

ENR 3. ATS ROUTES

ENR 3.1 LOWER ATS ROUTES

3.1.1 INTERNATIONAL ATS ROUTES

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
A582						
▲ ANYANG VORTAC(SEL) 372449N 1265542E	174° 354°	UNL 4 500 (3 400)	10	↓		Daegu ACC FREQ: 132.80 MHz 118.925 MHz 132.20 MHz ¹⁾ 1) Common frequency
▲ POLEG 371249N 1265935E	174° 354°	Class A, D, G				Airspace Classification Class A : ABOVE FL 200 – FL 600 Class D : MEA – FL 200 Class G : ABOVE FL 600 - UNL
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	7.4					
△ OSPOT 365018N 1272055E	144° 324° 21.6	UNL 8 000 (3 300) Class A, D, G				Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency
△ VASLI 364252N 1273003E	144° 324° 10.4	UNL 8 000 (4 300) Class A, D, G				Airspace Classification Class A : ABOVE FL 200 – FL 600 Class D : MEA – FL 200 Class G : ABOVE FL 600 - UNL
△ MAKDU 362712N 1274909E	144° 324° 21.9	UNL 8 000 (4 400) Class A, D, G				
△ BITUX 361645N 1280148E	144° 324° 14.6	UNL 10 000 (5 200) Class A, D, G				
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	162° 342° 20.4	UNL 6 000 (5 400) Class A, D, G				
△ KALOD 353012N 1284626E	162° 342° 25.4	UNL 4 000 (3 000) Class A, D, G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	162° 342° 26.6	UNL 4 000 (3 000) Class A, D, G			↑	
▲ APELA(FIR BDRY) 344323N 1291400E 344312N 1291408E ³⁾						
INCHEON FIR						
FUKUOKA FIR						

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
					Odd	Even	
1	2	3		4	5		6
A586							
▲ TENAS 373820N 1313427E	227° 047° 68.1	UNL FL 310(4 600) Class A, G		10		↓	Daegu ACC FREQ : 122.25 MHz 134.175 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ AGSUS 364521N 1304044E	228° 048° 36.2	UNL FL 310(1 500) Class A, G					
△ DABIK 361743N 1301143E	228° 048° 28.1						
△ BULGA 355609N 1294924E	228° 048° 40.2	UNL FL 310(2 900) Class A, G					
△ BEDOM 352513N 1291754E	228° 047° 23.1	UNL FL 310(4 000) Class A, G					
▲ BUSAN VORTAC(PSN) 350721N 1285958E	237° 057° 10.4	UNL 8 000(3 500) Class A, D, G					Daegu ACC FREQ : 125.375 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
△ OMOTU 350033N 1285022E	237° 057° 22.3	UNL 8 000(3 200) Class A, D, G					
▲ TOPAX 344555N 1282952E	237° 057° 46.4	UNL 8 000(2 800) Class A, D, G					Incheon ACC FREQ : 128.175 MHz 124.575 MHz 132.20 MHz ³⁾ 3) Common frequency
△ GOSBO 341517N 1274734E	237° 056° 30.7	UNL 9 000(2 000) Class A, D, G	(79/78)				
▲ MAKET 335452N 1271953E	236° 056° 17.3	UNL 9 000(1 500) Class A, D, G					Incheon ACC FREQ : 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1 ※ The cruising levels from CJU to RUGMA are even levels due to operational reasons ※ The cruising level from RUGMA to CJU are odd levels due to operational reasons
△ ATINA 334320N 1270423E	236° 055° 30.3	UNL 9 000(8 700) Class A, D, G					
▲ JEJU VORTAC(CJU) 332305N 1263727E	169° 349° 24.0	UNL 9 000(8 700) Class A, D, G					
△ TOSAN 330012N 1264619E	169° 349° 31.5	UNL 9 000(1 500) Class A, D, G			↑		
▲ RUGMA 323012N 1265753E 323000N 1265800E ⁴⁾	4) BESSEL datum						
INCHEON FIR FUKUOKA FIR							

TENAS-PSN CDR1 Operational hour(UTC) - Weekdays : 1100-2200 - SAT: 2200 on the preceding until 2400 on the Saturday - SUN : 0000-2200 - Holiday: 1400 on the preceding until 2200 on the holiday. Rest of A586-PERM. See ENR 1.1-1.2.

Change : Information of controlling unit and Withdrawal of frequencies.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
FUKUOKA FIR						
INCHEON FIR						
A593 ▲ ONIKU(FIR BDRY) 321142N 1263917E	263° 082°	UNL FL 240 (1 500) Class A, G	50		↓	Incheon ACC FREQ : 124.525 MHz ¹⁾ 123.725 MHz 128.375 MHz 132.20 MHz ²⁾ 1) For not going via BEDAR 2) Common frequency Airspace Classification refer to ENR 3.1-1 ※ Eastbound from SADLI to ONIKU is only for Non-approval of RNAV 2.
△ NIRAT 320354N 1260329E	31.4					
△ PONIK 320021N 1254659E	263° 083°					
▲ SADLI 314948N 1250000E	14.5 262° 082°					
▲ LAMEN(FIR BDRY) 313636N 1240000E	41.4 263° 082°				↓	
	52.8			↑		
	2) BESSEL datum					
INCHEON FIR						
SHANHAI FIR						
1. Delegation The responsibility of Air Traffic Services in the scope below within Incheon FIR is delegated to Shanghai ACC. - Horizontal scope : 320229N 1240000E - 321540N 1250000E - 312356N 1250000E - 311043N 1240000E - Vertical scope : FL 240 through FL 410 inclusive 2. Flight Level Allocation Scheme (FLAS) (1) The west of SADLI - Eastbound : FL 250, FL 270, FL 290, FL 310, FL 330, FL 350, FL 370, FL 390, FL 410 - Westbound : FL 240, FL 260, FL 280, FL 300, FL 320, FL 340, FL 360, FL 380, FL 400 (2) The east of SADLI - Eastbound(From Shanghai FIR To Fukuoka FIR) : FL 250, FL 290, FL 310, FL 390 - Westbound(From Fukuoka FIR To Shanghai FIR) : FL 240, FL 280, FL 300, FL 400						
A595 ▲ JEJU VORTAC(CJU) 332305N 1263727E	089° 269°	UNL 9 000 (8 700) Class A, D, G	8	↓		Incheon ACC FREQ : 132.425 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ TAMNA 332815N 1271953E	35.9					
▲ SAMDO(FIR BDRY) 333503N 1281857E 333451N 1281905E ⁵⁾	089° 270°	UNL 9 000 (1 500) Class A, D, G			↑	Incheon ACC FREQ : 128.175 MHz 124.575 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
	49.8					
	5) BESSEL datum					
INCHEON FIR						
FUKUOKA FIR						

Change : Information of A593, controlling unit, frequencies and notice.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
PYONGYANG FIR						
INCHEON FIR						
B332 ▲ KANSU(FIR BDRY) 383800N 1322830E	180° 360°	UNL FL 200 (1 500) Class A, G	50	↓		Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ PALDU 375813N 1323625E	40.2 180° 360°					
▲ SABET 373829N 1324019E	19.9 180° 360°					
▲ IGRAS(FIR BDRY) 371846N 1324411E	19.9					
INCHEON FIR						
FUKUOKA FIR						
B467 ▲ GANGWON VORTAC(KAE) 374203N 1284514E	100° 280°	UNL 8 000 (7 100) Class A, D, G	10	↓		Daegu ACC FREQ : 122.25 MHz 134.175 MHz 125.925 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
△ NOMEX 374112N 1294441E	47.2					
△ BUSKO 374033N 1301610E	100° 280°	UNL 8 000 (1 500) Class A, D, G				
▲ TENAS 373820N 1313427E	25.0 100° 281°	UNL 8 000 (4 600) Class A, D, G				
△ MALSO 375440N 1314904E	62.2 044° 224°	UNL FL 200 (1 500) Class A, G	50			
▲ KANSU(FIR BDRY) 383800N 1322830E	20.0 044° 225°					
INCHEON FIR						
PYONGYANG FIR						

Change : Establishment of significant point(ELGEP) and Information of track MAG, DIST, controlling unit and frequencies.

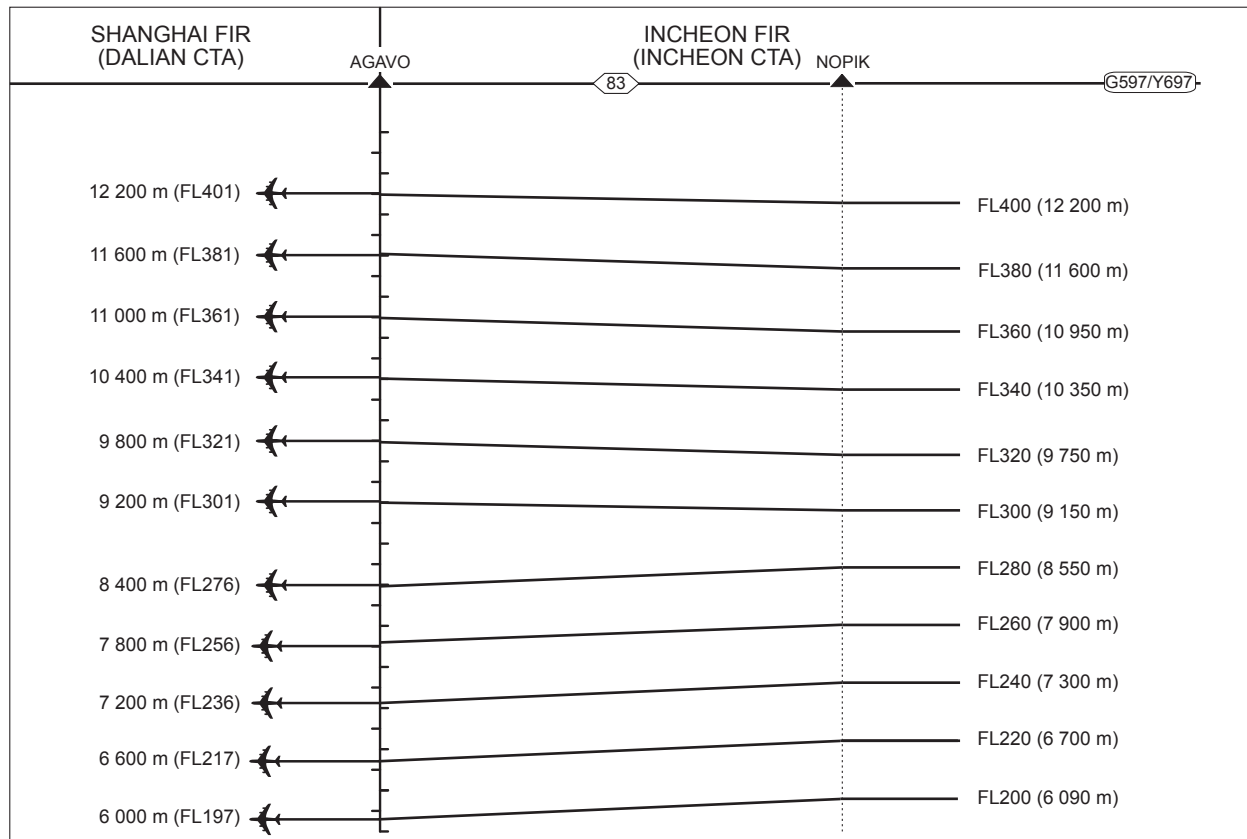
Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
G339 ▲ BUSAN VORTAC(PSN) 350721N 1285958E ▲ INVOK(FIR BDRY) 344719N 1291923E 344708N 1291931E ²⁾ INCHEON FIR FUKUOKA FIR						
	$\frac{149^\circ}{330^\circ}$ 25.6	<u>UNL</u> 10 000 (3 400) Class A, D, G	8	↓		Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i>
	2) <i>BESSEL datum</i>					Airspace Classification refer to ENR 3.1-1

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
					Odd	Even	
1	2	3	4	5	6		
G585							Incheon ACC
▲ ANYANG VORTAC(SEL) 372449N 1265542E	133° 313° 10.7	UNL 8 000 (3 400) Class A, D, G	8	↓			FREQ: 132.80 MHz 128.7 MHz 118.925 MHz 120.525 MHz 132.20 MHz ¹⁾ 1) Common frequency Only flying westbound from KPO to SEL on G585 is authorized except ACFT departing from RKTU or RKTU. Aircraft flying eastbound from SEL to KPO at or above 11 000 ft on G585 shall get PPR 24 hours before from Daegu ACC. No PPR is needed at or below 10 000 ft. Airspace Classification refer to ENR 3.1-1
▲ KALMA 371845N 1270645E	133° 313° 19.3						
△ KAKSO 370745N 1272637E	133° 313° 11.5	UNL 8 000 (3 600) Class A, D, G					Daegu ACC FREQ: 120.575 MHz 119.357 MHz 134.375 MHz 122.75 MHz ²⁾ 2) Common frequency Only flying westbound from KPO to SEL on G585 is authorized except ACFT departing from RKTU or RKTU. Aircraft flying eastbound from SEL to KPO at or above 11 000 ft on G585 shall get PPR 24 hours before from Incheon/Daegu ACC. No PPR is needed at or below 10 000 ft. Airspace Classification refer to ENR 3.1-1
△ GUKDO 370111N 1273823E	133° 313° 9.2	UNL 8 000 (3 700) Class A, D, G					
△ ENSAL 365554N 1274747E	133° 314° 9.2	UNL 8 000 (4 000) Class A, D, G					
△ BASEM 365037N 1275710E	134° 314° 12.5	UNL 8 000 (5 000) Class A, D, G					
▲ BIGOB 364325N 1280952E	134° 314° 9.5	UNL 8 000 (4 900) Class A, D, G					
△ YECHEON VOR(CUN) 363755N 1281931E	133° 313° 30.8	UNL 8 000 (3 900) Class A, D, G					
△ ELAPI 362014N 1285051E	133° 314° 37.3	UNL 8 000 (5 000) Class A, D, G					
▲ POHANG VORTAC(KPO) 355838N 1292828E	107° 287° 17.2	UNL 8 000 (3 500) Class A, D, G					
△ BULGA 355609N 1294924E	107° 287° 44.4	UNL 8 000 (1 500) Class A, D, G					
▲ SAPRA(FIR BDRY) 354926N 1304325E 354915N 1304334E ³⁾						↑	
INCHEON FIR FUKUOKA FIR	3) BESSEL datum						

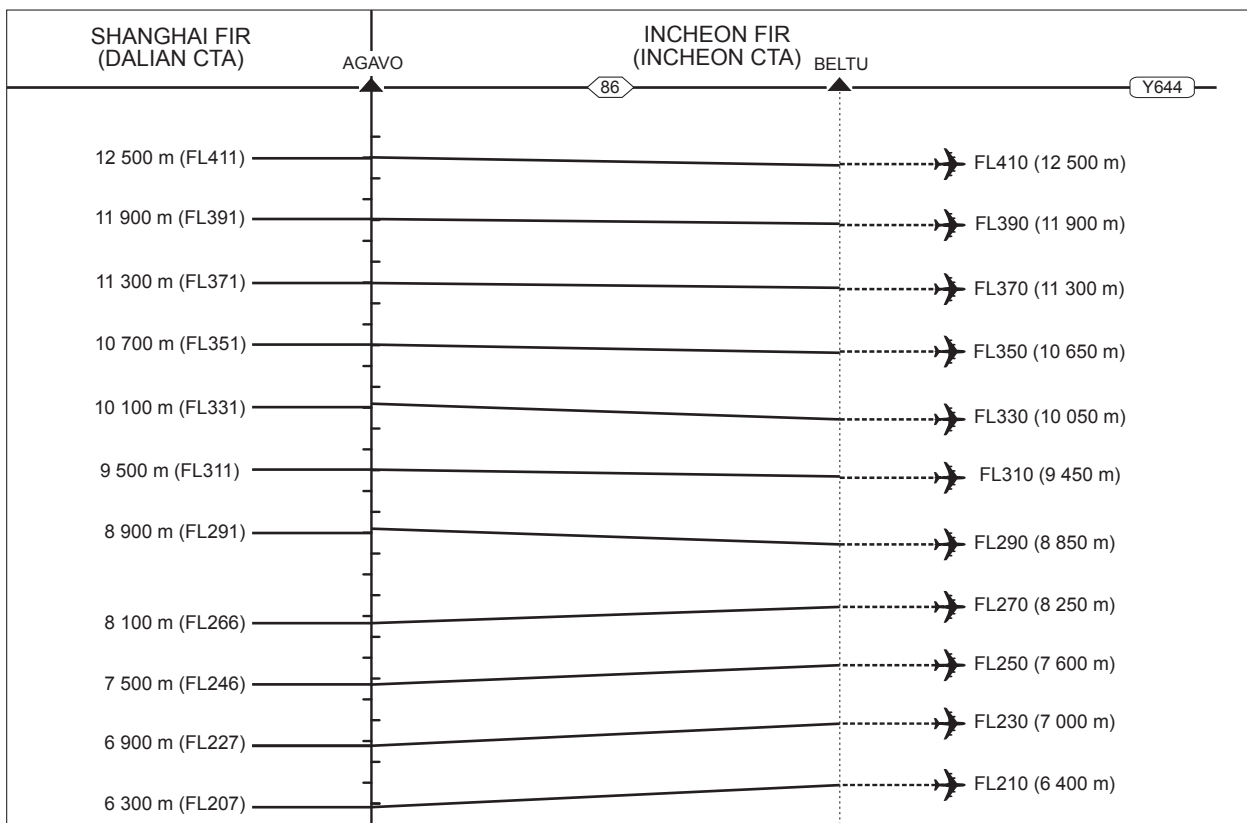
Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
SHANGHAI FIR						
INCHEON FIR						
G597						Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾
▲ AGAVO(FIR BDRY) 371010N 1235953E 371000N 1240000E ⁵⁾	096° 276°	UNL FL 150 (1 500) Class A, D, G	10			1) Common frequency
▲ GONAV 371048N 1242453E	20.0					Westbound(SEL-AGAVO) FL 400, FL 380, FL 360, FL 340, FL 320, FL 300, FL 280, FL 260, FL 240, FL 220, FL 200.
△ DANTI 371806N 1243929E	066° 246°					Note G597 is only for Non-RNAV aircraft. Any aircraft approved for RNAV operations should use Y697.
△ ANSIM 372323N 1245009E	13.8 066° 247°					Only flying westbound from SEL to AGAVO on G597 is authorized. (unless otherwise assigned by ATC, flying eastbound in this airway shall not be used)
△ BINIL 372349N 1251359E	10.0 097° 277°					Aircraft flying eastbound from AGAVO to SEL on G597 shall get PPR 24-hours before from Incheon ACC.
△ NOPIK 372412N 1253905E	19.0 097° 278°	UNL 8 000 (2 200) Class A, D, G				REF. ENR 3.1-9 for the detailed Altitude conversion procedures.
△ GOGET 372442N 1263036E	20.0 098° 278°					Incheon ACC FREQ : 132.80 MHz 118.925 MHz 132.20 MHz ²⁾
▲ ANYANG VORTAC(SEL) 372449N 1265542E	20.0	UNL 8 000 (3 400) Class A, D, G		↑		2) Common frequency
△ EGOBA 372915N 1272246E	087° 267°	UNL 7 500 (3 500) Class A, D, G		↓		Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ³⁾
△ KARBU 373159N 1273952E	22.0	UNL 7 500 (5 100) Class A, D, G				3) Common frequency
△ TORUS 373625N 1280807E	087° 267°	UNL 7 500 (5 600) Class A, D, G				Airspace Classification refer to ENR 3.1-1
△ BIKSI 374032N 1283504E	13.9	UNL 7 500 (7 500) Class A, D, G				
▲ GANGWON VORTAC(KAE) 374203N 1284514E	087° 268°	UNL 7 500 (7 100) Class A, D, G				Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ⁴⁾
▲ PILIT 372631N 1291731E	22.9	UNL 7 500 (7 500) Class A, D, G				4) Common frequency
△ NIMUS 371210N 1294656E	21.8	UNL 9 000 (3 100) Class A, D, G				Only flying westbound from LANAT to KAE on G597 shall get 24HRs PPR from Daegu ACC.
△ AGSUS 364521N 1304044E	088° 268°	UNL 7 500 (7 100) Class A, D and G				Airspace Classification refer to ENR 3.1-1
▲ LANAT(FIR BDRY) 362224N 1312542E 362213N 1312551E ⁵⁾	8.2	UNL 8 000 (7 100) Class A, D, G				
INCHEON FIR	130° 310°	UNL 8 000 (7 100) Class A, D, G				
FUKUOKA FIR	30.0	UNL 9 000 (3 100) Class A, D, G				
	130° 311°	UNL 9 000 (1 500) Class A, D and G				
	50.8					
	131° 311°					
	42.9					
	5) BESSEL datum					

Change : Information of TORUS coordinates(373159N 1273952E → 373625N 1280807E).

ALTITUDE CONVERSION FROM INCHEON CTA TO DALIAN CTA (RVSM)



FROM DALIAN CTA TO INCHEON CTA



Change : Information of altitude conversion.



INTENTIONALLY

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3.1.2 DOMESTIC ATS ROUTES

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
V11						
▲ PILIT 372631N 1291731E	183° 003°	UNL 9 000 (7 000) Class A, D, G	8		↓	Daegu ACC FREQ : 134.175 MHz 120.575 MHz 123.65 MHz 119.375 MHz 122.75 MHz ¹⁾ 1) Common frequency 1. 11 000 ft to FL 240, at or above FL 280 will be blocked. 2. At or above 11 000 ft, required 15 days PPR from Air Traffic Management Office 3. Airspace Classification refer to ENR 3.1-1
KAE R128/30 DME KPO R001/88 DME						
△ NOBUT 370715N 1291957E	19.3					
△ LOSTO 362016N 1292548E	183° 003°	UNL 9 000 (6 400) Class A, D, G				
▲ POHANG VORTAC(KPO) 355838N 1292828E	47.2					
	183° 003°	UNL 9 000 (3 300) Class A, D, G				
▲ POHANG VORTAC(KPO) 355838N 1292828E	21.7					
	213° 032°	UNL 9 000 (4 200) Class A, D, G				
△ APARU 352442N 1290932	37.2					
	213° 032°	UNL 9 000 (4 400) Class A, D, G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	19.0			↑		

Change : Information of track MAG bearing and Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
					Odd	Even	
1	2	3		4	5		6
V543							Incheon ACC FREQ : 120.725 MHz 128.30 MHz 123.725 MHz 124.50 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ DALSU 350731N 1264206E	097° 277°	(7/101)	UNL 8 000 (2 500) Class A, D, G	10	↓		
△ GWANGJU VOR(KWA) 350734N 1264844E	5.4		UNL 8 000 (2 000) Class A, D, G				
△ SAMUL 350736N 1265154E	097° 278°		UNL 8 000 (5 200) Class A, D, G				
△ TEDAN 350744N 1271852E	2.6		UNL 8 000 (8 000) Class A, D, G				
△ ANUBA 350746N 1273523E	098° 278°		UNL 8 000 (3 800) Class A, D, G				
△ SAPDI 350737N 1282952E	22.1		UNL 8 000 (4 000) Class A, D, G				
△ SARAM 350736N 1283147E	098° 278°		UNL 8 000 (3 500) Class A, D, G				
△ ANKUS 350730N 1284616E	13.5		UNL 8 000 (3 500) Class A, D, G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	098° 279°		UNL 8 000 (3 500) Class A, D, G				
	44.7		UNL 8 000 (3 500) Class A, D, G				
	098° 278°		UNL 8 000 (3 500) Class A, D, G				
	099° 279°		UNL 8 000 (3 500) Class A, D, G				
	11.9		UNL 8 000 (3 500) Class A, D, G				
	099° 279°		UNL 8 000 (3 500) Class A, D, G				
	11.2	UNL 8 000 (3 500) Class A, D, G					
						↑	
V547							Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ GWANGJU VOR(KWA) 350734N 1264844E	072° 253°	(48/48)	10 000 9 000 (8 600) Class D	10	↓		
△ IGDOK 353104N 1274907E	54.7		10 000 9 000 (5 000) Class D				
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	073° 254°		10 000 9 000 (5 000) Class D				
	41.6		10 000 9 000 (5 000) Class D				
						↑	Airspace Classification refer to ENR 3.1-1

Change : Information of significant point, track MAG bearing and Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
					Odd	Even	
1	2	3		4	5		6
V549							
▲ GUNSAN VORTAC(KUZ) 355437N 1263641E	101° 281°	(49/48)	10 000 7 000 (1 800) Class D	10	↓		Incheon ACC FREQ : 132.15 MHz 126.175 MHz 123.55 MHz 134.375 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ ELPOS 355410N 1264707E	8.5 101° 281°						
△ RINBO 355352N 1265349E	5.5 101° 282°		10 000 7 000 (3 500) Class D				
△ MELES 355251N 1271542E	17.8 102° 282°		10 000 7 000 (5 000) Class D				
▲ OPEDA 355149N 1273652E	17.2 102° 282°		10 000 7 000 (6 600) Class D				
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	47.7 085° 265°		UNL 6 000 (5 400) Class A, D, G				
△ LAPAL 355413N 1290452E	24.6 085° 265°						Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1 TGU is used Between TGU and KPO
▲ POHANG VORTAC(KPO) 355838N 1292828E	19.7					↑	
W45							
▲ GWANGJU TACAN(KWJ) 350713N 1264802E	097° 278°	(30/78)	UNL 8 000 (8 000) Class A, D, G	10	↓		Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ³⁾ 3) Common frequency Between PIPOL and BOKUM 11 000 ft AMSL to FL 190 VMC-IMC use for training purpose. Airspace Classification refer to ENR 3.1-1
△ PIPOL 350730N 1273456E	38.5 098° 278°		UNL 8 000 (8 000) Class A, D, G				
△ BOKUM 350731N 1282952E	45.1 098° 279°		UNL 8 000 (4 000) Class A, D, G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	24.7					↑	
							Between PIPOL and BOKUM 11 000 ft AMSL to FL 190 VMC-IMC use for training purpose. Airspace Classification refer to ENR 3.1-1

Change : Information of coordinates, track MAG bearing and Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude(MOCA) ft AMSL or FL Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
W61						
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	316° 136°	UNL 8 000 (2 400)	10		↓	Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾ <i>1) Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ MONSI 371247N 1265015E	11.7	Class A, D, G				
	316° 136°	UNL 8 000 (3 200)				
△ GOGET 372442N 1263036E	19.7	Class A, D, G		↑		
W62						
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	044° 224°	UNL FL 140 (4 600)	10	↓		Incheon ACC FREQ : 128.70MHz 132.80MHz 132.20 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ EGOBA 372915N 1272246E	28.8	Class A, D, G			↑	
W69						
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	192° 012°	UNL 5 000 (4 900)	10		↓	Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ³⁾ <i>3) Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ MASTA 352847N 1283340E	19.8	Class A, D, G				
	192° 012°	UNL 5 000 (3 800)				
△ SARAM 350736N 1283147E	21.2	Class A, D, G				
	192° 012°	UNL 5 000 (3 200)				
▲ TOPAX 344555N 1282952E	21.7	Class A, D, G		↑		

Change : Information of track MAG bearing and Amended format.

ENR 3.2 UPPER ATS ROUTES

NIL

INTENTIONALLY

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits or (MOCA) ft AMSL or FL Airspace classification			
1	2	3	4	5	6		7
L512 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency
▲ TENAS 373820N 1313427E	N/A	098 279	52.3	UNL	↓		Airspace Classification refer to ENR 3.1-1 * L512 OPS HR between TENAS and ANDOL - EASTBOUND : H24 - WESTBOUND : H24 **After ANDOL, MEA is FL 290, see AIP JAPAN ***Extended DME DOC volume service is 220 NM
▲ SABET 373829N 1324019E		093 274	15.7	FL 270(1 500) Class A, G			
▲ ANDOL(FIR BDRY) 373958N 1330000E						↑	
INCHEON FIR							
FUKUOKA FIR							
1. Critical DME : KAE<TENAS/SABET>, KPO<TENAS/SABET> 2. DME GAP : SABET/ANDOL, GNSS or DME/DME/IRU required.							
Y233 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ²⁾ 2) Common frequency
△ BUSKO 374033N 1301610E	N/A	069 250	30.0	UNL	↓		Airspace Classification refer to ENR 3.1-1
△ SELPA 375515N 1304911E		070 251	69.1	FL 200(1 500) Class A, D, G			
△ ONATA 382832N 1320602E		071 251	20.0			↑	
▲ KANSU(FIR BDRY) 383800N 1322830E							
INCHEON FIR							
PYONGYANG FIR							
1. Critical DME : KAE<BUSKO/SELPA>, KPO<BUSKO/SELPA>, KAE<SELPA/ONATA>, KPO<SELPA/ONATA> 2. DME GAP : ONATA/KANSU, GNSS or DME/DME/IRU required.							

* RNAV2 represents a navigation accuracy of ±2NM on a 95% containment basis.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency		
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even			
1	2	3	4	5	6		7		
Y253 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ DALSU 350731N 1264206E △ GWANGJU VOR(KWA) 350734N 1264844E △ SAMUL 350736N 1265154E △ TEDAN 350744N 1271852E △ ANUBA 350746N 1273523E △ SAPDI 350737N 1282952E △ SARAM 350736N 1283147E △ ANKUS 350730N 1284616E ▲ BUSAN VORTAC(PSN) 350721N 1285958E	N/A						Incheon ACC FREQ : 124.50 MHz 132.20 MHz¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1		
			097 277	5.4	UNL 8 000(2 400) Class A, D, G	↓			
			097 278	2.6	UNL 8 000(2 000) Class A, D, G				
			097 278	22.1	UNL 8 000(5 200) Class A, D, G				
			098 278	13.5	UNL 8 000(5 400) Class A, D, G				
			098 278	44.7	UNL 8 000(5 400) Class A, D, G				
			098 278	1.6	UNL 8 000(2 400) Class A, D, G				
			098 279	11.9	UNL 8 000(4 000) Class A, D, G				
			099 279	11.2	UNL 8 000(3 500) Class A, D, G				
							↑		

1. Critical DME : PSN<SAPDI/SARAM>, CJU<SAPDI/SARAM>, PSN<SARAM/KANBO>, CJU<SARAM/KANBO>,
PSN<KANBO/PSN>, CJU<KANBO/PSN>

* RNAV2 represents a navigation accuracy of ±2NM on a 95% containment basis.

Change : Withdrawal of frequency.

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Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
Y437 (RNAV2) [GNSS,DME/DME, DME/DME/IRU]							Daegu ACC
▲ GANGWON VORTAC(KAE) 374203N 1284514E	N/A						FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency
△ NOMEX 374112N 1294441E		$\frac{100}{280}$	47.2	UNL 8 000(6 400) Class A, D, G	↓		Airspace Classification refer to ENR 3.1-1
△ BUSKO 374033N 1301610E		$\frac{100}{281}$	25.0	UNL 8 000(1 500) Class A, D, G			
▲ TENAS 373820N 1313427E		$\frac{101}{281}$	62.2				
△ MALSO 375440N 1314904E		$\frac{044}{224}$	20.0	UNL FL 200(1 500) Class A, D, G			
▲ KANSU(FIR BDRY) 383800N 1322830E		$\frac{044}{225}$	53.3			↑	
INCHEON FIR							
PYONGYANG FIR							
1. Critical DME : KAE<KAE/NOMEX>, KPO<KAE/NOMEX>, KAE<NOMEX/BUSKO>, KPO<NOMEX/BUSKO>, KAE<BUSKO/TENAS>, KPO<BUSKO/TENAS>, KAE<TENAS/MALSO>, KPO<TENAS/MALSO> 2. DME GAP : MALSO/KANSU GNSS or DME/DME/IRU required.							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency		
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even			
1	2	3	4	5	6		7		
Y579 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ TENAS 373820N 1313427E △ AGSUS 364521N 1304044E ▲ DABIK 361743N 1301143E △ BULGA 355609N 1294924E ▲ BEDOM 352513N 1291754E ▲ BUSAN VORTAC(PSN) 350721N 1285958E △ OMOTU 350033N 1285022E ▲ TOPAX 344555N 1282952E △ GOSBO 341517N 1274734E ▲ MAKET 335452N 1271953E △ ATINA 334320N 1270423E ▲ JEJU VORTAC(CJU) 332305N 1263727E △ TOSAN 330012N 1264619E ▲ RUGMA(FIR BDRY) 323012N 1265753E	N/A					Daegu ACC FREQ: 122.25 MHz 134.375 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1			
		228 047	68.1	UNL FL 140(1 500) Class A, D, G			↓		
		229 049	36.2						
		229 048	28.1						
		228 048	40.2	UNL FL 140(2 700) Class A, D, G		Incheon ACC FREQ: 128.175 MHz 124.575 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1			
		228 047	23.1	UNL FL 140(3 800) Class A, D, G					
		237 057	10.4	UNL 8 000(3 000) Class A, D, G					
		237 057	22.3	UNL 8 000(2 500) Class A, D, G					
		237 056	46.4			Incheon ACC FREQ: 132.425 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1 ※ The cruising levels from CJU to RUGMA are even levels due to operational reasons ※ The cruising levels from RUGMA to CJU are odd levels due to operational reasons			
		236 056	30.7	UNL 9 000(1 500) Class A, D, G					
		236 056	17.3						
		236 055	30.3	UNL 9 000(8 700) Class A, D, G					
		169 349	24.0						
		169 349	31.5	UNL 9 000(1 500) Class A, D, G		↑			
		INCHEON FIR							
		FUKUOKA FIR							

1. Critical DME : PSN<PSN/OMOTU>, CJU<PSN/OMOTU>, PSN<OMOTU/TOPAX>, CJU<POMOTU/TOPAX>, PSN<TOPAX/GOSBO>, CJU<TOPAX/GOSBO>, PSN<GOSBO/MAKET>, CJU<GOSBO/MAKET>, PSN<MAKET/ATINA>, CJU<MAKET/ATINA>,
2. DME GAP : ATINA/CJU, CJU/TOSAN, TOSAN/RUGMA GNSS or DME/DME/IRU required.
3. TENAS-PSN CDR1 Operational hour(UTC) - Weekdays : 1400-2200 - SAT: 2200 on the preceding until 2400 on the Saturday - SUN : 0000-2200 - Holiday : 1400 on the preceding until 2200 on the holiday. Rest of Y579-PERM. See ENR 1.1-1.2

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit and frequencies

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Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency	
				Lower limits (MOCA) ft AMSL or FL	Odd	Even		
				Airspace classification				
1	2	3	4	5	6		7	
Y644 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾	
SANGHAI FIR								
INCHEON FIR								
▲ AGAVO(FIR BDRY) 371010N 1235953E	N/A							
△ RILRO 371033N 1241442E		<u>096</u> 276	11.8	UNL FL 150(1 500) Class A, D, G	↓			
▲ GONAV 371048N 1242453E		<u>096</u> 276	8.1					
△ BODOL 371122N 1244954E		<u>096</u> 277	20.0					
△ REBIT 371203N 1252913E		<u>097</u> 277	31.4					
△ BELTU 371218N 1254759E		<u>097</u> 278	15.0					
△ BOGAN 371241N 1262812E		<u>098</u> 278	32.1	UNL 8 000(2 400) Class A, D, G				
△ MONSI 371247N 1265015E		<u>098</u> 278	17.6	UNL 8 000(3 200) Class A, D, G				
▲ POLEG 371249N 1265935E		<u>098</u> 278	7.5	UNL 8 000(2 400) Class A, D, G				
△ EGOBA 372915N 1272246E		<u>057</u> 237	24.7	UNL FL 140(3 300) Class A, D, G				

1. Critical DME : SEL<AGAVO/RILRO>, KUZ<AGAVO/RILRO>, SEL<RILRO/GONAV>, KUZ<RILRO/GONAV>, SEL<MONSI/POLEG>, SOT<MONSI/POLEG>, SEL<POLEG/EGOBA>, SOT<POLEG/EGOBA>

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

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Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency	
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even		
1	2	3	4	5	6		7	
Y655 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ GONAV 371048N 1242453E △ DALPO 365835N 1242453E △ NONOS 364046N 1242453E △ DANPA 353036N 1242453E △ PALSA 340131N 1242453E △ TOLIS 335030N 1242453E △ LIMDI 333313N 1254953E △ REMOS 332605N 1262329E ▲ JEJU VORTAC(CJU) 332305N 1263727E							Daegu ACC FREQ : 132.80 MHz 128.70 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1	
	N/A	<u>188</u> 008	12.2	UNL FL 140(1 500) Class A, D, G	↓			
		<u>188</u> 008	17.8					
		<u>188</u> 008	70.1					
		<u>188</u> 007	88.9					
		<u>187</u> 007	11.0	UNL 9 000(1 500) Class A, D, G				
		<u>111</u> 291	73.0				UNL 9 000(4 100) Class A, D, G	
		<u>111</u> 292	29.0					
		<u>112</u> 292	12.1	UNL 9 000(8 700) Class A, D, G				
	1. Critical DME : SEL<GONAV/DALPO>, KUZ<GONAV/DALPO>, SEL<DALPO/NONOS>, KUZ<DALPO/NONOS>, SEL<NONOS/DANPA>, KUZ<NONOS/DANPA>, KWA<LIMDI/REMOS>, CJU<LIMDI/REMOS> 2. DME GAP : DANPA/PALSA, PALSA/TOLIS, TOLIS/LIMDI, REMOS/CJU GNSS or DME/DME/IRU required							
	Y657 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ GWANGJU VOR(KWA) 350734N 1264844E △ IGDOK 353104N 1274907E ▲ DALSEONG VORTAC(TGU) 354835N 1283527E							Incheon ACC FREQ : 124.50 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		N/A	<u>072</u> 253	54.7	<u>10 000</u> 8 000(7 100) Class D	↓		
<u>073</u> 254			41.6	<u>10 000</u> 8 000(4 800) Class D				
							↑	Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit and frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency	
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even		
1	2	3	4	5	6		7	
Y659 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ GUNSAN VORTAC(KUZ) 355437N 1263641E △ ELPOS 355410N 1264707E △ RINBO 355352N 1265349E △ MELES 355251N 1271542E ▲ OPEDA 355149N 1273652E ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ LAPAL 355413N 1290452E ▲ POHANG VORTAC(KPO) 355838N 1292828E							Incheon ACC FREQ : 132.15 MHz 126.175 MHz 123.55 MHz 134.375 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1	
	N/A	<u>101</u> 281	8.5	<u>10 000</u> 7 000(1 700)	↓			
		<u>101</u> 281	5.5	Class D				
		<u>101</u> 282	17.8	<u>10 000</u> 7 000(3 700)				
		<u>102</u> 282	17.2	<u>10 000</u> 7 000(5 000)				
		<u>102</u> 282	47.7	<u>10 000</u> 7 000(6 600)				
		<u>085</u> 265	24.6	<u>UNL</u> 6 000(4 200)				
		<u>085</u> 265	19.7	<u>UNL</u> 6 000(3 300)				
							Daegu ACC FREQ :125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1	
Y677 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ JEJU VORTAC(CJU) 332305N 1263727E △ TAMNA 332815N 1271953E ▲ SAMDO(FIR BDRY) 333503N 1281857E							Incheon ACC FREQ : 132.425 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1	
	N/A	<u>089</u> 269	35.9	<u>UNL</u> 9 000(6 300) Class A, D, G	↓			
		<u>089</u> 270	49.8	<u>UNL</u> 9 000(1 500) Class A, D, G				
								Incheon ACC FREQ: 128.175 MHz 124.575 MHz 132.20 MHz ⁴⁾ 4) Common frequency
INCHEON FIR							Airspace Classification refer to ENR 3.1-1	
FUKUOKA FIR								

1. Critical DME : PSN<CJU/TAMNA>, CJU<CJU/TAMNA>, PSN<TAMNA/SAMDO>, CJU<TAMNA/SAMDO>

1. Critical DME : PSN<CJU/TAMNA>, CJU<CJU/TAMNA>, PSN<TAMNA/SAMDO>, CJU<TAMNA/SAMDO>

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Daegu ACC → Incheon ACC) and frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
Y685 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ: 132.80 MHz 128.7 MHz 118.925 MHz 120.525 MHz 132.20 MHz ¹⁾ 1) Common frequency
▲ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	133 313	10.7	UNL 8 000(3 200) Class A, D, G	↓		Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTU or RKTU. Aircraft flying eastbound f rom SEL to KPO at or above 11 000 ft on Y6 85 shall get PPR 24 hours before from Inc heon/Daegu ACC. No PPR is needed at or below 10 000 ft. Airspace Classification refer to ENR 3.1-1
▲ KALMA 371845N 1270645E		133 313	19.3	UNL 8 000(2 900) Class A, D, G			
△ KAKSO 370745N 1272637E		133 313	11.5	UNL 8 000(3 600) Class A, D, G			
△ GUKDO 370111N 1273823E		133 314	9.2	UNL 8 000(3 700) Class A, D, G			
△ ENSAL 365554N 1274747E		134 314	9.2	UNL 8 000(4 000) Class A, D, G			
△ BASEM 365037N 1275710E		134 314	12.5	UNL 8 000(5 000) Class A, D, G			
▲ BIGOB 364325N 1280952E		134 314	9.5	UNL 8 000(4 900) Class A, D, G			
△ YECHEON VOR(CUN) 363755N 1281931E		133 314	30.8	UNL 8 000(3 800) Class A, D, G			
△ ELAPI 362014N 1285051E		134 314	37.3	UNL 8 000(4 700) Class A, D, G			
▲ POHANG VORTAC(KPO) 355838N 1292828E		107 287	17.2	UNL 8 000(2 100) Class A, D, G			
△ BULGA 355609N 1294924E		107 287	44.4	UNL 8 000(1 500) Class A, D, G			
▲ SAPRA(FIR BDRY) 354926N 1304325E							
INCHEON FIR FUKUOKA FIR							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
Y697 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾
SANGHAI FIR							1) Common frequency
INCHEON FIR							
▲ AGAVO(FIR BDRY) 371010N 1235953E	N/A	<u>066</u> 246	7.5	UNL FL 150(1 500) Class A, D, G			Westbound(SEL-AGAVO) FL 400, FL 380, FL 360, FL 340, FL 320, FL 300, FL 280, FL 260, FL 240, FL 220, FL 200. REF. ENR 3.1-9 for the detailed Altitude conversion procedures. Only flying westbound from SEL to AGAVO on Y697 is authorized.
△ OLBIM 371411N 1240751E		<u>066</u> 246	16.2				
△ NOGON 372250N 1242505E		<u>097</u> 277	20.0				
△ ANSIM 372323N 1245009E		<u>097</u> 277	19.0				
△ BINIL 372349N 1251359E		<u>097</u> 277	20.0				
△ NOPIK 372412N 1253905E		<u>097</u> 278	41.0	UNL 8 000(2 100) Class A, D, G			↑
△ GOGET 372442N 1263036E		<u>098</u> 278	20.0	UNL 7 500(3 400) Class A, D, G			
▲ ANYANG VORTAC(SEL) 372449N 1265542E		<u>087</u> 267	22.0	UNL 7 500(5 100) Class A, D, G	↓		Daegu ACC FREQ : 132.80 MHz 118.925 MHz 132.20 MHz ²⁾
△ EGOBA 372915N 1272246E		<u>087</u> 267	13.9	UNL 7 500(4 500) Class A, D, G			2) Common frequency
△ KARBU 373159N 1273952E		<u>087</u> 268	22.9	UNL 7 500(7 500) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ TORUS 373625N 1280807E		<u>088</u> 268	21.8	UNL 7 500(7 100) Class A, D, G			Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ³⁾
△ BIKSI 374032N 1283504E		<u>088</u> 268	8.2	UNL 8 000(7 100) Class A, D, G			3) Common frequency
▲ GANGWON VORTAC(KAE) 374203N 1284514E		<u>130</u> 310	30.0	UNL 9 000(1 500) Class A, D, G			Airspace Classification refer to ENR 3.1-1
▲ PILIT 372631N 1291731E		<u>130</u> 310	27.5	UNL 9 000(1 500) Class A, D, G			4) Common frequency
△ NIMUS 371210N 1294656E		<u>130</u> 310	50.8				
△ AGSUS 364521N 1304044E		<u>130</u> 311	42.9				
▲ LANAT(FIR BDRY) 362224N 1312542E							Only flying westbound from LANAT to KAE on G597 shall get 24HRs PPR from Daegu ACC.
INCHEON FIR							Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							

1. Critical DME : SEL<AGAVO/OLBIM>, KUZ<AGAVO/OLBIM>, SEL<OLBIM/NOGON>, KUZ<OLBIM/NOGON>, SEL<NOGON/ANSIM>, KUZ<NOGON/ANSIM>, SEL<KARBU/AAAAA>, KAE<KARBU/AAAAA>, SEL<AAAAA/BIKSI>, KAE<AAAAA/BIKSI>, SEL<BIKSI/KAE>, KAE<BIKSI/KAE>, KAE<KAE/PILIT>, KPO<KAE/PILIT>, KAE<PILIT/DADAS>, KPO<PILIT/DADAS>, KAE<DADAS/AGSUS>, KPO<DADAS/AGSUS>, KAE<AGSUS/LANAT>, KPO<AGSUS/LANAT>

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency				
				Lower limits (MOCA) ft AMSL or FLAirspace classification	Odd	Even					
1	2	3	4	5	7		10				
Y711 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] MONSI 371247N 1265015E △ BULTI 364322N 1264930E △ MEKIL 363322N 1264953E △ GONAX 362311N 1265016E △ BEDES 360905N 1264844E △ ELPOS 355410N 1264707E △ MANGI 353011N 1264432E △ DALSU 350731N 1264206E △ DOTOL 341515N 1263637E △ KIDOS 335028N 1263402E △ REMOS 332605N 1262329E △ PANSI 330014N 1261225E △ DOMKO 322848N 1255859E △ PONIK 320021N 1254659E △ IKEDO 314314N 1253948E △ KANKA 313155N 1253504E △ BONSO 302840N 1250851E ▲ MUGUS(FIR BDRY) 300006N 1245712E						Daegu ACC FREQ: 132.80 MHz 128.70 MHz 122.75 MHz ¹⁾ 1) Common frequency					
	N/A	<u>190</u> 010	29.4	<u>UNL</u> FL 140(2 900) Class A, D, G			Airspace Classification refer to ENR 3.1-1				
		<u>187</u> 007	10.0				Incheon ACC FREQ: 132.150 MHz 123.55 MHz 120.725 MHz 124.525 MHz 132.20 MHz ²⁾ 2) Common frequency				
		<u>187</u> 006	10.2	<u>UNL</u> FL 140(3 200) Class A, D, G			Airspace Classification refer to ENR 3.1-1				
		<u>193</u> 013	14.1								
		<u>193</u> 013	14.9	<u>UNL</u> FL 140(2 200) Class A, D, G							
		<u>193</u> 013	24.0	<u>UNL</u> FL 140(2 800) Class A, D, G							
		<u>193</u> 013	22.7	<u>UNL</u> FL 140(3 800) Class A, D, G							
		<u>193</u> 013	52.4	<u>UNL</u> FL 140(4 000) Class A, D, G							
		<u>193</u> 012	24.8	<u>UNL</u> FL 140(2 700) Class A, D, G							
		<u>207</u> 027	25.9	<u>UNL</u> FL 140(6 000) Class A, D, G							
		<u>207</u> 027	27.4	<u>UNL</u> FL 140(6 300) Class A, D, G							
		<u>207</u> 027	33.4	<u>UNL</u> FL 140(1 500) Class A, D, G							
		<u>207</u> 027	30.1								
		<u>207</u> 027	18.2								
		<u>207</u> 026	12.0								
		<u>207</u> 026	67.0								
			<u>206</u> 026	30.2							
		INCHEON FIR									
FUKUOKA FIR											

1. Critical DME : KWA<DOTOL/KIDOS>, CJU<DOTOL/KIDOS>

2. DME GAP : KIDOS/REMOS, REMOS/PANSI, PANSI/DOMKO, DOMKO/PONIK, PONIK/KANKA, KANKA/BONSO, BONSO/MUGUS GNSS or DME/DME/IRU required.

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Establishment of significant point(IKEDO) and Information of track MAG, DIST, controlling unit and frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even	
1	2	3	4	5	7		10
Y722 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ: 126.175 MHz 124.50 MHz 132.425 MHz 132.20 MHz ¹⁾ 1) Common frequency
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	N/A	194 014	21.5	UNL FL 140(3 100) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ OLMEN 364413N 1265928E		187 007	10.0	UNL FL 140(3 600) Class A, D, G			
△ GUNKU 363414N 1265949E		187 007	11.0	UNL FL 140(3 300) Class A, D, G			
△ PEBRI 362311N 1270013E		193 013	29.5	UNL FL 140(2 300) Class A, D, G			
△ ATASO 355344N 1265657E		193 013	23.6	UNL FL 140(3 800) Class A, D, G			
△ MAKSA 353011N 1265422E		193 013	22.7	UNL FL 140(4 000) Class A, D, G			
△ SAMUL 350736N 1265154E		193 013	52.5	UNL FL 140(3 400) Class A, D, G			
△ KAMIT 341514N 1264618E		193 013	22.4	UNL FL 140(2 100) Class A, D, G			
△ GUKSU 335251N 1264357E		193 012	19.6	UNL FL 140(1 700) Class A, D, G			
△ LOSNI 333315N 1264153E		207 027	10.8	UNL FL 140(7 600) Class A, D, G			
▲ JEJU VORTAC(CJU) 332305N 1263727E		207 027	24.3	UNL FL 140(8 700) Class A, D, G			
△ SOSDO 330012N 1262735E		207 027	29.5	UNL FL 140(1 500) Class A, D, G			
△ SAMLO 323223N 1261536E		207 027	30.2				
△ NIRAT 320354N 1260329E		207 027	18.1				
△ ELGEP 314653N 1255617E		207 027	12.1				
△ TESIM 313526N 1255128E		207 026	100.9				
▲ ATOTI(FIR BDRY) 300013N 1251154E							
INCHEON FIR							
SANGHAI FIR							

1. Critical DME : KWA<KAMIT/GUKSU>, CJU<KAMIT/GUKSU>

2. DME GAP : GUKSU/LOSNI, LOSNI/CJU, CJU/SOSDO, SOSDO/SAMLO, SAMLO/NIRAT, NIRAT/TESIM, TESIM/ATOTI,
GNSS or DME/DME/IRU required.

* RNAV2 represents a navigation accuracy of ± 2 NM on a 95% containment basis.

Change : Establishment of significant point(ELGEP) and Information of track MAG, DIST, frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
Y744 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ PILIT 372631N 1291731E △ NOBUT 370715N 1291957E △ LOSTO 362016N 1292548E ▲ POHANG VORTAC(KPO) 355838N 1292828E △ APARU 352442N 1290932E ▲ BUSAN VORTAC(PSN) 350721N 1285958E	N/A						Daegu ACC FREQ: 134.175 MHz 120.575 MHz 123.65 MHz 119.375 MHz 122.75 MHz ¹⁾ 1) Common frequency 1. 11 000 ft to FL 240, at or above FL 280 will be blocked. 2. At or above 11 000 ft, required 15 days PPR from Air Traffic Management Office 3. Airspace Classification refer to ENR 3.1-1
		<u>183</u> 003	19.3	UNL 9 000(4 900) Class A, D, G		↓	
		<u>183</u> 003	47.2	UNL 9 000(5 600) Class A, D, G			
		<u>183</u> 003	21.7	UNL 9 000(2 100) Class A, D, G			
		<u>213</u> 033	37.2	UNL 9 000(4 400) Class A, D, G			
		<u>213</u> 032	19.0	UNL 9 000(4 400) Class A, D, G	↑		
Y781 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ MASTA 352847N 1283340E △ ANKUS 350730N 1284616E △ OMOTU 350033N 1285022E ▲ BESNA(FIR BDRY) 343718N 1290751E	N/A						Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
		<u>192</u> 012	19.8	UNL 7 000(4 900) Class A, D, G	↓		
		<u>162</u> 342	23.6	UNL 7 000(4 000) Class A, D, G			
		<u>162</u> 342	7.7	UNL 7 000(3 500) Class A, D, G			
		<u>156</u> 336	27.3	UNL 7 000(2 800) Class A, D, G			
INCHEON FIR							
FUKUOKA FIR							

1. Critical DME : PSN<OMOTU/BESNA>, CJU<OMOTU/BESNA>
2. DME GAP : KANBO/OMOTU, GNSS or DME/DME/IRU required.

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency		
				Lower limits (MOCA) ft AMSL or FL Airspace classification					
1	2	3	4	5	6		7		
Y782 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ ANYANG VORTAC(SEL) 372449N 1265542E ▲ POLEG 371249N 1265935E ▲ SONGTAN VORTAC(SOT) 370540N 1270154E △ OSPOT 365018N 1272055E △ VASLI 364252N 1273003E △ MAKDU 362712N 1274909E △ BITUX 361645N 1280148E ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ KALOD 353012N 1284626E ▲ BUSAN VORTAC(PSN) 350721N 1285958E ▲ APELA(FIR BDRY) 344323N 1291400E	N/A						Daegu ACC FREQ: 128.70 MHz 120.525 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1		
		174 354	12.4	UNL 4 500(3 000) Class A, D, G	↓				
		174 354	7.4	UNL 4 500(2 000) Class A, D, G					
		144 324	21.6	UNL 8 000(3 300) Class A, D, G					
		144 324	10.4	UNL 8 000(4 200) Class A, D, G					
		144 324	21.9	UNL 8 000(4 200) Class A, D, G					
		144 324	14.6	UNL 10 000(4 500) Class A, D, G					
		162 342	20.4	UNL 8 000(4 400) Class A, D, G					
		162 342	25.4	UNL 5 000(3 600) Class A, D, G					
		162 342	26.6	UNL 4 000(3 000) Class A, D, G					
		INCHEON FIR							Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
		FUKUOKA FIR							

1. Critical DME : SEL<SEL/POLEG>, SOT<SEL/POLEG>, SEL<POLEG/SOT>, SOT<POLEG/SOT>

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
Z50 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ: 128.70 MHz 126.175 MHz 134.175 MHz 132.20 MHz ¹⁾
△ EGOBA 372915N 1272246E	N/A	<u>224</u> 044	28.8	UNL FL 140(3 300) Class A, D, G		↓	1) Common frequency Airspace Classification refer to ENR 3.1-1
▲ SONGTAN VORTAC(SOT) 370540N 1270154E		<u>213</u> 032	24.4	UNL FL 140(2 900) Class A, D, G			
△ BULTI 364322N 1264930E					↑		
Z51 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ : 126.175 MHz 134.375 MHz 132.20 MHz ²⁾
△ BOPTA 364406N 1263658E	N/A	<u>173</u> 353	21.6	UNL FL 150(3 900) Class A, D, G		↓	2) Common frequency Airspace Classification refer to ENR 3.1-1
△ MOXID 362311N 1264359E		<u>173</u> 353	14.6	UNL FL 150(3 600) Class A, D, G			
△ BEDES 360905N 1264844E							
Z52 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ : 126.175 MHz 125.375 MHz 120.575 MHz 132.20 MHz ³⁾
△ OLMEN 364413N 1265928E	N/A	<u>051</u> 231	16.4	UNL 8 000(3 400) Class A, D, G	↓		3) Common frequency Airspace Classification refer to ENR 3.1-1
△ POSAN 365615N 1271316E		<u>051</u> 232	15.7	UNL 8 000(3 000) Class A, D, G		↑	
△ KAKSO 370745N 1272637E							
Z53 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 125.375 MHz 120.575 MHz 125.775 MHz 119.375 MHz 122.75 MHz ⁴⁾
△ BITUX 361645N 1280148E	N/A	<u>002</u> 182	17.0	UNL FL 160(4 000) Class A, D, G		↓	4) Common frequency Airspace Classification refer to ENR 3.1-1
△ TEBEX 363341N 1275929E		<u>002</u> 182	17.0	UNL FL 160(4 600) Class A, D, G			
△ BASEM 365037N 1275710E					↑		

* RNAV2 represents a navigation accuracy of ±2NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even	
1	2	3	4	5	6		7
Z54 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ SONGTAN VORTAC(SOT) 370540N 1270154E △ MONSI 371247N 1265015E △ GOGET 372442N 1263036E							Daegu ACC FREQ: 128.70 MHz 132.80 MHz 120.575 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	<u>316</u> 136	11.7	<u>UNL</u> 8 000(2 400) Class A, D, G		↓	
		<u>316</u> 136	19.7	<u>UNL</u> 8 000(2 300) Class A, D, G	↑		
Z55 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
SANGHAI FIR							
INCHEON FIR							
△ AGAVO(FIR BDRY) 371010N 1235953E	N/A	<u>154</u> 334	35.5	<u>UNL</u> FL 140(1 500) Class A, D, G		↑	
△ NONOS 364046N 1242453E							
1. Critical DME : SEL<AGAVO/NONOS>, KUZ<AGAVO/NONOS>							
Z56 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
PYONGYANG FIR							
INCHEON FIR							
▲ KANSU(FIR BDRY) 383800N 1322830E	N/A	<u>180</u> 360	40.2	<u>UNL</u> FL 200(1 500) Class A, G	↓		
△ PALDU 375813N 1323625E		<u>180</u> 360	19.9				
▲ SABET 373829N 1324019E		<u>180</u> 360	19.9				
▲ IGRAS(FIR BDRY) 371846N 1324411E						↑	
INCHEON FIR							
FUKUOKA FIR							
1. Critical DME : KAE<PALDU/SABET>, KPO<PALDU/SABET>, KAE<SABET/IGRAS>, KPO<SABET/IGRAS> 2. DME GAP : KANSU/PALDU. GNSS or DME/DME/IRU required.							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even	
1	2	3	4	5	6		7
Z57 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ RILRO 371033N 1241442E △ DALPO 365835N 1242453E							Daegu ACC FREQ: 128.7 MHz 132.8 MHz 132.2 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	154 334	14.5	UNL FL 150(1 500) Class A, D, G	↓		
1. Critical DME : SEL<RILRO/DALPO>, KUZ<RILRO/DALPO>							
Z63 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ PILIT 372631N 1291731E △ NOMEX 374112N 1294441E							Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	064 245	26.1	UNL FL 250(1 500) Class A, G	↓		
						↑	
1. Critical DME : KAE<PILIT/NOMEX>, KPO<PILIT/NOMEX>							
Z81 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ KIDOS 335028N 1263402E ▲ JEJU VORTAC(CJU) 332305N 1263727E							Incheon ACC FREQ: 124.525 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	182 001	27.5	UNL FL 140(8 700) Class A, D, G		↓	
Z82 (RNAV2) [GNSS, DME/DME/IRU] ▲ JEJU VORTAC(CJU) 332305N 1263727E △ PANSI 330014N 1261225E							Incheon ACC FREQ: 124.525 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	230 050	31.0	UNL FL 140(8 700) Class A, D, G		↓	
1. DME GAP : CJU/PANSI, GNSS or DME/DME/IRU required							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of controlling unit(Incheon ACC → Daegu ACC) and Withdrawal of frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even	
1	2	3	4	5	6		7
Z83 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ MASTA 352847N 1283340E △ SARAM 350736N 1283147E ▲ TOPAX 344555N 1282952E	N/A						Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
		192 012	19.8	UNL 5 000(4 900) Class A, D, G		↓	
		192 012	21.2	UNL 5 000(3 800) Class A, D, G			
		192 012	21.7	UNL 5 000(3 000) Class A, D, G	↑		
1. Critical DME : PSN<TGU/MASTA>, TGU<TGU/MASTA>, PSN<MASTA/SARAM>, TGU<MASTA/SARAM>, PSN<SARAM/TOPAX>, TGU<SARAM/TOPAX>							
Z84 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ BUSAN VORTAC(PSN) 350721N 1285958E ▲ KALEK(FIR BDRY) 351232N 1295305E	N/A						Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
		091 272	43.8	UNL 8 000(3 100) Class A, D, G	↓	↑	
INCHEON FIR							
FUKUOKA FIR							
Z85 (RNAV2) [GNSS, DME/DME/IRU] △ ATINA 334320N 1270423E ▲ RUGMA(FIR BDRY) 323012N 1265753E	N/A						Incheon ACC FREQ : 124.525 MHz 128.175 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		192 011	73.2	UNL FL 170(1 500) Class A, D, G	↓	↑	
INCHEON FIR							
FUKUOKA FIR							
1. DME GAP : ATINA/RUGMA, GNSS or DME/DME/IRU required.							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of RNAV route, navigation specification limitation(Z85) and Amended format.

OFFICE OF CIVIL AVIATION

AIRAC AIP AMDT 11/20
Effective : 1600UTC 2 DEC 2020

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation] 1	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna 2	MAG TRACK ° 3	Geodetic DIST NM 4	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification 5	Direction of cruising levels 6		Remarks Controlling unit Frequency 10
					Odd 7	Even 8	
Z86 (RNAV2) [GNSS, DME/DME/IRU]							Incheon ACC
△ BONSO 302840N 1250851E							FREQ: 124.525 MHz 132.20 MHz ¹⁾
▲ ATOTI(FIR BDRY) 300013N 1251154E	N/A	181 001	28.5	UNL FL 140(1 500) Class A, D, G		↓	1) Common frequency
INCHEON FIR							Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							
1. DME GAP : BONSO/ATOTI, GNSS or DME/DME/IRU required.							
Z91 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC
▲ BUSAN VORTAC(PSN) 350721N 1285958E							FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾
▲ INVOK(FIR BDRY) 344719N 1291923E	N/A	149 329	25.6	UNL 10 000(3 000) Class A, D, G	↓		2) Common frequency
INCHEON FIR							Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							

* RNAV2 represents a navigation accuracy of ±2 NM on a 95% containment basis.

Change : Information of RNAV route and navigation specification limitation(Z86) and Amended format.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even	
1	2	3	4	5	7		10
Y590 (RNAV2) [GNSS, DME/DME/IRU]							Incheon ACC FREQ : 124.525 MHz ¹⁾ 123.725 MHz 128.375 MHz 132.20 MHz ²⁾ 1) For not going via BEDAR 2) Common frequency Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							
INCHEON FIR							
▲ BEDAR(FIR BDRY) 315401N 1262910E	N/A	<u>263</u> 082	28.9	UNL FL 240(1 500) Class A, G			
△ ELGEP 314653N 1255617E		<u>262</u> 082	14.5				
△ IKEDO 314314N 1253948E		<u>288</u> 108	34.5				
▲ SADLI 314948N 1250000E							

1. DME GAP : BEDAR/SADLI, GNSS or DME/DME/IRU required.

2. Flight Level Allocation Scheme (FLAS)

- For the eastbound over BEDAR : FL 250, FL 290, FL 310, FL 390

Change : Establishment of route(Y590).

INTENTIONALLY

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ENR 3.4 HELICOPTER ROUTES

To be developed

INTENTIONALLY

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ENR 3.5 OTHER ROUTES

1. 관광비행로

이 비행로는 초경량비행장치 또는 경량항공기 비행이 많으므로 동 비행로 주변을 비행하는 항공기는 지정된 비행 경로를 회피하거나 주의하여 비행하여야 한다.

1. TOURIST ROUTES

Aircraft which want to fly around 「tourist routes」 have to beware of the published 「tourist routes」 or avoid them. Because 「tourist routes」 have a lot of traffic, Ultra light vehicle flight and light aircraft

Name 명칭	Flight routes coordinates 비행경로	Type of flight 비행방식	Remarks 비고
Danyang tourist route 단양 비행로	365623N 1281812E ↔ 365725N 1281958E ↔ 365847N 1282036E ↔ 365846N 1282219E ↔ 370018N 1282045E ↔ 370001N 1282312E ↔ 370148N 1282302E ↔ 370237N 1282450E ↔ 370337N 1282456E	VFR 시계비행	Fly at the right side of river 강을 중심으로 우측비행
Gumy tourist route 구미 비행로	360938N 1282306E ↔ 361135N 1282156E ↔ 361322N 1282140E ↔ 361456N 1282005E ↔ 361709N 1282021E		
Haman tourist route 함안 비행로	352008N 1282339E ↔ 352127N 1282302E ↔ 352140N 1282458E ↔ 352157N 1282543E ↔ 352313N 1282536E ↔ 352248N 1282822E ↔ 352347N 1283009E ↔ 352244N 1283321E		

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ENR 3.6 EN-ROUTE HOLDING

Except when aircraft are in emergency, all en-route holding patterns may only be used after prior permission from Incheon ACC.

HLDG ID FIX/WPT Coordinates	INBD TR (MAG)	Direction of PTN	MAX IAS (kt)	MNM-MAX HLDG LVL	Time (MIN)	Controlling Unit and Frequency
1	2	3	4	5	6	7
MANOL 333629N 1265514E (R055 CJU/D20)	235	L	280	FL 180 - FL 260	1.5	Incheon ACC 123.725 MHz 124.50 MHz 132.20 MHz ²⁾
SAKTI 365100N 1274600E (R137 SEL/D53)	317	L	280	FL 180 - FL 200	1.5	Daegu ACC 120.575 MHz 119.375 MHz 134.375 MHz 122.75 MHz ²⁾
OROGA¹⁾ 364456N 1272718E (R143 SOT/D29)	323	R	280	FL 210 - FL 250	1.5	Daegu ACC 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾
BIGOB¹⁾ 364325N 1280952E (R132 SEL/D72)	312	R	280 0.83 MACH	FL 210 - FL 340 FL 340 - FL 360	1.5	Daegu ACC 120.575 MHz 119.375 MHz 134.375 MHz 122.75 MHz ²⁾
ATASO 355344N 1265657E (RNAV HOLD)	012	R	280	FL 230 - FL 260	1.5	Incheon ACC 126.175 MHz 134.375 MHz 132.20 MHz ²⁾
NONOS 364046N 1242453E (RNAV HOLD)	007	R	280	FL 200 - FL 310	1.5	Incheon ACC 128.70 MHz 120.525 MHz 132.20 MHz ²⁾
CJU 332305N 1263727E (RNAV HOLD)	026	R	280 0.83 MACH	FL 270 - FL 340 FL 350	1.5	Incheon ACC 123.725 MHz 124.50 MHz 132.20 MHz ²⁾
SAMUL 350736N 1265154E (RNAV HOLD)	012	R	280 0.83 MACH	FL 270 - FL 340 FL 350	1.5	Incheon ACC 123.725 MHz 124.50 MHz 132.20 MHz ²⁾
1) FL 210 ~ FL 250 Shall not be used at the same time at BIGOB and OROGA						
2) Common frequency						



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