

RJAF / MATSUMOTO

AD CHART

CHANGE: Aircraft stand lead-in line (Spot 6,10,11) changed.



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STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

SID

MATSUMOTO REVERSAL ONE DEPARTURE

- RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321° to intercept and proceed via MBE R006 to 5.0DME, turn right direct to MBE VOR/DME.  
Cross MBE R006/5.0DME at or above 6000FT, cross MBE VOR/DME at or above 10000FT.
- RWY 36 : Climb via MBE R006 to 5900FT, turn right direct to MBE VOR/DME.  
Cross MBE VOR/DME at or above 10000FT.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.

OBST ALT 3740FT located at 111°/4.40NM FM end of RWY18.

2) Departure turn limited to 150KIAS maximum until completing left turn.



## STANDARD DEPARTURE CHART-INSTRUMENT

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SID

HAPPO ONE DEPARTURE

RWY 18 : Climb RWY HDG to 2700FT, turn left HDG321° to intercept and proceed via MBE R006 to HAPPO.

RWY 36 : Climb via MBE R006 to HAPPO.

NOTE RWY18 : 1) 6.6% climb gradient required up to 4200FT.

OBST ALT 3740FT located at 111°/4.40NM FM end of RWY18.

2) Departure turn limited to 150KIAS maximum until completing left turn.



STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID



CHANGE: VAR.

## STANDARD DEPARTURE CHART-INSTRUMENT

RJAF / MATSUMOTO

RNAV SID

NIIGATA ONE DEPARTURE

## RWY36

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	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	Basic RNP1
002	DF	AZUMI	-	-	-8.2	-	-	-	-	-	Basic RNP1
003	TF	HOKUE	-	041 (032.6)	-8.2	45.1	-	+9000	-	-	Basic RNP1
004	TF	GTC	-	041 (033.0)	-8.2	60.7	-	-	-	-	Basic RNP1

MATSUMOTO ONE DEPARTURE

## RWY36

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	-	-	359 (351.1)	-8.2	-	-	+2600	-	-	Basic RNP1
002	DF	AF600	Y	-	-8.2	-	-	-	-	-	Basic RNP1
003	DF	MBE	-	-	-8.2	-	R	+10000	-	-	Basic RNP1

CHANGE: VAR. True course(VA).

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VOR RWY18

MAPt	3	4	5	6	FAF	NM to MBE
–	2764	3083	3401	3720	4015	ALT (3.0° APCH Path)

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

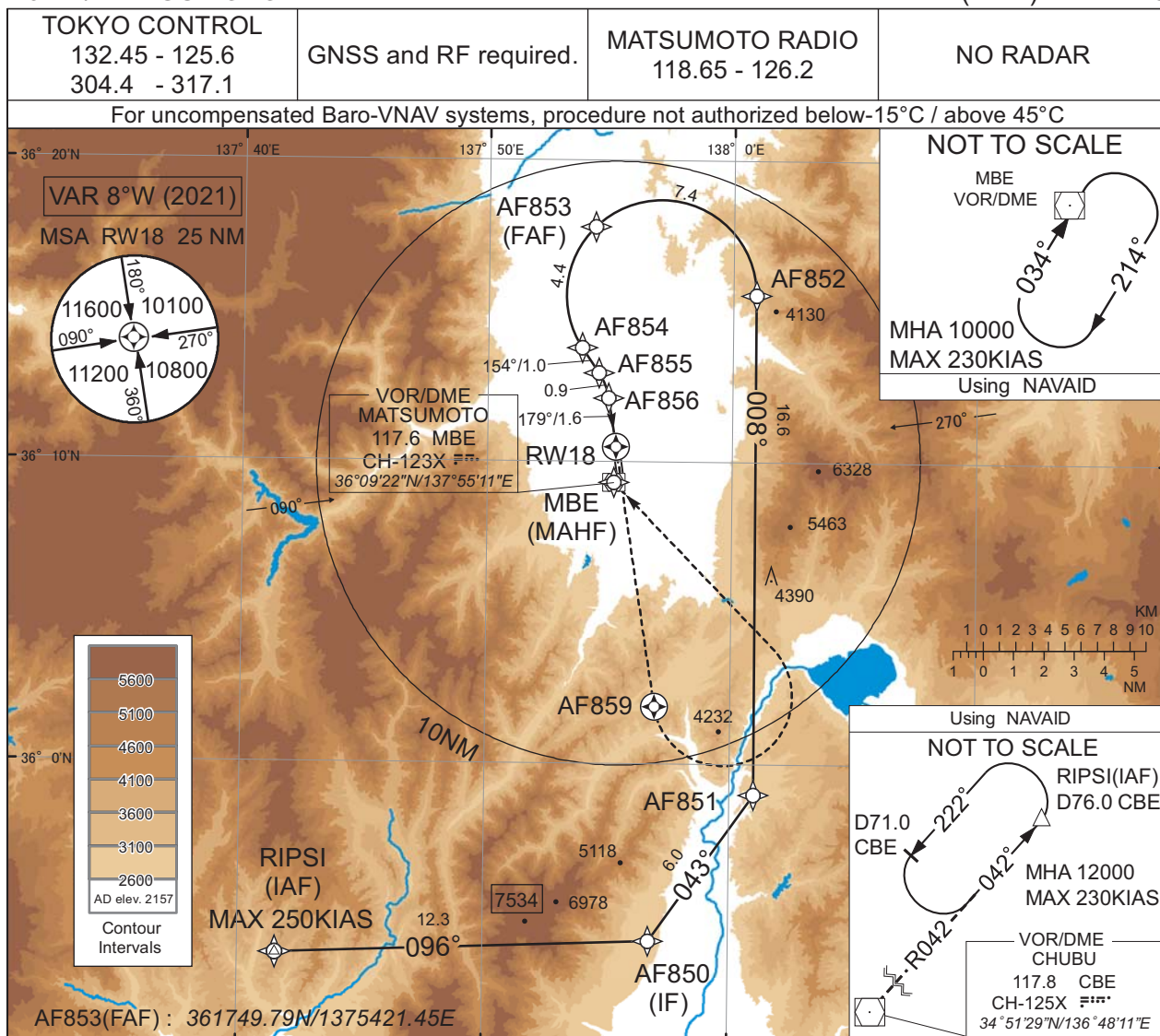
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INSTRUMENT APPROACH CHART

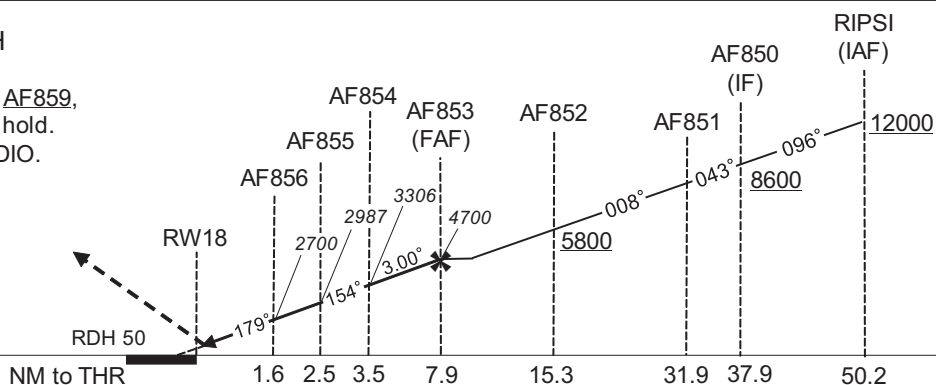
RJAF / MATSUMOTO

RNAV(RNP) Z RWY18



MISSED APPROACH

Climb to 10000FT, direct to AF859,  
turn left, direct to MBE and hold.  
Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

CAT	THR elev. 2132		AD elev. 2157	
	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	2432(300)	1000	2448(316)	1000
D	-	-	-	-

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

**RNP AR**

**Special Authorization Required**

CHANGE : VAR. MSA.

## INSTRUMENT APPROACH CHART

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RNAV(RNP) Z RWY18

RNAV(RNP) Z RWY18Coding 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	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	-	-	-	0.3
004	TF	AF852	-	008 (359.9)	-8.2	16.6	-	+5800	-	-	0.3
005	RF Center: AFRF5 r=3.15NM	AF853	-	-	-8.2	7.4	L	4700	-	-	0.3
006	RF Center: AFRF5 r=3.15NM	AF854	-	-	-8.2	4.4	L	3306	-	-3.00	0.2 0.3
007	TF	AF855	-	154 (146.1)	-8.2	1.0	-	2987	-	-3.00	0.2 0.3
008	RF Center: AFRF6 r=2.06NM	AF856	-	-	-8.2	0.9	R	2700	-	-3.00	0.2 0.3
009	TF	RW18	Y	179 (171.1)	-8.2	1.6	-	2182	-	-3.00/50	0.2 0.3
010	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
011	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

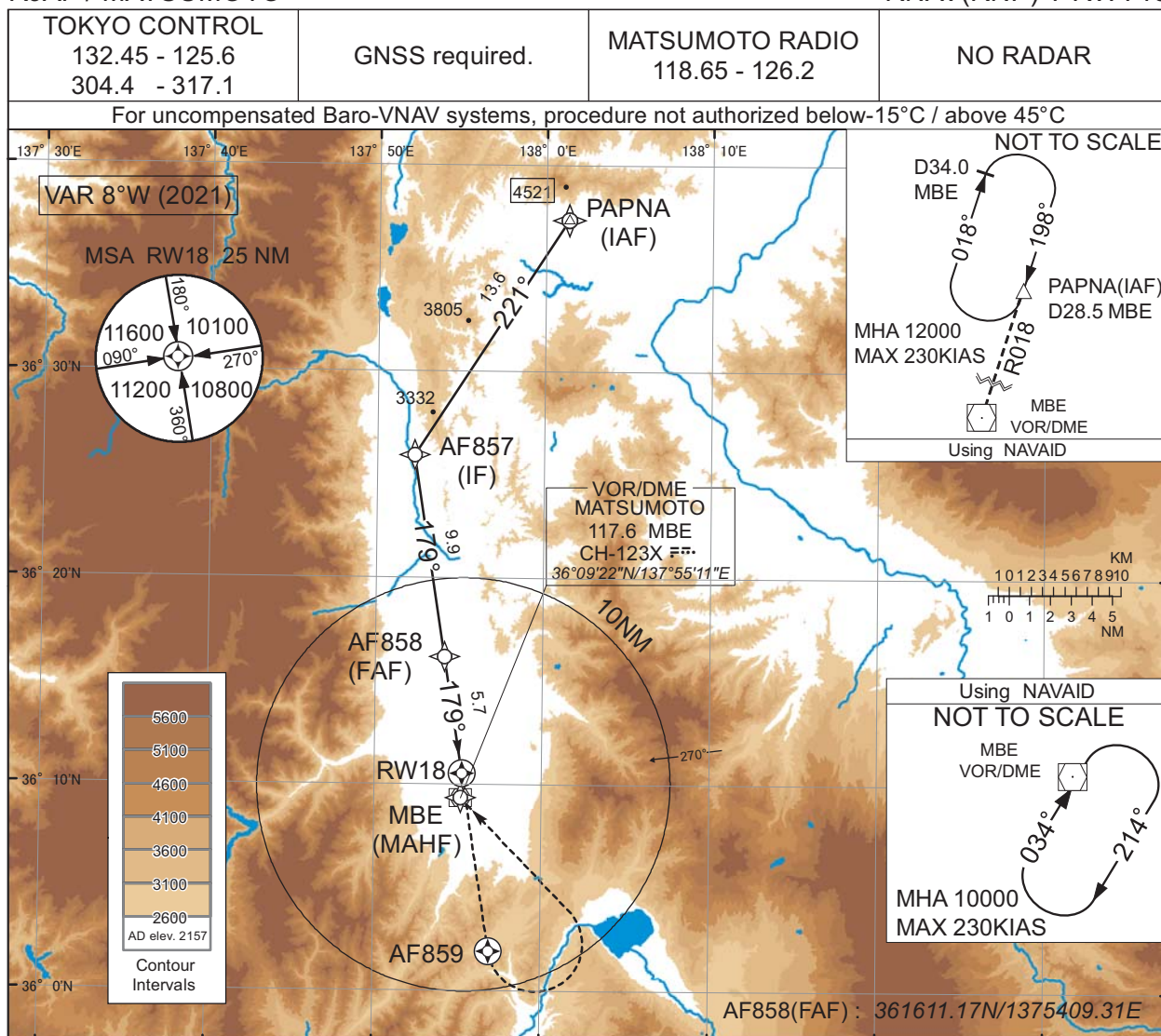
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	355340.33N / 1374133.41E	AFRF5	361534.43N / 1375704.35E
AF850	355408.74N / 1375645.79E	AFRF6	361149.74N / 1375225.49E
AF851	355901.18N / 1380100.60E		
AF852	361534.92N / 1380057.71E		
AF853	361749.79N / 1375421.45E		
AF854	361348.83N / 1375350.85E		
AF855	361259.03N / 1375432.28E		
AF856	361209.11N / 1375456.52E		
RW18	361032.37N / 1375515.37E		
AF859	360155.80N / 1375655.84E		
MBE	360921.51N / 1375511.34E		

CHANGE : VAR.

INSTRUMENT APPROACH CHART

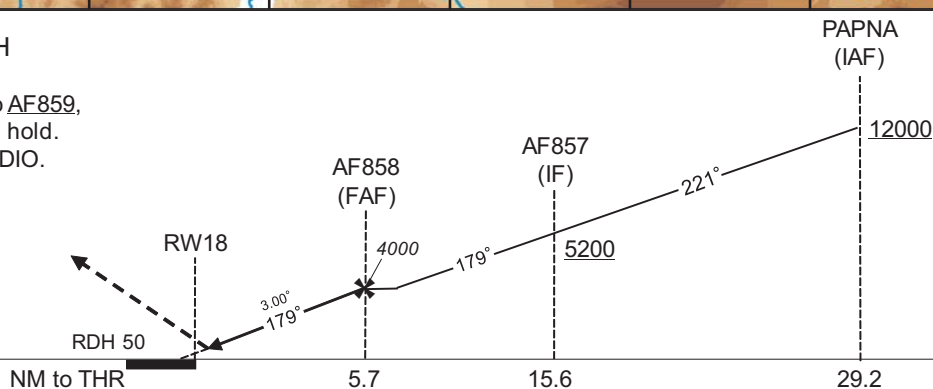
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RNAV(RNP) Y RWY18



MISSED APPROACH

Climb to 10000FT, direct to AF859,  
turn left, direct to MBE and hold.  
Contact MATSUMOTO RADIO.



Missed APCH climb gradient MNM 7.0%

MINIMA	THR elev. 2132	AD elev. 2157
CAT	RNP 0.20	RNP 0.30
	DA(H)	CMV
A	-	-
B	-	-
C	2432(300)	1000
D	-	-

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

# RNP AR

Special Authorization Required

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY18

RNAV(RNP) Y RWY18Coding 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	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF857	-	221 (212.8)	-8.2	13.6	-	+5200	-	-	1.0
003	TF	AF858	-	179 (171.0)	-8.2	9.9	-	4000	-	-	1.0
004	TF	RW18	Y	179 (171.1)	-8.2	5.7	-	2182	-	-3.00/50	0.2 0.3
005	DF	AF859	Y	-	-8.2	-	-	-	-	-	1.0
006	DF	MBE	-	-	-8.2	-	L	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates
PAPNA	363721.74N / 1380122.92E
AF857	362557.23N / 1375214.72E
AF858	361611.17N / 1375409.31E
RW18	361032.37N / 1375515.37E
AF859	360155.80N / 1375655.84E
MBE	360921.51N / 1375511.34E

CHANGE : VAR.



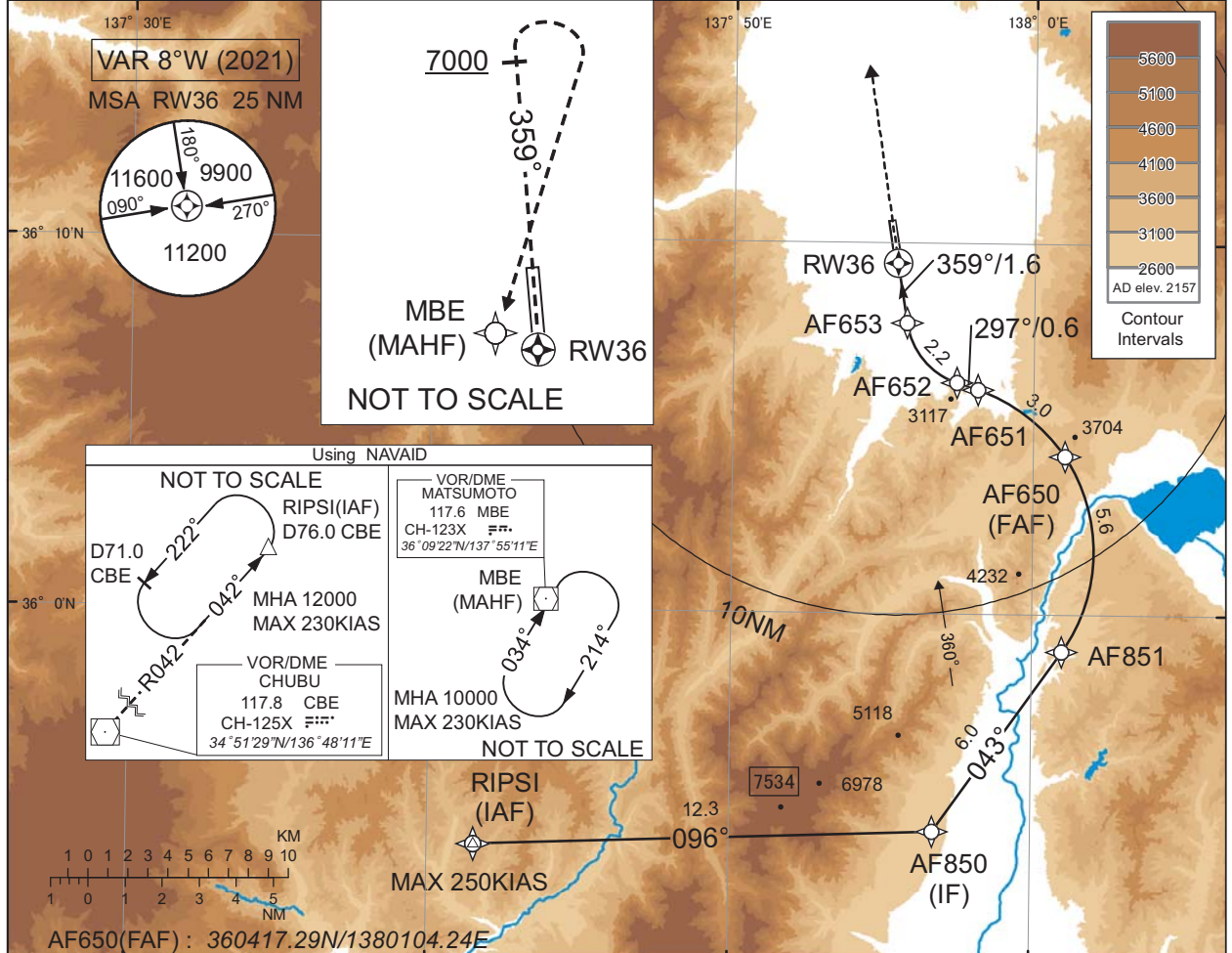
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY36

TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS and RF required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR
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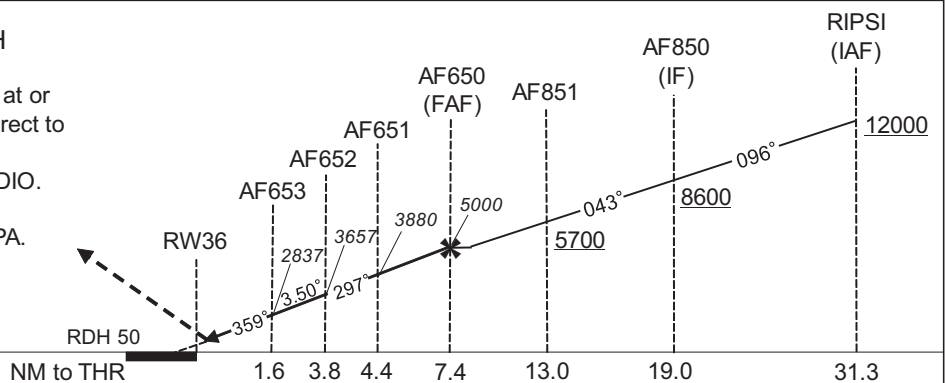
For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



MISSED APPROACH

From RWY36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT. Contact MATSUMOTO RADIO.

PAPI not coincident with VPA.



CAT	THR elev. 2182		AD elev. 2157	
	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	2482(300)	1800	2551(369)	1800
D	-	-	-	-

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

**RNP AR**

Special Authorization Required

CHANGE : VAR. MSA. Course FM AF651 to AF652.

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Z RWY36

RNAV(RNP) Z RWY36Coding 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	RIPSI	-	-	-8.2	-	-	+12000	-250	-	-
002	TF	AF850	-	096 (087.7)	-8.2	12.3	-	+8600	-	-	1.0
003	TF	AF851	-	043 (035.2)	-8.2	6.0	-	+5700	-	-	1.0
004	RF Center: AFRF1 r=4.60NM	AF650	-	-	-8.2	5.6	L	5000	-	-	1.0
005	RF Center: AFRF1 r=4.60NM	AF651	-	-	-8.2	3.0	L	3880	-	-3.50	0.2 0.3
006	TF	AF652	-	297 (288.3)	-8.2	0.6	-	3657	-	-3.50	0.2 0.3
007	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
008	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
009	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
010	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
RIPSI	355340.33N / 1374133.41E	AFRF1	360141.27N / 1375622.53E
AF850	355408.74N / 1375645.79E	AFRF2	360810.39N / 1375813.97E
AF851	355901.18N / 1380100.60E		
AF650	360417.29N / 1380104.24E		
AF651	360604.23N / 1375809.40E		
AF652	360615.53N / 1375727.24E		
AF653	360751.55N / 1375546.68E		
RW36	360928.29N / 1375527.85E		
MBE	360921.51N / 1375511.34E		

CHANGE : VAR. Course FM AF651 to AF652.

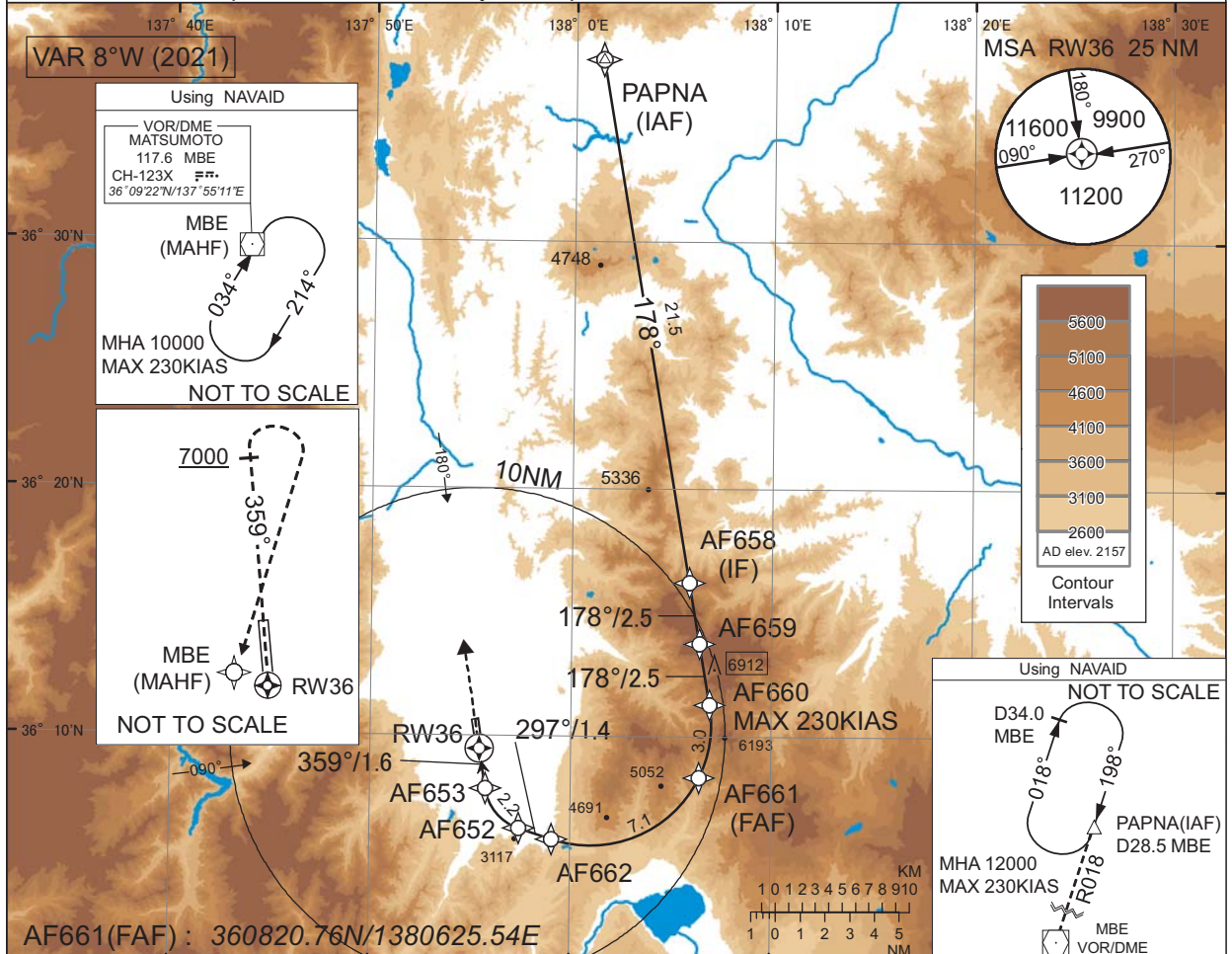
INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY36

TOKYO CONTROL 132.45 - 125.6 304.4 - 317.1	GNSS and RF required.	MATSUMOTO RADIO 118.65 - 126.2	NO RADAR
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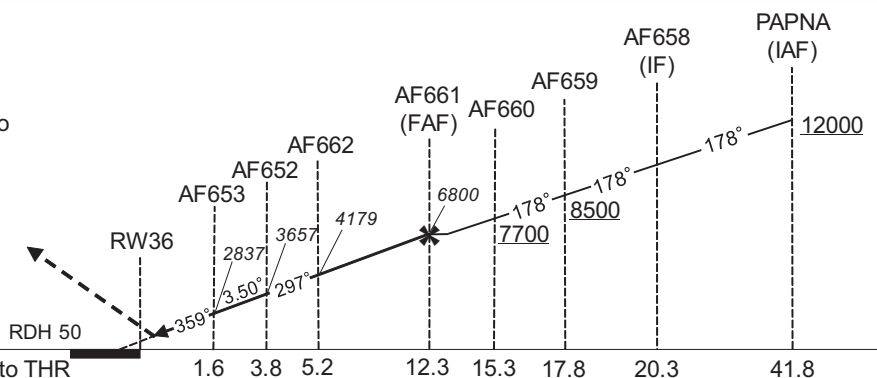
For uncompensated Baro-VNAV systems, procedure not authorized below -15°C / above 45°C



MISSED APPROACH

From RW36 on track 359°, at or above 7000FT turn right, direct to MBE and hold at 10000FT.  
Contact MATSUMOTO RADIO.

PAPI not coincident with VPA.



Missed APCH climb gradient MNM 3.0%

CAT	THR elev. 2182		AD elev. 2157	
	RNP 0.20		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B	-	-	-	-
C	2482(300)	1800	2551(369)	1800
D	-	-	-	-

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

**RNP AR**

Special Authorization Required

CHANGE : VAR. MSA. AF659 established. Waypoint renamed(AF654→AF658, AF655→AF660, AF656→AF661, AF657→AF662).  
Course FM AF662 to AF652. ALT restriction(AF660). Speed restriction(AF660).

## INSTRUMENT APPROACH CHART

RJAF / MATSUMOTO

RNAV(RNP) Y RWY36

RNAV(RNP) Y RWY36Coding 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	PAPNA	-	-	-8.2	-	-	+12000	-	-	-
002	TF	AF658	-	178 (170.2)	-8.2	21.5	-	-	-	-	1.0
003	TF	AF659	-	178 (170.3)	-8.2	2.5	-	+8500	-	-	0.3
004	TF	AF660	-	178 (170.3)	-8.2	2.5	-	+7700	-230	-	0.3
005	RF Center: AFRF4 r=4.89NM	AF661	-	-	-8.2	3.0	R	6800	-	-	0.3
006	RF Center: AFRF4 r=4.89NM	AF662	-	-	-8.2	7.1	R	4179	-	-3.50	0.2 0.3
007	TF	AF652	-	297 (288.4)	-8.2	1.4	-	3657	-	-3.50	0.2 0.3
008	RF Center: AFRF2 r=2.02NM	AF653	-	-	-8.2	2.2	R	2837	-	-3.50	0.2 0.3
009	TF	RW36	Y	359 (351.1)	-8.2	1.6	-	2232	-	-3.50/50	0.2 0.3
010	FA	-	-	359 (351.1)	-8.2	-	-	+7000	-	-	1.0
011	DF	MBE	-	-	-8.2	-	R	10000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
PAPNA	363721.74N / 1380122.92E	AFRF4	361027.73N / 1380059.34E
AF658	361613.48N / 1380553.24E	AFRF2	360810.39N / 1375813.97E
AF659	361345.52N / 1380624.64E		
AF660	361117.56N / 1380656.02E		
AF661	360820.76N / 1380625.54E		
AF662	360549.12N / 1375905.80E		
AF652	360615.53N / 1375727.24E		
AF653	360751.55N / 1375546.68E		
RW36	360928.29N / 1375527.85E		
MBE	360921.51N / 1375511.34E		

CHANGE : VAR. AF659 established. Waypoint renamed(AF654→AF658, AF655→AF660, AF656→AF661, AF657→AF662).  
Course FM AF662 to AF652. ALT restriction(AF660). Speed restriction(AF660).



RJAF / MATSUMOTO

Visual REP



Call sign	BRG / DIST from ARP	Remarks
安曇野インターチェンジ Azumino Interchange	008°/8.0NM	長野自動車道 安曇野インターチェンジ Interchange
松本ステーション Matsumoto Station	036°/4.3NM	JR駅 Station
美ヶ原 Utsukushigahara	075°/9.6NM	美ヶ原王ヶ頭 Peak
島島 Shimashima	292°/5.0NM	松本電鉄新島島駅 Station
塩尻インターチェンジ Shiojiri Interchange	142°/4.1NM	長野自動車道 塩尻インターチェンジ Interchange
諏訪湖 Suwako	140°/10NM	諏訪湖上空 Lake
鳥居峠 Torii touge	213°/14.4NM	峠 Mountain Pass



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Minimum Vectoring Altitude CHART

