF	IG452	-	040 (035.7)	-4.7	4.6	-	1	1	-	1.0
800	TF	SEIJI	-	082 (077.6)	-4.7	12.4	-	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
SEIJI	242944.43N/1243036.57E	IGRF1	241948.12N/1241500.55E
SIZKU	242350.59N/1242345.74E		
IG450	241756.41N/1241655.55E		
LAPNA	241817.95N/1241244.88E		
IG200	242118.09N/1241244.70E		
RW04	242320.91N/1241421.64E		
IG452	242705.63N/1241719.18E		



ROIG / NEW ISHIGAKI

RNAV(RNP) Y RWY04

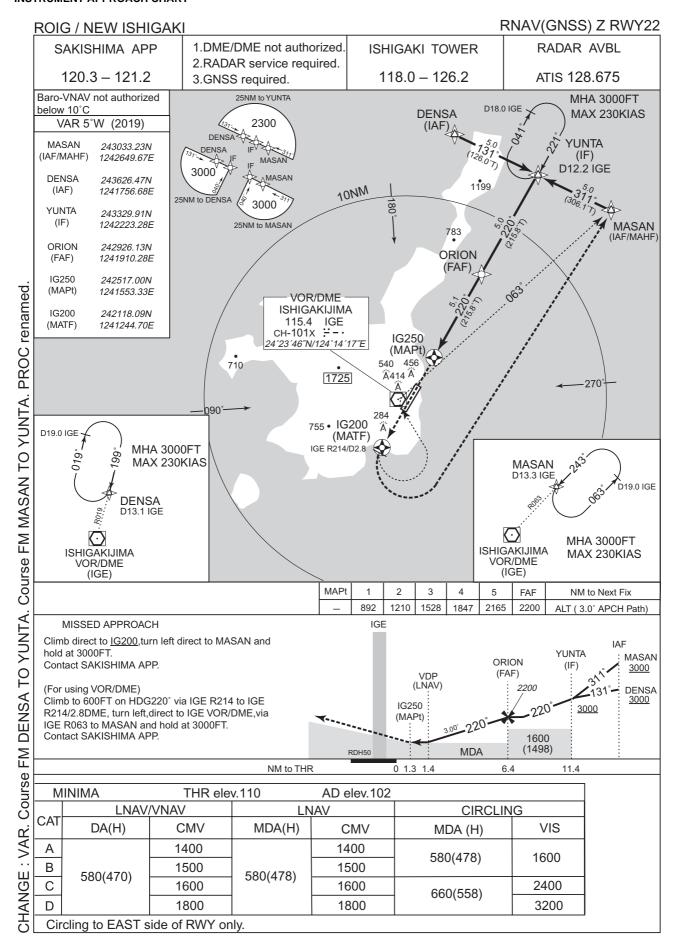
RNAV(RNP) Y RWY04

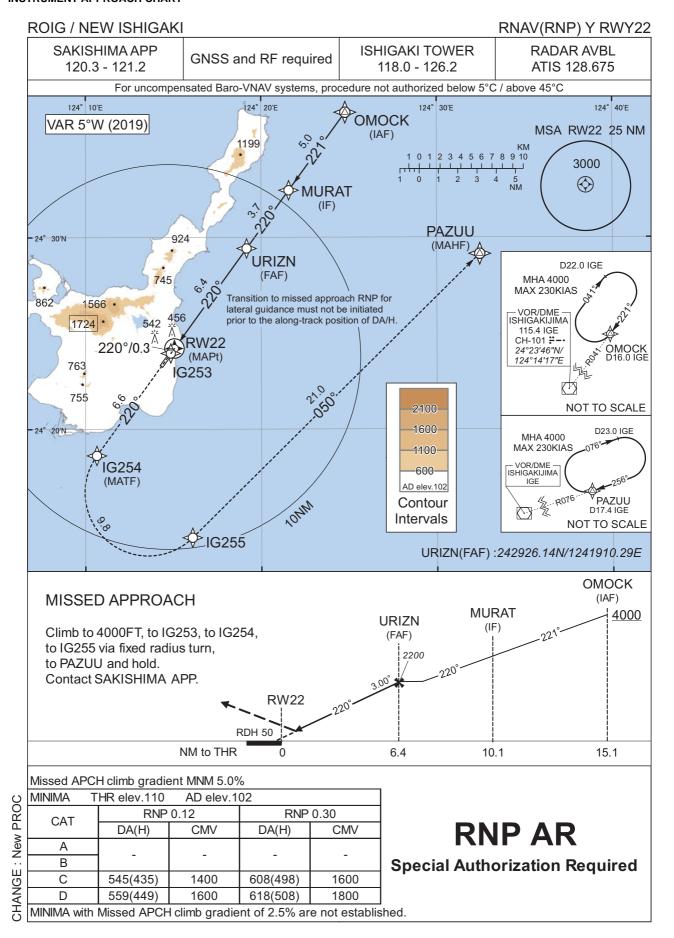
Coding Table

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	TOGAX	1	ı	-4.7	-	-	+4000	ı	-	-
002	TF	PAIGU	1	261 (256.1)	-4.7	6.2	1	ı	1	1	1.0
003	TF	IG451	1	261 (256.1)	-4.7	6.2	1	+2000	-185	1	1.0
004	RF Center: IGRF2 r=2.47NM	RICKY	ı	ı	-4.7	2.8	R	2000	1	1	1.0
005	RF Center: IGRF2 r=2.47NM	IG200	ı	ı	-4.7	3.2	R	982	1	-3.00	0.3
006	TF	RW04	Υ	040 (035.7)	-4.7	2.5	ı	180	1	-3.00/54	0.3
007	TF	IG452	-	040 (035.7)	-4.7	4.6	ı	-	- 1	ı	1.0
800	TF	TOGAX	-	127 (122.7)	-4.7	12.4	-	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
TOGAX	242024.18N/1242843.66E	IGRF2	241950.87N/1241456.35E
PAIGU	241855.41N/1242209.38E		
IG451	241726.37N/1241535.30E		
RICKY	241818.77N/1241248.75E		
IG200	242118.09N/1241244.70E		
RW04	242320.91N/1241421.64E		
IG452	242705.63N/1241719.18E		





ROIG / NEW ISHIGAKI

RNAV(RNP) Y RWY22

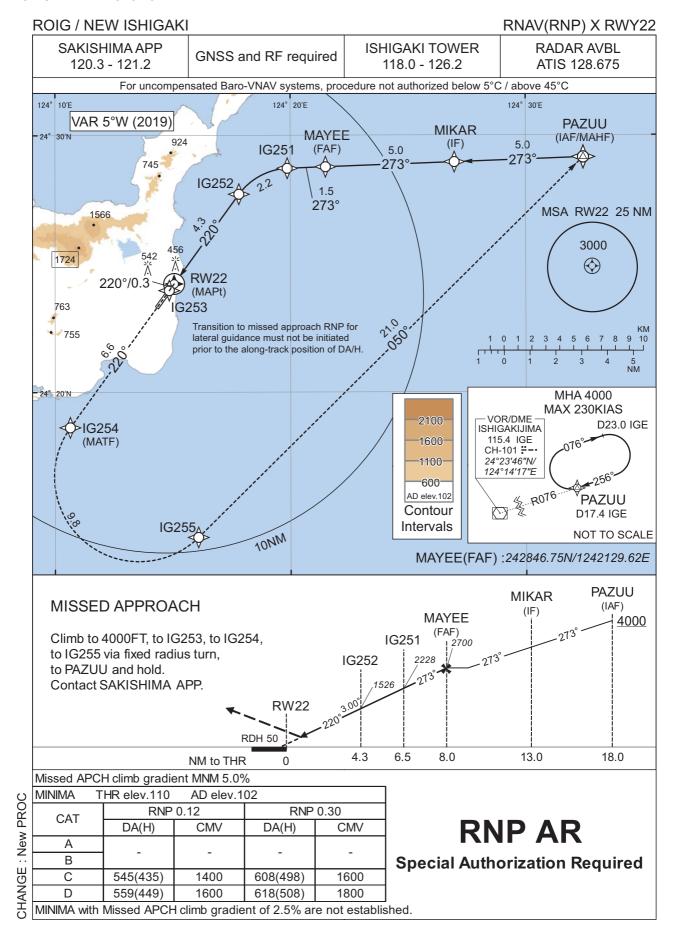
RNAV(RNP) Y RWY22

Coding 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	ОМОСК	1	-	-4.7	1	1	+4000	-	-	-
002	TF	MURAT	1	221 (215.8)	-4.7	5.0	-	-	-	-	1.0
003	TF	URIZN	1	220 (215.8)	-4.7	3.7	-	2200	-	-	1.0
004	TF	RW22	Υ	220 (215.8)	-4.7	6.4	1	160	1	-3.00/50	0.12 0.30
005	TF	IG253	1	220 (215.7)	-4.7	0.3	1	ı	1	-	0.12 0.30
006	TF	IG254	1	220 (215.7)	-4.7	6.6	1	ı	1	-	1.0
007	RF Center: IGRF3 r=3.28NM	IG255	ı	-	-4.7	9.8	L	-	1	-	1.0
800	TF	PAZUU	-	050 (045.2)	-4.7	21.0	ı	4000	ı	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
OMOCK	243631.66N/1242447.35E	IGRF3	241641.99N/1241333.15E
MURAT	243227.94N/1242134.19E		
URIZN	242926.14N/1241910.29E		
RW22	242413.59N/1241503.24E		
IG253	242357.98N/1241450.93E		
IG254	241837.84N/1241038.29E		
IG255	241421.38N/1241604.82E		
PAZUU	242908.99N/1243226.97E		



ROIG / NEW ISHIGAKI

RNAV(RNP) X RWY22

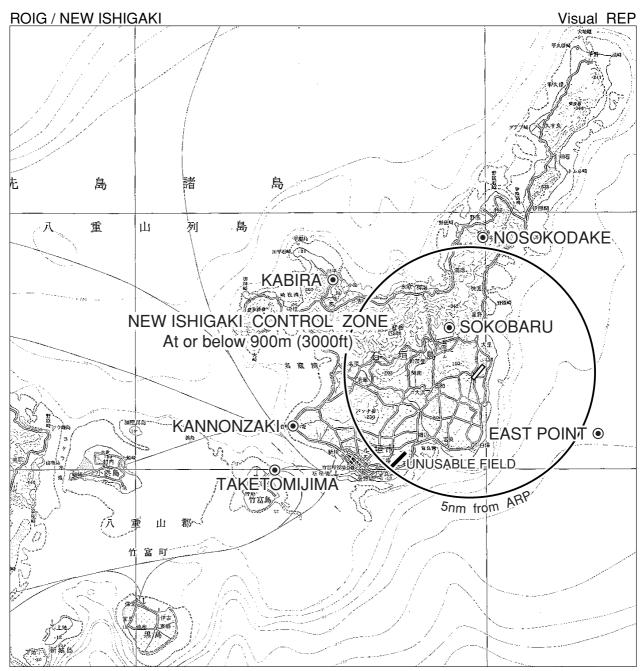
RNAV(RNP) X RWY22

Coding 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	PAZUU	-	-	-4.7	-	-	+4000	-	-	-
002	TF	MIKAR	ı	273 (267.9)	-4.7	5.0	-		1	-	1.0
003	TF	MAYEE	1	273 (267.9)	-4.7	5.0	-	2700	-	-	1.0
004	TF	IG251	1	273 (267.8)	-4.7	1.5	-	2228	1	-3.00	0.12 0.30
005	RF Center: IGRF4 r=2.43NM	IG252	1	ı	-4.7	2.2	L	1526	ı	-3.00	0.12 0.30
006	TF	RW22	Y	220 (215.7)	-4.7	4.3	1	160	1	-3.00/50	0.12 0.30
007	TF	IG253	ı	220 (215.7)	-4.7	0.3	-	-	ı	1	0.12 0.30
800	TF	IG254	ı	220 (215.7)	-4.7	6.6	1	-	1	1	1.0
009	RF Center: IGRF3 r=3.28NM	IG255	ı	-	-4.7	9.8	L	-	-	-	1.0
010	TF	PAZUU	-	050 (045.2)	-4.7	21.0	-	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PAZUU	242908.99N/1243226.97E	IGRF4	242617.16N/1241958.19E
MIKAR	242857.97N/1242658.29E	IGRF3	241641.99N/1241333.15E
MAYEE	242846.75N/1242129.62E		
IG251	242843.38N/1241952.14E		
IG252	242742.97N/1241748.71E		
RW22	242413.59N/1241503.24E		
IG253	242357.98N/1241450.93E		
IG254	241837.84N/1241038.29E		
IG255	241421.38N/1241604.82E		



Call sign	BRG / DIST from ARP	Remarks
野 底 岳 Nosokodake	006° / 5.5NM	Щ Mountain
EAST POINT	120° / 6.0NM	海上 Over the sea
竹 富 島 Taketomijima	250° / 9.0NM	高速艇船着場 Port
観音崎 Kannonzaki	259° / 7.5NM	灯台 Light house
川 平 Kabira	309° / 6.8NM	川平湾グラスボート乗り場 Kabira Bay Boat pier
底 原 Sokobaru	325° / 2.1NM	ダム Dam

