

## RKPU AD 2.1 AERODROME LOCATION INDICATOR AND NAME

### RKPU - ULSAN / Ulsan Domestic

## RKPU AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	353536N 1292108E 181° / 1 020 m from THR 18
2	Direction and distance from city	039°, 7 km from Ulsan City Hall
3	Elevation/Reference temperature	13 m / 31 °C
4	Geoid undulation at AD ELEV PSN	30 m
5	MAG VAR/Annual change	8° W (2020) / 0.089° increasing
6	Aerodrome Operator, Address, Telephone, Telefax, AFS	Korea Airports Corporation(Ulsan Airport) 1103, Saneop-ro, Buk-gu, Ulsan, 44238, Republic of Korea  TEL : +82-52-219-6382, 6338~9 Telefax : +82-52-219-6300, 6388
7	Type of traffic permitted(IFR/VFR)	IFR/VFR
8	Remarks	NIL

## RKPU AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	2100-1300 UTC
2	Customs and Immigration	NIL
3	Health and Sanitation	NIL
4	AIS Briefing Office	2230-1230 UTC
5	ATS Reporting Office	2230-1230 UTC
6	MET Briefing Office	H24
7	ATS	2230-1230 UTC
8	Fuelling	NIL
9	Handling	HO
10	Security	HO
11	De-icing	HO
12	Remarks	Outside these hours services are available under the pre-coordination (Only passenger flight)

## RKPU AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	Conveyor belt, various vehicles and equipment
2	Fuel/oil type	NIL
3	Fuelling facilities/capacity	NIL
4	De-icing facilities	Available. See AD chart for location (ACFT stand NR. 1).
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

Change : Information of AD operator, TEL, telefax and Withdrawal of AFS.

### RKPU AD 2.5 PASSENGER FACILITIES

1	Hotels	In Ulsan city
2	Restaurants	60 Seats, light food services available at AD
3	Transportation	Buses, Taxis and rental cars available at AD
4	Medical Facilities	Ambulance services available Hospitals in Ulsan city
5	Bank and Post Office	Bank and Post office available in the vicinity of AD
6	Tourist Office	Available at AD
7	Remarks	<a href="http://www.airport.co.kr/mbs/ulsan/">http://www.airport.co.kr/mbs/ulsan/</a>

### RKPU AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD Category for fire fighting	CAT 7
2	Rescue equipment	- 2 Chemical Fire Fighting Trucks - 1 Ambulance Car - Water : 22 000 L - AFFF : 3 200 L - Dry Chemical : 500 kg
3	Capability for removal of disabled aircraft	Specialized aircraft recovery equipment available for up to and including B737-900 size aircraft. The usable equipment list which is 50 ton hydraulic recovery jack, 50 ton crane and other accessory equipment can be provided by airlines. Korea Airports Corporation is the co-ordinator for the removal of disabled aircraft and can be reached at Airport Duty manager. (TEL : +82-52-219-6312)
4	Remarks	NIL

### RKPU AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	a. 1 Compact runway jet sweeper (working width : about 5.6 m) b. 1 Multi purpose snowplough (working width : about 3.2 m) c. 1 Thawing material spreader d. 1 De-icing Cart
2	Clearance priorities	1. RWY 18/36, TWY B and Apron (ACFT stands NR. 1, 2, 3) 2. TWY A and Apron (ACFT stand NR. 4)
3	Remarks	NIL

### RKPU AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Designation, Apron surface and strength	a. Surface : Asphalt b. Strength : PCN 43/F/A/X/T
2	Designation, Taxiway width, surface and strength	a. Width : 30 m b. Surface : Asphalt c. Strength - "A" : PCN 43/F/A/X/T - "B" : PCN 43/F/A/X/T
3	Altimeter checkpoint location and elevation	Location : At apron Elevation : 9 m
4	VOR checkpoints	NIL
5	INS checkpoint	See AD chart
6	Remarks	NIL



## RKPU AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nosewheel guidelines on taxiways and apron
2	RWY and TWY markings and LGT	a. RWY - Light : Edge, THR and End - Marking : Designation, THR, TDZ, CL, side stripe and aiming point b. TWY - Light : Edge - Marking : TWY & taxilane centerline and holding positions
3	Stop bars	NIL
4	Remarks	NIL

## RKPU AD 2.10 AERODROME OBSTACLES

In Area 2					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Markings/ Type, colour	Remarks
a	b	c	d	e	f
RKPUOB001	Hill	354005.0N 1292136.1E	1 339 ft/	NIL	36/APCH  18/TKOF
RKPUOB002	Hill	353941.7N 1292144.6E	1 113 ft/	NIL	
RKPUOB003	Hill	353811.0N 1291931.3E	424 ft/	NIL	
RKPUOB004	Hill	353931.0N 1291916.2E	964 ft/	NIL	
RKPUOB005	Hill	354225.3N 1292053.9E	1 774 ft/	NIL	
RKPUOB006	Mountain	354806.3N 1292043.1E	2 444 ft/	NIL	
RKPUOB007	Hill	353839.7N 1291841.2E	785 ft/	NIL	
RKPUOB008	Building	353425.1N 1292056.2E	169 ft/	NIL	
RKPUOB009	Pylon	353318.2N 1292158.7E	346 ft/	NIL	
RKPUOB010	Pylon	353230.9N 1292128.2E	427 ft/	NIL	
RKPUOB011	Hill	353526.7N 1292350.7E	1 480 ft/	NIL	18/APCH  36/TKOF
RKPUOB012	contour	353521.6N 1292249.6E	850 ft/	NIL	
RKPUOB013	Pylon	352842.8N 1292218.5E	623 ft/	NIL	
RKPUOB014	Pylon	352928.3N 1292148.5E	446 ft/	NIL	
RKPUOB015	Pylon	352621.6N 1291917.2E	724 ft/	NIL	
RKPUOB016	Pylon	352517.5N 1291932.5E	878 ft/	NIL	
RKPUOB017	Mountain	353958.6N 1291515.1E	2 517 ft/	NIL	
In Area 3					
OBST ID/ Designation	OBST type	OBST position	ELEV/HGT	Markings/ Type, colour	Remarks
a	b	c	d	e	f
NIL					

### RKPU AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Ulsan Airport Weather Office (TEL : +82-52-289-0365, Telefax : +82-52-288-2392)
2	Hours of service MET Office outside hours	Aerodrome Operating hours
3	Office responsible for TAF preparation Periods of validity	Ulsan Airport Weather Office 30 hours at 0000, 0600, 1200, 1800 UTC
4	Trend forecast Interval of issuance	Trend type forecast 1 hour (METAR) and when SPECI reported
5	Briefing/consultation provided	Available at the Office for 24 hours, if required
6	Flight documentation Language(s) used	Aerodrome forecasts (TAF code form), SIGWX charts, WINTEN charts, SIGMET information in English
7	Charts and other information available for briefing or consultation	Analysis charts (surface and upper air), Prognostic charts, Graphic displays and other model outputs
8	Supplementary equipment available for providing information	Satellite and Weather radar imageries
9	ATS units provided with information	TWR and AIS Office
10	Additional information (limitation of service, etc.)	Automated METAR is provided during non-operational hours of the aerodrome. All observation data, model outputs and forecasts produced by KMA and WAFS are available at the office through internet link.

### RKPU AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations Runway NR	TRUE BRG	Dimension of RWY(m)	Strength(PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
18	176.10°	2 000 × 45	PCN 43/F/A/X/T ASPHALT	353608.89N 1292103.54E GUND 30 m	THR 13 m / 42 ft
36	356.10°	2 000 × 45	PCN 43/F/A/X/T ASPHALT	353504.15N 1292108.95E GUND 29.9 m	THR 8.5 m / 27.8 ft TDZ 10.4 m / 34.1 ft

7. Slope of RWY

The diagram illustrates the slope of Runway 18/36. It shows a horizontal line representing the runway surface, sloping downwards from left to right. The left end is labeled '18' and has a vertical arrow pointing down to '13 m / 42 ft'. The right end is labeled '36' and has a vertical arrow pointing down to '8.5 m / 27.8 ft'. A horizontal arrow above the slope indicates a -0.2% gradient. Below the runway line, a horizontal double-headed arrow spans the 2,000 m length of Runway 18, labeled '2 000 m' and 'CWY'. To the right of Runway 36, a horizontal double-headed arrow spans the 200 m length of Runway 36, labeled '200 m' and 'CWY'. A dashed line extends from the end of Runway 36 to a vertical line, with a vertical arrow pointing down to '7.6 m / 25 ft'.

SWY dimensions (m)	CWY dimensions (m)	Strip dimensions (m)	RESA dimensions (m)	Location & description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
NIL	200 × 250	2 120 × 191~280	200 × 90	NIL	NIL	The width of strip and the length of RESA do not meet criteria in ANNEX 14. The surface of RWY 18/36 are grooved. (Except from THR of RWY 18 to 250 m, from THR of RWY 36 to 200 m.
NIL	NIL		80 × 90	NIL	NIL	

Change : Information of ATS units provided with information.

**RKPU AD 2.13 DECLARED DISTANCES**

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
36	2 000	2 000	2 000	2 000	NIL
36	984	984	984	-	Take-off from intersection with TWY A
36	1 104	1 104	1 104	-	Take-off from intersection with TWY B
18	2 000	2 200	2 000	2 000	NIL
18	1 047	1 247	1 047	-	Take-off from intersection with TWY A
18	927	1 127	927	-	Take-off from intersection with TWY B

**RKPU AD 2.14 APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	THR LGT Colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Center line LGT Length, Spacing Colour, INTST	RWY edge LGT LEN, Spacing Colour INTST	RWY End LGT Colour WBAR	SWY LGT LEN(m) Colour	Remarks
1	2	3	4	5	6	7	8	9	10
18	SSALF 330 m LIH	Green -	PAPI Left/3.8° (59 ft)	Simple TDZ LGT	NIL	2 000 m 60 m White, LIH	RED -	NIL	NIL
36	ALSF-1 720 m LIH	Green -	PAPI Left/3° (56 ft)	NIL	NIL	2 000 m 60 m White, LIH	RED -	NIL	NIL

Simple TDZ LGT

- Simple touchdown zone lights located each two on both side of the runway centerline are installed 622.8 m from the threshold of RWY 18.

RWY 18 PAPI Restrictions

- PAPI unusable beyond 10° right side due to angular coverage.
- PAPI unusable beyond 7° left side due to OBST.

**RKPU AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	ABN/IBN location, characteristics and hours of operation	ABN : At tower building, FLG W/G EV 2~3 SEC IBN : NIL H24
2	LDI location and LGT Anemometer location and LGT	LDI : NIL Anemometer : NIL
3	TWY edge and center line lighting	a. Edge : All TWY b. Center line : NIL
4	Secondary power supply/switch-over time	Secondary power supply to all lighting at AD Switch-over time : 15 SEC
5	Remarks	NIL

### RKPU AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	-
2	TLOF and/or FATO elevation m/ft	-
3	TLOF and FATO area dimensions, surface, strength, marking	-
4	True BRG of FATO	-
5	Declared distance available	-
6	APP and FATO lighting	-
7	Remarks	As directed by ATC

### RKPU AD 2.17 ATS AIRSPACE

1	Designation and lateral limit	Ulsan CTR A circle, 5 NM radius centered at ARP
2	Vertical limits	SFC to 3 000 ft AGL
3	Airspace classification	D
4	ATS unit call sign Languages	Ulsan Tower English / Korean
5	Transition altitude	14 000 ft AMSL
6	Operational hours	2200-1230 UTC
7	Remarks	Refer to ENR 2.1-9, RKPU Visual Approach Chart to identify Class D airspace.

### RKPU AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Channel	Hours of operation	Remarks
1	2	3	4	5
APP	Pohang Approach	124.25 MHz 120.2 MHz 232.4 MHz	H24	NIL
	Ulsan Arrival	119.250 MHz 317.525 MHz	2230-1230 UTC	
TWR	Ulsan Tower	118.75 MHz 236.6 MHz 225.55 MHz	2230-1230 UTC	
GND	Ulsan Ground	121.75 MHz	2230-1230 UTC	Digital PDC service available
ATIS	Ulsan Airport	127.625 MHz 233.55 MHz	2230-1230 UTC	Digital ATIS service available
EMERG		121.5 MHz 243.0 MHz	2230-1230 UTC	
Scheduled Inspection Time - APP(124.25 MHz, 232.4 MHz, 119.250 MHz, 317.525 MHz), TWR, GND, ATIS, EMERG : Every 1st WED(1400-2000 UTC) of the month.				

Change : Information of hours of operation.

## RKPU AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, Type of supported OPS	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
LOC 36 (8° W/2020) ILS CAT I (8° W or 352°)	IULS	110.3 MHz	H24	353616.3N 1292102.9E		<b>LOC unusable :</b> Beyond 13 NM from LOC due to RK P61B
GP 36	-	335 MHz	H24	353513.8N 1292112.1E		<b>Scheduled Inspection time :</b> Every 2nd WED(1400-2000 UTC) of the month
DME 36	-	1001 MHz (CH 40X)	H24	353513.8N 1292112.1E	30 m	
TVOR/DME (8° W/2020)	USN	111.4 MHz (CH 51X)	H24	353554.6N 1292111.8E	30 m	<b>Scheduled Inspection time :</b> Every 3rd WED(1400-2000 UTC) of the month
VORTAC (8° W/2020)	KPO	112.5 MHz (CH 72X)	H24	355837.9N 1292828.3E	800 ft	<b>Unusable and scheduled inspection time :</b> See ENR 4.1 for the details
<b>VOR unusable</b> RDL 301-340 beyond 20 DME below 8 000 ft RDL 261-300 beyond 12 DME below 9 000 ft RDL 201-260 beyond 18 DME below 7 000 ft RDL 151-160 beyond 19 DME below 6 000 ft RDL 021-150 beyond 20 DME below 10 000 ft RDL 000-020 beyond 22 DME below 7 000 ft <b>DME unusable</b> RDL 301-340 beyond 16 DME below 9 000 ft RDL 261-300 beyond 12 DME below 9 000 ft RDL 201-260 beyond 16 DME below 7 000 ft RDL 151-160 beyond 16 DME below 6 000 ft RDL 021-150 beyond 10 DME below 15 000 ft RDL 000-020 beyond 13 DME below 11 000 ft RADAR(ASR/SSR) Scheduled Inspection time : Every 3rd WED (1400-2000 UTC) of the month						

## RKPU AD 2.20 LOCAL AERODROME REGULATIONS

1. Airport Regulations
  - 1.1 Aircraft operation is restricted when surface friction measurement is less than 0.30 due to shortage of the runway strip(See AD chart).
  - 1.2 All aircraft requiring parking on the aircraft stand must request prior permission,  
TEL : +82-52-219-6330(Korea Airports Corporation).  
This does not apply to locally based aircraft and scheduled services.
  - 1.3 Pilots of departing IFR aircraft can request ATC clearance up to 10 minutes before ETD or push-back. Departing aircraft on first contact with ULSAN GROUND must state aircraft identification, destination, proposed altitude, stand number and the code letter of the latest ATIS received.
  - 1.4 Pre-departure clearance by datalink is available at ULSAN airport for suitably equipped aircraft.
  - 1.5 All aircraft contact ULSAN TWR prior to entering class D airspace(Refer to ENR 2.1-9).
2. Ground Movement
  - 2.1 Visiting General Aviation aircraft will be directed by ATC to taxi to aircraft stand then follow the marshaller's instruction for parking.

Change : Information of coordinates, elevation for DME 36 and remarks.

- 2.2 Aircraft shall maintain idle thrust in the apron. In case of using breakaway thrust, aircraft shall maintain minimum breakaway thrust.
- 2.3 Radio Frequency Change Procedure
  - 2.3.1 Arrival aircraft shall change radio frequency from ULSAN TOWER(118.75 MHz) to ULSAN GROUND(121.75 MHz) when vacating Runway.
  - 2.3.2 Departure aircraft shall change radio frequency from ULSAN GROUND(121.75 MHz) to ULSAN TOWER(118.75 MHz) when start taxiing in the apron.
- 3. Warning
  - 3.1 Single-engined aircraft shall use caution when overflying the chemical complex on the south of the aerodrome.
  - 3.2 Many flare stacks are located in the chemical complex.
  - 3.3 Caution large concentrations of birds maybe on and in the vicinity of the aerodrome.
  - 3.4 Grass cutting may take place on a daily basis between June and October inclusive within the strip enclosing Runway 18/36 and the equipment is under ATC control. Circuit flying may be restricted at certain times to permit grass cutting in the areas immediately adjacent to the runway.
  - 3.5 High-rise buildings(700 ft AMSL) are sited approximately 2.8 NM southwest of the aerodrome, in the fixed-wing VFR Traffic Circuit(See AD 2-12 VFR Traffic Circuits). Pilots are advised to exercise extreme caution when flying in the visual circuit.
  - 3.6 OBST(mountainous terrain) rising to 767 m (2 517 ft AMSL) 2.3 NM North of "N" VFR Reporting point (See AD 2-12 VFR Traffic Circuits).
  - 3.7 OBST(mountainous terrain) rising to 447 m (1 465 ft AMSL) between "N" and "W" VFR Reporting point (See AD 2-12 VFR Traffic Circuits).
  - 3.8 OBST(mountainous terrain) rising to 600 m (1 969 ft AMSL) 2.1 NM West of "S" VFR Reporting point (See AD 2-12 VFR Traffic Circuits).
- 4. Training Flights
  - 4.1 Training flights may only take place by prior arrangement with ATC(TEL : +82-52-289-4740).
  - 4.2 ATC must be advised of any changes and cancellations of the flight plan.
  - 4.3 The number of aircraft in the visual circuit will be determined by ATC, subject to the prevailing weather and traffic conditions.
  - 4.4 Training may be curtailed if significant noise complaints are received.
  - 4.5 Training flights will not be given priority over essential aerodrome maintenance work.
  - 4.6 Simulated engine failures are not permitted.

## RKPU AD 2.21 NOISE ABATEMENT PROCEDURES

- 1. Aircraft Operating Procedures(Except helicopter)
  - 1.1 Take off
    - 1.1.1 NADP 1(RWY 18, RWY 36)

All departing aircraft should apply ICAO PANS-OPS(Doc 8168) Volume III Noise Abatement Departure Procedures One (NADP ONE).

- a. Take-off to 800 ft AGL
  - Take-off power
  - Take-off flaps/slats setting
  - Initial climb speed is not less than  $V_2 + 10$  kt
- b. At 800 ft AGL
  - Reduce power/thrust to Not less than climb power
- c. 800 ft AGL to 3 000 ft AGL
  - Maintain with flaps/slats in the take-off configuration
  - Climb at  $V_2 + 10$  to 20 kt



- d. After passing an altitude of Not less than 3 000 ft AGL
  - Accelerate and retract flaps on schedule to En-route climb

## 1.2 Approach

For noise abatement using a reduced flap setting landing procedure is recommended. However, use of this procedure is subject to captain's decision and safety prevail at all times.

### 1.2.1 Delayed Flap setting Approach

- a. For approach to land on RWY 18;
  - Maintain intermediate flap setting until 1 NM prior to FAF.
  - Set final landing flaps within 1 NM prior to FAF.
- b. For approach to land on RWY 36;
  - Maintain intermediate flap setting until 1 NM prior to FAF(FAP).
  - Set final landing flaps within 1 NM prior to FAF(FAP).

### 1.2.2 Reduced Flap setting Approach

- a. When the landing weight and runway length are enough,
- b. When the runway condition is dry,
- c. When the tailwind component is not existent,
- d. Set the certificated shallow landing flaps in the approved performance section of the Airplane Flight manual to land.

## 1.3 Exempted cases

### 1.3.1 Aircraft need not be complied with the procedures described in paragraph 1.1 and 1.2 above in adverse operating conditions such as;

- a. If the runway is not clear and dry. i.e. it is adversely affected by, snow, slush, ice, water or other substances;
- b. In conditions when the ceiling is lower than 500 ft, or when the horizontal visibility is less than 1.9 km.
- c. When the cross-wind component, including gusts, exceeds 15 kt.
- d. When the tailwind component, including gusts, exceeds 5 kt.
- e. When the wind shear has been reported or forecast, or thunderstorms are expected to affect the approach.

### 1.3.2 Aircraft unable to comply with the procedures described in paragraph 1.1 and 1.2 above for any reason shall inform ATC.

## 1.4 Operational Limitations

### 1.4.1 Engine test shall be conducted with prior permission from the airport control tower. It shall be conducted at the approved place and approved conditions only. However, the power setting(s) shall not exceed idle thrust.

## RKPU AD 2.22 FLIGHT PROCEDURES

## 1. IFR

Instrument flight procedures are based on the guidance contained in ICAO Doc 8168-Procedures for Air Navigation Service-Aircraft Operations(PANS-OPS), except instrument approach procedure for RWY 18(under FAA TERPS).

### 1.1 Straight in approach

Refer to Instrument approach charts.

### 1.2 Take-off weather minima

CATEGORY	RWY	Facilities		
		REDL & RCL	REDL or RCL	NIL (Day Only)
Multi-Engine ACFT with TKOF ALTN AD	18	400 m / 1 200 ft	400 m / 1 200 ft	500 m / 1 600 ft
	36	400 m / 1 200 ft	400 m / 1 200 ft	500 m / 1 600 ft
OTHERS	18	AVBL LDG MINIMA		
	36			
Note : SIDs are designed in accordance with STANDARDS for FLIGHT PROCEDURE DESIGN				
1. The TDZ RVR/VIS may be assessed by the pilot.				
2. For Night Operations at least REDL or RCLL and RENL are available.				

### 1.3 Fuel Dumping Area

Fuel Dumping Area is established within POHANG TMA as follows;

- a. Area : A circle, 3 NM radius centered at R 100 USN/D12 (353520N 1293551E)
- b. Altitude : 8 000 ft AMSL

2. VFR

2.1 VFR Procedure

2.1.1 VFR Weather Minima

VFR flight will be permitted under the condition as below;

- a. Ground visibility : Not less than 5 km (If Ground visibility is not reported, Flight visibility : Not less than 5 km)
- b. Ceiling : At or above 450 m (1 500 ft)

2.1.2 VFR Traffic Circuits : Refer to page RKPU AD 2-12

2.1.3 VFR Reporting Points : Refer to page RKPU AD 2-12

2.1.4 VFR Traffic Circuits Altitude(AMSL)

- a. CAT A, B : 1 500 ft AMSL

2.1.5 VFR Flight procedure

1. Departure procedure

- a. After departing from RWY 18, fly the following routes unless otherwise directed by ATC;
  - For north bound : Turn right proceed to N. Cross N at or above 3 000 ft.
  - For west bound : Turn right proceed to W. Cross W at or above 2 000 ft.
  - For south bound : Turn right proceed to S. Cross S at or above 2 500 ft.
  - For east bound : Maintain RWY HDG until reaching 1 500 ft, then turn left proceed to E. Cross E at or above 3 000 ft.
  - For east bound : Turn left proceed to T1. Cross T1 at 2 500 ft.
- b. After departing from RWY 36, fly the following routes unless otherwise directed by ATC;
  - For north bound : Turn left proceed to N. Cross N at or above 3 000 ft.
  - For west bound : Turn left proceed to W. cross W at or above 2 000 ft.
  - For south bound : Turn left proceed to S via W. Cross W at or above 2 000 ft and S at or above 2 500 ft.
  - For east bound : Turn left proceed to E. Cross E at or above 3 000 ft.

2. Arrival procedure

- a. Inbound from south/west : Proceed to W via S, then fly the following routes unless otherwise directed by ATC.
  - Cross S at or above 2 500 ft and W at or above 2 000 ft.
  - When RWY 18 in use : Enter into the right downwind leg at 1 500 ft(HEL 1 000 ft), then land.
  - When RWY 36 in use : Enter into the left downwind leg at 1 500 ft(HEL 1 000 ft), then land.
- b. Inbound from north : Proceed to N, then fly the following routes unless otherwise directed by ATC.
  - Cross N at or above 3 000 ft.
  - When RWY 18 in use : Enter into the right downwind leg at 1 500 ft(HEL 1 000 ft), then land.
  - When RWY 36 in use : Enter into the left downwind leg at 1 500 ft(HEL 1 000 ft), then land.
- c. Inbound from east : Proceed to E, then fly the following routes unless otherwise directed by ATC.
  - Cross E at or above 3 000 ft.
  - When RWY 18 in use : Enter into the right downwind leg at 1 500 ft(HEL 1 000 ft), then land.
  - When RWY 36 in use : Enter into the left downwind leg at 1 500 ft(HEL 1 000 ft), then land.

2.2 Special VFR

2.2.1 Special VFR flight for taking off or landing may only be permitted except helicopters when;

- a. The Ground visibility is not less than 1 500 m.
- b. If ground visibility is not reported, the Flight visibility is not less than 1 500 m.

2.2.2 For Special VFR operation, the pilot shall ;

- a. Get a clearance from ATC.
- b. Stay clear of clouds.
- c. Fly within control zone as cleared by ATC.
- d. Maintain visual reference with surface or water.
- e. Maintain at least 1 500 m of flight visibility.

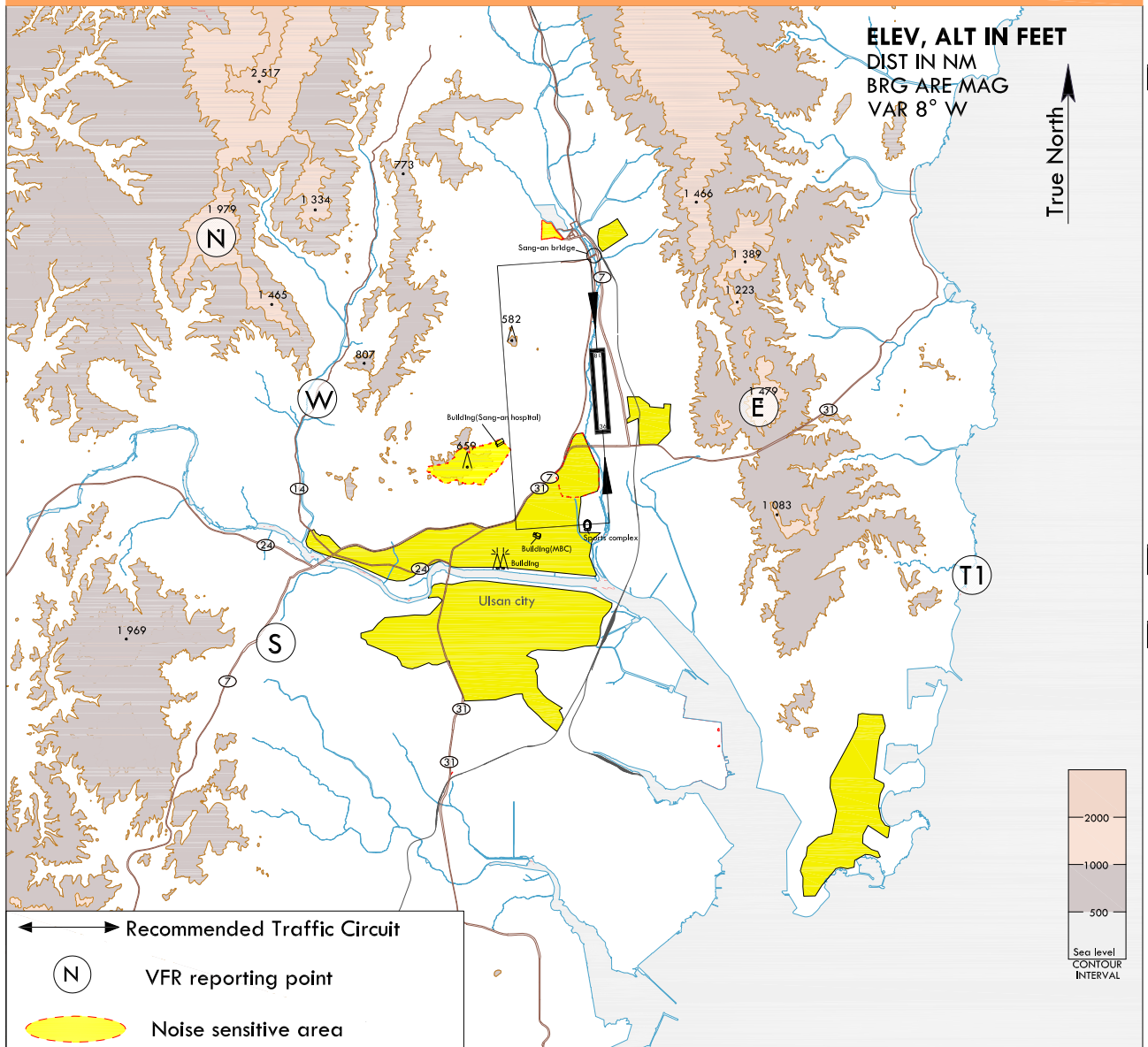
※ At night(between sunset and sunrise), the pilot must have an instrument rating and the aircraft must be equipped for IFR flight under Aviation Act.(Except for helicopters)

Change : Information of ground visibility.

3. Radio communication failure procedure
  - 3.1 in VMCs
    1. Squawk 7600.
    2. Continue to fly in VMC.
    3. Land at nearest suitable aerodrome.
  - 3.1.1 Procedure for VFR flights
    1. Squawk 7600.
    2. Proceed to and hold over west downwind for RWY 18/36, west bound; and
    3. When able to see light gun signal from control tower, follow that instruction; or
    4. When unable to see light gun signal from control tower, hold over downwind for RWY 18/36 until ETA or for 10 MIN, whichever is longer; then
    5. Land on RWY 18/36 in use as appropriate.

\* Pilot shall use caution traffic landing and take-off from/to runway.
  - 3.2 in IMCs or when conditions are such that it does not appear likely that the pilot will complete the flight in accordance with 3.1.;
  - 3.2.1 DEPARTURE AIRCRAFT
    1. Squawk 7600.
    2. Maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 min following;
      - a. The time the transponder is set to Code 7600; or
      - b. The time the last assigned level or minimum flight altitude is reached;  
whichever is later and thereafter adjust level and speed in accordance with the filed flight plan;
    3. When being vectored or having been directed by ATC, proceed in the most direct manner possible to rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude.;
  - 3.2.2 ARRIVAL AIRCRAFT
    1. Squawk 7600.
    2. Follow the STAR issued by ATC. When being vectored or having been directed by ATC, proceed in the most direct manner possible to join the STAR no later than the next significant point. then commence descent as filed.
    3. Start approach to the assigned runway without delay.
    4. If no specific runway for landing has been assigned, start approach to RWY 36 without delay.

## VFR Traffic Circuits - Ulsan



## \* NOTE

1. All VFR flight operation within ULSAN control zone shall maintain two way communication with ULSAN TWR.
2. Pilots are encouraged to use the recommended VFR traffic circuit for traffic flow, noise abatement, obstacle avoidance. However, helicopter should fly within 0.7 NM from RWY at 1 000 ft AMSL.
3. The use of the recommended VFR traffic circuit does not alter the responsibility of each pilot to see and avoid other aircraft, obstacle.

## VFR Traffic Circuit Altitude

Category	A	B	C	D
Altitude	1 500 ft AMSL		N/A	

Reporting Point	Geographical Name	Position	Coordinates	Altitude(AMSL)
N	Guksubong(Mt.) (국수봉)	5.8 NM NW of Ulsan R 296 USN/D5.7	353746N 1291434E	At or above 3 000 ft
W	Ulsan Wild Flower Learnig Center (울산들꽃학습원)	4.0 NM W of Ulsan R 272 USN/D4.0	353531N 1291617E	At or above 2 000 ft
S	Ulsan Munsu Football Staduim (울산문수축구경기장)	5.7 NM SW of Ulsan R 238 USN/D6.0	353207N 1291534E	At or above 2 500 ft
E	Muryongsan (무룡산)	2.2 NM E of Ulsan R 110 USN/D2.2	353527N 1292351E	At or above 3 000 ft
T1	Jujeon Mongdol (주전몽돌)	5.8 NM SE of Ulsan R 118 USN/D5.8	353306N 1292728E	At 2 500 ft

Change : Information of OBST.

## RKPU AD 2.23 ADDITIONAL INFORMATION

1. Horizontal Surface height differs partially.
2. Bird concentrations in the vicinity of airport

Due to bird habitats in the Ulsan airport, pilots shall pay attention to crash with birds.

- Every January until March, and every October until December in the one or two hours after sunrise, a flock of jackdaws moves from resting area (approximately 13 km far away from the threshold of RWY 36) to the Dongcheon river or the field of airport.

Also, every April until September in the same hours, there are concentrated activities that birds which are mainly white-plumed egret and grey heron move from resting area (mountains which are located in approximately 8 km far away from the airport) to feeding area (nearby airport).

Additionally, resident birds, such as magpie and sparrow, always fly to the field nearby airport.

- The activity altitude of birds is approximately 2 000 ft(600 m). Also, before sunset, activities of the birds occur above the same way when returning to the resting area during one or two hours.

- Control tower shall offer pilots information about the movement of birds.

- Especially, during this time, control tower shall keep pilots informed that landing lights of aircraft are needed to turn on when take-off and approach for landing.

- Furthermore, preventive activities against bird strikes, such as operation of B.A.T(Bird Alert Team) and devices (cannon, shotgun, etc) which scare birds away, shall be carried out. Also, the measures for eliminating resting or feeding area of birds is being taken in the airport boundary, not enough sufficient.

- The measures are as followings :

spraying plants with insecticide and eliminating waterway or puddle, improving methods of waste disposal from the airport.

3. Checker Board for Visual reference point

- Checker Board for Visual reference point to help approach procedure to RWY 18

- Location : The place is located in 3.6 km far away from THR RWY 18. (Coordinates : 353803.7N 1292038.3E)

- Board Size : 12 m x 12 m (total height : 18 m)

- Board Color : White/Red(Cross Stripes)

- Lights

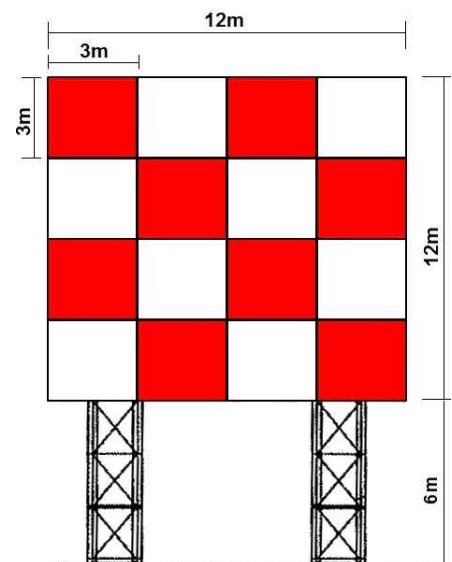
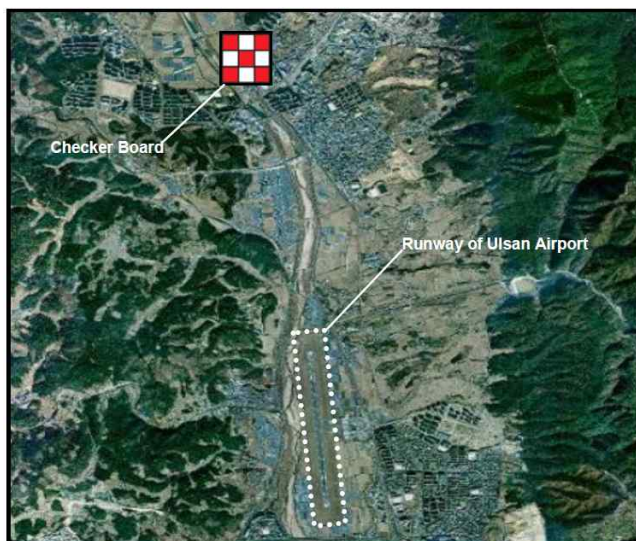
a. Type : LED band type(Cross Stripes)

b. Luminous intensity : 180 cd/m

c. Color : White

- Operation time schedule: depend on ATC

- Diagram



## RKPU AD 2.24 CHART RELATED TO THE AERODROME

Aerodrome Chart .....	RKPU AD CHART 2-1
Aerodrome Obstacle Chart - ICAO Type A .....	RKPU AD CHART 2-3
Aerodrome Obstacle Chart - ICAO Type A .....	RKPU AD CHART 2-4
Aerodrome Obstacle Chart - ICAO Type B .....	RKPU AD CHART 2-5
SID - ICAO - RWY 18 - RNAV KPO 1M, RNAV APARU 1M .....	RKPU AD CHART 2-6
SID - ICAO - RWY 18 - KPO 7S, APARU 7S, KPO 1A .....	RKPU AD CHART 2-7
SID - ICAO - RWY 36 - RNAV KPO 1R, RNAV APARU 1R .....	RKPU AD CHART 2-8
SID - ICAO - RWY 36 - KPO 8N, APARU 1A, APARU 8N .....	RKPU AD CHART 2-9
STAR - ICAO - RWY 18 - RNAV LAPAL 2D, RNAV APARU 2D .....	RKPU AD CHART 2-10
STAR - ICAO - RWY 36 - RNAV LAPAL 2C, RNAV APARU 2C .....	RKPU AD CHART 2-11
ATC Surveillance Minimum Altitude Chart - ICAO(Refer to RKTH AD CHART 2-10) .....	RKTH AD CHART 2-10
Instrument Approach Chart - RWY 18 - RNP Y .....	RKPU AD CHART 2-12
Instrument Approach Chart - RWY 18 - RNP Z(AR) .....	RKPU AD CHART 2-13
Instrument Approach Chart - RWY 18 - VOR .....	RKPU AD CHART 2-14
Instrument Approach Chart - RWY 36 - ILS Y or LOC Y .....	RKPU AD CHART 2-15
Instrument Approach Chart - RWY 36 - ILS Z or LOC Z .....	RKPU AD CHART 2-16
Instrument Approach Chart - RWY 36 - RNP .....	RKPU AD CHART 2-17
Instrument Approach Chart - RWY 36 - VOR .....	RKPU AD CHART 2-18
Visual Approach Chart .....	RKPU AD CHART 2-19
Bird concentrations in the vicinity of the airport .....	RKPU AD CHART 2-20

Change : Information of chart NR.(RKTH 2-9 → RKTH 2-10).