

AD CHART



STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

SID

YAMAGATA FOUR DEPARTURE

RWY01 : Climb RWY HDG to 2000FT, via YTE R017 to 22.0DME, turn left, via YTE R003 to YTE VOR/DME.

RWY19 : Climb RWY HDG to 2000FT, turn right, direct to YTE VOR/DME, cross YTE VOR/DME at or above 4000FT, via YTE R017 to 15.0DME, turn left, via YTE R354 to YTE VOR/DME.

Note RWY01: 5.0% climb gradient required up to 2000FT.

OBST ALT 1182FT located at 4.2NM 033° FM end of RWY01.

RWY19: 5.0% climb gradient required up to 2000FT.

OBST ALT 788FT located at 3.1NM 181° FM end of RWY19.

Note No turn before DER.

For RWY01

For RWY19



STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

RUBIS ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 8°W (2017)

RUBIS ONE DEPARTURE

RWY01 : Climb on HDG015° at or above 800FT, direct to SC101, to SC102 at or above 7000FT,...

RWY19 : Climb on HDG195° at or above 1300FT, direct to SC903, to SC904, to SC905, to SC906,...

... to ZUNDA at or above FL170, to RUBIS at or above FL200.

Note RWY01 : 5.0% climb gradient required up to 2000FT.
OBST ALT 3609FT located at 16.0NM 039° FM end of RWY01.

RWY19 : 4.0% climb gradient required up to 1300FT.
OBST ALT 919FT located at 3.2NM 181° FM end of RWY19.

CHANGE : New PROC

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

RUBIS ONE DEPARTURE

RWY01

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	—	—	015 (006.6)	-8.2	—	—	+800	—	—	Basic RNP1
002	DF	SC101	—	—	-8.2	—	—	—	—	—	Basic RNP1
003	TF	SC102	—	105 (096.6)	-8.2	8.4	—	+7000	—	—	Basic RNP1
004	TF	ZUNDA	—	200 (192.2)	-8.2	31.2	—	+FL170	—	—	Basic RNP1
005	TF	RUBIS	—	169 (161.2)	-8.2	26.9	—	+FL200	—	—	Basic RNP1

RWY19

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	—	—	195 (186.6)	-8.2	—	—	+1300	—	—	Basic RNP1
002	DF	SC903	—	—	-8.2	—	—	—	—	—	Basic RNP1
003	TF	SC904	—	285 (276.6)	-8.2	9.4	—	—	—	—	Basic RNP1
004	TF	SC905	—	015 (006.4)	-8.2	10.5	—	—	—	—	Basic RNP1
005	TF	SC906	—	105 (096.5)	-8.2	10.6	—	—	—	—	Basic RNP1
006	TF	ZUNDA	—	179 (171.0)	-8.2	15.7	—	+FL170	—	—	Basic RNP1
007	TF	RUBIS	—	169 (161.2)	-8.2	26.9	—	+FL200	—	—	Basic RNP1

CHANGE : New PROC

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

NIIGATA ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 8°W (2017)

NIIGATA ONE DEPARTURENIIGATA ONE DEPARTURE

RWY01 : Climb on HDG015° at or above 800FT, turn left direct to SC100,...

RWY19 : Climb on HDG195° at or above 800FT, direct to SC900,...

... to AKAYU at or above FL150, to GTC.

Note RWY01 : 5.5% climb gradient required up to 2500FT.

OBST ALT 2198FT located at 6.3NM 321° FM end of RWY01.

RWY19 : 4.3% climb gradient required up to 800FT.

OBST ALT 722FT located at 2.8NM 182° FM end of RWY19.

CHANGE : FIX symbol(NIIGATA).

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

NIIGATA ONE DEPARTURE

RWY01

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	—	—	015 (006.6)	-8.2	—	—	+800	—	—	Basic RNP1
002	DF	SC100	—	—	-8.2	—	L	—	—	—	Basic RNP1
003	TF	AKAYU	—	266 (258.2)	-8.2	14.7	—	+FL150	—	—	Basic RNP1
004	TF	GTC	—	266 (258.0)	-8.2	31.3	—	—	—	—	Basic RNP1

RWY19

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	—	—	195 (186.6)	-8.2	—	—	+800	—	—	Basic RNP1
002	DF	SC900	—	—	-8.2	—	—	—	—	—	Basic RNP1
003	TF	AKAYU	—	267 (258.3)	-8.2	26.3	—	+FL150	—	—	Basic RNP1
004	TF	GTC	—	266 (258.0)	-8.2	31.3	—	—	—	—	Basic RNP1

CHANGE : New PROC

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

HANKA ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 8°W (2017)

HANKA ONE DEPARTURE

RWY01 : Climb on HDG015° at or above 800FT, direct to SC902,...

RWY19 : Climb on HDG195° at or above 1300FT, turn right direct to SC901, to SC902,...
... to HANKA at or above 13000FT.

Note RWY01 : 5.0% climb gradient required up to 800FT.

OBST ALT 1542FT located at 6.5NM 026° FM end of RWY01.

RWY19 : 4.0% climb gradient required up to 1300FT.

OBST ALT 919FT located at 3.2NM 181° FM end of RWY19.

No turn before DER.

CHANGE : FIX symbol(HANKA).

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

HANKA ONE DEPARTURE

RWY01

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	—	—	015 (006.6)	-8.2	—	—	+800	—	—	Basic RNP1
002	DF	SC902	—	—	-8.2	—	—	—	—	—	Basic RNP1
003	TF	HANKA	—	029 (020.8)	-8.2	18.9	—	+13000	—	—	Basic RNP1

RWY19

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	—	—	195 (186.6)	-8.2	—	—	+1300	—	—	Basic RNP1
002	DF	SC901	—	—	-8.2	—	R	—	—	—	Basic RNP1
003	TF	SC902	—	029 (020.7)	-8.2	20.1	—	—	—	—	Basic RNP1
004	TF	HANKA	—	029 (020.8)	-8.2	18.9	—	+13000	—	—	Basic RNP1

CHANGE : Editorial

RJSC / YAMAGATA RNAV STAR RWY01

Basic RNP1

Note GNSS required.

VAR 8°W (2017)



STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY01

YOZAN WEST ARRIVAL

From ELDAK at or above FL150, to SUGGY at or above 11000FT, to YOZAN at or above 9000FT.

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	ELDAK	—	—	-8.2	—	—	+FL150	—	—	Basic RNP1
002	TF	SUGGY	—	085 (076.3)	-8.2	12.1	—	+11000	—	—	Basic RNP1
003	TF	YOZAN	—	083 (074.8)	-8.2	7.2	—	+9000	—	—	Basic RNP1

YOZAN NORTH ARRIVAL

From YTE, to IMONY, to YOZAN at or above 9000FT.

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	YTE	—	—	-8.2	—	—	—	—	—	Basic RNP1
002	TF	IMONY	—	225 (216.5)	-8.2	15.1	—	—	-250	—	Basic RNP1
003	TF	YOZAN	—	195 (186.4)	-8.2	4.9	—	+9000	—	—	Basic RNP1

CHANGE : Course FM YTE to IMONY.

STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

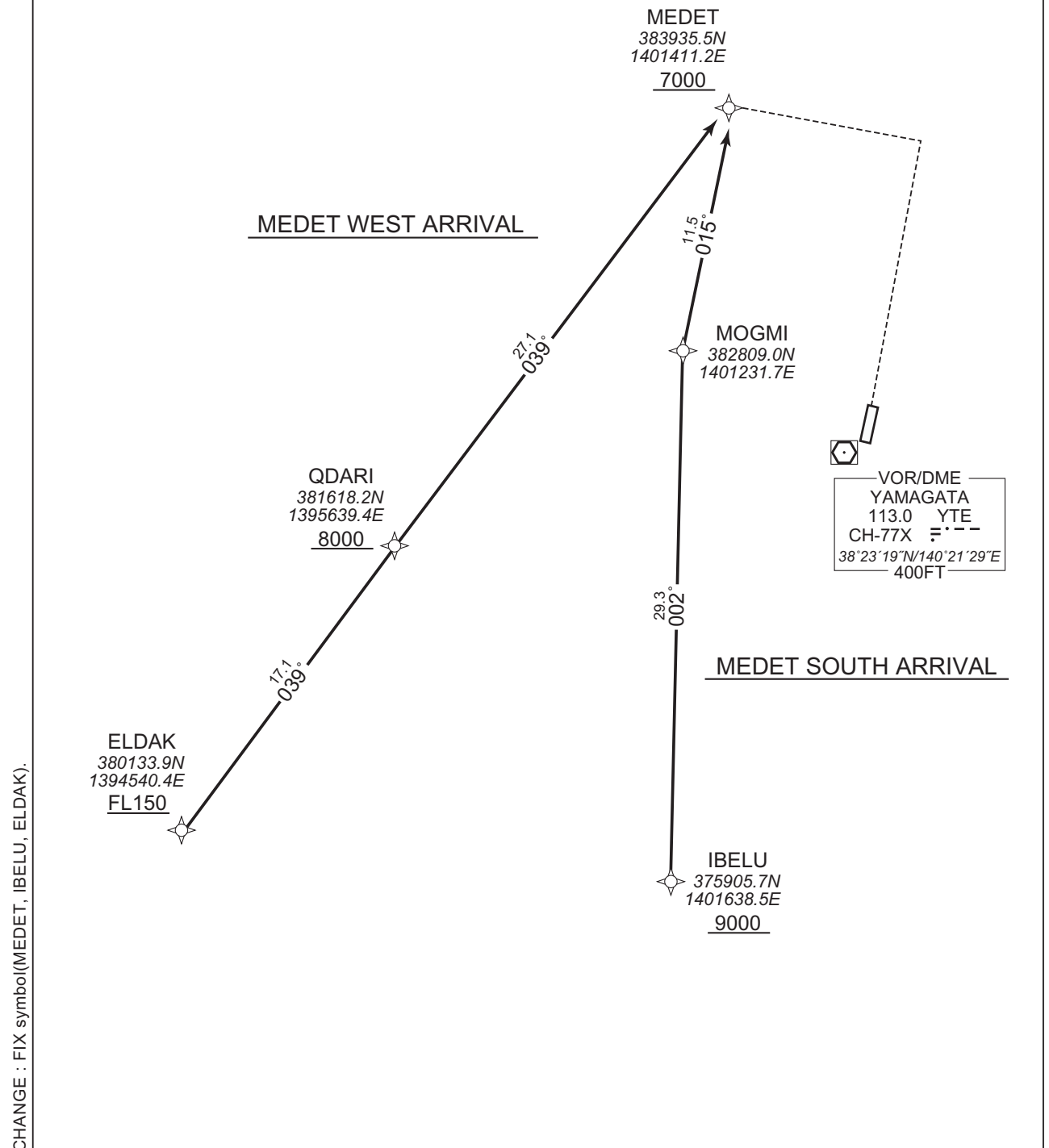
RNAV STAR RWY19

MEDET WEST ARRIVAL / MEDET SOUTH ARRIVAL

Basic RNP1

Note GNSS required.

VAR 8°W (2017)



STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY19

MEDET WEST ARRIVAL

From ELDAK at or above FL150, to QDARI at or above 8000FT, to MEDET at or above 7000FT.

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	ELDAK	—	—	-8.2	—	—	+FL150	—	—	Basic RNP1
002	TF	QDARI	—	039 (030.3)	-8.2	17.1	—	+8000	—	—	Basic RNP1
003	TF	MEDET	—	039 (030.4)	-8.2	27.1	—	+7000	—	—	Basic RNP1

MEDET SOUTH ARRIVAL

From IBELU at or above 9000FT, to MOGMI, to MEDET at or above 7000FT.

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	IBELU	—	—	-8.2	—	—	+9000	—	—	Basic RNP1
002	TF	MOGMI	—	002 (353.7)	-8.2	29.3	—	—	—	—	Basic RNP1
003	TF	MEDET	—	015 (006.5)	-8.2	11.5	—	+7000	—	—	Basic RNP1

CHANGE : New PROC

STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATARNAV STAR RWY19

TUYAH ARRIVAL	Basic RNP1
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Note GNSS required.

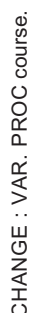


<u>TUYAH ARRIVAL</u> From LAVOT at or above 11000FT, to TUYAH at or above 7000FT.											
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	LAVOT	—	—	-8.2	—	—	+11000	—	—	Basic RNP1
002	TF	TUYAH	—	258 (249.3)	-8.2	14.0	—	+7000	—	—	Basic RNP1

CHANGE : FIX symbol(LAVOT, TUYAH).

RJSC / YAMAGATA

ILS Z RWY01



RJSC / YAMAGATA

TOKYO CONTROL
118.9 - 276.8
135.9 - 230.6

ILS LOC
110.1 IYT ---
ILS-DME CH-38X

YAMAGATA RADIO
122.7 - 126.2

NO RADAR

VAR 9°W (2021)

MSA 25NM

YTE VOR/DME
113.0 YTE
CH-77X
38°23'19"N/140°21'29"E

MAPt
D0.8 IYT
794

EQPT REQUIRED
DME
VOR

Using NAVAID

NOTE: For Initial approach segment
(1) Basic RNP1.
(2) GNSS required.

KAJYO(FAF)
D14.1 IYT

LAFRA(IF)
380522.60N
1401927.16E
D19.1 IYT

IBELU(IAF)
375905.65N
1401638.49E
9000

YOZAN(IAF)
D19.5 YTE
380617.11N
1400922.81E
9000

KAJYO(FAF) : 381021.06N/1402010.69E

NM to IYT	FAF	14	13	12	11	10	9	8	7	6	5	4	3	2	MAPt
ALT(3.1° APCH Path)	4969	4941	4612	4283	3954	3625	3296	2967	2637	2308	1979	1650	1321	992	-

MISSED APPROACH
Climb to 2000FT on HDG015°, via YTE R017 to 5000FT, turn left, via YTE R003 to YTE VOR/DME and hold at 7000FT. Contact YAMAGATA RADIO. PAPI and descent angles not coincident. Timing not authorized for defining the MAPt.

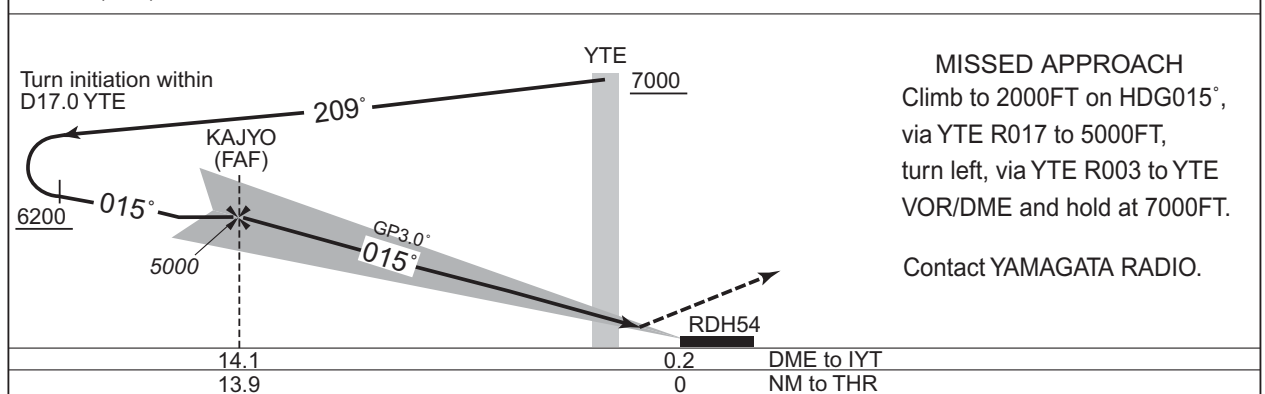
CAT	MINIMA		AD elev. 345	
	MDA(H)	RVR/CMV	MDA(H)	VIS
A	870 (525)	1000	870 (525)	1600
B		1200		2400
C		1600		3200
D		1600		3200

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

INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

ILS Y RWY01



Missed APCH climb gradient MNM 5.0%				
MINIMA	THR elev. 347		AD elev. 345	
CAT	CAT I		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	VIS
	547 (200)	550	790 (445)	1600
			800 (455)	2400
			900 (555)	3200

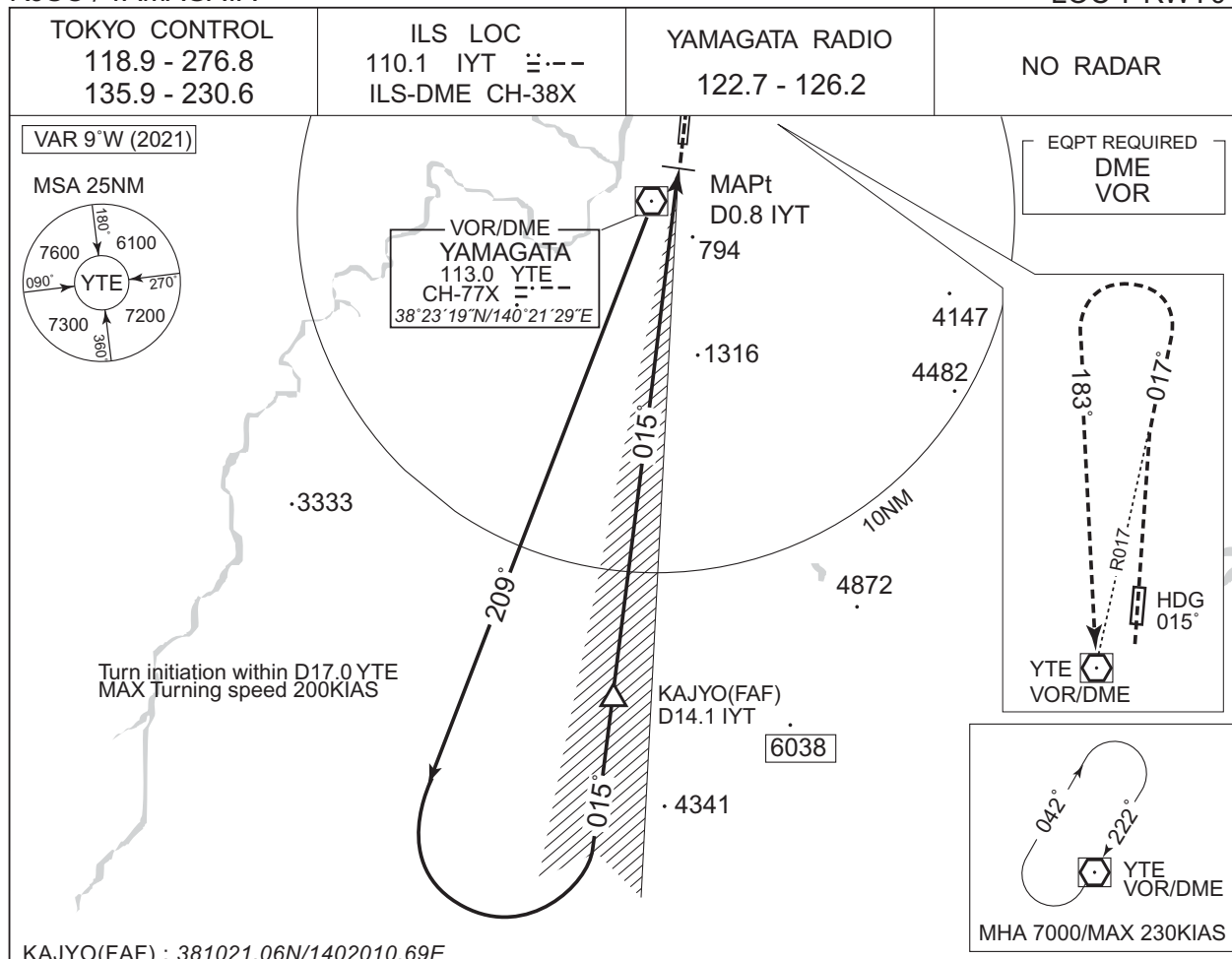
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

CHANGE : VAR. PROC course.

INSTRUMENT APPROACH CHART

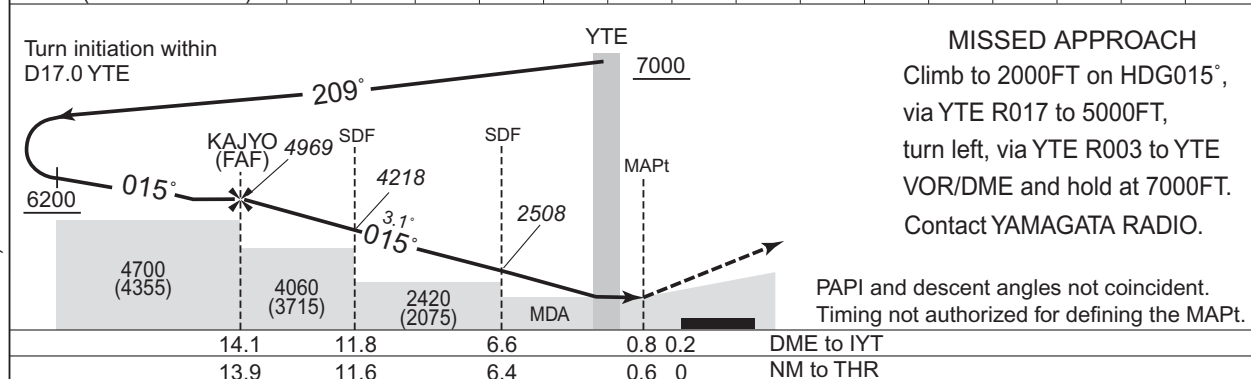
RJSC / YAMAGATA

LOC Y RWY01



KAJYO (FAF) : 381021.06N/1402010.69E

NM to IYT	FAF	14	13	12	11	10	9	8	7	6	5	4	3	2	MAPt
ALT(3.1° APCH Path)	4969	4941	4612	4283	3954	3625	3296	2967	2637	2308	1979	1650	1321	992	-



Missed APCH climb gradient MNM 5.0%

MINIMA		THR elev. 347		AD elev. 345	
CAT			CIRCLING		
	MDA(H)	RVR/ CMV	MDA(H)	VIS	
A	870 (525)	1000	870 (525)	1600	
B		1200			
C					
D		1600	900 (555)	3200	

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

INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

VOR A

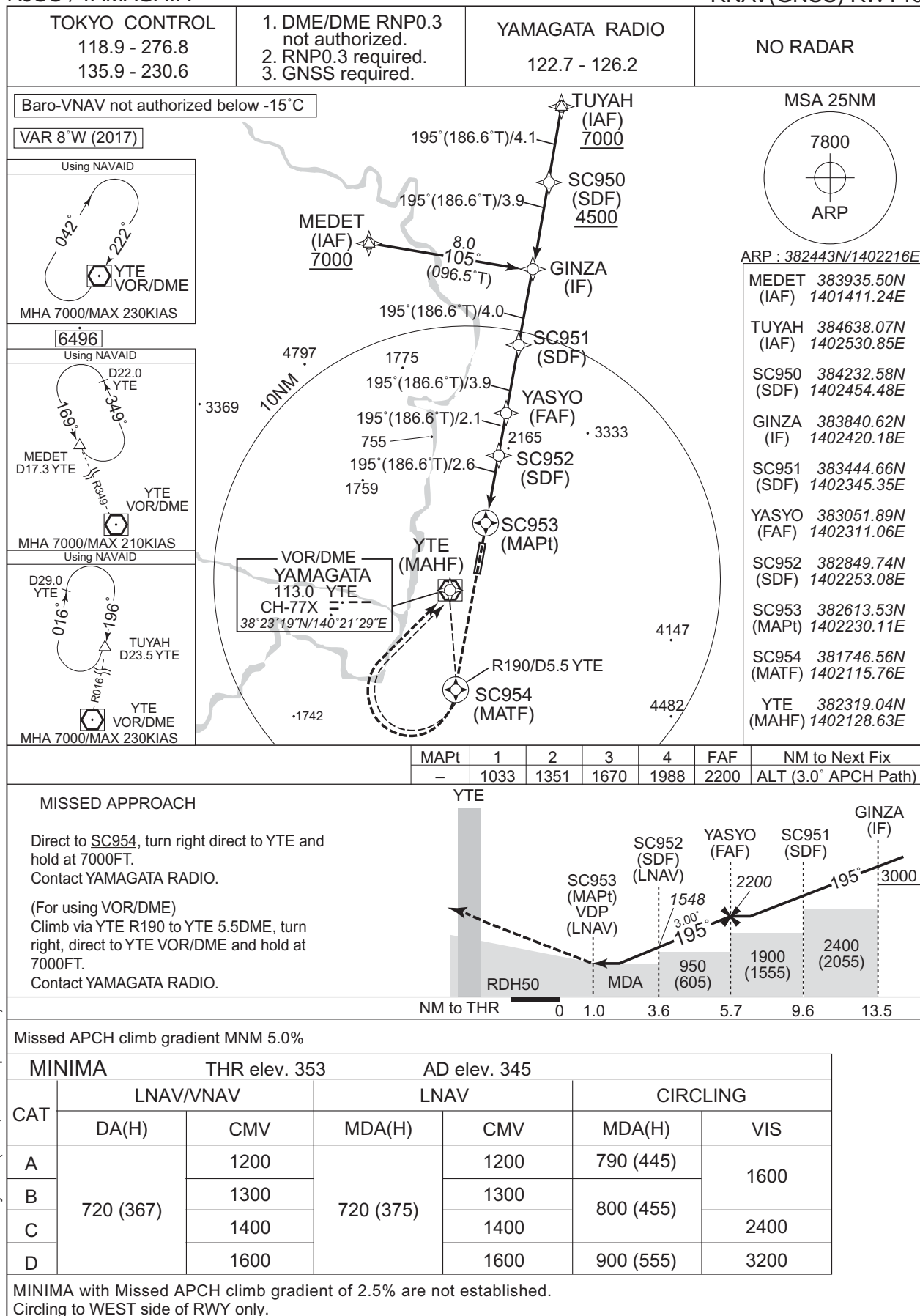


CHANGE : MHA

INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

RNAV(GNSS) RWY19



CHANGE : FIX symbol(YTE, HDLG pattern)

RJSC / YAMAGATA

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).

RJSC / YAMAGATA

Visual REP

Call sign	BRG / DIST from ARP	Remarks
舟形 Funagata	351°T / 17.7NM	舟形インターチェンジ Interchange
徳良湖 Tokurako	017°T / 11.5NM	徳良湖 Lake
基点 Goten	344°T / 4.5NM	村山市民体育館 Gymnasium
楯岡 Tateoka	010°T / 4.0NM	村山駅(旧楯岡駅) JR station
西川 Nishikawa	274°T / 9.8NM	西川インターチェンジ Interchange
谷地 Yachi	282°T / 3.0NM	谷地高校 School
関山峠 Sekiyama Toge	100°T / 9.5NM	関山トンネル Tunnel
寒河江 Sagae	242°T / 5.1NM	寒河江駅 JR station
アテラ Atera	203°T / 9.3NM	山形中央インターチェンジ Interchange
山形ステーション Yamagata Station	192°T / 10.0NM	山形駅 JR station
上山 Kaminoyama	196°T / 16.2NM	かみのやま温泉駅 JR station

CHANGE : Kaminoyama(Remarks).



RJSC / YAMAGATA

Minimum Vectoring Altitude CHART



CENTER : 382443N/1402216E (ARP)