

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		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
		Airspace classification			Odd	Even	
1	2	3		4	5		6
A582							
▲ ANYANG VORTAC(SEL) 372449N 1265542E	174° 354°	4 500 ft AMSL (3 400 ft)		10	↓		Incheon ACC FREQ: 132.80 MHz 118.925 MHz 132.20 MHz ¹⁾ <i>1) Common frequency</i>
▲ POLEG 371249N 1265935E	12.4 174° 354°	Class A, D and 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	143° 323° 21.6	(69/39)	8 000 ft AMSL (3 300 ft)				Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i>
△ VASLI 364252N 1273003E	143° 324° 10.4		8 000 ft AMSL (4 300 ft)				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		8 000 ft AMSL (4 400 ft)				
△ BITUX 361645N 1280148E	144° 324° 14.6		10 000 ft AMSL (5 200 ft)				
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	144° 324° 39.2		6 000 ft AMSL (5 400 ft)				
△ KALOD 353012N 1284626E	162° 342° 20.4		4 000 ft AMSL (3 000 ft)				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	162° 342° 25.4						
▲ APELA 344323N 1291400E 344312N 1291408E ³⁾	162° 342° 26.6					↑	
INCHEON FIR	3) <i>BESSEL datum</i>						
FUKUOKA FIR							

Change : Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude 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°	FL 310 (4 600 ft)	10			↓ Daegu ACC FREQ : 122.25 MHz 134.175 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾ <i>1) Common frequency</i> Operational Hour(UTC) -Weekdays: 1100-2200 -SAT : 2200 on the preceding until 2400 on Saturday. -SUN : 0000-2200 -Holiday : 1100 on the preceding until 2200 on holiday. Airspace Classification refer to ENR 3.1-1
△ AGSUS 364521N 1304044E	68.1	Class A and G				
△ DABIK 361743N 1301143E	228° 048°	FL 310 (1 500 ft)				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ BULGA 355609N 1294924E	36.2	Class A and G				
△ BEDOM 352513N 1291754E	228° 048°	FL 310 (2 800 ft)				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ BUSAN VORTAC(PSN) 350721N 1285958E	227° 047°	Class A and G				
△ OMOTU 350033N 1285022E	237° 057°	8 000 ft AMSL (3 500 ft)				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ TOPAX 344555N 1282952E	10.4	Class A, D and G				
△ GOSBO 341517N 1274734E	237° 057°	8 000 ft AMSL (3 200 ft)				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ MAKET 335452N 1271953E	22.3	Class A, D and G				
△ ATINA 334320N 1270423E	237° 056°	8 000 ft AMSL (2 800 ft)				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ JEJU VORTAC(CJU) 332305N 1263727E	236° 055°	9 000 ft AMSL (2 000 ft)				
△ TOSAN 330012N 1264619E	30.7	Class A, D and G				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ RUGMA 323012N 1265753E 323000N 1265800E ⁴⁾	235° 055°	9 000 ft AMSL (1 500 ft)				
	17.3	Class A, D and G				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
	235° 055°	9 000 ft AMSL (8 700 ft)				
	30.3	Class A, D and G				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
	169° 349°	9 000 ft AMSL (8 700 ft)				
	24.0	Class A, D and G				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
	169° 349°	9 000 ft AMSL (1 500 ft)				
	31.5	Class A, D and G				↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
	169° 349°	9 000 ft AMSL (1 500 ft)				
	4) <i>BESSEL datum</i>					↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
INCHEON FIR						↓ Daegu ACC FREQ : 125.375 MHz 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR						

Change : Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude 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						Incheon ACC
▲ ONIKU 321142N 1263917E	$\frac{263^\circ}{082^\circ}$	FL 240 (1 500 ft) Class A and G	50		↓	FREQ : 124.525 MHz 128.375 MHz 132.20 MHz ¹⁾
△ NIRAT 320354N 1260329E	31.4					1) <i>Common frequency</i>
△ PONIK 320021N 1254659E	$\frac{263^\circ}{082^\circ}$					※ Following altitudes are used by Fukuoka ACC: -Westbound : FL 240, FL 280 or FL 300, FL 400 -Eastbound : FL 250, FL 290 or FL 310, FL 390
▲ SADLI 315000N 1245954E	14.5					Airspace Classification refer to ENR 3.1-1
▲ LAMEN 313648N 1235954E 313636N 1240000E ²⁾	$\frac{262^\circ}{082^\circ}$ 41.4 $\frac{262^\circ}{082^\circ}$ 52.8					2) <i>BESSEL datum</i>
INCHEON FIR						
SHANHAI FIR						
A595						Incheon ACC
▲ JEJU VORTAC(CJU) 332305N 1263727E	$\frac{089^\circ}{269^\circ}$	9 000 ft AMSL (8 700 ft) Class A, D and G	8		↓	FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ³⁾
△ TAMNA 332815N 1271953E	35.9	3) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1				
▲ SAMDO 333503N 1281857E 333451N 1281905E ⁵⁾	$\frac{089^\circ}{270^\circ}$ 49.8	9 000 ft AMSL (1 500 ft) Class A, D and G				4) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
INCHEON FIR						
FUKUOKA FIR						
5) <i>BESSEL datum</i>						

Change : Information of Incheon ACC FREQ.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude 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						Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ <i>1) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ KANSU 383800N 1322830E	180° 360°	FL 200 (1 500 ft) Class A and G	50	↓		
△ PALDU 375813N 1323625E	40.2					
▲ SABET 373829N 1324019E	180° 360°					
▲ IGRAS 371846N 1324411E	19.9					
	180° 360°				↑	
INCHEON FIR						
FUKUOKA FIR						
B467						Daegu ACC FREQ : 122.25 MHz 134.175 MHz 125.925 MHz 122.75 MHz ²⁾ <i>2) Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ GANGWON VORTAC(KAE) 374203N 1284514E	099° 280°	8 000 ft AMSL (7 100 ft) Class A, D and G	10	↓		
△ NOMEX 374112N 1294441E	47.2	8 000 ft AMSL (1 500 ft)				
△ BUSKO 374033N 1301610E	100° 280°	8 000 ft AMSL (4 600 ft)				
▲ TENAS 373820N 1313427E	25.0	Class A, D and G	50			
	100° 281°	8 000 ft AMSL (4 600 ft)				
△ MALSO 375440N 1314904E	62.2	Class A, D and G	FL 200 (1 500 ft) Class A and G			
▲ KANSU 383800N 1322830E	044° 224°					
	20.0					
	044° 224°				↑	
	53.3					
INCHEON FIR						
PYONGYANG FIR						

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude Airspace classification		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
		Odd	Even		5	6	
B576*							
▲ ANYANG VORTAC(SEL) 372449N 1265542E	174° 354°	4 500 ft AMSL (3 400 ft) Class A, D and G		10		↓	Incheon ACC FREQ: 126.175 MHz 134.375 MHz 120.725 MHz 128.30 MHz 124.525 MHz 128.375 MHz 132.20 MHz ¹⁾
▲ POLEG 371249N 1265935E	12.4 174° 354°						
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	7.4 193° 013°		2 800				
△ OLMEN 364413N 1265928E	21.5 193° 013°		3 600				1) Common frequency
△ ENTEL 362311N 1265705E	21.1 193° 013°	13 000 ft AMSL 7 000 ft AMSL	3 100				Airspace Classification refer to ENR 3.1-1
△ RINBO 355352N 1265349E	29.4 193° 013°	(59/59) UNL** FL 140	3 400				* Note B576 is only used for Non-RNAV aircraft. Any aircraft approved for RNAV operations should use Y711 or Y722
△ LINTA 353116N 1265119E	22.7 193° 013°		4 700				
△ GWANGJU VOR(KWA) 350734N 1264844E	23.8 193° 013°						
△ IPDAS 341515N 1264301E	52.5 192° 012°	(52/52) 13 000 ft AMSL 9 000 ft AMSL	UNL** FL 140				**Note Any aircraft planning to operate above FL 140 between SOT and CJU must coordinate with Incheon ACC before flight planning
▲ JEJU VORTAC(CJU) 332305N 1263727E	52.3 207° 027°	9 000 ft AMSL (8 700 ft) Class A, D and G					
△ SOSDO 330012N 1262735E	24.3 207° 027°						
△ SAMLO 323223N 1261536E	29.5 207° 027°						
△ NIRAT 320354N 1260329E	30.2 207° 027°	8 000 ft AMSL (1 500 ft) Class A, D and G					
△ TESIM 313526N 1255128E	30.2 207° 027°						
▲ ATOTI 300013N 1251154E 300000N 1251200E ²⁾	100.9					↑	
INCHEON FIR FUKUOKA FIR	2) BESSEL datum						



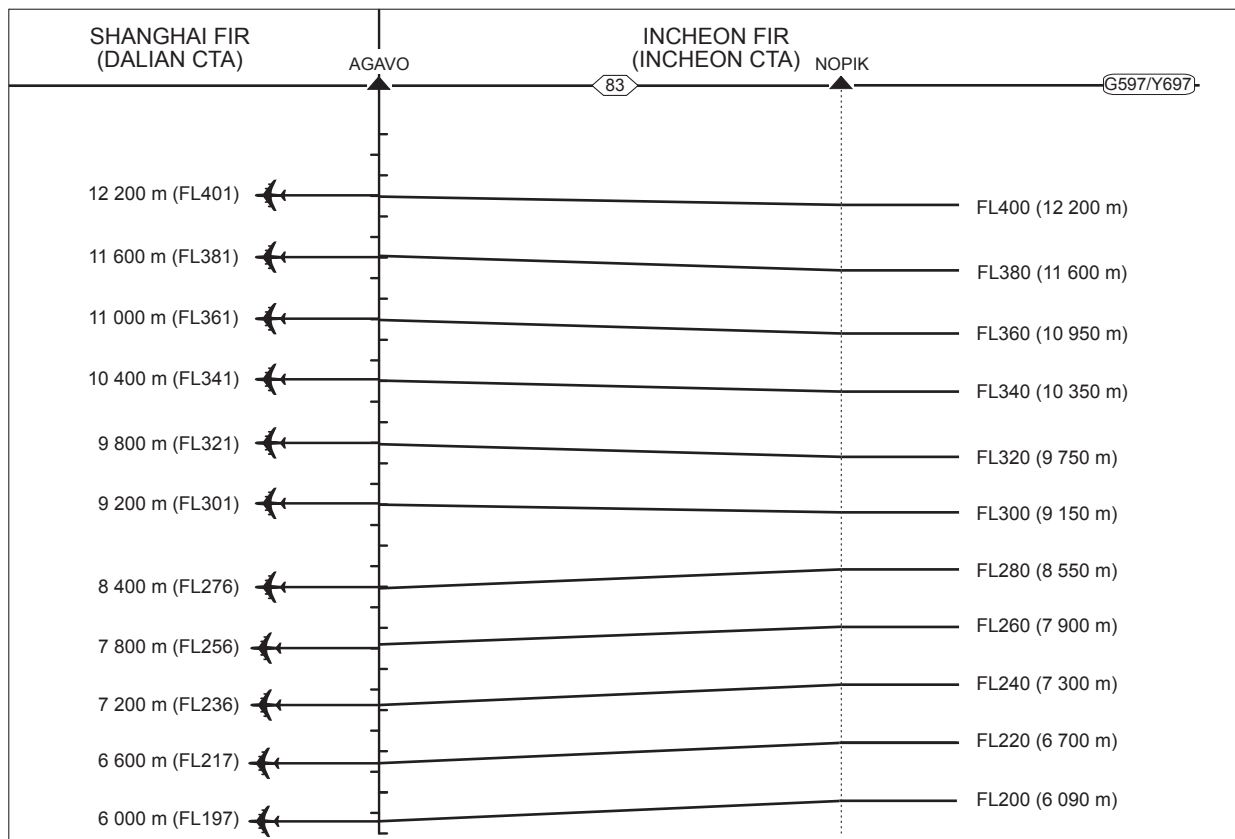
Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
G339 ▲ BUSAN VORTAC(PSN) 350721N 1285958E ▲ INVOK 344719N 1291923E 344708N 1291931E ²⁾ INCHEON FIR FUKUOKA FIR	$\frac{149^\circ}{329^\circ}$	10 000 ft AMSL (3 400 ft) Class A, D and G	8	↓		Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
	25.6				↑	
	2) <i>BESSEL datum</i>					

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
		Airspace classification			Odd	Even	
1	2	3		4	5		6
G585							
▲ ANYANG VORTAC(SEL) 372449N 1265542E				8	↓		Incheon ACC 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 RKTY or RKT1. 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° 10.7		8 000 ft AMSL (3 400 ft) Class A, D and G				
△ KAKSO 370745N 1272637E	133° 313° 19.3						
△ GUKDO 370111N 1273823E	133° 313° 11.5	(50/32)	8 000 ft AMSL (3 600 ft) Class A, D and 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 RKTY or RKT1. 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
△ ENSAL 365554N 1274747E	133° 313° 9.2		8 000 ft AMSL (3 600 ft) Class A, D and G				
△ BASEM 365037N 1275710E	133° 313° 9.2		8 000 ft AMSL (4 000 ft) Class A, D and G				
▲ BIGOB 364325N 1280952E	133° 313° 12.5		8 000 ft AMSL (5 000 ft) Class A, D and G				
△ YECHEON VOR(CUN) 363755N 1281931E	134° 314° 9.5		8 000 ft AMSL (4 900 ft) Class A, D and G				
△ ELAPI 362014N 1285051E	133° 313° 30.8	(34/34)	8 000 ft AMSL (3 900 ft) Class A, D and G				
▲ POHANG VORTAC(KPO) 355838N 1292828E	133° 314° 37.3		8 000 ft AMSL (5 000 ft) Class A, D and G				
△ BULGA 355609N 1294924E	106° 286° 17.2		8 000 ft AMSL (3 500 ft) Class A, D and G				
▲ SAPRA 354926N 1304325E 354915N 1304334E ³⁾	107° 287° 44.4		8 000 ft AMSL (1 500 ft) Class A, D and G			↑	
INCHEON FIR FUKUOKA FIR	3) BESSEL datum						

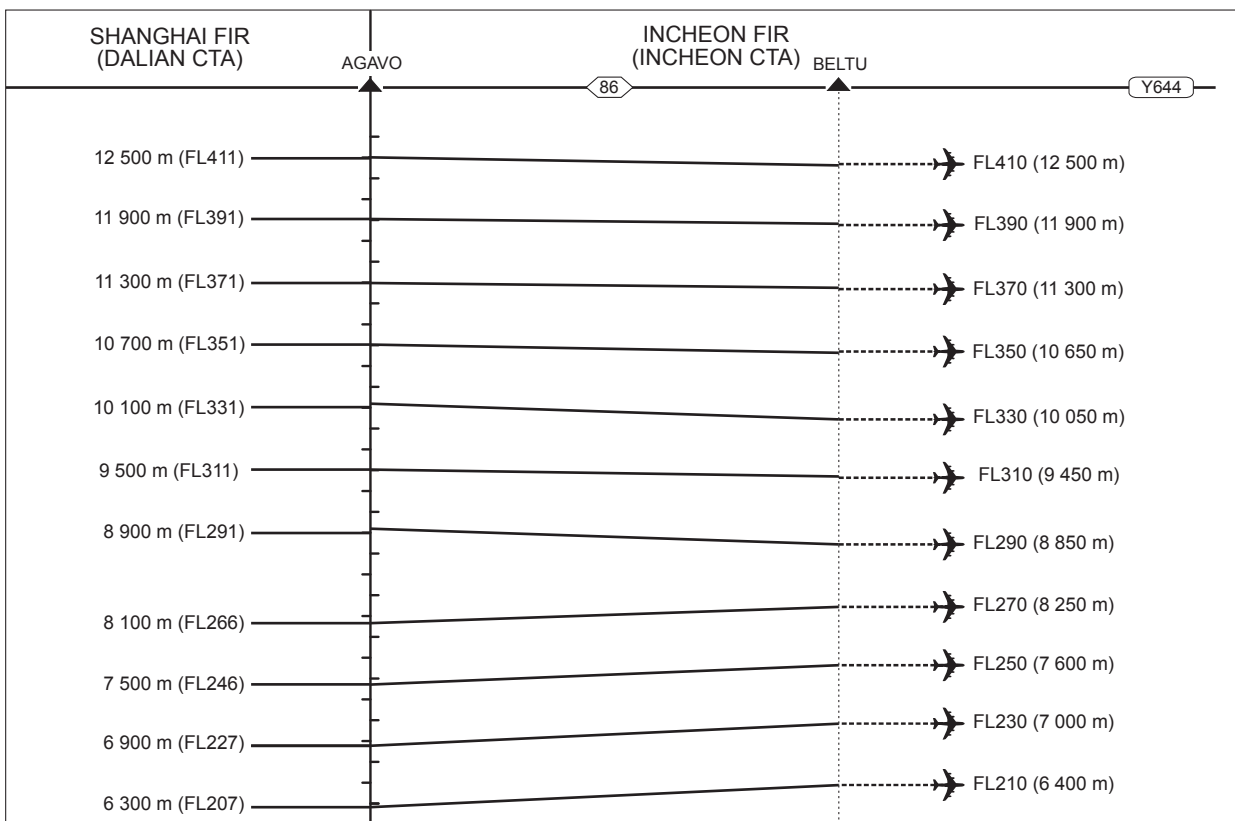
Change : Establishment of significant point(ENSAL), Information of track MAG, VOR RDL and minimum altitude.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude		Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
		Airspace classification			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⁾ 1) Common frequency
▲ AGAVO 371010N 1235953E 371000N 1240000E ⁵⁾	096° 277°			10			
▲ GONAV 371048N 1242453E	20.0 066° 246°						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	13.8 066° 247°		FL 150 (1 500 ft)				Note G597 is only for Non-RNAV aircraft. Any aircraft approved for RNAV operations should use Y697.
△ ANSIM 372323N 1245009E	10.0 097° 277°		Class A, D and G				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	19.0 097° 277°						Aircraft flying eastbound from AGAVO to SEL on G597 shall get PPR 24-hours before from Incheon ACC.
△ NOPIK 372412N 1253905E	20.0 097° 278°		8 000 ft AMSL (2 200 ft) Class A, D and G				
△ GOGET 372442N 1263036E	41.0 098° 278°		8 000 ft AMSL (3 400 ft) Class A, D and G				↑ REF. ENR 3.1-9 for the detailed Altitude conversion procedures.
▲ ANYANG VORTAC(SEL) 372449N 1265542E	087° 267°		7 500 ft AMSL (3 500 ft) Class A, D and G			↓	Incheon ACC FREQ : 132.80 MHz 118.925 MHz 132.20 MHz ²⁾ 2) Common frequency
△ EGOBA 372915N 1272246E	22.0 087° 267°						Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ³⁾ 3) Common frequency
△ KARBU 373159N 1273952E	13.9 087° 268°	(44/45)	7 500 ft AMSL (7 500 ft) Class A, D and G				Airspace Classification refer to ENR 3.1-1
△ BIKSI 374032N 1283504E	44.7 088° 268°						
▲ GANGWON VORTAC(KAE) 374203N 1284514E	8.2 130° 310°		8 000 ft AMSL (7 000 ft) Class A, D and G				Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ⁴⁾ 4) Common frequency
▲ PILIT 372631N 1291731E	30.0 130° 310°		9 000 ft AMSL (7 000 ft) Class A, D and G				Only flying westbound from LANAT to KAE on G597 shall get 24HRS PPR from Daegu ACC.
△ DADAS 371210N 1294656E	27.5 130° 311°		9 000 ft AMSL (1 500 ft) Class A, D and G				Airspace Classification refer to ENR 3.1-1
△ AGSUS 364521N 1304044E	50.8 131° 311°						
▲ LANAT 362224N 1312542E 362213N 1312551E ⁵⁾	42.9						↑
INCHEON FIR							
FUKUOKA FIR							

ALTITUDE CONVERSION FROM INCHEON CTA TO DALIAN CTA (RVSM)



FROM DALIAN CTA TO INCHEON CTA



Change : Information of altitude conversion.



INTENTIONALLY

LEFT

BLANK

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 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	182° 002°	9 000 ft AMSL (7 000 ft) Class A, D and 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	182° 002°	9 000 ft AMSL (6 400 ft) Class A, D and G				
▲ POHANG VORTAC(KPO) 355838N 1292828E	47.2	9 000 ft AMSL (3 000 ft) Class A, D and G				
▲ POHANG VORTAC(KPO) 355838N 1292828E	182° 002°	9 000 ft AMSL (3 000 ft) Class A, D and G				
△ APARU 352442N 1290932	21.7	9 000 ft AMSL (4 200 ft) Class A, D and G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	212° 032°	9 000 ft AMSL (4 200 ft) Class A, D and G				
	37.2	9 000 ft AMSL (4 400 ft) Class A, D and G				
	212° 032°	9 000 ft AMSL (4 400 ft) Class A, D and G				
	19.0	Class A, D and G			↑	

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude Airspace classification	Lateral limits NM	Direction of cruising levels		Remarks Controlling unit channel Logon address
				Odd	Even	
1	2	3	4	5		6
V543						
△ DALSU 350731N 1264206E	097° 277°	8 000 ft AMSL (2 500 ft)	10	↓		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
△ GWANGJU VOR(KWA) 350734N 1264844E	5.4	Class A, D and G				
△ SAMUL 350736N 1265154E	097° 277°	8 000 ft AMSL (2 000 ft)				
△ SAMUL 350736N 1265154E	2.6	Class A, D and G				
△ TEDAN 350744N 1271852E	097° 277°	8 000 ft AMSL (5 200 ft)				
△ TEDAN 350744N 1271852E	22.1	Class A, D and G				
△ ANUBA 350746N 1273523E	098° 278°	8 000 ft AMSL (8 000 ft)				
△ ANUBA 350746N 1273523E	13.5	Class A, D and G				
△ SAPDI 350737N 1282952E	098° 278°	8 000 ft AMSL (8 000 ft)				
△ SAPDI 350737N 1282952E	44.7	Class A, D and G				
△ SARAM 350736N 1283147E	098° 278°	8 000 ft AMSL (3 300 ft)				
△ SARAM 350736N 1283147E	1.6	Class A, D and G				
△ KANBO 350730N 1284616E	098° 278°	8 000 ft AMSL (4 000 ft)				
△ KANBO 350730N 1284616E	11.9	Class A, D and G				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	098° 278°	8 000 ft AMSL (3 500 ft)				
▲ BUSAN VORTAC(PSN) 350721N 1285958E	11.2	Class A, D and G			↑	
V547						
△ GWANGJU VOR(KWA) 350734N 1264844E	072° 252°	10 000 ft AMSL 9 000 ft AMSL (8 600 ft) Class D	10	↓		Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ IGDOK 353104N 1274907E	54.7					
△ IGDOK 353104N 1274907E	073° 253°	10 000 ft AMSL 9 000 ft AMSL (5 000 ft) Class D				
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	41.6				↑	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

Change : Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑ / ↓ VOR RDL DIST (COP)		Upper limits Lower limits or Minimum altitude 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 ft AMSL 7 000 ft AMSL (1 700 ft) Class D	10	↓		Incheon ACC FREQ : 132.15 MHz 126.175 MHz 123.55 MHz 134.375 MHz 132.20 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ ELPOS 355410N 1264707E	8.5		10 000 ft AMSL 7 000 ft AMSL (1 800 ft) Class D				
△ RINBO 355352N 1265349E	101° 281°		10 000 ft AMSL 7 000 ft AMSL (3 500 ft) Class D				
△ MELES 355251N 1271542E	5.5		10 000 ft AMSL 7 000 ft AMSL (5 000 ft) Class D				
▲ OPEDA 355149N 1273652E	101° 282°		10 000 ft AMSL 7 000 ft AMSL (6 600 ft) Class D				Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1 TGU is used Between TGU and KPO
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	17.2		6 000 ft AMSL (5 400 ft) Class A, D and G				
△ LAPAL 355413N 1290452E	102° 282°						
▲ POHANG VORTAC(KPO) 355838N 1292828E	47.7					↑	
W45							
▲ GWANGJU TACAN(KWJ) 350710N 1264851E	097° 277°	(30/78)	8 000 ft AMSL (8 000 ft) Class A, D and G	10	↓		Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ³⁾ 3) <i>Common frequency</i> 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		8 000 ft AMSL (8 000 ft) Class A, D and G				
△ BOKUM 350731N 1282952E	097° 278°		8 000 ft AMSL (4 000 ft) Class A, D and G				Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ⁴⁾ 4) <i>Common frequency</i> 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
▲ BUSAN VORTAC(PSN) 350721N 1285958E	45.1					↑	
	098° 278°						

Change : Amended format.

Route designator (RNP/RNAV) Name of significant points Coordinates	Track MAG ↑/↓ VOR RDL DIST (COP)	Upper limits Lower limits or Minimum altitude 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° 135°	8 000 ft AMSL (2 400 ft)	10		↓	Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1	
△ MONSI 371247N 1265015E	11.7	Class A, D and G					
△ GOGET 372442N 1263036E	316° 135°	8 000 ft AMSL (2 700 ft)		↑			
	19.7	Class A, D and G					
W62							
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	043° 224°	FL 140 (4 600 ft)	10		↓	Incheon ACC FREQ : 128.70MHz 132.80MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1	
△ EGOBA 372915N 1272246E	28.8	Class A, D and G					↑
W69							
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	192° 012°	5 000 ft AMSL (4 900 ft)	10		↓		Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ MASTA 352847N 1283340E	19.8	Class A, D and G					
△ SARAM 350736N 1283147E	192° 012°	5 000 ft AMSL (3 800 ft)					
▲ TOPAX 344555N 1282952E	21.2	Class A, D and G				↑	
	192° 012°	5 000 ft AMSL (3 200 ft)					
	21.7	Class A, D and G					

ENR 3.2 UPPER ATS ROUTES

NIL

INTENTIONALLY

LEFT

BLANK

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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7	8	9	10	
L512 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ TENAS 373820N 1313427E ▲ SABET 373829N 1324019E ▲ ANDOL 373958N 1330000E									Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency 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	
		098(89.5) 279(270.2)	52.3	Class A and G	FL 270** (1500 ft)	↓		(*1)		
		093(84.5) 274(264.7)	15.7			↑				
	FUKUOKA FIR									
(*1) Critical DME : KAE<TENAS/SABET>, KPO<TENAS/SABET>, KAE<SABET/ANDOL>, KPO<SABET/ANDOL>										
Y233 (RNAV2) [DME/DME DME/DME/IRU, GNSS] △ BUSKO 374033N 1301610E △ SELPA 375515N 1304911E △ ONATA 382832N 1320602E ▲ KANSU 383800N 1322830E									Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1	
		069(060.5) 249(240.9)	30.0	Class A, D and G	FL 200 (1500 ft)	↓		(*1)		
		069(060.9) 250(241.7)	69.1				(*2)			
		070(61.7) 251(241.9)	20.0			↑	(*3)			
	(*1) Critical DME : KAE<BUSKO/SELPA>, KPO<BUSKO/SELPA> (*2) Critical DME : KAE<SELPA/ONATA>, KPO<SELPA/ONATA> (*3) DME GAP : ONATA/KANSU, GNSS or DME/DME/IRU required.									

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



Change : Information of area navigation route(L512).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits	MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency			
				Lower limits or Airspace classification		Odd	Even						
1	2	3	4	5	6	7	8	9	10				
Y253 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]													
△ DALSU 350731N 1264206E		$\frac{097(89.4)^\circ}{277(269.4)^\circ}$	5.4	Class A, D and G	8 000 ft (2400 ft)	↓			(*1)	Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1			
△ GWANGJU VOR(KWA) 350734N 1264844E		$\frac{097(89.6)^\circ}{277(269.6)^\circ}$	2.6		8 000 ft (2000 ft)				(*2)				
△ SAMUL 350736N 1265154E		$\frac{097(89.5)^\circ}{277(269.8)^\circ}$	22.1		8 000 ft (5200 ft)				(*3)				
△ TEDAN 350744N 1271852E		$\frac{097(89.8)^\circ}{277(269.9)^\circ}$	13.5		8 000 ft (5400 ft)				(*4)				
△ ANUBA 350746N 1273523E		$\frac{097(89.9)^\circ}{278(270.5)^\circ}$	44.7		8 000 ft (5400 ft)				(*5)				
△ SAPDI 350737N 1282952E		$\frac{098(90.4)^\circ}{278(270.4)^\circ}$	1.6		8 000 ft (2400 ft)				(*6)				
△ SARAM 350736N 1283147E		$\frac{098(90.5)^\circ}{278(270.6)^\circ}$	11.9		8 000 ft (4000 ft)				(*7)				
△ KANBO 350730N 1284616E		$\frac{098(90.6)^\circ}{278(270.7)^\circ}$	11.2		8 000 ft (3500 ft)				(*8)				
▲ BUSAN VORTAC(PSN) 350721N 1285958E								↑					Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
(*1) DME GAP : DALSU/KWA, GNSS or DME/DME/IRU required. (*2) DME GAP : KWA/SAMUL, GNSS or DME/DME/IRU required. (*3) DME GAP : SAMUL/TEDAN, GNSS or DME/DME/IRU required. (*4) Critical DME : TGU<TEDAN/ANUBA> (*5) Critical DME : TGU<ANUBA/SAPDI>, PSN<ANUBA/SAPDI> (*6) Critical DME : TGU<SAPDI/SARAM>, PSN<SAPDI/SARAM> (*7) DME GAP : SARAM/KANBO, GNSS or DME/DME/IRU required. (*8) DME GAP : KANBO/PSN, 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits	MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency		
				Lower limits or Airspace classification		Odd	Even					
1	2	3	4	5	6	7	8	9	10			
SHANGHAI FIR												
INCHEON FIR												
Y437 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Daegu ACC		
▲ GANGWON VORTAC(KAE) 374203N 1284514E		100(090.7)° 280(271.3)°	47.2	Class A,D and G	8 000 ft (6 400 ft)	↓				FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency		
△ NOMEX 374112N 1294441E	KAE 280° / 47.2 NM KPO 196° / 103.3 NM	100(091.3)° 281(271.6)°	25.0		8 000 ft (1 500 ft)					(*1)	(*2)	Airspace Classification refer to ENR 3.1-1
△ BUSKO 374033N 1301610E	KPO 209° / 108.8 NM	101(091.6)° 281(272.4)°	62.2		FL 200 (1 500 ft)							
▲ TENAS 373820N 1313427E	KAE 281° / 134.4 NM KPO 235° / 141.9 NM	044(035.3)° 224(215.5)°	20.0									
△ MALSO 375440N 1314904E		044(035.5)° 225(215.9)°	53.3									
▲ KANSU 383800N 1322830E						↑						
INCHEON FIR												
PYONGYANG FIR												
(*1) Critical DME : KAE<NOMEX/BUSKO>, KPO<NOMEX/BUSKO>, KAE<TENAS/MALSO>, KPO<TENAS/MALSO> (*2) DME GAP : KAE/NOMEX, BUSKO/TENAS, 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Y579 (RNAV2) [DME/DME DME/DME/IRU, GNSS]										Daegu ACC FREQ: 122.25 MHz 134.375 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾
▲ TENAS 373820N 1313427E		228(219.3) 047(38.8)°	68.1	Class A, D and G	FL 140 (1 500 ft)	↓	(*1)	(*2)		1) Common frequency Prior permission is needed from ROKAF except during the following times, 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. Airspace Classification refer to ENR 3.1-1
△ AGSUS 364521N 1304044E		229(220.4) 049(40.1)°	36.2							
▲ DABIK 361743N 1301143E		229(220.1) 048(39.9)°	28.1							
△ BULGA 355609N 1294924E		228(219.9) 048(39.6)°	40.2							
▲ BEDOM 352513N 1291754E		228(219.6) 047(39.4)°	23.1		FL 140 (2 700 ft)					
▲ BUSAN VORTAC(PSN) 350721N 1285958E		237(229.3) 057(49.2)°	10.4		8 000 ft (3 000 ft)					
△ OMOTU 350033N 1285022E		237(229.2) 057(49.0)°	22.3		8 000 ft (2 500 ft)					
▲ TOPAX 344555N 1282952E		237(229.0) 056(48.6)°	46.4		9 000 ft (1 500 ft)					
△ GOSBO 341517N 1274734E		236(228.6) 056(48.3)°	30.7							
▲ MAKET 335452N 1271953E		236(228.3) 056(48.2)°	17.3		9 000 ft (8 700 ft)					
△ ATINA 334320N 1270423E		236(228.2) 055(47.9)°	30.3							
▲ JEJU VORTAC(CJU) 332305N 1263727E		169(161.9) 349(342.0)°	24.0		9 000 ft (1 500 ft)					
△ TOSAN 330012N 1264619E		169(161.9) 349(342.0)°	31.5							
▲ RUGMA 323012N 1265753E										↑
INCHEON FIR FUKUOKA FIR										
(*1) Critical DME : PSN<BULGA/BEDOM>, TGU<BULGA/BEDOM>, TGU<BEDOM/PSN>, TGU<PSN/OMOTU>, KPO<PSN/OMOTU>, PSN<OMOTU/TOPAX>, TGU<OMOTU/TOPAX>, PSN<ATINA/CJU>, KWA<ATINA/CJU>, PSN<CJU/TOSAN>, KWA<CJU/TOSAN> (*2) DME GAP : TOPAX/GOSBO, GOSBO/MAKET, CJU/TOSAN GNSS or DME/DME/IRU required										

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

Change : Information of area navigation(Y579).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification			Odd	Even			
1	2	3	4	5	6	7	8	9	10		
SHANGHAI FIR											
INCHEON FIR											
Y644 (RNAV2) [DME/DME DME/DME/IRU, GNSS]											
▲ AGAVO 371010N 1235953E 371000N 1240000E ³⁾											
3) <i>BESSEL datum</i>											
		096(88.0) 276(268.2)	11.8								
△ RILRO 371033N 1241442E		096(88.2) 276(268.3)	8.1								
▲ GONAV 371048N 1242453E		096(88.3) 277(268.5)	20.0			FL 150 (1 500ft)					
△ BODOL 371122N 1244954E		097(88.5) 277(268.9)	31.4								
△ REBIT 371203N 1252913E	SEL 268°/ 70.2 NM SOT 284°/ 74.4 NM	097(89.0) 278(269.1)	15.0								
△ BELTU 371218N 1254759E	SEL 265°/ 55.5 NM SOT 285°/ 59.5 NM	098(89.1) 278(269.5)	32.1	Class A, D and G		8 000 ft (2400ft)			(*)		
△ BOGAN 371241N 1262812E	SEL 249°/ 25.1 NM SOT 293°/ 27.8 NM	098(89.5) 278(269.7)	17.6			8 000 ft (3200ft)					
△ MONSI 371247N 1265015E	SEL 208°/ 12.8 NM SOT 316°/ 11.7 NM	098(89.7) 278(269.8)	7.5			8 000 ft (2400ft)					
▲ POLEG 371249N 1265935E	SEL 174°/ 12.4 NM SOT 354°/ 7.4 NM	057(48.3) 237(228.5)	24.7			FL 140 (3300ft)					
△ EGOBA 372915N 1272246E	SEL 087°/ 22.0 NM SOT 044°/ 28.8 NM										
Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ²⁾ 2) <i>Common frequency</i> Eastbound(AGAVO-EGOBA) FL 410, FL 390, FL 370, FL 350, FL 330, FL 310, FL 290, FL 270, FL 250, FL 230. REF. ENR 3.1-10 for the detailed altitude conversion procedures. Airspace Classification refer to ENR 3.1-1											
(*1) Critical DME : SEL<AGAVO/RILRO>, KUZ<AGAVO/RILRO>, KUZ<RILRO/GONAV>, KUZ<GONAV/BODOL>, KUZ<BODOL/REBIT>, CUN<MONSI/POLEG>, CUN<POLEG/EGOBA>											

* 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency							
				Lower limits or Airspace classification	ft or FL		Odd	Even										
1	2	3	4	5	6	7	8	9	10									
Y655 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]																		
▲ GONAV 371048N 1242453E		188(180.0) [°] 008(360.0) [°]	12.2	Class A, D and G	FL 140 (1 500 ft)	↓			(*1)	(*2)	Incheon ACC FREQ : 132.80 MHz 128.70 MHz 126.17 MHz 120.725 MHz 124.525 MHz 132.20 MHz ⁽²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1							
△ DALPO 365835N 1242453E		188(180.0) [°] 008(360.0) [°]	17.8															
△ NONOS 364046N 1242453E		188(180.0) [°] 008(360.0) [°]	70.1															
△ DANPA 353036N 1242453E		188(180.0) [°] 007(360.0) [°]	88.9															
△ PALSA 340131N 1242453E		187(180.0) [°] 007(360.0) [°]	11.0															
△ TOLIS 335030N 1242453E		111(103.3) [°] 291(284.1) [°]	73.0		9 000 ft (1 500 ft)													
△ LIMDI 333313N 1254953E	CJU 292°/ 41.1 NM	111(104.1) [°] 292(284.4) [°]	29.0		9 000 ft (4 100 ft)													
△ REMOS 332605N 1262329E	CJU 292°/ 12.1 NM	112(104.4) [°] 292(284.5) [°]	12.1		9 000 ft (8 700 ft)													
▲ JEJU VORTAC(CJU) 332305N 1263727E																		
(*1) Critical DME : SEL<GONAV/DALPO>, KUZ<GONAV/DALPO>, SEL<DALPO/NONOS>, KUZ<DALPO/NONOS>, SEL<NONOS/DANPA>, KUZ<NONOS/DANPA>, KUZ<DANPA/PALSA>, CJU<DANPA/PALSA>, KUZ<PALSA/TOLIS>, CJU<PALSA/TOLIS>																		
(*2) DME GAP : TOLIS/LIMDI, LIMDI/REMOS, REMOS/CJU GNSS or DME/DME/IRU required																		
Y657 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]																		
△ GWANGJU VOR(KWA) 350734N 1264844E		072(64.3) [°] 253(244.9) [°]	54.7	10 000 ft AMSL 8 000 ft AMSL Class D	8 000 ft (7 100 ft)	↓			(*1)		Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ⁽¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1							
△ IGDOK 353104N 1274907E		073(64.9) [°] 253(245.4) [°]	41.6									8 000 ft (4 500 ft)						
▲ DALSEONG VORTAC(TGU) 354835N 1283527E																		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
(*1) DME GAP : KWA/IGDOK, GNSS or DME/DME/IRU required																		
(*2) Critical DME : KPO<IGDOK/TGU>, PSN<IGDOK/TGU>																		

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

Change : Information of area navigation(Y655).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification			Odd	Even			
1	2	3	4	5	6	7	8	9	10		
Y659 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ 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 ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1 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	
		101(93.0)° 281(273.1)°	8.5		7 000 ft (1 700 ft)	↓			(*1)		
		101(93.1)° 281(273.2)°	5.5		7 000 ft (1 600 ft)						
		101(93.2)° 281(273.4)°	17.8	10 000 ft AMSL 7 000 ft AMSL Class D	7 000 ft (3 700 ft)						
		101(93.4)° 282(273.6)°	17.2		7 000 ft (5 000 ft)						
		102(93.6)° 282(274.1)°	47.7		7 000 ft (6 600 ft)			(*2)			
		085(76.7)° 265(256.9)°	24.6	6 000 ft AMSL Class A, D and G	6 000 ft (4 200 ft)			(*3)			
		085(76.9)° 265(257.1)°	19.7		6 000 ft (3 300 ft)						
						↑					
(*1) DME GAP : KUZ/ELPOS, GNSS or DME/DME/IRU required (*2) Critical DME : KPO<OPEDA/TGU> (*3) Critical DME : KPO<TGU/LAPAL>											
Y677 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ JEJU VORTAC(CJU) 332305N 1263727E △ TAMNA 332815N 1271953E ▲ SAMDO 333503N 1281857E INCHEON FIR FUKUOKA FIR										Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1 Daegu ACC FREQ: 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1	
		089(81.5)° 269(261.9)°	35.9		9 000 ft (6 300 ft)	↓					
		089(81.9)° 270(262.5)°	49.8		9 000 ft (1 500 ft)			(*2)	(*1)		
						↑					
(*1) DME GAP : CJU/TAMNA, GNSS or DME/DME/IRU required (*2) Critical DME : CJU<TAMNA/SAMDO>, PSN<TAMNA/SAMDO>											

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

Change : Information of area navigation(Y677).

OFFICE OF CIVIL AVIATION

AIRAC AIP AMDT 4/20
Effective : 1600UTC 20 MAY 2020

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits	MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency	
				Lower limits or Airspace classification		Odd	Even				
1	2	3	4	5	6	7		8	9	10	
Y685 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ: 132.80 MHz 128.7 MHz 118.925 MHz 120.525 MHz 132.20 MHz ¹⁾	
▲ ANYANG VORTAC(SEL) 372449N 1265542E		133(124.5) 313(304.6)	10.7	Class A, D and G	8 000 ft (3 200 ft)	↓				1) Common frequency Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTY or RKT1.	
▲ KALMA 371845N 1270645E		133(124.6) 313(304.8)	19.3		8 000 ft (2 900 ft)					Aircraft flying eastbound from SEL to KPO at or above 11 000 ft on Y685 shall get PPR 24 hours before from Incheon/Daegu ACC. No PPR is needed at or below 10 000 ft.	
△ KAKSO 370745N 1272637E		133(124.8) 313(304.9)	11.5		8 000 ft (3 600 ft)					Airspace Classification refer to ENR 3.1-1	
△ GUKDO 370111N 1273823E		133(124.9) 313(305.0)	9.2		8 000 ft (3 700 ft)					Daegu ACC FREQ: 120.575 MHz 119.375 MHz 134.375 MHz 122.75 MHz ²⁾	
△ ENSAL 365554N 1274747E		133(125.0) 314(305.1)	9.2		8 000 ft (4 000 ft)					2) Common frequency	
△ BASEM 365037N 1275710E		133(125.1) 314(305.2)	12.5		8 000 ft (5 000 ft)					Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTY or RKT1.	
▲ BIGOB 364325N 1280952E		134(125.2) 314(305.3)	9.5		8 000 ft (4 900 ft)					Aircraft flying eastbound from SEL to KPO at or above 11 000 ft on Y685 shall get PPR 24 hours before from Incheon/Daegu ACC. No PPR is needed at or below 10 000 ft.	
△ YECHEON VOR(CUN) 363755N 1281931E		133(124.8) 313(305.1)	30.8		8 000 ft (3 800 ft)						
△ ELAPI 362014N 1285051E		133(125.1) 314(305.5)	37.3		8 000 ft (4 700 ft)			(*1)			
▲ POHANG VORTAC(KPO) 355838N 1292828E		106(088.2) 287(278.4)	17.2		8 000 ft (2 100 ft)				(*2)		
△ BULGA 355609N 1294924E		106(088.4) 287(278.9)	44.4		8 000 ft (1 500 ft)				(*3)	Airspace Classification refer to ENR 3.1-1	
▲ SAPRA 354926N 1304325E							↑				
INCHEON FIR											
FUKUOKA FIR											
(*1) Critical DME : SEL<ELAPI/KPO>, KUZ<ELAPI/KPO>											
(*2) Critical DME : SEL<KPO/BULGA>, KUZ<KPO/BULGA>											
(*3) Critical DME : PSN<BULGA/SAPRA>, KPO<BULGA/SAPRA>											

* 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency	
				Lower limits or Airspace classification			Odd	Even				
1	2	3	4	5	6	7	8	9	10			
SHANGHAI FIR												
INCHEON FIR												
Y697 (RNAV2) [DME/DME, INS or IRS, GNSS]												
▲ AGAVO 371010N 1235953E 371000N 1240000E ²⁾		066(057.7) 246(237.8)	7.5			FL 150 (1500 ft)			(*1)		Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ¹⁾ 1) Common frequency 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		066(057.8) 246(237.9)	16.2			FL 150 (1500 ft)			(*2)			
△ NOGON 372250N 1242505E		096(088.3) 277(268.6)	20.0			FL 150 (1500 ft)			(*3)			
△ ANSIM 372323N 1245009E		097(088.6) 277(268.8)	19.0			FL 150 (1500 ft)			(*4)			
△ BINIL 372349N 1251359E		097(088.8) 277(269.0)	20.0			FL 150 (1500 ft)			(*5)			
△ NOPIK 372412N 1253905E		097(089.0) 278(269.6)	41.0			8 000 ft (2 100 ft)			(*6)			
△ GOGET 372442N 1263036E		098(089.5) 278(269.8)	20.0			7 500 ft (3 400 ft)		↑	(*7)			
▲ ANYANG VORTAC(SEL) 372449N 1265542E		087(078.3) 267(258.5)	22.0	Class A, D and G		7 500 ft (3 400 ft)		↓	(*8)			
△ EGOBA 372915N 1272246E		087(078.5) 267(258.7)	13.9				7 500 ft (5 100 ft)			(*9)		
△ KARBU 373159N 1273952E		087(078.7) 268(259.3)	44.7				7 500 ft (7 500 ft)			(*10)		
△ BIKSI 374032N 1283504E		088(079.3) 268(259.4)	8.2				7 500 ft (7 100 ft)			(*11)		
▲ GANGWON VORTAC(KAE) 374203N 1284514E		130(121.0) 310(301.3)	30.0				8 000 ft (7 100 ft)			(*12)		
▲ PILIT 372631N 1291731E		130(121.3) 310(301.6)	27.5				9 000 ft (1 500 ft)			(*13)		
△ DADAS 371210N 1294656E		130(121.6) 310(302.1)	50.8				9 000 ft (1 500 ft)			(*14)		
△ AGSUS 364521N 1304044E		130(122.1) 311(302.5)	42.9				9 000 ft (1 500 ft)		↑	(*15)		
▲ LANAT 362224N 1312542E 362213N 1312551E ²⁾												
INCHEON FIR 2) BESSEL datum												
FUKUOKA FIR												
(*1) DME GAP : AGAVO/OLBIM GNSS or DME/DME/IRU required (*2) Critical DME : SEL<OLBIM/NOGON>, SOT<OLBIM/NOGON> (*3) Critical DME : KUZ<NOGON/ANSIM> (*4) Critical DME : KUZ<ANSIM/BINIL> (*5) Critical DME : KUZ<BINIL/NOPIK> (*6) Critical DME : KUZ<NOPIK/GOGET> (*7) DME GAP : GOGET/SEL, GNSS or DME/DME/IRU required (*8) Critical DME : KAE<SEL/EGOBA>, SOT<SEL/EGOBA> (*9) Critical DME : TGU<EGOBA/KARBU> (*10) Critical DME : TGU<KARBU/BIKSI> (*11) DME GAP : BIKSI/KAE, GNSS or DME/DME/IRU required (*12) DME GAP : KAE/PILIT, GNSS or DME/DME/IRU required (*13) DME GAP : PILIT/DADAS, GNSS or DME/DME/IRU required (*14) DME GAP : DADAS/AGSUS, GNSS or DME/DME/IRU required (*15) Critical DME : KAE<AGSUS/LANAT>												

* 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7		8	9	10
Y711 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										
△ MONSI 371247N 1265015E		190(181.2) 010(001.2)	29.4	Class A, D and G	FL 140 (2 900 ft)	↓		(*1)	(*2)	Incheon ACC FREQ: 132.80 MHz 128.70 MHz 126.175 MHz 120.725 MHz 124.525 MHz 128.375 MHz ¹⁾ 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ BULTI 364322N 1264930E		187(178.2) 007(388.2)	10.0							
△ MEKIL 363322N 1264953E		187(178.2) 006(388.2)	10.2							
△ GONAX 362311N 1265016E		193(185.1) 013(005.1)	14.1							
△ BEDES 360905N 1264844E		193(185.1) 013(005.0)	14.9							
△ ELPOS 355410N 1264707E		193(185.0) 013(005.0)	24.0							
△ MANGI 353011N 1264432E		193(185.0) 013(005.0)	22.7							
△ DALSU 350731N 1264206E		193(185.0) 013(004.9)	52.4							
△ DOTOL 341515N 1263637E		193(184.9) 012(004.9)	24.8							
△ KIDOS 335028N 1263402E		207(199.9) 027(019.8)	25.9							
△ REMOS 332605N 1262329E		207(199.8) 027(019.7)	27.4							
△ PANSI 330014N 1261225E		207(199.9) 027(019.8)	33.4							
△ DOMKO 322848N 1255859E		207(199.8) 026(019.7)	30.1							
△ PONIK 320021N 1254659E		207(199.8) 026(019.6)	30.1							
△ KANKA 313155N 1253504E		207(199.8) 026(019.5)	67.0							
△ BONSO 302840N 1250851E		206(199.5) 026(019.4)	30.2							
▲ MUGUS 300006N 1245712E										
(*1) Critical DME : PSN<DALSU/DOTOL> (*2) DME GAP : MONSI/BULTI, DOTOL/KIDOS, 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 : Information of area navigation(Y711) ,Withdrawal of Y711(RNAV5) and Amended format.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Y722 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC
▲ SONGTAN VORTAC(SOT) 370540N 1270154E		194(185.2) ⁺ 014(005.2) ⁺	21.5	Class A, D and G	FL 140 (3 100 ft)					FREQ: 132.80 MHz 128.70 MHz 126.175 MHz 120.725 MHz 124.525 MHz 128.375 MHz 132.20 MHz ¹⁾
△ OLMEN 364413N 1265928E		187(178.3) ⁺ 007(388.3) ⁺	10.0		FL 140 (3 600 ft)					
△ GUNKU 363414N 1265949E		187(178.3) ⁺ 007(388.3) ⁺	11.0		FL 140 (3 300 ft)					
△ PEBRI 362311N 1270013E		193(185.2) ⁺ 013(005.1) ⁺	29.5		FL 140 (2 300 ft)					
△ ATASO 355344N 1265657E		193(185.1) ⁺ 013(005.1) ⁺	23.6		FL 140 (3 800 ft)					
△ MAKSA 353011N 1265422E		193(185.1) ⁺ 013(005.1) ⁺	22.7		FL 140 (4 000 ft)					
△ SAMUL 350736N 1265154E		193(185.1) ⁺ 013(005.0) ⁺	52.5		FL 140 (3 400 ft)					
△ KAMIT 341514N 1264618E		193(185.0) ⁺ 013(005.0) ⁺	22.4		FL 140 (2 100 ft)			(*1)	(*2)	
△ GUKSU 335251N 1264357E		193(185.0) ⁺ 012(005.0) ⁺	19.6		FL 140 (1 700 ft)					
△ LOSNI 333315N 1264153E		207(200.1) ⁺ 027(020.0) ⁺	10.8		FL 140 (7 600 ft)					
▲ JEJU VORTAC(CJU) 332305N 1263727E		207(200.0) ⁺ 027(019.9) ⁺	24.3		FL 140 (8 700 ft)					
△ SOSDO 330012N 1262735E		207(200.1) ⁺ 027(019.9) ⁺	29.5		FL 140 (1 500 ft)					
△ SAMLO 323223N 1261536E		207(199.9) ⁺ 027(019.8) ⁺	30.2		FL 140 (1 500 ft)					
△ NIRAT 320354N 1260329E		207(199.9) ⁺ 026(019.8) ⁺	30.2		FL 140 (1 500 ft)					
△ TESIM 313526N 1255128E		207(199.9) ⁺ 026(019.6) ⁺	100.9	FL 140 (1 500 ft)						
▲ ATOTI 300013N 1251154E										

(*1) Critical DME : PSN<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 : Information of area navigation(Y722) and Withdrawal of 722(RNAV5).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DM E BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification			Odd	Even			
1	2	3	4	5	6	7	8	9	10		
Y744 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]											Daegu ACC FREQ: 134.175 MHz 120.575 MHz 123.65 MHz 119.375 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> 2. 11 000 ft to FL 240, at or above FL 280 will be blocked. 3. At or above 11000ft, required 15 days PPR from Air Traffic Management Office 3. Airspace Classification refer to ENR 3.1-1
▲ PILIT 372631N 1291731E		183(174.2) [°] 003(354.3) [°]	19.3	Class A, D and G	9 000 ft (4 900 ft)	↓			(*1)		
△ NOBUT 370715N 1291957E		182(174.2) [°] 002(354.3) [°]	47.2		9 000 ft (5 600 ft)				(*2)		
△ LOSTO 362016N 1292548E		182(174.3) [°] 002(354.3) [°]	21.7		9 000 ft (2 100 ft)				(*3)		
▲ POHANG VORTAC(KPO) 355838N 1292828E		212(204.6) [°] 032(24.4) [°]	37.2		9 000 ft (4 400 ft)				(*4)		
△ APARU 352442N 1290932E		212(204.4) [°] 032(24.3) [°]	19.0		9 000 ft (4 400 ft)				(*5)		
▲ BUSAN VORTAC(PSN) 350721N 1285958E											
(*1) DME GAP : PILIT/NOBUT, GNSS or DME/DME/IRU required. (*2) Critical DME : KAE<NOBUT/LOSTO>, TGU<NOBUT/LOSTO> (*3) Critical DME : PSN<LOSTO/KPO> (*4) Critical DME : TGU<KPO/APARU>, PSN<KPO/APARU> (*5) Critical DME : TGU<APARU/PSN>, KPO<APARU/PSN>											
Y781 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]											Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
▲ DALSEONG VORTAC(TGU) 354835N 1283527E		192(184.2) [°] 012(004.2) [°]	19.8	Class A, D and G	7 000 ft (4 900 ft)	↓			(*1)		
△ MASTA 352847N 1283340E		162(154.0) [°] 342(334.2) [°]	23.6		7 000 ft (4 000 ft)				(*2)		
△ KANBO 350730N 1284616E		162(154.2) [°] 342(334.2) [°]	7.7		7 000 ft (3 500 ft)				(*4)		
△ OMOTU 350033N 1285022E		156(148.1) [°] 336(328.3) [°]	27.3		7 000 ft (2 800 ft)				(*5)		
▲ BESNA 343718N 1290751E											
INCHEON FIR											
FUKUOKA FIR											
(*1) Critical DME : PSN<TGU/MASTA> (*2) Critical DME : PSN<MASTA/15.6 NM to KANBO> (*3) DME GAP : 15.6 NM to KANBO/KANBO, GNSS or DME/DME/IRU required. (*4) DME GAP : KANBO/OMOTU, GNSS or DME/DME/IRU required. (*5) DME GAP : OMOTU/BESNA, 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits	MEA (MOCA) ft or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification		Odd	Even			
1	2	3	4	5	6	7		8	9	10
Y782 (RNAV2) [DME/DME, [DME/DME/IRU, GNSS]										Incheon ACC FREQ: 128.70 MHz 120.525 MHz 132.20 MHz ¹⁾
▲ ANYANG VORTAC(SEL) 372449N 1265542E		174(165.5) [°] 354(345.5) [°]	12.4	Class A, D and G	4 500 ft (3 000 ft)	↓			(*1)	1) Common frequency Airspace Classification refer to ENR 3.1-1
▲ POLEG 371249N 1265935E		174(165.5) [°] 354(345.5) [°]	7.4		4 500 ft (2 000 ft)			(*2)		
▲ SONGTAN VORTAC(SOT) 370540N 1270154E		143(135.1) [°] 323(315.3) [°]	21.6		8 000 ft (3 300 ft)					
△ OSPOT 365018N 1272055E		143(135.3) [°] 323(315.4) [°]	10.4							
△ VASLI 364252N 1273003E		143(135.4) [°] 324(315.6) [°]	21.9		8 000 ft (4 200 ft)					
△ MAKDU 362712N 1274909E		144(135.6) [°] 324(315.7) [°]	14.6		10 000 ft (4 500 ft)			(*3)		
△ BITUX 361645N 1280148E		144(135.7) [°] 324(316.0) [°]	39.2		8 000 ft (4 400 ft)			(*4)		
▲ DALSEONG VORTAC(TGU) 354835N 1283527E		162(153.9) [°] 342(334.0) [°]	20.4		5 000 ft (3 600 ft)			(*5)		
▲ BUSAN VORTAC(PSN) 350721N 1285958E		162(154.2) [°] 342(334.3) [°]	26.6		4 000 ft (3 000 ft)			(*6)	(*7)	
▲ APELA 344323N 1291400E								↑		
INCHEON FIR FUKUOKA FIR										
(*1) DME GAP : SEL/POLEG, GNSS or DME/DME/IRU required (*2) Critical DME : SEL<POLEG/SOT>, KAE<POLEG/SOT> (*3) Critical DME : PSN<BITUX/TGU>, KPO<BITUX/TGU> (*4) Critical DME : PSN<TGU/KALOD>, KPO<TGU/KALOD> (*5) Critical DME : KPO<KALOD/PSN>, CJU<KALOD/PSN> (*6) Critical DME : KPO<PSN/APELA>, PSN<PSN/APELA> (*7) DME GAP : PSN/APELA, GNSS or DME/DME/IRU required below 7 000 ft.										

* 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	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Z50 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ: 128.70 MHz 126.175 MHz 134.175 MHz 132.20 MHz ¹⁾
△ EGOBA 372915N 1272246E		224(215.4)° 043(035.2)°	28.8	Class A, D and G	FL 140 (3300 ft)		↓			1) Common frequency
▲ SONGTAN VORTAC(SOT) 370540N 1270154E		212(204.1)° 032(024.0)°	24.4		FL 140 (2900 ft)		↑			Airspace Classification refer to ENR 3.1-1
△ BULTI 364322N 1264930E										
Z51 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ : 126.175 MHz 134.375 MHz 132.20 MHz ¹⁾
△ BOPTA 364406N 1263658E		173(164.8)° 353(344.9)°	21.6	Class A, D and G	FL 150 (3900 ft)		↓			1) Common frequency
△ MOXID 362311N 1264359E		173(164.7)° 352(344.8)°	14.6		FL 150 (3600 ft)					Airspace Classification refer to ENR 3.1-1
△ BEDES 360905N 1264844E										
Z52 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ : 126.175 MHz 125.375 MHz 120.575 MHz 132.20 MHz ²⁾
△ OLMEN 364413N 1265928E		051(042.6)° 231(222.8)°	16.3	Class A, D and G	8 000 ft (3400 ft)		↓			2) Common frequency
△ POSAN 365615N 1271316E		051(042.9)° 231(223.0)°	15.7		8 000 ft (3000 ft)		↑			Airspace Classification refer to ENR 3.1-1
△ KAKSO 370745N 1272637E										
Z53 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Daegu ACC FREQ : 125.375 MHz 120.575 MHz 125.775 MHz 119.375 MHz 122.75 MHz ³⁾
△ BITUX 361645N 1280148E		002(353.7)° 182(173.7)°	17.0	Class A, D and G	FL 160 (4000 ft)		↓			3) Common frequency
△ TEBEX 363341N 1275929E		002(353.7)° 182(173.7)°	17.0		FL 160 (4600 ft)		↑			Airspace Classification refer to ENR 3.1-1
△ BASEM 365037N 1275710E										

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

Change : Establishment of significant point(TEBEX).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	Upper limits		Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
				Lower limits or Airspace classification	MEA (MOCA) ft or FL	Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Z54 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ: 128.70 MHz 132.80 MHz 120.575 MHz 132.20 MHz ²⁾
▲ SONGTAN VORTAC(SOT) 370540N 1270154E		316(307.4) [°] 135(127.3) [°]	11.7	Class A, D and G	8 000 ft (2400 ft)		↓			2) Common frequency
△ MONSI 371247N 1265015E		315(307.3) [°] 135(127.1) [°]	19.7		8 000 ft (2300 ft)	↑				Airspace Classification refer to ENR 3.1-1
△ GOGET 372442N 1263036E										
SHANHAI FIR										
INCHEON FIR										
Z55 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ : 128.70 MHz 132.80 MHz 132.20 MHz ³⁾
△ AGAVO 371010N 1235953E 371000N 1240000E ⁴⁾				Class A, D and G	FL 140 (1500 ft)					3) Common frequency
△ NONOS 364046N 1242453E		154(145.6) [°] 334(325.8) [°]	35.5		FL 140 (1500 ft)					(*) Airspace Classification refer to ENR 3.1-1
4) BESSEL datum										
(*) DME GAP : AGAVO/NONOS, GNSS or DME/DME/IRU required										
PYONGYANG FIR										
INCHEON FIR										
Z56 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾
▲ KANSU 383800N 1322830E		180(171.0) [°] 360(351.1) [°]	40.2	Class A and G	FL 200 (1500 ft)		↓			1) Common frequency
△ PALDU 375813N 1323625E	KPO 241° / 192.2 NM	180(171.1) [°] 360(351.1) [°]	19.9		FL 200 (1500 ft)					(*) Airspace Classification refer to ENR 3.1-1
▲ SABET 373829N 1324019E	KPO 247° / 183.5 NM	180(171.1) [°] 360(351.1) [°]	19.9		FL 200 (1500 ft)					
▲ IGRAS 371846N 1324411E	KPO 253° / 176.6 NM						↑			
INCHEON FIR										
FUKUOKA FIR										
(*) DME GAP : KANSU/PALDU, PALDU/SABET, SABET/IGRAS GNSS or DME/DME/IRU required										

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

Change : Information of area navigation(Z55, Z56).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	UPPER LIMITS LOWER LIMITS or Airspace classification	MEA (MOCA) FT or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
						Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Z57 (RNAV2) [DME/DME, DME/DME/IRU GNSS] △ RILRO 371033N 1241442E △ DALPO 365835N 1242453E										Incheon ACC FREQ: 128.7 MHz 132.8 MHz 132.2 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
		154(145.7) [°] 334(325.8) [°]	14.5	Class A, D and G	FL 150 (1 500 ft)	↓			(*)	
	(*) DME GAP : RILRO/DALPO, GNSS or DME/DME/IRU required									
Z63 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ PILIT 372631N 1291731E △ NOMEX 374112N 1294441E										Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
	KAE 129°/ 30.0 NM	064(055.7) [°] 245(236.0) [°]	26.1	Class A and G	FL 250 (1500ft)	↓				
	KAE 099°/ 47.2 NM						↑			
Z81 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] △ KIDOS 335028N 1263402E ▲ JEJU VORTAC(CJU) 332305N 1263727E										Incheon ACC FREQ: 120.725 MHz 128.30 MHz 124.525 MHz 128.375 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		181(174.0) [°] 001(354.1) [°]	27.5	Class A, D and G	FL 140 (8700ft)		↓		(*)	
	(*) Critical DME : KUZ<KIDOS/CJU> PSN<KIDOS/CJU>									
Z82 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ JEJU VORTAC(CJU) 332305N 1263727E △ PANSI 330014N 1261225E										Incheon ACC FREQ: 120.725 MHz 128.30 MHz 124.525 MHz 128.375 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
		230(222.8) [°] 050(042.5) [°]	31.0	Class A, D and G	FL 140 (8700ft)		↓		(*)	
	CJU 229°/ 31.0 NM									
(*) 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 area navigation(Z57, Z63 and Z82).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	UPPER LIMITS LOWER LIMITS or Airspace classification	MEA (MOCA) FT or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
						Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Z83 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ MASTA 352847N 1283340E △ SARAM 350736N 1283147E ▲ TOPAX 344555N 1282952E										Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		192(184.2) 012(4.2)°	19.8	Class A, D and G	5 000 ft (4 900 ft)		↓	(*1)		
		192(184.2) 012(4.2)°	21.2		5 000 ft (3 800 ft)			(*2)		
		192(184.2) 012(4.2)°	21.7		5 000 ft (3 000 ft)	↑		(*3)		
(*1) Critical DME : PSN<TGU/MASTA>, KPO<TGU/MASTA> (*2) Critical DME : PSN<MASTA/SARAM>, TGU<MASTA/SARAM> (*3) Critical DME : PSN<SARAM/TOPAX>, TGU<SARAM/TOPAX>										
Z84 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] △ BUSAN VORTAC(PSN) 350721N 1285958E ▲ KALEK 351232N 1295305E INCHEON FIR FUKUOKA FIR										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
		091(083.0) 271(263.5)°	43.8	Class A, D and G	8 000 ft (3 100 ft)	↓		(*1)		
							↑			
(*1) Critical DME : TGU<PSN/KALEK> KPO<PSN/KALEK>										
Z85 (RNAV2) [DME/DME, DME/DME/IRU, GNSS] △ ATINA 334320N 1270423E ▲ RUGMA 323012N 1265753E										Incheon ACC FREQ : 124.525 MHz 128.175 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		191(184.3) 012(004.3)°	73.2	Class A, D and G	FL 170 (1 500 ft)	↓		(*1)	(*2)	
							↑			
(*1) Critical DME : PSN<35.2 NM to ATINA/ATINA>, KWA<35.2 NM to ATINA/ATINA> (*2) DME GAP : RUGMA/35.2 NM to ATINA, GNSS, VOR/DME, INS or IRS required.										

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

Change : Information of area navigation(Z85) and coordinates(ATINA, RUGMA).

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST	MAG TRACK (TRUE TRACK)	Geodetic DIST	UPPER LIMITS LOWER LIMITS or Airspace classification	MEA (MOCA) FT or FL	Direction of cruising levels		Critical DME	DME GAP	Remarks Controlling unit Frequency
						Odd	Even			
1	2	3	4	5	6	7	8	9	10	
Z86 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Incheon ACC FREQ: 124.525 MHz 132.20 MHz ¹⁾ 1) Common frequency
△ BONSO 302840N 1250851E		181(174.7) [°] 001(354.7) [°]	28.5	Class A, D and G	FL 140 (1 500 ft)		↓		(*1)	Airspace Classification refer to ENR 3.1-1
▲ ATOTI 300013N 1251154E										
(*1) DME GAP : BONSO/ATOTI, GNSS or DME/DME/IRU required										
Z91 (RNAV2) [DME/DME, DME/DME/IRU, GNSS]										Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency
▲ BUSAN VORTAC(PSN) 350721N 1285958E		149(141.3) [°] 329(321.5) [°]	25.6	Class A, D and G	10 000 ft (3 000 ft)		↓		(*1)	Airspace Classification refer to ENR 3.1-1
▲ INVOK 344719N 1291923E							↑			
INCHEON FIR										
FUKUOKA FIR										
(*1) DME GAP : PSN/INVOK, GNSS or DME/DME/IRU required										

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

ENR 3.4 HELICOPTER ROUTES

To be developed

INTENTIONALLY

LEFT

BLANK

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		

INTENTIONALLY

LEFT

BLANK

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



INTENTIONALLY

LEFT

BLANK