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

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

Change : Information of title and index number(ENR 3.3 → 3.2).

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 Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y253 **(RNAV2)** **[GNSS, DME/DME, DME/DME/IRU]**							**Incheon ACC** FREQ : 123.725 MHz 124.50 MHz 132.20 MHz[1)] *1) Common frequency* Airspace Classification refer to ENR 3.1-1
△ DALSU 350731N 1264206E	N/A	097 / 277	5.4	UNL / 8 000(2 400) Class A, D, G	↓		
△ GWANGJU VOR(KWA) 350734N 1264844E		097 / 278	2.6	UNL / 8 000(2 000) Class A, D, G			
△ SAMUL 350736N 1265154E		097 / 278	22.1	UNL / 8 000(5 200) Class A, D, G			
△ TEDAN 350744N 1271852E		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
△ ANUBA 350746N 1273523E		098 / 278	44.7				
△ SAPDI 350737N 1282952E		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
△ SARAM 350736N 1283147E		098 / 279	11.9	UNL / 8 000(4 000) Class A, D, G			
△ ANKUS 350730N 1284616E		099 / 279	11.2	UNL / 8 000(3 500) Class A, D, G		↑	
▲ BUSAN VORTAC(PSN) 350721N 1285958E							

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 : 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels: Odd	Direction of cruising levels: Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y437 **(RNAV2)** **[GNSS,DME/DME, DME/DME/IRU]**							**Daegu ACC** FREQ : 122.25 MHz 125.925 MHz 122.75 MHz[1)] *1) Common frequency*
▲ GANGWON VORTAC(KAE) 374203N 1284514E	N/A	100 / 280	47.2	UNL / 8 000(6 400) / Class A, D, G	↓		Airspace Classification refer to ENR 3.1-1
△ NOMEX 374112N 1294441E		100 / 281	25.0	UNL / 8 000(1 500) / Class A, D, G			
△ BUSKO 374033N 1301610E		101 / 281	62.2				
▲ TENAS 373820N 1313427E		044 / 224	20.0	UNL / FL 200(1 500) / Class A, D, G			
△ MALSO 375440N 1314904E		044 / 225	53.3			↑	
▲ KANSU(FIR BDRY) 383800N 1322830E							
INCHEON FIR							
PYONGYANG FIR							

1. Critical DME : KAE<KAE/NOMEX>, KPO<KAE/NOMEX>, KAE<NOMEX/BUSKO>, KPO<NOMEX/BUSKO>, KAE<BUSKO/TENAS>, KPO<BUSKO/TENAS>, KAE<TENAS/MALSO>, KPO<TENAS/MALSO>
2. DME GAP : MALSO/KANSU GNSS or DME/DME/IRU required.

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

Route designator (Navigation specification) Name of significant points Coordinates [Navigation Specification limitation]	Waypoint IDENT of VOR/DME BRG & DIST ELEV DME Antenna	MAG TRACK °	Geodetic DIST NM	Upper limits / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y571 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**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	N/A	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			**Daegu ACC** FREQ : 128.175 MHz 124.575 MHz 122.75 MHz[2)] *2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ 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.

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

Change : Information of controlling unit and frequencies for Y571.

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 Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y572 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ : 128.175 MHz 124.575 MHz 122.75 MHz[2)] *2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ PSN 350721N 1285958E						↓	
△ OLMUD 350225N 1284916E		249 / 069	10.1	UNL / 11 000(3 000) Class A, D, G			
△ ENGOT 344834N 1282952E		237 / 057	21.1	UNL / 11 000(3 200) Class A, D, G			
△ POVOR 341520N 1274360E		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	N/A	236 / 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 level from RUGMA to CJU are odd levels due to operational reasons.
△ BEPKO 333910N 1265514E		236 / 056	10.5	UNL / 11 000(1 500) Class A, D, G			
△ CJU 332305N 1263727E		230 / 050	21.9	UNL / 11 000(5 600) Class A, D, G			
△ OMKIM 331320N 1264114E		169 / 349	10.2	UNL / 11 000(8 700) Class A, D, G		↓	
△ TOSAN 330012N 1264619E		169 / 349	13.8	UNL / 11 000(1 500) Class A, D, G			
△ RUGMA(FIR BDRY) 323012N 1265753E		169 / 349	31.5	UNL / 11 000(1 500) Class A, D, G	↑		
INCHEON FIR							
SHANGHAI 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 controlling unit and frequencies for Y572.

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 Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y579 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**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
▲ TENAS 373820N 1313427E	N/A	228 / 047	68.1	UNL / FL 140(1 500) Class A, D, G		↓	
△ AGSUS 364521N 1304044E		229 / 049	36.2				
▲ DABIK 361743N 1301143E		229 / 048	28.1				
△ BULGA 355609N 1294924E		228 / 048	40.2	UNL / FL 140(2 700) Class A, D, G			
▲ BEDOM 352513N 1291754E		228 / 047	23.1	UNL / FL 140(3 800) Class A, D, G	↑		
▲ BUSAN VORTAC(PSN) 350721N 1285958E							

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 / Airspace classification	Direction of cruising levels: Odd	Direction of cruising levels: Even	Remarks Controlling unit Frequency
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)] *1) Common frequency*
SANGHAI FIR							
INCHEON FIR							
▲ AGAVO(FIR BDRY) 371010N 1235953E							
△ RILRO 371033N 1241442E	N/A	096 / 276	11.8	UNL / FL 150(1 500) / Class A, D, G	↓		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
		096 / 276	8.1				
▲ GONAV 371048N 1242453E		096 / 277	20.0				
△ BODOL 371122N 1244954E		097 / 277	31.4				
△ REBIT 371203N 1252913E		097 / 278	15.0				
△ BELTU 371218N 1254759E		098 / 278	32.1	UNL / 8 000(2 400) / Class A, D, G			
△ BOGAN 371241N 1262812E		098 / 278	17.6	UNL / 8 000(3 200) / Class A, D, G			
△ MONSI 371247N 1265015E		098 / 278	7.5	UNL / 8 000(2 400) / Class A, D, G			
▲ POLEG 371249N 1265935E		057 / 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 : 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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y655 (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
▲ GONAV 371048N 1242453E	N/A	188/008	12.2	UNL / FL 140(1 500) Class A, D, G	↓		
△ DALPO 365835N 1242453E		188/008	17.8				
△ NONOS 364046N 1242453E		188/008	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
△ DANPA 353036N 1242453E		188/007	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
△ PALSA 340131N 1242453E		187/007	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
△ TOLIS 335030N 1242453E		111/291	73.0	UNL / 9 000(1 500) Class A, D, G			
△ LIMDI 333313N 1254953E		111/292	29.0	UNL / 9 000(4 100) Class A, D, G			
△ REMOS 332605N 1262329E		112/292	12.1	UNL / 9 000(8 700) Class A, D, G		↑	
▲ JEJU VORTAC(CJU) 332305N 1263727E							
1. Critical DME : SEL<GONAV/DALPO>, KUZ<GONAV/DALPO>, SEL<DALPO/NONOS>, KUZ<DALPO/NONOS>, SEL<NONOS/DANPA>, KUZ<NONOS/DANPA>, KWA<LIMDI/REMOS>, CJU<LIMDI/REMOS> 2. DME GAP : DANPA/PALSA, PALSA/TOLIS, TOLIS/LIMDI, REMOS/CJU GNSS or DME/DME/IRU required							
Y657 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Incheon ACC** FREQ : 123.725MHz 124.50 MHz 132.20 MHz[5] *5) Common frequency* Airspace Classification refer to ENR 3.1-1
△ GWANGJU VOR(KWA) 350734N 1264844E	N/A	072/253	54.7	10 000 / 8 000(7 100) Class D	↓		
△ IGDOK 353104N 1274907E		073/254	41.6	10 000 / 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
▲ DALSEONG VORTAC(TGU) 354835N 1283527E							

* RNAV2 represents a navigation accuracy of ±2 NM 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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
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	101/281	8.5	10 000 / 7 000(1 700) Class D	↓		
△ ELPOS 355410N 1264707E		101/281	5.5				
△ RINBO 355352N 1265349E		101/282	17.8	10 000 / 7 000(3 700) Class D			
△ MELES 355251N 1271542E		102/282	17.2	10 000 / 7 000(5 000) Class D			
▲ OPEDA 355149N 1273652E		102/282	47.7	10 000 / 7 000(6 600) Class D			**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
▲ DALSEONG VORTAC(TGU) 354835N 1283527E		085/265	24.6	UNL / 6 000(4 200) Class A, D, G			
△ LAPAL 355413N 1290452E		085/265	19.7	UNL / 6 000(3 300) Class A, D, G		↑	
▲ POHANG VORTAC(KPO) 355838N 1292828E							
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	089/269	35.9	UNL / 9 000(6 300) Class A, D, G	↓		
△ TAMNA 332815N 1271953E		089/270	49.8	UNL / 9 000(1 500) Class A, D, G		↑	**Incheon ACC** FREQ: 128.175 MHz 128.325 MHz 132.20 MHz[4] *4) Common frequency* Airspace Classification refer to ENR 3.1-1
▲ SAMDO(FIR BDRY) 333503N 1281857E							
INCHEON FIR							
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 : 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
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* Only flying westbound from KPO to SEL on Y685 is authorized except ACFT departing from RKTY or RKTI. 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
▲ ANYANG VORTAC(SEL) 372449N 1265542E	N/A	133/313	10.7	UNL / 8 000(3 200) / Class A, D, G	↓		
▲ 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			**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 RKTI. 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
△ ENSAL 365554N 1274747E		134/314	9.2	UNL / 8 000(4 000) / Class A, D, G			
△ BASEM 365037N 1275710E		134/314	12.5	UNL / 8 000(5 000) / Class A, D, G			
▲ BIGOB 364325N 1280952E		134/314	9.5	UNL / 8 000(4 900) / Class A, D, G			
△ YECHEON VOR(CUN) 363755N 1281931E		133/314	30.8	UNL / 8 000(3 800) / Class A, D, G			
△ ELAPI 362014N 1285051E		134/314	37.3	UNL / 8 000(4 700) / Class A, D, G			
▲ POHANG VORTAC(KPO) 355838N 1292828E		107/287	17.2	UNL / 8 000(2 100) / Class A, D, G			
△ BULGA 355609N 1294924E		107/287	44.4	UNL / 8 000(1 500) / Class A, D, G	↑		
▲ SAPRA(FIR BDRY) 354926N 1304325E							
INCHEON FIR							
FUKUOKA FIR							

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

Change : 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
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] *1) Common frequency*
SANGHAI FIR							
INCHEON FIR							
▲ AGAVO(FIR BDRY) 371010N 1235953E							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	N/A	066 / 246	7.5	UNL / FL 150(1 500) Class A, D, G			
△ NOGON 372250N 1242505E		066 / 246	16.2				
△ ANSIM 372323N 1245009E		097 / 277	20.0				
△ BINIL 372349N 1251359E		097 / 277	19.0				
△ NOPIK 372412N 1253905E		097 / 277	20.0				
△ GOGET 372442N 1263036E		097 / 278	41.0	UNL / 8 000(2 100) Class A, D, G			
▲ ANYANG VORTAC(SEL) 372449N 1265542E		098 / 278	20.0	UNL / 7 500(3 400) Class A, D, G		↑	
△ EGOBA 372915N 1272246E		087 / 267	22.0		↓		**Daegu ACC** FREQ : 132.80 MHz 118.925 MHz 122.75 MHz[2] *2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ KARBU 373159N 1273952E		087 / 267	13.9	UNL / 7 500(5 100) Class A, D, G			
△ TORUS 373625N 1280807E		087 / 268	22.9	UNL / 7 500(4 500) 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
△ BIKSI 374032N 1283504E		088 / 268	21.8	UNL / 7 500(7 500) Class A, D, G			
▲ GANGWON VORTAC(KAE) 374203N 1284514E		088 / 268	8.2	UNL / 7 500(7 100) Class A, D, G			
▲ PILIT 372631N 1291731E		130 / 310	30.0	UNL / 8 000(7 100) 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.
△ NIMUS 371210N 1294656E		130 / 310	27.5	UNL / 9 000(1 500) Class A, D, G			
△ AGSUS 364521N 1304044E		130 / 310	50.8				
▲ LANAT(FIR BDRY) 362224N 1312542E		130 / 311	42.9			↑	Airspace Classification refer to ENR 3.1-1
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 : 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 / Lower limits (MOCA) ft AMSL or FLAirspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
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			
△ BULTI 364322N 1264930E		187 / 007	10.0				**Incheon ACC** FREQ: 132.150 MHz 123.55 MHz 132.20 MHz[2)] *2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ 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			
△ 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			**Incheon ACC** FREQ: 120.725 MHz 128.30 MHz 132.20 MHz[3)] *3) Common frequency* Airspace Classification refer to ENR 3.1-1
△ 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				
△ IKEDO 314314N 1253948E		207 / 026	12.0	UNL / FL 140(1 500) Class A, D, G			
△ KANKA 313155N 1253504E		207 / 026	67.0				
△ BONSO 302840N 1250851E							
▲ MUGUS(FIR BDRY) 300006N 1245712E		206 / 026	30.2				
INCHEON FIR							
FUKUOKA FIR							

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

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

Change : 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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
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							
△ OLMEN 364413N 1265928E		194 / 014	21.5	UNL / FL 140(3 100) Class A, D, G			Airspace Classification refer to ENR 3.1-1
△ GUNKU 363414N 1265949E		187 / 007	10.0	UNL / FL 140(3 600) Class A, D, G			
△ PEBRI 362311N 1270013E		187 / 007	11.0	UNL / FL 140(3 300) Class A, D, G			
△ ATASO 355344N 1265657E		193 / 013	29.5	UNL / FL 140(2 300) Class A, D, G			
△ MAKSA 353011N 1265422E		193 / 013	23.6	UNL / FL 140(3 800) Class A, D, G			
△ SAMUL 350736N 1265154E		193 / 013	22.7	UNL / FL 140(4 000) 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
△ KAMIT 341514N 1264618E		193 / 013	52.5	UNL / FL 140(3 400) Class A, D, G			
△ GUKSU 335251N 1264357E	N/A	193 / 013	22.4	UNL / FL 140(2 100) 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
△ LOSNI 333315N 1264153E		193 / 012	19.6	UNL / FL 140(1 700) Class A, D, G			
▲ JEJU VORTAC(CJU) 332305N 1263727E		207 / 027	10.8	UNL / FL 140(7 600) Class A, D, G			
△ SOSDO 330012N 1262735E		207 / 027	24.3	UNL / FL 140(8 700) Class A, D, G			
△ SAMLO 323223N 1261536E		207 / 027	29.5	UNL / FL 140(1 500) 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
△ NIRAT 320354N 1260329E		207 / 027	30.2				
△ ELGEP 314653N 1255617E		207 / 027	18.1				
△ TESIM 313526N 1255128E		207 / 027	12.1				
▲ ATOTI(FIR BDRY) 300013N 1251154E		207 / 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 or DME/DME/IRU required.

* RNAV2 represents a navigation accuracy of ±2 NM 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y744 **(RNAV2)** **[GNSS, DME/DME, DME/DME/IRU]**							**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
▲ PILIT 372631N 1291731E	N/A	183 / 003	19.3	UNL / 9 000(4 900) / Class A, D, G		↓	
△ NOBUT 370715N 1291957E		183 / 003	47.2	UNL / 9 000(5 600) / Class A, D, G			
△ LOSTO 362016N 1292548E		183 / 003	21.7	UNL / 9 000(2 100) / Class A, D, G			
▲ POHANG VORTAC(KPO) 355838N 1292828E		213 / 033	37.2	UNL / 9 000(4 400) / Class A, D, G			
△ APARU 352442N 1290932E		213 / 032	19.0	UNL / 9 000(4 400) / Class A, D, G	↑		
▲ BUSAN VORTAC(PSN) 350721N 1285958E							
Y781 **(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* Airspace Classification refer to ENR 3.1-1
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	N/A	192 / 012	19.8	UNL / 7 000(4 900) / Class A, D, G	↓		
△ MASTA 352847N 1283340E		162 / 342	23.6	UNL / 7 000(4 000) / Class A, D, G			
△ ANKUS 350730N 1284616E		162 / 342	7.7	UNL / 7 000(3 500) / Class A, D, G			
△ OMOTU 350033N 1285022E		156 / 336	27.3	UNL / 7 000(2 800) / Class A, D, G			
▲ BESNA(FIR BDRY) 343718N 1290751E							
INCHEON FIR							
FUKUOKA FIR							
1. Critical DME : PSN<OMOTU/BESNA>, CJU<OMOTU/BESNA> 2. DME GAP : ANKUS/OMOTU, GNSS or DME/DME/IRU required.							

* RNAV2 represents a navigation accuracy of ±2 NM 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels: Odd	Direction of cruising levels: Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Y782 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ: 128.70 MHz 120.525 MHz 122.75 MHz[1)] *1) Common frequency* 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	↓		
▲ 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				**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
△ VASLI 364252N 1273003E		144 / 324	21.9	UNL / 8 000(4 200) Class A, D, G			
△ MAKDU 362712N 1274909E		144 / 324	14.6				
△ BITUX 361645N 1280148E		144 / 324	39.2	UNL / 10 000(4 500) Class A, D, G			
▲ DALSEONG VORTAC(TGU) 354835N 1283527E		162 / 342	20.4	UNL / 8 000(4 400) Class A, D, G			
△ KALOD 353012N 1284626E		162 / 342	25.4	UNL / 5 000(3 600) 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.

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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Z50 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ: 128.70 MHz 134.175 MHz 122.75 MHz[1)]
△ EGOBA 372915N 1272246E							*1) Common frequency*
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	N/A	224 / 044	28.8	UNL / FL 140(3 300) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
		213 / 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							*2) Common frequency*
△ MOXID 362311N 1264359E	N/A	173 / 353	21.6	UNL / FL 150(3 900) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
△ BEDES 360905N 1264844E		173 / 353	14.6	UNL / FL 150(3 600) Class A, D, G			
Z52 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Incheon ACC** FREQ : 126.175 MHz 134.375 MHz 132.20 MHz[3)]
△ OLMEN 364413N 1265928E							*3) Common frequency*
△ POSAN 365615N 1271316E	N/A	051 / 231	16.4	UNL / 8 000(3 400) Class A, D, G	↓		Airspace Classification refer to ENR 3.1-1
△ KAKSO 370745N 1272637E		051 / 232	15.7	UNL / 8 000(3 000) Class A, D, G		↑	
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							*4) Common frequency*
△ TEBEX 363341N 1275929E	N/A	002 / 182	17.0	UNL / FL 160(4 000) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
△ BASEM 365037N 1275710E		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 : 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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Z54 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ: 128.70 MHz 132.80 MHz 120.525 MHz 122.75 MHz [1)]
▲ SONGTAN VORTAC(SOT) 370540N 1270154E	N/A	316 / 136	11.7	UNL / 8 000(2 400) Class A, D, G		↓	*1) Common frequency* Airspace Classification refer to ENR 3.1-1
△ MONSI 371247N 1265015E		316 / 136	19.7	UNL / 8 000(2 300) Class A, D, G	↑		
△ GOGET 372442N 1263036E							
Z55 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ: 128.70 MHz 132.80 MHz 122.75 MHz[2)]
SANGHAI FIR							
INCHEON FIR							
△ AGAVO(FIR BDRY) 371010N 1235953E	N/A	154 / 334	35.5	UNL / FL 140(1 500) Class A, D, G		↑	*2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ NONOS 364046N 1242453E							
1. Critical DME : SEL<AGAVO/NONOS>, KUZ<AGAVO/NONOS>							
Z56 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC** FREQ : 122.25 MHz 125.925 MHz 122.75 MHz[3)]
PYONGYANG FIR							
INCHEON FIR							
▲ KANSU(FIR BDRY) 383800N 1322830E	N/A	180 / 360	40.2	UNL / FL 200(1 500) Class A, G	↓		*3) Common frequency* Airspace Classification refer to ENR 3.1-1
△ PALDU 375813N 1323625E		180 / 360	19.9				
▲ SABET 373829N 1324019E		180 / 360	19.9			↑	
▲ IGRAS(FIR BDRY) 371846N 1324411E							
INCHEON FIR							
FUKUOKA FIR							
1. Critical DME : KAE<PALDU/SABET>, KPO<PALDU/SABET>, KAE<SABET/IGRAS>, KPO<SABET/IGRAS> 2. DME GAP : KANSU/PALDU, GNSS or DME/DME/IRU required.							

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

Change : 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 / Lower limits (MOCA) ft AMSL or FL / Airspace classification	Direction of cruising levels: Odd	Direction of cruising levels: Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Z57 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC**
△ RILRO 371033N 1241442E	N/A	154 / 334	14.5	UNL / FL 150(1 500) Class A, D, G	↓		FREQ: 128.70 MHz 132.80 MHz 122.75 MHz[1)] *1) Common frequency* Airspace Classification refer to ENR 3.1-1
△ DALPO 365835N 1242453E							
1. Critical DME : SEL<RILRO/DALPO>, KUZ<RILRO/DALPO>							
Z63 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Daegu ACC**
▲ PILIT 372631N 1291731E	N/A	064 / 245	26.1	UNL / FL 250(1 500) Class A, G	↓	↑	FREQ : 134.175 MHz 123.65 MHz 122.75 MHz[2)] *2) Common frequency* Airspace Classification refer to ENR 3.1-1
△ NOMEX 374112N 1294441E							
1. Critical DME : KAE<PILIT/NOMEX>, KPO<PILIT/NOMEX>							
Z81 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							**Incheon ACC**
△ KIDOS 335028N 1263402E	N/A	182 / 001	27.5	UNL / FL 140(8 700) Class A, D, G		↓	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							
Z82 (RNAV2) [GNSS, DME/DME/IRU]							**Incheon ACC**
▲ JEJU VORTAC(CJU) 332305N 1263727E	N/A	230 / 050	31.0	UNL / FL 140(8 700) Class A, D, G		↓	FREQ: 124.525 MHz 132.425 MHz 132.20 MHz [4)] *4) Common frequency* Airspace Classification refer to ENR 3.1-1
△ PANSI 330014N 1261225E							
1. DME GAP : CJU/PANSI, GNSS or DME/DME/IRU required							

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

Change : 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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
1	2	3	4	5	6		7
Z83 (RNAV2) [GNSS, DME/DME, DME/DME/IRU]							
▲ DALSEONG VORTAC(TGU) 354835N 1283527E	N/A	192 / 012	19.8	UNL / 5 000(4 900) Class A, D, G		↓	**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		192 / 012	21.2	UNL / 5 000(3 800) Class A, D, G			
△ SARAM 350736N 1283147E		193 / 013	19.1	UNL / 5 000(3 000) Class A, D, G			
△ ENGOT 344834N 1282952E		188 / 008	10.6	UNL / 5 000(2 300) Class A, D, G	↑		
△ ANROD 343758N 1282952E							
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]							**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
△ BUSAN VORTAC(PSN) 350721N 1285958E	N/A	091 / 272	43.8	UNL / 8 000(3 100) Class A, D, G	↓	↑	
▲ KALEK(FIR BDRY) 351232N 1295305E							
INCHEON FIR							
FUKUOKA FIR							
Z85 (RNAV2) [GNSS, DME/DME/IRU]							**Incheon ACC** FREQ : 124.525 MHz 128.175 MHz 132.20 MHz[3] *3) Common frequency* Airspace Classification refer to ENR 3.1-1
△ BILUM 334613N 1270439E	N/A	192 / 012	11.5	UNL / FL 170(1 500) Class A, D, G	↓	↑	
△ PAPLU 333441N 1270337E		192 / 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 Z83 and Z85.

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 Odd	Even	Remarks Controlling unit Frequency
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	N/A	181 / 001	28.5	UNL / FL 140(1 500) Class A, D, G		↓	Airspace Classification refer to ENR 3.1-1
▲ ATOTI(FIR BDRY) 300013N 1251154E							
INCHEON FIR							
FUKUOKA FIR							
1. DME GAP : BONSO/ATOTI, GNSS or DME/DME/IRU 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	N/A	149 / 329	25.6	UNL / 10 000(3 000) Class A, D, G	↓	↑	Airspace Classification refer to ENR 3.1-1
▲ INVOK(FIR BDRY) 344719N 1291923E							
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 / Lower limits (MOCA) ft AMSL or FL Airspace classification	Direction of cruising levels Odd	Direction of cruising levels Even	Remarks Controlling unit Frequency
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	263 082	28.9	UNL FL 240(1 500) Class A, G	↑		
△ ELGEP 314653N 1255617E		262 082	14.5				
△ IKEDO 314314N 1253948E		288 108	34.5				
▲ SADLI 314948N 1250000E							

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

2. Flight Level Allocation Scheme (FLAS)
   - For the eastbound over BEDAR : FL 250, FL 290, FL 310, FL 390

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

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