

ENR 3.2 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	Odd	Even	
1	2	3	4	5	6		7
L512 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ TENAS 373820N 1313427E ▲ SABET 373829N 1324019E ▲ ANDOL(FIR BDRY) 373958N 1330000E							Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> 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.
	N/A	098 279	52.3	UNL FL 270(1 500)	↓		
		093 274	15.7	Class A, G		↑	
INCHEON FIR							
FUKUOKA FIR							
1. Critical DME : KAE<TENAS/SABET>, KPO<TENAS/SABET> 2. DME GAP : SABET/ANDOL, GNSS required.							
Y233 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ BUSKO 374033N 1301610E △ SELPA 375515N 1304911E △ ONATA 382832N 1320602E ▲ KANSU(FIR BDRY) 383800N 1322830E							Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ²⁾ 2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
	N/A	069 250	30.0	UNL FL 200(1 500)	↓		
		070 251	69.1	Class A, D, G		↑	
		071 251	20.0				
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 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				
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 : 123.725 MHz 124.50 MHz 132.20 MHz ¹⁾ 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		Incheon ACC FREQ : 128.175 MHz 128.325 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1					
		098 278	44.7								
		098 278	1.6	UNL 8 000(2 400) Class A, D, G		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					
		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/ANKUS>, CJU<SARAM/ANKUS>, PSN<ANKUS/PSN>, CJU<ANKUS/PSN>									

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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	
Y437 (RNAV2) [GNSS,DME/DME, DME/DME/IRU] ▲ GANGWON VORTAC(KAE) 374203N 1284514E △ NOMEX 374112N 1294441E △ BUSKO 374033N 1301610E ▲ TENAS 373820N 1313427E △ MALSO 375440N 1314904E ▲ KANSU(FIR BDRY) 383800N 1322830E	N/A						Daegu ACC FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1	
		<u>100</u> 280	47.2	UNL 8 000(6 400) Class A, D, G	↓			
		<u>100</u> 281	25.0	UNL 8 000(1 500) Class A, D, G				
		<u>101</u> 281	62.2					
		<u>044</u> 224	20.0					
		<u>044</u> 225	53.3	UNL FL 200(1 500) Class A, D, G				
								↑
	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 required.

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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
Y571 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]	N/A						Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
		△ SOSDO 330012N 1262735E	048 229	17.4	UNL 11 000(1 500) Class A, D, G	↓	
		△ OMKIM 331320N 1264114E	049 229	28.4	UNL 11 000(2 200) Class A, D, G		
		△ PAPLU 333441N 1270337E	056 236	18.2	UNL 11 000(1 500) Class A, D, G		
		△ AKPON 334650N 1271953E	056 236	42.9	UNL 11 000(1 800) Class A, D, G		
		△ NISAV 341519N 1275835E	056 237	34.4	UNL 11 000(2 100) Class A, D, G		
		△ ANROD 343758N 1282952E	057 237	26.6	UNL 11 000(2 800) Class A, D, G		
		△ POVEM 345523N 1285416E	029 209	12.8	UNL 11 000(3 000) Class A, D, G		
		△ PSN 350721N 1285958E					
	1. DME GAP : SOSDO/OMKIM, OMKIM/PAPLU, PAPLU/AKPON, AKPON/NISAV GNSS required.						

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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	7
Y572 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ 2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ PSN 350721N 1285958E	N/A	249 069	10.1	UNL 11 000(3 000) Class A, D, G		↓	Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) <i>Common frequency</i> 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.
△ OLMUD 350225N 1284916E		237 057	21.1	UNL 11 000(3 200) Class A, D, G			
△ ENGOT 344834N 1282952E		237 056	50.4	UNL 11 000(2 600) Class A, D, G			
△ POVOR 341520N 1274360E		236 056	26.8	UNL 11 000(2 000) Class A, D, G			
△ UPGOS 335733N 1271953E		236 056	17.0	UNL 11 000(1 500) Class A, D, G			
△ BILUM 334613N 1270439E		236 056	10.5	UNL 11 000(1 500) Class A, D, G			
△ BEPKO 333910N 1265514E		230 050	21.9	UNL 11 000(5 600) Class A, D, G			
△ CJU 332305N 1263727E		169 349	10.2	UNL 11 000(8 700) Class A, D, G		↓	
△ OMKIM 331320N 1264114E		169 349	13.8	UNL 11 000(1 500) Class A, D, G			
△ TOSAN 330012N 1264619E		169 349	31.5	UNL 11 000(1 500) Class A, D, G			
△ RUGMA(FIR BDRY) 323012N 1265753E					↑		
INCHEON FIR							
FUKUOKA FIR							

1. DME GAP : UPGOS/BILUM, BILUM/BEPKO, BEPKO/CJU, CJU/OMKIM, OMKIM/TOSAN, TOSAN/RUGMA GNSS required.

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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
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	N/A						Daegu ACC FREQ: 122.25 MHz 134.375 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
		228 047	68.1				
		229 049	36.2	UNL FL 140(1 500) Class A, D, G			
		229 048	28.1				
		228 048	40.2	UNL FL 140(2 700) Class A, D, G			
		228 047	23.1	UNL FL 140(3 800) Class A, D, G			

1. 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.

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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 122.75 MHz ¹⁾
SANGHAI FIR							1) Common frequency 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
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>							

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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	N/A				↓		Daegu ACC FREQ : 132.80 MHz 128.70 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1			
		$\frac{188}{008}$	12.2	UNL FL 140(1 500) Class A, D, G						
		$\frac{188}{008}$	17.8							
		$\frac{188}{008}$	70.1							
		$\frac{188}{007}$	88.9							
		$\frac{187}{007}$	11.0							
		$\frac{111}{291}$	73.0				UNL 9 000(1 500) Class A, D, G			
		$\frac{111}{292}$	29.0				UNL 9 000(4 100) Class A, D, G			
		$\frac{112}{292}$	12.1				UNL 9 000(8 700) Class A, D, G			
									↑	Incheon ACC FREQ : 132.15 MHz 123.55 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
										Incheon ACC FREQ : 120.725 MHz 128.30 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
										Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1

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 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 : 123.725 MHz 124.50 MHz 132.20 MHz ⁵⁾ 5) Common frequency Airspace Classification refer to ENR 3.1-1
	N/A	$\frac{072}{253}$	54.7	$\frac{10\ 000}{8\ 000(7\ 100)}$ Class D			
		$\frac{073}{254}$	41.6	$\frac{10\ 000}{8\ 000(4\ 800)}$ Class D			

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Change : Information of DME GAP.

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				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 : 126.175 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>6 000(4 200)</u> Class A, D, G				
		<u>085</u> 265	19.7	<u>6 000(3 300)</u> Class A, D, G				
							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 : 124.525 MHz 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 128.325 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>								

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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
Y685 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ: 132.80 MHz 128.70 MHz 118.925 MHz 120.525 MHz 122.75 MHz ¹⁾ 1) Common frequency
▲ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	<u>133</u> 313	10.7	<u>UNL</u> 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.
▲ KALMA 371845N 1270645E		<u>133</u> 313	19.3	<u>UNL</u> 8 000(2 900) Class A, D, G			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		<u>133</u> 313	11.5	<u>UNL</u> 8 000(3 600) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ GUKDO 370111N 1273823E		<u>133</u> 314	9.2	<u>UNL</u> 8 000(3 700) Class A, D, G			Daegu ACC FREQ: 120.575 MHz 119.375 MHz 134.375 MHz 122.75 MHz ²⁾ 2) Common frequency
△ ENSAL 365554N 1274747E		<u>134</u> 314	9.2	<u>UNL</u> 8 000(4 000) Class A, D, G			Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTU or RKTU.
△ BASEM 365037N 1275710E		<u>134</u> 314	12.5	<u>UNL</u> 8 000(5 000) Class A, D, G			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.
▲ BIGOB 364325N 1280952E		<u>134</u> 314	9.5	<u>UNL</u> 8 000(4 900) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ YECHEON VOR(CUN) 363755N 1281931E		<u>133</u> 314	30.8	<u>UNL</u> 8 000(3 800) Class A, D, G			
△ ELAPI 362014N 1285051E		<u>134</u> 314	37.3	<u>UNL</u> 8 000(4 700) Class A, D, G			
▲ POHANG VORTAC(KPO) 355838N 1292828E		<u>107</u> 287	17.2	<u>UNL</u> 8 000(2 100) Class A, D, G			
△ BULGA 355609N 1294924E		<u>107</u> 287	44.4	<u>UNL</u> 8 000(1 500) Class A, D, G			↑
▲ SAPRA(FIR BDRY) 354926N 1304325E							
INCHEON FIR FUKUOKA FIR							

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					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 122.75 MHz ¹⁾
SANGHAI FIR							
INCHEON FIR							1) Common frequency
▲ 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			Daegu ACC FREQ : 132.80 MHz 118.925 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
▲ ANYANG VORTAC(SEL) 372449N 1265542E		<u>098</u> 278	20.0	UNL 7 500(3 400) Class A, D, G	↓	↑	
△ EGOBA 372915N 1272246E		<u>087</u> 267	22.0	UNL 7 500(5 100) Class A, D, G			Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ KARBU 373159N 1273952E		<u>087</u> 268	22.9	UNL 7 500(4 500) Class A, D, G			
△ TORUS 373625N 1280807E		<u>088</u> 268	21.8	UNL 7 500(7 500) Class A, D, G			Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ⁴⁾ 4) Common frequency Only flying westbound from LANAT to KAE on G597 shall get 24HRs PPR from Daegu ACC.
△ BIKSI 374032N 1283504E		<u>088</u> 268	8.2	UNL 7 500(7 100) Class A, D, G			
▲ GANGWON VORTAC(KAE) 374203N 1284514E		<u>130</u> 310	30.0	UNL 8 000(7 100) 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			
△ NIMUS 371210N 1294656E		<u>130</u> 310	50.8				
△ AGSUS 364521N 1304044E		<u>130</u> 311	42.9				
▲ LANAT(FIR BDRY) 362224N 1312542E							
INCHEON FIR							
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/TORUS>, KAE<KARBU/TORUS>, SEL<TORUS/BIKSI>, KAE<TORUS/BIKSI>, SEL<BIKSI/KAE>, KAE<BIKSI/KAE>, KAE<KAE/PILIT>, KPO<KAE/PILIT>, KAE<PILIT/NIMUS>, KPO<PILIT/NIMUS>, KAE<NIMUS/AGSUS>, KPO<NIMUS/AGSUS>, KAE<AGSUS/LANAT>, KPO<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 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	7		10
Y711 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ: 132.80 MHz 128.70 MHz 122.75 MHz ¹⁾ 1) Common frequency
△ MONSI 371247N 1265015E	N/A	<u>190</u> 010	29.4	UNL FL 140(2 900) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ BULTI 364322N 1264930E		<u>187</u> 007	10.0				Incheon ACC FREQ: 132.150 MHz 123.55 MHz 132.20 MHz ²⁾ 2) Common frequency
△ MEKIL 363322N 1264953E		<u>187</u> 006	10.2	UNL FL 140(3 200) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ GONAX 362311N 1265016E		<u>193</u> 013	14.1				
△ BEDES 360905N 1264844E		<u>193</u> 013	14.9	UNL FL 140(2 200) Class A, D, G			
△ ELPOS 355410N 1264707E		<u>193</u> 013	24.0	UNL FL 140(2 800) Class A, D, G			
△ MANGI 353011N 1264432E		<u>193</u> 013	22.7	UNL FL 140(3 800) Class A, D, G			Incheon ACC FREQ: 120.725 MHz 128.30 MHz 132.20 MHz ³⁾ 3) Common frequency
△ DALSU 350731N 1264206E		<u>193</u> 013	52.4	UNL FL 140(4 000) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ DOTOL 341515N 1263637E		<u>193</u> 012	24.8	UNL FL 140(2 700) Class A, D, G			Incheon ACC FREQ: 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency
△ KIDOS 335028N 1263402E		<u>207</u> 027	25.9	UNL FL 140(6 000) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ REMOS 332605N 1262329E		<u>207</u> 027	27.4	UNL FL 140(6 300) Class A, D, G			
△ PANSI 330014N 1261225E		<u>207</u> 027	33.4				
△ DOMKO 322848N 1255859E		<u>207</u> 027	30.1				Incheon ACC FREQ : (At or above FL 335) 133.425 MHz 134.15 MHz 132.20 MHz ⁵⁾ (below FL 335) 125.725 MHz 132.825 MHz 128.375 MHz 132.20 MHz ⁵⁾ 5) Common frequency
△ PONIK 320021N 1254659E		<u>207</u> 027	18.2	UNL FL 140(1 500) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ IKEDO 314314N 1253948E		<u>207</u> 026	12.0				
△ KANKA 313155N 1253504E		<u>207</u> 026	67.0				
△ BONSO 302840N 1250851E		<u>206</u> 026	30.2				
▲ MUGUS(FIR BDRY) 300006N 1245712E							
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 required.

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

Change : Information of DME GAP.

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	7		10
Y722 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ: 126.175 MHz 134.375 MHz 132.20 MHz ¹⁾ 1) Common frequency
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	N/A			UNL			Airspace Classification refer to ENR 3.1-1
△ OLMEN 364413N 1265928E		<u>194</u> 014	21.5	FL 140(3 100) Class A, D, G			
△ GUNKU 363414N 1265949E		<u>187</u> 007	10.0	UNL FL 140(3 600) Class A, D, G			
△ PEBRI 362311N 1270013E		<u>187</u> 007	11.0	UNL FL 140(3 300) Class A, D, G			Incheon ACC FREQ: 123.725 MHz 124.50 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
△ ATASO 355344N 1265657E		<u>193</u> 013	29.5	UNL FL 140(2 300) Class A, D, G			
△ MAKSA 353011N 1265422E		<u>193</u> 013	23.6	UNL FL 140(3 800) Class A, D, G			
△ SAMUL 350736N 1265154E		<u>193</u> 013	22.7	UNL FL 140(4 000) Class A, D, G			Incheon ACC FREQ: 124.525 MHz 132.425 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ KAMIT 341514N 1264618E		<u>193</u> 013	52.5	UNL FL 140(3 400) Class A, D, G			
△ GUKSU 335251N 1264357E		<u>193</u> 013	22.4	UNL FL 140(2 100) Class A, D, G			
△ LOSNI 333315N 1264153E		<u>193</u> 012	19.6	UNL FL 140(1 700) Class A, D, G			Incheon ACC FREQ: (At or above FL 335) 133.425 MHz 134.15 MHz 132.20 MHz ⁴⁾ (below FL 335) 125.725 MHz 132.825 MHz 128.375 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
▲ JEJU VORTAC(CJU) 332305N 1263727E		<u>207</u> 027	10.8	UNL FL 140(7 600) Class A, D, G			
△ SOSDO 330012N 1262735E		<u>207</u> 027	24.3	UNL FL 140(8 700) Class A, D, G			
△ SAMLO 323223N 1261536E		<u>207</u> 027	29.5	UNL FL 140(1 500) Class A, D, G			
△ NIRAT 320354N 1260329E		<u>207</u> 027	30.2				
△ ELGEP 314653N 1255617E		<u>207</u> 027	18.1				
△ TESIM 313526N 1255128E		<u>207</u> 027	12.1				
▲ ATOTI(FIR BDRY) 300013N 1251154E		<u>207</u> 026	100.9				
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 required.

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

Change : Information of DME GAP.

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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			
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							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
	N/A	<u>183</u> 003	19.3	<u>UNL</u> 9 000(4 900) Class A, D, G		↓	
		<u>183</u> 003	47.2	<u>UNL</u> 9 000(5 600) Class A, D, G			
		<u>183</u> 003	21.7	<u>UNL</u> 9 000(2 100) Class A, D, G			
		<u>213</u> 033	37.2	<u>UNL</u> 9 000(4 400) Class A, D, G			
		<u>213</u> 032	19.0	<u>UNL</u> 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							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
	N/A	<u>192</u> 012	19.8	<u>UNL</u> 7 000(4 900) Class A, D, G		↓	
		<u>162</u> 342	23.6	<u>UNL</u> 7 000(4 000) Class A, D, G			
		<u>162</u> 342	7.7	<u>UNL</u> 7 000(3 500) Class A, D, G			
		<u>156</u> 336	27.3	<u>UNL</u> 7 000(2 800) Class A, D, G			
1. Critical DME : PSN<OMOTU/BESNA>, CJU<OMOTU/BESNA> 2. DME GAP : ANKUS/OMOTU, GNSS required.							

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

Change : Information of DME GAP.

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			
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(TGL) 354835N 1283527E △ KALOD 353012N 1284626E ▲ BUSAN VORTAC(PSN) 350721N 1285958E ▲ APELA(FIR BDRY) 344323N 1291400E							Daegu ACC FREQ: 128.70 MHz 120.525 MHz 122.75 MHz ¹⁾			
	N/A	<u>174</u> 354	12.4	<u>UNL</u> 4 500(3 000) Class A, D, G	↓		1) Common frequency Airspace Classification refer to ENR 3.1-1			
		<u>174</u> 354	7.4	<u>UNL</u> 4 500(2 000) Class A, D, G						
		<u>144</u> 324	21.6	<u>UNL</u> 8 000(3 300) Class A, D, G						
		<u>144</u> 324	10.4	<u>UNL</u> 8 000(4 200) Class A, D, G						
		<u>144</u> 324	21.9	<u>UNL</u> 8 000(4 200) Class A, D, G			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>144</u> 324	14.6	<u>UNL</u> 10 000(4 500) Class A, D, G						
		<u>162</u> 342	20.4	<u>UNL</u> 8 000(4 400) Class A, D, G						
		<u>162</u> 342	25.4	<u>UNL</u> 5 000(3 600) Class A, D, G						
		<u>162</u> 342	26.6	<u>UNL</u> 4 000(3 000) Class A, D, G						
INCHEON FIR										
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.

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 134.175 MHz 122.75 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 : 132.15 MHz 123.55 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 134.375 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 : Page control.

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 120.525 MHz 122.75 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 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
SANGHAI FIR							
INCHEON FIR							
△ AGAVO(FIR BDRY) 371010N 1235953E △ NONOS 364046N 1242453E	N/A	<u>154</u> 334	35.5	<u>UNL</u> FL 140(1 500) Class A, D, G		↑	
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 △ PALDU 375813N 1323625E ▲ SABET 373829N 1324019E ▲ IGRAS(FIR BDRY) 371846N 1324411E	N/A	<u>180</u> 360	40.2	<u>UNL</u> FL 200(1 500) Class A, G	↓		
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 required.							

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

Change : Information of DME GAP.

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: 128.70 MHz 132.80 MHz 122.75 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 132.425 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 132.425 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 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
Z83 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ DALSEONG VORTAC(TGU) 354835N 1283527E △ MASTA 352847N 1283340E △ SARAM 350736N 1283147E △ ENGOT 344834N 1282952E △ ANROD 343758N 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			
		193 013	19.1	UNL 5 000(3 000) Class A, D, G			
		188 008	10.6	UNL 5 000(2 300) Class A, D, G	↑		
1. Critical DME : PSN<TGU/MASTA>, TGU<TGU/MASTA>, PSN<MASTA/SARAM>, TGU<MASTA/SARAM>, PSN<SARAM/ENGOT>, TGU<SARAM/ENGOT> 2. DME GAP : ENGOT/ANROD, GNSS required.							
Z84 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ BUSAN VORTAC(PSN) 350721N 1285958E ▲ KALEK(FIR BDRY) 351232N 1295305E	N/A	091 272	43.8	UNL 8 000(3 100) Class A, D, G	↓		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
						↑	
	INCHEON FIR						
FUKUOKA FIR							
Z85 (RNAV2) [GNSS, DME/DME/IRU] △ BILUM 334613N 1270439E △ PAPLU 333441N 1270337E ▲ RUGMA(FIR BDRY) 323012N 1265753E	N/A	192 012	11.5	UNL FL 170(1 500) Class A, D, G	↓		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	64.5				
						↑	
	INCHEON FIR						
FUKUOKA FIR							
1. DME GAP : BILUM/PAPLU, PAPLU/RUGMA, GNSS 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 Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	7		10
Z86 (RNAV2) [GNSS, DME/DME/IRU]							Incheon ACC FREQ: 124.525 MHz 132.20 MHz ¹⁾ 1) Common frequency
△ BONSO 302840N 1250851E							↓ Airspace Classification refer to ENR 3.1-1
▲ ATOTI(FIR BDRY) 300013N 1251154E	N/A	181 001	28.5	UNL FL 140(1 500) Class A, D, G			
INCHEON FIR							
FUKUOKA FIR							
1. DME GAP : BONSO/ATOTI, GNSS required.							
Z91 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ: 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency
▲ BUSAN VORTAC(PSN) 350721N 1285958E							↓ Airspace Classification refer to ENR 3.1-1
▲ INVOK(FIR BDRY) 344719N 1291923E	N/A	149 329	25.6	UNL 10 000(3 000) Class A, D, G			
INCHEON FIR							
FUKUOKA FIR							

* 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	7		10
Y590 (RNAV2) [GNSS, DME/DME/IRU]							Incheon ACC FREQ : (At or above FL 335) 133.425 MHz 134.15 MHz 132.20 MHz ¹⁾ (below FL 335) 125.725 MHz 132.825 MHz 128.375 MHz 132.20 MHz ¹⁾ 1) 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 required. 2. Flight Level Allocation Scheme (FLAS) - For the eastbound over BEDAR : FL 250, FL 290, FL 310, FL 390							

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



INTENTIONALLY

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