

ENR 3.3 AREA NAVIGATION 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
<b>L512 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ TENAS 373820N 1313427E  △ SABET 373829N 1324019E  ▲ ANDOL(FIR BDRY) 373958N 1330000E	N/A	<u>098</u> 279	52.3	UNL FL 270(1 500) Class A, G	↓		<b>Daegu ACC</b>  FREQ : 122.250(125.925) MHz 263.350(263.85) MHz  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.
		<u>093</u> 274	15.7				
						↑	
	INCHEON FIR						
FUKUOKA FIR							
1. Critical DME : KAE<TENAS/SABET>, KPO<TENAS/SABET> 2. DME GAP : SABET/ANDOL, GNSS required.							
<b>Y233 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ BUSKO 374033N 1301610E  △ SELPA 375515N 1304911E  △ ONATA 382832N 1320602E  ▲ KANSU(FIR BDRY) 383800N 1322830E	N/A	<u>069</u> 250	30.0	UNL FL 200(1 500) Class A, D, G	↓		<b>Daegu ACC</b>  FREQ : 122.250(125.925) MHz 263.350(263.85) MHz  Airspace Classification refer to ENR 3.1-1
		<u>070</u> 251	69.1				
		<u>071</u> 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.

Change : Information of frequencies.

OFFICE OF CIVIL AVIATION

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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			
<b>Y253 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ 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						<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ : (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1			
		097 277	5.4	UNL 8 000(2 400) Class A, D, G	↓					
		097 278	2.6	UNL 8 000(2 000) Class A, D, G						
		097 278	22.1	UNL 8 000(5 200) Class A, D, G						
		098 278	13.5	UNL 8 000(5 400) Class A, D, G						
		098 278	44.7							
		098 278	1.6	UNL 8 000(2 400) Class A, D, G						
		098 279	11.9					UNL 8 000(4 000) Class A, D, G		
		099 279	11.2	UNL 8 000(3 500) Class A, D, G						
									↑	
		1. Critical DME : PSN<SAPDI/SARAM>, CJU<SAPDI/SARAM>, PSN<SARAM/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 controlling unit and frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency			
				Lower limits (MOCA) ft AMSL or FL  Airspace classification	Odd	Even				
1	2	3	4	5	6		7			
Y437 (RNAV2) [GNSS,DME/DME, DME/DME/IRU]  △ GANGWON VORTAC(KAE) 374203N 1284514E  △ LESBU 374116N 1294104E  ▲ UGOVI 374105N 1295051E  △ BUSKO 374033N 1301610E  △ TENAS 373820N 1313427E  △ MALSO 375440N 1314904E  ▲ KANSU(FIR BDRY) 383800N 1322830E	N/A						Daegu ACC  FREQ: (at or below FL 295) 134.175(123.65) MHz 272.40(233.60) MHz			
		<u>100</u> 280	44.3	<u>UNL</u> 8 000(6 400) Class A, D, G	↓		FREQ : (above FL 295) 122.250(125.925) MHz 263.350(263.85) MHz			
		<u>100</u> 280	7.8	<u>UNL</u> 8 000(1 500) Class A, D, G			Airspace Classification refer to ENR 3.1-1			
		<u>100</u> 281	20.1				Daegu ACC  FREQ : 122.250(125.925) MHz 263.350(263.85) MHz			
		<u>101</u> 281	62.2				Airspace Classification refer to ENR 3.1-1			
		<u>044</u> 224	20.0	<u>UNL</u> FL 200(1 500) Class A, D, G						
		<u>044</u> 225	53.3							
									↑	
		INCHEON FIR								
		PYONGYANG FIR								
		1. Critical DME : KAE<KAE/LESBU>, KPO<KAE/LESBU>, KAE<LESBU/UGOVI>, KPO<LESBU/UGOVI>, KAE<UGOVI/BUSKO>, KPO<UGOVI/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 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	
<b>Y571 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ 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	N/A						<b>Incheon ACC</b>  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  Airspace Classification refer to ENR 3.1-1
		<u>048</u> 229	17.4	<u>UNL</u> 11 000(1 500) Class A, D, G	↓		
		<u>049</u> 229	28.4	<u>UNL</u> 11 000(2 200) Class A, D, G			
		<u>056</u> 236	18.2	<u>UNL</u> 11 000(1 500) Class A, D, G			
		<u>056</u> 236	42.9	<u>UNL</u> 11 000(1 800) Class A, D, G			<b>Daegu ACC</b>  FREQ : 128.175(128.325) MHz 335.50(275.20) MHz  Airspace Classification refer to ENR 3.1-1
		<u>056</u> 237	34.4	<u>UNL</u> 11 000(2 100) Class A, D, G			
		<u>057</u> 237	26.6	<u>UNL</u> 11 000(2 800) Class A, D, G			
		<u>029</u> 209	12.8	<u>UNL</u> 11 000(3 000) Class A, D, G			
	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 Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency
					Odd	Even	
1	2	3	4	5	6		7
<b>Y572 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>
△ BUSAN VORTAC(PSN) 350721N 1285958E							FREQ : 128.175(128.325) MHz 335.50(275.20) MHz
△ OLMUD 350225N 1284916E		249 069	10.1	UNL 11 000(3 000) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
▲ ENGOT 344834N 1282952E		237 057	21.1	UNL 11 000(3 200) Class A, D, G			
▲ POVOR 341520N 1274400E		237 056	50.4	UNL 11 000(2 600) Class A, D, G			
▲ UPGOS 335733N 1271953E		236 056	26.8	UNL 11 000(2 000) Class A, D, G			
△ BILUM 334613N 1270439E		236 056	17.0	UNL 11 000(1 500) Class A, D, G			
△ BEPKO 333910N 1265514E	N/A	236 056	10.5	UNL 11 000(1 500) Class A, D, G			<b>Incheon ACC</b>
△ JEJU VORTAC(CJU) 332305N 1263727E		230 050	21.9	UNL 11 000(5 600) Class A, D, G			FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz
△ OMKIM 331320N 1264114E		169 349	10.2	UNL 11 000(8 700) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
▲ TOSAN 330012N 1264619E		169 349	13.8	UNL 11 000(1 500) Class A, D, G			※ The cruising levels from CJU to RUGMA are even levels due to operational reasons.
▲ RUGMA(FIR BDRY) 323012N 1265753E		169 349	31.5	UNL 11 000(1 500) Class A, D, G			※ The cruising levels from RUGMA to CJU are odd levels due to operational reasons.
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 : Information of frequencies.

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Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits 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
<b>Y579 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ TENAS 373820N 1313427E  △ AGSUS 364521N 1304044E  ▲ DABIK 361743N 1301143E  ▲ BULGA 355609N 1294924E  ▲ BEDOM 352513N 1291754E  △ BUSAN VORTAC(PSN) 350721N 1285958E	N/A						<b>Daegu ACC</b>  FREQ : 122.250(125.925) MHz 263.350(263.85) MHz  Airspace Classification refer to ENR 3.1-1
		228 047	68.1	UNL FL 140(1 500) Class A, D, G			
		229 049	36.2				<b>Daegu ACC</b>  FREQ : 120.575(119.375, 119.325, 134.375) MHz 254.70(335.75) MHz  Airspace Classification refer to ENR 3.1-1
		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.

\* 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
<b>Y644 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz
SANGHAI FIR							FREQ : (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  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) 371000N 1240000E  △ RILRO 371033N 1241442E  △ GONAV 371048N 1242453E  △ BODOL 371122N 1244954E  ▲ REBIT 371203N 1252913E  △ BELTU 371218N 1254759E  △ BOGAN 371241N 1262812E  ▲ MONSI 371247N 1265015E  △ POLEG 371249N 1265935E  △ EGOBA 372915N 1272246E	N/A	<u>095</u> 276	11.8	UNL FL 150(1 500) Class A, D, G	↓		
		<u>096</u> 276	8.1				
		<u>096</u> 277	20.0				
		<u>097</u> 277	31.4				
		<u>097</u> 278	15.0				
		<u>098</u> 278	32.1	UNL 8 000(2 400) Class A, D, G			
		<u>098</u> 278	17.6	UNL 8 000(3 200) Class A, D, G			
		<u>098</u> 278	7.5	UNL 8 000(2 400) Class A, D, G			
		<u>057</u> 237	24.7	UNL FL 140(3 300) Class A, D, G			
1. Critical DME : SEL<AGAVO/RILRO>, KUZ<AGAVO/RILRO>, SEL<RILRO/GONAV>, KUZ<RILRO/GONAV>, SEL<MONSI/POLEG>, SOT<MONSI/POLEG>, SEL<POLEG/EGOBA>, SOT<POLEG/EGOBA>							

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

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  ▲ BIDRI 362007N 1242453E  ▲ DANPA 353036N 1242453E    ▲ PALSA 340131N 1242453E      △ TOLIS 335030N 1242453E    ▲ ENSUM 321302N 1244635E  △ BONSO 302840N 1250851E  ▲ ATOTI(FIR BDRY) 300013N 1251154E	N/A						Daegu ACC  FREQ : (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz		
			188 008	12.2	UNL FL 140(1 500)  Class A, D, G	↓		FREQ : (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz	
			188 008	17.8				Airspace Classification refer to ENR 3.1-1	
			188 008	20.6					
			188 008	49.4					
			188 007	88.9				Incheon ACC FREQ : (below FL 255) 126.175(134.375) MHz 317.85(335.55) MHz FREQ : (at or above FL 255) 132.15(123.55) MHz 263.15(272.60) MHz Airspace Classification refer to ENR 3.1-1	
			187 007	11.0				Incheon ACC FREQ : (below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz FREQ : (at or above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz Airspace Classification refer to ENR 3.1-1	
			177 356	99.0				Incheon ACC FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz Airspace Classification refer to ENR 3.1-1	
			176 356	105.9				FL 220 FL 150(1 500) Class A, D	Incheon ACC FREQ : (below FL 335) 125.725(132.825, 128.375) MHz 232.95(233.15) MHz
			181 001	28.5					FREQ : (at or above FL 335) 133.425(132.425) MHz 234.35(234.65) MHz
		INCHEON FIR							Airspace Classification refer to ENR 3.1-1
		FUKUOKA FIR							
		1. Critical DME : SEL<GONAV/DALPO>, KUZ<GONAV/DALPO>, SEL<DALPO/NONOS>, KUZ<DALPO/NONOS>, SEL<NONOS/BIDRI>, KUZ<NONOS/BIDRI>, SEL<BIDRI/DANPA>, KUZ<BIDRI/DANPA> 2. DME GAP : DANPA/PALSA, PALSA/TOLIS, TOLIS/ENSUM, ENSUM/BONSO, BONSO/ATOTI 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 : (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz		
		072 253	54.7	10 000 8 000(7 100) Class D	↓		FREQ : (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz		
		073 254	41.6	10 000 8 000(4 800) Class D			Airspace Classification refer to ENR 3.1-1		
							↑	Daegu ACC  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  Airspace Classification refer to ENR 3.1-1	

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

Change : Information of Y655.



Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits	Direction of cruising levels		Remarks Controlling unit Frequency			
				Lower limits (MOCA) ft AMSL or FL Airspace classification	Odd	Even				
1	2	3	4	5	6		7			
Y659 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]  △ GUNSAN VORTAC(KUZ) 355437N 1263641E  △ ELPOS 355410N 1264707E  △ RINBO 355352N 1265349E  △ MELES 355251N 1271542E  △ OPEDA 355149N 1273652E  △ DALSEONG VORTAC(TGU) 354835N 1283527E  ▲ LAPAL 355413N 1290452E  △ POHANG VORTAC(KPO) 355838N 1292828E	N/A					Incheon ACC  FREQ: (at or below FL255) 126.175(134.375) MHz 317.85(335.55) MHz  FREQ : (above FL 255) 132.15(123.55) MHz 263.15(272.60) MHz  Airspace Classification refer to ENR 3.1-1  Daegu ACC  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  Airspace Classification refer to ENR 3.1-1				
		<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)						
				Class D						
		<u>102</u> 282	17.2	<u>10 000</u> 7 000(5 000)						
				Class D						
		<u>102</u> 282	47.7	<u>10 000</u> 7 000(6 600)						
				Class D						
		<u>085</u> 265	24.6	<u>UNL</u> 6 000(4 200)						
				Class A, D, G						
		<u>085</u> 265	19.7	<u>UNL</u> 6 000(3 300)						
				Class A, D, G						
						↑				
Y677 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]  △ TOLIS 335030N 1242453E  ▲ LIMDI 333313N 1254953E  △ REMOS 332605N 1262329E  △ JEJU VORTAC(CJU) 332305N 1263727E  ▲ TAMNA 332815N 1271953E  ▲ SAMDO(FIR BDRY) 333503N 1281857E	N/A					Incheon ACC  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  Airspace Classification refer to ENR 3.1-1				
		<u>111</u> 291	73.0	<u>UNL</u> 9 000(1 500)	↓					
				Class A, D, G						
		<u>111</u> 292	29.0	<u>UNL</u> 9 000(4 100)						
				Class A, D, G						
		<u>112</u> 292	12.1	<u>UNL</u> 9 000(8 700)						
				Class A, D, G						
		<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 FIR										
FUKUOKA FIR										
1. Critical DME : KWA<LIMDI/REMOS>, CJU<LIMDI/REMOS>, PSN<CJU/TAMNA>, CJU<CJU/TAMNA>, PSN<TAMNA/SAMDO>, CJU<TAMNA/SAMDO> 2. DME GAP : TOLIS/LIMDI, REMOS/CJU GNSS required.										

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

Change : Information of Y677, controlling unit and frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits 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
<b>Y685 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ: (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz
△ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	133 313	10.7	UNL 8 000(3 200) Class A, D, G	↓		Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTY or RKT1.  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		133 313	19.3	UNL 8 000(2 900) Class A, D, G			
△ KAKSO 370745N 1272637E		133 313	11.5	UNL 8 000(3 600) Class A, D, G			
▲ GUKDO 370111N 1273823E		133 314	9.2	UNL 8 000(3 700) Class A, D, G			
△ ENSAL 365554N 1274747E		134 314	9.2	UNL 8 000(4 000) Class A, D, G			
△ BASEM 365037N 1275710E		134 314	12.5	UNL 8 000(5 000) Class A, D, G			
▲ BIGOB 364325N 1280952E		134 314	9.5	UNL 8 000(4 900) Class A, D, G			
△ YECHEON VOR(CUN) 363755N 1281931E		133 314	30.8	UNL 8 000(3 800) Class A, D, G			
△ ELAPI 362014N 1285051E		134 314	37.3	UNL 8 000(4 700) Class A, D, G			
△ POHANG VORTAC(KPO) 355838N 1292828E		107 287	17.2	UNL 8 000(2 100) Class A, D, G			
▲ BULGA 355609N 1294924E		107 287	44.4	UNL 8 000(1 500) Class A, D, G			
▲ SAPRA(FIR BDRY) 354926N 1304325E							
INCHEON FIR							Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							

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

Change : Information of frequencies.

OFFICE OF CIVIL AVIATION

AIRAC AIP AMDT 11/23  
Effective : 1600UTC 29 NOV 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
<b>Y697 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz
SANGHAI FIR							
INCHEON FIR							
▲ AGAVO(FIR BDRY) 371000N 1240000E	N/A	064 244	7.5	UNL  FL 150(1 500) Class A, D, G			FREQ: (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  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		066 246	16.2				
△ NOGON 372250N 1242505E		097 277	20.0				
△ ANSIM 372323N 1245009E		097 277	19.0				
▲ BINIL 372349N 1251359E		097 277	20.0				
▲ NOPIK 372412N 1253905E		097 278	41.0	UNL 8 000(2 100) Class A, D, G			↓
△ GOGET 372442N 1263036E		098 278	20.0	UNL 7 500(3 400) Class A, D, G			
△ ANYANG VORTAC(SEL) 372449N 1265542E		087 267	22.0	UNL 7 500(5 100) Class A, D, G			
△ EGOBA 372915N 1272246E		087 267	13.9	UNL 7 500(4 500) Class A, D, G			
▲ KARBU 373159N 1273952E		087 268	22.9	UNL 7 500(7 500) Class A, D, G			
▲ TORUS 373625N 1280807E		088 268	21.8	UNL 7 500(7 100) Class A, D, G			
▲ BIKSI 374032N 1283504E		088 268	8.2	UNL 8 000(7 100) Class A, D, G			
△ GANGWON VORTAC(KAE) 374203N 1284514E		130 310	30.0	UNL 9 000(1 500) Class A, D, G			
▲ PILIT 372631N 1291731E		130 310	31.2				
▲ ESNEG 371014N 1295051E		130 310	47.1				
△ AGSUS 364521N 1304044E		130 311	42.9				↑
▲ LANAT(FIR BDRY) 362224N 1312542E							
INCHEON FIR							Airspace Classification refer to ENR 3.1-1
FUKUOKA FIR							

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

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

Change : Information of 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	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		
<b>Y711 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ MONSI 371247N 1265015E  ▲ BULTI 364322N 1264930E  ▲ MEKIL 363322N 1264953E  △ GONAX 362311N 1265016E  △ BEDES 360905N 1264844E  △ ELPOS 355410N 1264707E  ▲ MANGI 353011N 1264432E  △ DALSU 350731N 1264206E  △ NULDI 342514N 1263739E  ▲ DOTOL 341515N 1263637E  △ KIDOS 335028N 1263402E  △ REMOS 332605N 1262329E  ▲ PANSI 330014N 1261225E  △ DOMKO 322848N 1255859E  △ PONIK 320021N 1254659E  △ IKEDO 314314N 1253948E  ▲ KANKA 313155N 1253504E  △ BONSO 302840N 1250851E  ▲ MUGUS(FIR BDRY) 300006N 1245712E	N/A						<b>Daegu ACC</b> FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz		
		<u>190</u> 010	29.4	<u>UNL</u> FL 140(2 900) Class A, D, G			↓	FREQ: (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>187</u> 007	10.0					<b>Incheon ACC</b>  FREQ: (at or below FL 255) 126.175(134.375) MHz 317.85(335.55) MHz  FREQ: (above FL 255) 132.15(123.55) MHz 263.15(272.60) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>187</u> 006	10.2	<u>UNL</u> FL 140(3 200) Class A, D, G					
		<u>193</u> 013	14.1					<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>193</u> 013	14.9	<u>UNL</u> FL 140(2 200) Class A, D, G					
		<u>193</u> 013	24.0	<u>UNL</u> FL 140(2 800) Class A, D, G				<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>193</u> 013	22.7	<u>UNL</u> FL 140(3 800) Class A, D, G					
		<u>193</u> 013	42.4	<u>UNL</u> FL 140(4 000) Class A, D, G				<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>193</u> 013	10.0	<u>UNL</u> FL 140(3 300) Class A, D, G					
		<u>193</u> 012	24.8	<u>UNL</u> FL 140(2 700) Class A, D, G				<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>207</u> 027	25.9	<u>UNL</u> FL 140(6 000) Class A, D, G					
		<u>207</u> 027	27.4	<u>UNL</u> FL 140(6 300) Class A, D, G				<b>Incheon ACC</b>  FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz  FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>207</u> 027	33.4						
		<u>207</u> 027	30.1					<b>Incheon ACC</b>  FREQ: (At or above FL 335) 133.425(132.425) MHz 234.35(234.65) MHz  FREQ: (below FL 335) 125.725(132.825, 128.375) MHz 232.95(233.15) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>207</u> 026	18.2	<u>UNL</u> FL 140(1 500) Class A, D, G					
		<u>207</u> 026	12.0					<b>Incheon ACC</b>  FREQ: (At or above FL 335) 133.425(132.425) MHz 234.35(234.65) MHz  FREQ: (below FL 335) 125.725(132.825, 128.375) MHz 232.95(233.15) MHz  Airspace Classification refer to ENR 3.1-1	
		<u>207</u> 026	67.0						
		<u>206</u> 026	30.2						
		INCHEON FIR							
		FUKUOKA FIR							

1. Critical DME : KWA<DOTOL/KIDOS>, CJU<DOTOL/KIDOS>  
2. DME GAP : KIDOS/REMOS, REMOS/PANSI, PANSI/DOMKO, DOMKO/PONIK, PONIK/KANKA, KANKA/BONSO, BONSO/MUGUS GNSS required.

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.

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
<b>Y722 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Incheon ACC</b>
△ SONGTAN VORTAC(SOT) 370540N 1270154E							FREQ: (at or below FL 255) 126.175(134.375) MHz 317.85(335.55) MHz
▲ OLMEN 364413N 1265928E		<u>194</u> 014	21.5	UNL FL 140(3 100) Class A, D, G			FREQ: (above FL 255) 132.15(123.55) MHz 263.15(272.60) MHz
△ GUNKU 363414N 1265949E		<u>187</u> 007	10.0	UNL FL 140(3 600) Class A, D, G			Airspace Classification refer to ENR 3.1-1
▲ PEBRI 362311N 1270013E		<u>187</u> 007	11.0	UNL FL 140(3 300) Class A, D, G			
△ 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			<b>Incheon ACC</b>
△ SAMUL 350736N 1265154E		<u>193</u> 013	22.7	UNL FL 140(4 000) Class A, D, G			FREQ: (at or below FL 255) 120.725(128.30) MHz 263.90(272.75) MHz
▲ KAMIT 341514N 1264618E		<u>193</u> 013	52.5	UNL FL 140(3 400) Class A, D, G			FREQ: (above FL 255) 123.725(124.50) MHz 239.25(275.40) MHz
△ GUKSU 335251N 1264357E	N/A	<u>193</u> 013	22.4	UNL FL 140(2 100) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ LOSNI 333315N 1264153E		<u>193</u> 012	19.6	UNL FL 140(1 700) Class A, D, G			<b>Incheon ACC</b>
△ JEJU VORTAC(CJU) 332305N 1263727E		<u>207</u> 027	10.8	UNL FL 140(7 600) Class A, D, G			FREQ: 124.525(132.425) MHz 255.40(233.50), 348.10) MHz
▲ SOSDO 330012N 1262735E		<u>207</u> 027	24.3	UNL FL 140(8 700) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ SAMLO 323223N 1261536E		<u>207</u> 027	29.5				
△ NIRAT 320354N 1260329E		<u>207</u> 027	30.2				<b>Incheon ACC</b>
△ ELGEP 314653N 1255617E		<u>207</u> 027	18.1	UNL FL 140(1 500) Class A, D, G			FREQ: (At or above FL 335) 133.425(132.425) MHz 234.35(234.65) MHz
▲ TESIM 313526N 1255128E		<u>207</u> 027	12.1				FREQ: (below FL 335) 125.725(132.825), 128.375) MHz 232.95(233.15) MHz
▲ ATOTI(FIR BDRY) 300013N 1251154E		<u>207</u> 026	100.9				Airspace Classification refer to ENR 3.1-1
INCHEON FIR							
SANGHAI FIR							

1. Critical DME : KWA&lt;KAMIT/GUKSU&gt;, CJU&lt;KAMIT/GUKSU&gt;

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.

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
<b>Y744 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ <b>PILIT</b> 372631N 1291731E  ▲ <b>NOBUT</b> 370715N 1291957E  ▲ <b>OSVOM</b> 363844N 1292331E  ▲ <b>LOSTO</b> 362016N 1292548E  △ <b>POHANG VORTAC(KPO)</b> 355838N 1292828E  ▲ <b>APARU</b> 352442N 1290932E  △ <b>BUSAN VORTAC(PSN)</b> 350721N 1285958E	N/A						<b>Daegu ACC</b>  FREQ : (at or below FL 295) 134.175(123.65) MHz 272.40(233.60) MHz  FREQ : (above FL 295) 122.250(125.925) MHz 263.350(263.85) MHz  1. 11 000 ft to FL 240, at or above FL 280 will be blocked.  2. At or above 11 000 ft, required 15 days PPR from Air Traffic Management Office.  3. Airspace Classification refer to ENR 3.1-1
		<u>183</u> 003	19.3	<u>UNL</u> 9 000(4 900) Class A, D, G			

\* 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	
<b>Y782 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>
△ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	174 354	12.4	UNL 4 500(3 000) Class A, D, G	↓		FREQ : (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz
△ POLEG 371249N 1265935E		174 354	7.4	UNL 4 500(2 000) Class A, D, G			FREQ : (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz
△ SONGTAN VORTAC(SOT) 370540N 1270154E		144 324	21.6	UNL 8 000(3 300) Class A, D, G			Airspace Classification refer to ENR 3.1-1
▲ OSPOT 365018N 1272055E		144 324	10.4	UNL 8 000(4 200) Class A, D, G			<b>Daegu ACC</b>  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  Airspace Classification refer to ENR 3.1-1
▲ VASLI 364252N 1273003E		144 324	21.9	UNL 8 000(4 200) Class A, D, G			
▲ MAKDU 362712N 1274909E		144 324	14.6	UNL 10 000(4 500) Class A, D, G			
▲ BITUX 361645N 1280148E		162 342	20.4	UNL 8 000(4 400) Class A, D, G			
△ DALSEONG VORTAC(TGU) 354835N 1283527E		162 342	25.4	UNL 5 000(3 600) Class A, D, G			
▲ KALOD 353012N 1284626E		162 342	26.6	UNL 4 000(3 000) Class A, D, G			
△ BUSAN VORTAC(PSN) 350721N 1285958E							
▲ 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
<b>Z50 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ EGOBA 372915N 1272246E  △ SONGTAN VORTAC(SOT) 370540N 1270154E  ▲ BULTI 364322N 1264930E							<b>Daegu ACC</b>  FREQ: (at or below FL295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ: (above FL295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1
	N/A	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	↑		
<b>Z51 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ BOPTA 364406N 1263658E  △ MOXID 362311N 1264359E  △ BEDES 360905N 1264844E							<b>Incheon ACC</b>  FREQ: (at or below FL255) 126.175(134.375) MHz 317.85(335.55) MHz  FREQ: (above FL255) 132.15(123.55) MHz 263.15(272.60) MHz  Airspace Classification refer to ENR 3.1-1
	N/A	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			
<b>Z52 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ OLMEN 364413N 1265928E  △ POSAN 365615N 1271316E  △ KAKSO 370745N 1272637E							<b>Incheon ACC</b>  FREQ: (at or below FL255) 126.175(134.375) MHz 317.85(335.55) MHz  FREQ: (above FL255) 132.15(123.55) MHz 263.15(272.60) MHz  Airspace Classification refer to ENR 3.1-1
	N/A	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		↑	
<b>Z53 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  ▲ BITUX 361645N 1280148E  △ TEBEX 363341N 1275929E  △ BASEM 365037N 1275710E							<b>Daegu ACC</b>  FREQ: (at or below FL295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ: (above FL295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1
	N/A	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 frequencies.



Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits Lower limits (MOCA) ft AMSL or FL  Airspace classification	Direction of cruising levels		Remarks Controlling unit Frequency		
					Odd	Even			
1	2	3	4	5	6		7		
<b>Z54</b> <b>(RNAV2)</b> <b>[GNSS, DME/DME, DME/DME/IRU]</b>  △ 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		↓	<b>Daegu ACC</b>  FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ: (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1		
				<u>316</u> 136				19.7	<u>UNL</u> 8 000(2 300) Class A, D, G
								↑	
<b>Z55</b> <b>(RNAV2)</b> <b>[GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ: (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ: (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1		
SANGHAI FIR									
INCHEON FIR									
▲ AGAVO(FIR BDRY) 371000N 1240000E	N/A	<u>154</u> 334	35.4	<u>UNL</u> FL 140(1 500) Class A, D, G		↑			
▲ NONOS 364046N 1242453E									
1. Critical DME : SEL<AGAVO/NONOS>, KUZ<AGAVO/NONOS>									
<b>Z56</b> <b>(RNAV2)</b> <b>[GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ : 122.250(125.925) MHz 263.350(263.85) MHz  Airspace Classification refer to ENR 3.1-1		
PYONGYANG FIR									
INCHEON FIR									
▲ KANSU(FIR BDRY) 383800N 1322830E	N/A	<u>180</u> 360	40.2	<u>UNL</u> FL 200(1 500) Class A, G	↓				
△ PALDU 375813N 1323625E		<u>180</u> 360	19.9						
△ SABET 373829N 1324019E		<u>180</u> 360	19.9						
▲ IGRAS(FIR BDRY) 371846N 1324411E									
INCHEON FIR									
FUKUOKA FIR									
1. Critical DME : KAE<PALDU/SABET>, KPO<PALDU/SABET>, KAE<SABET/IGRAS>, KPO<SABET/IGRAS> 2. DME GAP : KANSU/PALDU. GNSS 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
<b>Z57 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ : (at or below FL 295) 128.70(118.925) MHz 270.50(263.60) MHz  FREQ : (above FL 295) 132.80(120.525) MHz 290.60(335.45) MHz  Airspace Classification refer to ENR 3.1-1
△ RILRO 371033N 1241442E	N/A	154 334	14.5	UNL FL 150(1 500) Class A, D, G	↓		
△ DALPO 365835N 1242453E							
1. Critical DME : SEL<RILRO/DALPO>, KUZ<RILRO/DALPO>							
<b>Z63 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Daegu ACC</b>  FREQ : (at or below FL 295) 134.175(123.65) MHz 272.40(233.60) MHz  FREQ : (above FL 295) 122.250(125.925) MHz 263.350(263.85) MHz  Airspace Classification refer to ENR 3.1-1
▲ PILIT 372631N 1291731E	N/A	060 241	23.8	UNL FL 250(1 500) Class A, G	↓		
△ LESBU 374116N 1294104E							
1. Critical DME : KAE<PILIT/LESBU>, KPO<PILIT/LESBU>							
<b>Z81 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>							<b>Incheon ACC</b>  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  Airspace Classification refer to ENR 3.1-1
△ KIDOS 335028N 1263402E	N/A	182 001	27.5	UNL FL 140(8 700) Class A, D, G		↓	
△ JEJU VORTAC(CJU) 332305N 1263727E							
<b>Z82 (RNAV2) [GNSS, DME/DME/IRU]</b>							<b>Incheon ACC</b>  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  Airspace Classification refer to ENR 3.1-1
△ JEJU VORTAC(CJU) 332305N 1263727E	N/A	230 050	31.0	UNL FL 140(8 700) Class A, D, G		↓	
▲ PANSI 330014N 1261225E							
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	
<b>Z83 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ DALSEONG VORTAC(TGU) 354835N 1283527E  ▲ MASTA 352847N 1283340E  ▲ SARAM 350736N 1283147E  ▲ ENGOT 344834N 1282952E  ▲ ANROD 343758N 1282952E	N/A						<b>Daegu ACC</b>  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  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.							
<b>Z84 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ BUSAN VORTAC(PSN) 350721N 1285958E  ▲ KALEK(FIR BDRY) 351232N 1295305E	N/A						<b>Daegu ACC</b>  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  Airspace Classification refer to ENR 3.1-1
		091 272	43.8	UNL 8 000(3 100) Class A, D, G	↓	↑	
INCHEON FIR							
FUKUOKA FIR							
<b>Z85 (RNAV2) [GNSS, DME/DME/IRU]</b>  △ 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	↓		<b>Incheon ACC</b>  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  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.

Change : Information of frequencies.

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits 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
<b>Z86 (RNAV2) [GNSS, DME/DME/IRU]</b>  △ BONSO 302840N 1250851E  ▲ ATOTI(FIR BDRY) 300013N 1251154E							<b>Incheon ACC</b>  FREQ : 124.525(132.425) MHz 255.40(233.50, 348.10) MHz  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.							
<b>Z91 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]</b>  △ BUSAN VORTAC(PSN) 350721N 1285958E  ▲ INVOK(FIR BDRY) 344719N 1291923E							<b>Daegu ACC</b>  FREQ : 125.375(125.775, 124.575) MHz 234.15(317.35, 335.50) MHz  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
<b>Y590 (RNAV2) [GNSS, DME/DME/IRU]</b>							<b>Incheon ACC</b>  FREQ: (at or above FL 335) 133.425(132.425) MHz 234.35(234.65) MHz  FREQ: (below FL 335) 125.725(132.825, 128.375) MHz 232.95(233.15) MHz  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

Change : Information of frequencies.

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