

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

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

Change : Information of reporting requirements for L512.

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	
		<u>097</u> 277	5.4	<u>UNL</u> 8 000(2 400) Class A, D, G	↓			
		<u>097</u> 278	2.6	<u>UNL</u> 8 000(2 000) Class A, D, G				
		<u>097</u> 278	22.1	<u>UNL</u> 8 000(5 200) Class A, D, G				
		<u>098</u> 278	13.5	<u>UNL</u> 8 000(5 400) Class A, D, G				
		<u>098</u> 278	44.7					
		<u>098</u> 278	1.6	<u>UNL</u> 8 000(2 400) Class A, D, G				
		<u>098</u> 279	11.9	<u>UNL</u> 8 000(4 000) Class A, D, G				
		<u>099</u> 279	11.2	<u>UNL</u> 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>						

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

Change : Information of reporting requirements for Y253.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
Y437 (RNAV2) [GNSS,DME/DME, DME/DME/IRU]							Daegu ACC
△ GANGWON VORTAC(KAE) 374203N 1284514E							FREQ : 122.25 MHz 125.925 MHz 122.75 MHz ¹⁾
▲ NOMEX 374112N 1294441E	N/A	$\frac{100}{280}$	47.2	UNL 8 000(6 400) Class A, D, G	↓		1) Common frequency Airspace Classification refer to ENR 3.1-1
△ BUSKO 374033N 1301610E		$\frac{100}{281}$	25.0	UNL 8 000(1 500) Class A, D, G			
△ TENAS 373820N 1313427E		$\frac{101}{281}$	62.2				
△ MALSO 375440N 1314904E		$\frac{044}{224}$	20.0	UNL FL 200(1 500) Class A, D, G			
▲ KANSU(FIR BDRY) 383800N 1322830E		$\frac{044}{225}$	53.3				
						↑	
INCHEON FIR							
PYONGYANG FIR							
1. Critical DME : KAE<KAE/NOMEX>, KPO<KAE/NOMEX>, KAE<NOMEX/BUSKO>, KPO<NOMEX/BUSKO>, KAE<BUSKO/TENAS>, KPO<BUSKO/TENAS>, KAE<TENAS/MALSO>, KPO<TENAS/MALSO> 2. DME GAP : MALSO/KANSU GNSS 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	Direction of cruising levels		Remarks Controlling unit Frequency
				Airspace classification	Odd	Even	
1	2	3	4	5	6		7
Y571 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ SOSDO 330012N 1262735E △ OMKIM 331320N 1264114E △ PAPLU 333441N 1270337E ▲ AKPON 334650N 1271953E ▲ NISAV 341519N 1275835E ▲ ANROD 343758N 1282952E △ POVEM 345523N 1285416E △ BUSAN VORTAC(PSN) 350721N 1285958E							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	048 229	17.4	UNL 11 000(1 500) Class A, D, G	↓		
		049 229	28.4	UNL 11 000(2 200) Class A, D, G			
		056 236	18.2	UNL 11 000(1 500) Class A, D, G			
		056 236	42.9	UNL 11 000(1 800) Class A, D, G			
		056 237	34.4	UNL 11 000(2 100) Class A, D, G			
		057 237	26.6	UNL 11 000(2 800) Class A, D, G			
		029 209	12.8	UNL 11 000(3 000) Class A, D, G			
							Daegu ACC FREQ : 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
1. DME GAP : SOSDO/OMKIM, OMKIM/PAPLU, PAPLU/AKPON, AKPON/NISAV 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	Direction of cruising levels		Remarks Controlling unit Frequency			
				Airspace classification	Odd	Even				
1	2	3	4	5	6		7			
Y572 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ BUSAN VORTAC(PSN) 350721N 1285958E △ OLMUD 350225N 1284916E ▲ ENGOT 344834N 1282952E ▲ POVOR 341520N 1274400E ▲ UPGOS 335733N 1271953E △ BILUM 334613N 1270439E △ BEPKO 333910N 1265514E △ JEJU VORTAC(CJU) 332305N 1263727E △ OMKIM 331320N 1264114E ▲ TOSAN 330012N 1264619E ▲ RUGMA(FIR BDRY) 323012N 1265753E	N/A						Daegu ACC FREQ : 128.175 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1			
		<u>249</u> 069	10.1	UNL 11 000(3 000) Class A, D, G		↓				
		<u>237</u> 057	21.1	UNL 11 000(3 200) Class A, D, G						
		<u>237</u> 056	50.4	UNL 11 000(2 600) Class A, D, G						
		<u>236</u> 056	26.8	UNL 11 000(2 000) Class A, D, G						
		<u>236</u> 056	17.0	UNL 11 000(1 500) Class A, D, G			Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1 ※ The cruising levels from CJU to RUGMA are even levels due to operational reasons. ※ The cruising levels from RUGMA to CJU are odd levels due to operational reasons.			
		<u>236</u> 056	10.5	UNL 11 000(1 500) Class A, D, G						
		<u>230</u> 050	21.9	UNL 11 000(5 600) Class A, D, G						
		<u>169</u> 349	10.2	UNL 11 000(8 700) Class A, D, G						
		<u>169</u> 349	13.8	UNL 11 000(1 500) Class A, D, G						
		<u>169</u> 349	31.5	UNL 11 000(1 500) Class A, D, G						
								↑		
		INCHEON FIR								
		FUKUOKA FIR								

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

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

Change : Amended coordinates for POVOR(1274360E → 1274400E).

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	Direction of cruising levels		Remarks Controlling unit Frequency
				Airspace classification	Odd	Even	
1	2	3	4	5	6		7
Y579 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ TENAS 373820N 1313427E △ AGSUS 364521N 1304044E ▲ DABIK 361743N 1301143E ▲ BULGA 355609N 1294924E ▲ BEDOM 352513N 1291754E △ BUSAN VORTAC(PSN) 350721N 1285958E	N/A						Daegu ACC FREQ : 122.25 MHz 134.375 MHz 120.575 MHz 125.925 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
		<u>228</u> 047	68.1	<u>UNL</u> FL 140(1 500) Class A, D, G		↓	
		<u>229</u> 049	36.2				
		<u>229</u> 048	28.1				
		<u>228</u> 048	40.2	<u>UNL</u> FL 140(2 700) Class A, D, G			
		<u>228</u> 047	23.1	<u>UNL</u> 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.

* 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	Direction of cruising levels		Remarks Controlling unit Frequency
				Airspace classification	Odd	Even	
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	<u>096</u> 276	11.8	UNL FL 150(1 500) Class A, D, G	↓		
△ RILRO 371033N 1241442E		<u>096</u> 276	8.1				
△ GONAV 371048N 1242453E		<u>096</u> 277	20.0				
△ BODOL 371122N 1244954E		<u>097</u> 277	31.4				
▲ REBIT 371203N 1252913E		<u>097</u> 278	15.0				
△ BELTU 371218N 1254759E		<u>098</u> 278	32.1	UNL 8 000(2 400) Class A, D, G			
△ BOGAN 371241N 1262812E		<u>098</u> 278	17.6	UNL 8 000(3 200) Class A, D, G			
▲ MONSI 371247N 1265015E		<u>098</u> 278	7.5	UNL 8 000(2 400) Class A, D, G			
△ POLEG 371249N 1265935E		<u>057</u> 237	24.7	UNL FL 140(3 300) Class A, D, G			
△ EGOBA 372915N 1272246E							
1. Critical DME : SEL<AGAVO/RILRO>, KUZ<AGAVO/RILRO>, SEL<RILRO/GONAV>, KUZ<RILRO/GONAV>, SEL<MONSI/POLEG>, SOT<MONSI/POLEG>, SEL<POLEG/EGOBA>, SOT<POLEG/EGOBA>							

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

Change : Information of reporting requirements for Y644.

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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					
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			UNL FL 140(1 500) Class A, D, G	↓		Daegu ACC FREQ : 132.80 MHz 128.70 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1					
		<u>188</u> 008	12.2									
		<u>188</u> 008	17.8									
		<u>188</u> 008	70.1							Incheon ACC FREQ : 132.15 MHz 123.55 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1		
		<u>188</u> 007	88.9							Incheon ACC FREQ : 120.725 MHz 128.30 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1		
		<u>187</u> 007	11.0							Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1		
		<u>111</u> 291	73.0				UNL 9 000(1 500) Class A, D, G					
		<u>111</u> 292	29.0				UNL 9 000(4 100) Class A, D, G					
		<u>112</u> 292	12.1				UNL 9 000(8 700) Class A, D, G					
										↑		
		1. Critical DME : SEL<GONAV/DALPO>, KUZ<GONAV/DALPO>, SEL<DALPO/NONOS>, KUZ<DALPO/NONOS>, SEL<NONOS/DANPA>, KUZ<NONOS/DANPA>, KWA<LIMDI/REMOS>, CJU<LIMDI/REMOS> 2. DME GAP : DANPA/PALSA, PALSA/TOLIS, TOLIS/LIMDI, REMOS/CJU GNSS required.										
		Y657 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ GWANGJU VOR(KWA) 350734N 1264844E ▲ IGDOK 353104N 1274907E △ DALSEONG VORTAC(TGU) 354835N 1283527E	N/A							↓		Incheon ACC FREQ : 123.725 MHz 124.50 MHz 132.20 MHz ⁵⁾ 5) Common frequency Airspace Classification refer to ENR 3.1-1
<u>072</u> 253	54.7			<u>10 000</u> 8 000(7 100) Class D								
<u>073</u> 254	41.6			<u>10 000</u> 8 000(4 800) Class D	Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ⁶⁾ 6) Common frequency Airspace Classification refer to ENR 3.1-1							

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

Change : Information of reporting requirements for Y655 and Y657.

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	
Y659 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ : 126.175 MHz 134.375 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
△ GUNSAN VORTAC(KUZ) 355437N 1263641E	N/A	<u>101</u> 281	8.5	<u>10 000</u> 7 000(1 700)	↓		
△ ELPOS 355410N 1264707E		<u>101</u> 281	5.5	Class D			
△ RINBO 355352N 1265349E		<u>101</u> 282	17.8	<u>10 000</u> 7 000(3 700)			
△ MELES 355251N 1271542E		<u>102</u> 282	17.2	<u>10 000</u> 7 000(5 000)			
△ OPEDA 355149N 1273652E		<u>102</u> 282	47.7	<u>10 000</u> 7 000(6 600)			
△ DALSEONG VORTAC(TGU) 354835N 1283527E		<u>085</u> 265	24.6	UNL 6 000(4 200)			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
▲ LAPAL 355413N 1290452E		<u>085</u> 265	19.7	UNL 6 000(3 300)			
△ POHANG VORTAC(KPO) 355838N 1292828E				Class A, D, G		↑	
Y677 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ JEJU VORTAC(CJU) 332305N 1263727E	N/A	<u>089</u> 269	35.9	UNL 9 000(6 300) Class A, D, G	↓		
▲ TAMNA 332815N 1271953E		<u>089</u> 270	49.8	UNL 9 000(1 500) Class A, D, G			
▲ SAMDO(FIR BDRY) 333503N 1281857E							
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>

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

Change : Information of reporting requirements for Y659 and Y677.

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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	Direction of cruising levels		Remarks Controlling unit Frequency
				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 RKTY or RKTl. 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. Airspace Classification refer to ENR 3.1-1
△ KALMA 371845N 1270645E		<u>133</u> 313	19.3	<u>UNL</u> 8 000(2 900) Class A, D, G			
△ KAKSO 370745N 1272637E		<u>133</u> 313	11.5	<u>UNL</u> 8 000(3 600) Class A, D, G			
▲ GUKDO 370111N 1273823E		<u>133</u> 314	9.2	<u>UNL</u> 8 000(3 700) Class A, D, G			
△ ENSAL 365554N 1274747E		<u>134</u> 314	9.2	<u>UNL</u> 8 000(4 000) Class A, D, G			Daegu ACC FREQ : 120.575 MHz 119.375 MHz 134.375 MHz 122.75 MHz ²⁾ 2) Common frequency Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTY or RKTl. 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. Airspace Classification refer to ENR 3.1-1
△ BASEM 365037N 1275710E		<u>134</u> 314	12.5	<u>UNL</u> 8 000(5 000) Class A, D, G			
▲ BIGOB 364325N 1280952E		<u>134</u> 314	9.5	<u>UNL</u> 8 000(4 900) Class A, D, G			
△ 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							

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

Change : Information of reporting requirements for Y685.

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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
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
△ GOGET 372442N 1263036E		<u>098</u> 278	20.0	UNL 7 500(3 400) Class A, D, G	↓	↑	
△ ANYANG VORTAC(SEL) 372449N 1265542E		<u>087</u> 267	22.0	UNL 7 500(5 100) Class A, D, G			Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ EGOBA 372915N 1272246E		<u>087</u> 267	13.9	UNL 7 500(4 500) Class A, D, G			
▲ KARBU 373159N 1273952E		<u>087</u> 268	22.9	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 24HR PPR from Daegu ACC.
▲ TORUS 373625N 1280807E		<u>088</u> 268	21.8	UNL 7 500(7 100) Class A, D, G			
▲ BIKSI 374032N 1283504E		<u>088</u> 268	8.2	UNL 8 000(7 100) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ GANGWON VORTAC(KAE) 374203N 1284514E		<u>130</u> 310	30.0	UNL 9 000(1 500) Class A, D, G			
▲ 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.

Change : Information of reporting requirements for Y697.

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 Airspace Classification refer to ENR 3.1-1
▲ MONSI 371247N 1265015E	N/A	190 010	29.4	UNL FL 140(2 900) Class A, D, G			Incheon ACC FREQ : 132.150 MHz 123.55 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
▲ BULTI 364322N 1264930E		187 007	10.0				
▲ MEKIL 363322N 1264953E		187 006	10.2	UNL FL 140(3 200) Class A, D, G			
△ GONAX 362311N 1265016E		193 013	14.1				
△ BEDES 360905N 1264844E		193 013	14.9	UNL FL 140(2 200) Class A, D, G			Incheon ACC FREQ : 120.725 MHz 128.30 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
△ ELPOS 355410N 1264707E		193 013	24.0	UNL FL 140(2 800) Class A, D, G			
▲ MANGI 353011N 1264432E		193 013	22.7	UNL FL 140(3 800) Class A, D, G			
△ DALSU 350731N 1264206E		193 013	52.4	UNL FL 140(4 000) Class A, D, G			
▲ DOTOL 341515N 1263637E		193 012	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 Airspace Classification refer to ENR 3.1-1
△ KIDOS 335028N 1263402E		207 027	25.9	UNL FL 140(6 000) Class A, D, G			
△ REMOS 332605N 1262329E		207 027	27.4	UNL FL 140(6 300) Class A, D, G			
▲ PANSI 330014N 1261225E		207 027	33.4				
△ DOMKO 322848N 1255859E		207 027	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 Airspace Classification refer to ENR 3.1-1
△ PONIK 320021N 1254659E		207 027	18.2	UNL FL 140(1 500) Class A, D, G			
△ IKEDO 314314N 1253948E		207 026	12.0				
▲ KANKA 313155N 1253504E		207 026	67.0				
△ BONSO 302840N 1250851E		206 026	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 reporting requirements for Y711.

OFFICE OF CIVIL AVIATION

AIRAC AIP AMDT 2/23
Effective : 1600UTC 22 MAR 2023

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	<u>194</u> 014	21.5	UNL FL 140(3 100) Class A, D, G			Airspace Classification refer to ENR 3.1-1
▲ OLMEN 364413N 1265928E		<u>187</u> 007	10.0	UNL FL 140(3 600) Class A, D, G			
△ GUNKU 363414N 1265949E		<u>187</u> 007	11.0	UNL FL 140(3 300) Class A, D, G			
▲ PEBRI 362311N 1270013E		<u>193</u> 013	29.5	UNL FL 140(2 300) 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	23.6	UNL FL 140(3 800) Class A, D, G			
▲ MAKSA 353011N 1265422E		<u>193</u> 013	22.7	UNL FL 140(4 000) Class A, D, G			
△ SAMUL 350736N 1265154E		<u>193</u> 013	52.5	UNL FL 140(3 400) 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	22.4	UNL FL 140(2 100) Class A, D, G			
△ GUKSU 335251N 1264357E		<u>193</u> 012	19.6	UNL FL 140(1 700) Class A, D, G			
△ LOSNI 333315N 1264153E		<u>207</u> 027	10.8	UNL FL 140(7 600) 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	24.3	UNL FL 140(8 700) Class A, D, G			
▲ SOSDO 330012N 1262735E		<u>207</u> 027	29.5	UNL FL 140(1 500) Class A, D, G			
△ SAMLO 323223N 1261536E		<u>207</u> 027	30.2				
△ NIRAT 320354N 1260329E		<u>207</u> 027	18.1				
△ ELGEP 314653N 1255617E		<u>207</u> 027	12.1				
▲ TESIM 313526N 1255128E		<u>207</u> 026	100.9				
▲ ATOTI(FIR BDRY) 300013N 1251154E							
INCHEON FIR							
SANGHAI FIR							

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

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

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

Change : Information of reporting requirements for Y722.

OFFICE OF CIVIL AVIATION

AIRAC AIP AMDT 2/23
Effective : 1600UTC 22 MAR 2023

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

1. Critical DME : PSN<OMOTU/BESNA>, CJU<OMOTU/BESNA>

2. DME GAP : ANKUS/OMOTU, 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] 1	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna 2	MAG TRACK ° 3	Geodetic DIST NM 4	Upper limits Lower limits (MOCA) ft AMSL or FL Airspace classification 5	Direction of cruising levels 6		Remarks Controlling unit Frequency 7
					Odd	Even	
Y782 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.70 MHz 120.525 MHz 122.75 MHz ¹⁾ 1) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	174 354	12.4	UNL 4 500(3 000) Class A, D, G	↓		2) <i>Common frequency</i> Airspace Classification refer to ENR 3.1-1
△ POLEG 371249N 1265935E		174 354	7.4	UNL 4 500(2 000) Class A, D, G			
△ SONGTAN VORTAC(SOT) 370540N 1270154E		144 324	21.6	UNL 8 000(3 300) Class A, D, G			
▲ OSPOT 365018N 1272055E		144 324	10.4	UNL 8 000(4 200) Class A, D, G			
▲ VASLI 364252N 1273003E		144 324	21.9	UNL 10 000(4 500) Class A, D, G			
▲ MAKDU 362712N 1274909E		144 324	14.6	UNL 8 000(4 400) Class A, D, G			
▲ BITUX 361645N 1280148E		144 324	39.2	UNL 5 000(3 600) Class A, D, G			
△ DALSEONG VORTAC(TGU) 354835N 1283527E		162 342	20.4	UNL 4 000(3 000) Class A, D, G			
▲ KALOD 353012N 1284626E		162 342	25.4	UNL 4 000(3 000) Class A, D, G			
△ BUSAN VORTAC(PSN) 350721N 1285958E		162 342	26.6	UNL 4 000(3 000) Class A, D, G			
▲ APELA(FIR BDRY) 344323N 1291400E							
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	
1	2	3	4	5	6		7
Z50 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ EGOBA 372915N 1272246E △ SONGTAN VORTAC(SOT) 370540N 1270154E ▲ BULTI 364322N 1264930E	N/A						Daegu ACC FREQ : 128.70 MHz 134.175 MHz 122.75 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
		224 044	28.8	UNL FL 140(3 300) Class A, D, G		↓	
		213 032	24.4	UNL FL 140(2 900) Class A, D, G	↑		
Z51 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ BOPTA 364406N 1263658E △ MOXID 362311N 1264359E △ BEDES 360905N 1264844E	N/A						Incheon ACC FREQ : 132.15 MHz 123.55 MHz 132.20 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
		173 353	21.6	UNL FL 150(3 900) Class A, D, G		↓	
		173 353	14.6	UNL FL 150(3 600) Class A, D, G			
Z52 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ OLMEN 364413N 1265928E △ POSAN 365615N 1271316E △ KAKSO 370745N 1272637E	N/A						Incheon ACC FREQ : 126.175 MHz 134.375 MHz 132.20 MHz ³⁾ 3) Common frequency Airspace Classification refer to ENR 3.1-1
		051 231	16.4	UNL 8 000(3 400) Class A, D, G	↓		
		051 232	15.7	UNL 8 000(3 000) Class A, D, G		↑	
Z53 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] ▲ BITUX 361645N 1280148E △ TEBEX 363341N 1275929E △ BASEM 365037N 1275710E	N/A						Daegu ACC FREQ : 125.375 MHz 120.575 MHz 125.775 MHz 119.375 MHz 122.75 MHz ⁴⁾ 4) Common frequency Airspace Classification refer to ENR 3.1-1
		002 182	17.0	UNL FL 160(4 000) Class A, D, G		↓	
		002 182	17.0	UNL FL 160(4 600) Class A, D, G	↑		

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

Change : Information of reporting requirements for Z50, Z51, Z52 and Z53.

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
Z54 (RNAV2) [GNSS, DME/DME, DME/DME/IRU] △ SONGTAN VORTAC(SOT) 370540N 1270154E ▲ MONSI 371247N 1265015E △ GOGET 372442N 1263036E	N/A	<u>316</u> 136	11.7	<u>UNL</u> 8 000(2 400) Class A, D, G	↓ 		

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

Change : Information of reporting requirements for Z54, Z55 and Z56.

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
Z57 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 128.70 MHz 132.80 MHz 122.75 MHz ¹⁾
△ RILRO 371033N 1241442E	N/A	154 334	14.5	UNL FL 150(1 500) Class A, D, G	↓		1) Common frequency
△ DALPO 365835N 1242453E							Airspace Classification refer to ENR 3.1-1
1. Critical DME : SEL<RILRO/DALPO>, KUZ<RILRO/DALPO>							
Z63 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Daegu ACC FREQ : 134.175 MHz 123.65 MHz 122.75 MHz ²⁾
▲ PILIT 372631N 1291731E	N/A	064 245	26.1	UNL FL 250(1 500) Class A, G	↓		2) Common frequency
▲ NOMEX 374112N 1294441E							Airspace Classification refer to ENR 3.1-1
1. Critical DME : KAE<PILIT/NOMEX>, KPO<PILIT/NOMEX>							
Z81 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ³⁾
△ KIDOS 335028N 1263402E	N/A	182 001	27.5	UNL FL 140(8 700) Class A, D, G		↓	3) Common frequency
△ JEJU VORTAC(CJU) 332305N 1263727E							Airspace Classification refer to ENR 3.1-1
Z82 (RNAV2) [GNSS, DME/DME/IRU]							Incheon ACC FREQ : 124.525 MHz 132.425 MHz 132.20 MHz ⁴⁾
△ JEJU VORTAC(CJU) 332305N 1263727E	N/A	230 050	31.0	UNL FL 140(8 700) Class A, D, G		↓	4) Common frequency
▲ PANSI 330014N 1261225E							Airspace Classification refer to ENR 3.1-1
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 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
Z83 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							
△ DALSEONG VORTAC(TGU) 354835N 1283527E	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
▲ MASTA 352847N 1283340E		<u>192</u> 012	19.8	<u>UNL</u> 5 000(4 900) Class A, D, G		↓	
▲ SARAM 350736N 1283147E		<u>192</u> 012	21.2	<u>UNL</u> 5 000(3 800) Class A, D, G			
▲ ENGOT 344834N 1282952E		<u>193</u> 013	19.1	<u>UNL</u> 5 000(3 000) Class A, D, G			
▲ ANROD 343758N 1282952E		<u>188</u> 008	10.6	<u>UNL</u> 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	N/A				↓		Daegu ACC FREQ : 125.375 MHz 125.775 MHz 124.575 MHz 122.75 MHz ²⁾ 2) Common frequency Airspace Classification refer to ENR 3.1-1
▲ KALEK(FIR BDRY) 351232N 1295305E		<u>091</u> 272	43.8	<u>UNL</u> 8 000(3 100) Class A, D, G		↑	
INCHEON FIR							
FUKUOKA FIR							
Z85 (RNAV2) [GNSS, DME/DME/IRU]							
△ BILUM 334613N 1270439E	N/A	<u>192</u> 012	11.5	<u>UNL</u> 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
△ PAPLU 333441N 1270337E		<u>192</u> 011	64.5				
▲ RUGMA(FIR BDRY) 323012N 1265753E						↑	
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.

Change : Information of reporting requirements for Z83.

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] △ BONSO 302840N 1250851E ▲ ATOTI(FIR BDRY) 300013N 1251154E							Incheon ACC FREQ : 124.525 MHz 132.20 MHz ¹⁾ 1) Common frequency Airspace Classification refer to ENR 3.1-1
	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] △ BUSAN VORTAC(PSN) 350721N 1285958E ▲ INVOK(FIR BDRY) 344719N 1291923E							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	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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