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Chapter 1

1

Glossary

1.1 DEFINITIONS OF PRINCIPAL TERMS
USED IN THIS MANUAL

1.1

Note. - Other definitions will be found in the appropriate Civil Act, Regulations of Civil Aviation Safety Authority MOCT and ICAO documents.

ICAO

Aerodrome control service. Air traffic control service for aerodrome traffic.

Aerodrome traffic. All traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Note. - An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrome traffic circuit.

주- 비행장 교통장주내에 있거나 교통장주를 진입 또는 이탈하는 항공기를 비행장 주위에서 운항하는 항공기로 간주함

Aerodrome traffic circuit. The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

Aeronautical mobile service. A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations

Aeronautical station. A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

Air-ground communication. Two-way communication between aircraft and stations or locations on the surface of the earth.

Air traffic. All aircraft in flight or operating on the maneuvering area of an aerodrome.

Air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Air traffic service. A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service, area control service, approach control service or aerodrome control service.

Air traffic services unit. A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

Airway. A control area or portion thereof established in the form of a corridor equipped with radio navigational aids.

Altitude. The vertical distance of a level, a point or an object considered as a point, measured from mean sea level.

Approach control service. Air traffic control service for arriving or departing controlled flights.

Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Area control centre. A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

Automatic terminal information service. The provision of current, routine information to arriving and departing aircraft by means of continuous and repetitive broadcasts throughout the day or a specified portion of the day.

Blind transmission. A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.

Broadcast. A transmission of information relating to air navigation that is not addressed to a specific station or stations.

Clearance limit. The point to which an aircraft is granted an air traffic control clearance.

Controlled airspace. An airspace of defined dimensions within which air traffic control service is provided to controlled flights.

Control zone. A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

Expected approach time. The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding point to complete its approach for a landing.

Flight information centre. A unit established to provide flight information service and alerting service.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Heading. The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid)

Holding point. A specified location, identified by visual or other means, in the vicinity of which the position of an aircraft in flight is maintained in accordance with air traffic control clearances.

Holding procedure. A predetermined manoeuvre which keeps an aircraft within a specified airspace whilst awaiting further clearance.

IFR flight. A flight conducted in accordance with the instrument flight rules.

Instrument meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Level. A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Manoeuvring area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Missed approach procedure. The procedure to be followed if the approach cannot be continued.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

Radar approach. An approach, executed by an aircraft, under the direction of a radar controller.

Radar identification. The process of correlating a particular radar blip or radar position symbol with a specific aircraft.

Radar vectoring. Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

Reporting point. A specified geographical location in relation to which the position of an aircraft can be reported.

Runway visual range. The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

Touchdown. The point where the nominal glide path intercepts the runway.

Track. The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

VFR flight. A flight conducted in accordance with the visual flight rules.

Visual approach. An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

Visual meteorological conditions.

Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

1.2 COMMONLY USED ABBREVIATIONS

1.2

Note. - The abbreviations listed below are normally spoken using the constituent letters, rather than the spelling alphabet, except that those indicated by an asterisk are normally spoken as complete words.

<i>ACC.</i> Area control centre or area control	<i>ACC.</i>
<i>ADF.</i> Automatic direction-finding equipment	<i>ADF.</i>
<i>ADR.</i> Advisory route	<i>ADR.</i>
<i>AFIS.</i> Aerodrome flight information service	<i>AFIS.</i>
<i>AGL.</i> Above ground level	<i>AGL.</i>
<i>AIP.</i> Aeronautical information publication	<i>AIP.</i>
<i>AIRAC.</i> Aeronautical information regulation and control	<i>AIRAC.</i>
<i>AIS.</i> Aeronautical information services	<i>AIS.</i>
<i>AMSL.</i> Above mean sea level	<i>AMSL.</i>
<i>ATC.</i> Air traffic control (in general)	<i>ATC.</i> ()
<i>ATD.</i> Actual time of departure	<i>ATD.</i>
<i>ATIS.</i> Automatic terminal information service	<i>ATIS</i>
<i>ATS.</i> Air traffic services	<i>ATS.</i>
<i>ATZ.</i> Aerodrome traffic zone	<i>ATZ.</i>
<i>CAVOK.</i> Visibility, cloud and present weather better than prescribed values or conditions	<i>CAVOK.</i>
<i>CTR.</i> Control zone	<i>CTR.</i>

<i>DME.</i> Distance measuring equipment	<i>DME.</i>
<i>EET.</i> Estimated elapsed time	<i>EET.</i>
<i>ETA.</i> Estimated time of arrival or estimating arrival	<i>ETA.</i>
<i>ETD.</i> Estimated time of departure or estimating departure	<i>ETD.</i>
<i>FIC.</i> Flight information centre	<i>FIC.</i>
<i>FIR.</i> Flight information region	<i>FIR.</i>
<i>FIS.</i> Flight information service	<i>FIS.</i>
<i>GCA.</i> Ground controlled approach system or ground controlled approach	<i>GCA.</i>
<i>HF.</i> High frequency (3 to 30 MHz)	<i>HF.</i> (3 30MHz)
<i>H24.</i> Continuous day and night service	<i>H24.</i> 24
<i>IFR.</i> Instrument flight rules	<i>IFR.</i>
<i>ILS.</i> Instrument landing system	<i>ILS.</i>
<i>IMC.</i> Instrument meteorological conditions	<i>IMC.</i>
<i>INFO.</i> Information	<i>INFO.</i>
<i>INS.</i> Inertial navigation system	<i>INS.</i>
<i>LORAN.</i> LORAN (long-range air navigation system)	<i>LORAN.</i>
<i>MET.</i> Meteorological or meteorology	<i>MET.</i>
<i>MLS.</i> Microwave landing system	<i>MLS.</i>
<i>MNPS.</i> Minimum navigation performance specifications	<i>MNPS.</i>
<i>NDB.</i> Non-directional radio beacon	<i>NDB.</i>
<i>NIL.</i> None or I have nothing to send you	<i>NIL.</i>

TMA. Terminal control area	TMA.
UHF. Ultra-high frequency (300 to 3,000 MHz)	UHF. (300 3,000MHz)
UIR. Upper flight information region	UIR.
UTA. Upper control area	UTA.
UTC. Co-ordinated universal time	UTC.
VASIS. Visual approach slope indicator system	VASIS.
VDF. Very high frequency direction -finding station	VDF.
VFR. Visual flight rules	VFR.
VHF. Very high frequency (30 to 300 MHz)	VHF. (30 300 MHz)
VIP. Very important person	VIP.
VMC. Visual meteorological conditions	VMC.
VOLMET. Meteorological information for aircraft in flight	VOLMET.
VOR. VHF omnidirectional radio range	VOR.
VORTAC. VOR and TACAN combination	VORTAC. VOR TACAN

1.3 EXPLANATION OF SCENARIO

1.3

1.3.1 In order to assist in understanding the context in which specific phrases are used, most of the examples of phraseology in this manual relate to typical situations, using fictitious call signs and locations. Any resemblance between locations in the area in which examples are set (see Figures 1 and 2) and actual locations is entirely coincidental. Any similarity with actual aircraft and ground station call signs is also coincidental.

1.3.1

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1 2

1.3.2 In the examples, the aircraft or ground station transmitting is shown by the symbol in Table 1. The station initiating the exchange of messages is in bold type. To facilitate following the sequence of the messages each subsequent message commences below the previous one and this is continued throughout the exchange.

1.3.2

1

Chapter 2

2

General Operating Procedures

2.1 INTRODUCTION

2.1

Radiotelephony(RTF) provides the means by which pilots and ground personnel communicate with each other. Used properly the information and instructions transmitted are of vital importance in assisting in the safe and expeditious operation of aircraft. On the other hand, the use of non-standard procedures and phraseology can cause misunderstanding. Incidents and accidents have occurred in which a contributing factor has been the misunderstanding caused by the use of poor phraseology. The importance of using correct and precise standard phraseology cannot be over-emphasized.

(RTF)

가

2.2 TRANSMITTING TECHNIQUE

2.2

2.2.1 The following transmitting techniques will assist in ensuring that transmitted speech is clearly and satisfactorily received:

2.2.1

- a) Before transmitting listen out on the frequency to be used to ensure that there will be no interference with a transmission from another station.
- b) Be familiar with good microphone operating techniques.
- c) Use a normal conversational tone, speak clearly and distinctly.
- d) Maintain an even rate of speech not exceeding 100 words per minute. When it is known that elements of the message will be written down by the recipient, speak at a slightly slower rate.

a)

가

b)

c)

d)

100

가

- e) Maintain the speaking volume at a constant level. e)
- f) A slight pause before and after numbers will assist in making them easier to understand. f) 가
- g) Avoid using hesitation sounds such as "er". g) " (er)"
- h) Depress the transmit switch fully before speaking and do not release it until the message is completed. This will ensure that the entire message is transmitted. h)

2.2.2 An irritating and potentially dangerous situation in radiotelephony is a stuck microphone button. Operators should always ensure that the button is released after a transmission and the microphone placed in an appropriate place that will ensure that it will not inadvertently be switched on. **2.2.2** 가

2.3 TRANSMISSION OF LETTERS **2.3.**

- 2.3.1** To expedite communications, the use of phonetic spelling should be dispensed with if there is no risk of this affecting correct reception and intelligibility of the message. **2.3.1**
- 2.3.2** With the exception of the telephony designator and the type of aircraft, each letter in the aircraft callsign shall be spoken separately using the phonetic spelling. **2.3.2**
- 2.3.3** The words in the table below shall be used when using the phonetic spelling. **2.3.3**

<i>Letter</i>	<i>Word</i>	<i>Pronunciation</i>
A	Alpha	<u>AL</u> FAH
B	Bravo	<u>BRAH</u> VOH
C	Charlie	<u>CHAR</u> LEE/ <u>SHAR</u> LEE
D	Delta	<u>DELL</u> TAH
E	Echo	<u>ECK</u> OH
F	Foxtrot	<u>FOKS</u> TROT
G	Golf	GOLF
H	Hotel	HOH <u>TELL</u>
I	India	<u>IN</u> DEE AH
J	Juliet	<u>JEW</u> LEE <u>ETT</u>
K	Kilo	<u>KEY</u> LOH
L	Lima	<u>LEE</u> MAH
M	Mike	MIKE
N	November	NO <u>VEM</u> BER
O	Oscar	<u>OSS</u> CAH
P	Papa	PAH <u>PAH</u>
Q	Quebec	KEH <u>BECK</u>
R	Romeo	<u>ROW</u> ME OH
S	Sierra	SEE <u>AIR</u> RAH
T	Tango	<u>TANG</u> GO
U	Uniform	<u>YOU</u> NEE FORM/ <u>OO</u> NEE FORM
V	Victor	<u>VIK</u> TAH
W	Wiskey	<u>WISS</u> KEY
X	X-ray	<u>ECKS</u> RAY
Y	Yankee	<u>YANG</u> KEY
Z	Zulu	<u>ZOO</u> LOO

Note. - Syllables to be emphasized are underlined.

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2.4 TRANSMISSION OF NUMBERS

2.4

2.4.1 When the English language is used, numbers shall be transmitted using the following pronunciation.

2.4.1 가

2-4-7()

<i>Number</i>	<i>Transmitted as</i>	<i>Pronounced as</i>
10	ONE ZERO	WUN ZE-RO
75	SEVEN FIVE	SEV-EN FIFE
100	ONE HUNDRED	WUN HUN-DRED
583	FIVE EIGHT THREE	FIVE AIT TREE
2500	TWO THOUSAND FIVE HUNDRED	TOO TOU-SAND FIFE HUN-DRED
5000	FIVE THOUSAND	FIFE TOU-SAND
11000	ONE ONE THOUSAND	WUN WUN TOU-SAND
25000	TWO FIVE THOUSAND	TOO FIFE TOU-SAND
38143	THREE EIGHT ONE FOUR THREE	TREE AIT WUN FOW-ER TREE

2.4.3 Numbers containing a decimal point shall be transmitted as prescribed in 2.4.1 with the decimal point in appropriate sequence being indicated by the word DECIMAL or POINT..

2.4.3
DECIMAL POINT
2.4.1
.

<i>Number</i>	<i>Transmitted as</i>	<i>Pronounced as</i>
118.1	ONE ONE EIGHT DECIMAL ONE	WUN WUN AIT DAY-SEE-MAL WUN
120.37	ONE TWO ZERO DECIMAL THREE SEVEN	WUN TWO ZERO DAY-SEE-MAL TREE SEV-EN

2.4.4 When it is necessary to verify the accurate reception of numbers, the person transmitting the message shall request the person receiving the message to read back the numbers.

2.4.4
,
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2.5 TRANSMISSION OF TIME

2.5

2.5.1 When transmitting time, only the minutes of the hour are normally required. However, the hour should be included if there is any possibility of confusion.

2.5.1 (分)
.
가
(時間) .

<i>Time</i>	<i>Transmitted as</i>	<i>Pronounced as</i>
0803	ZERO THREE or ZERO EIGHT ZERO THREE	ZERO TREE or ZERO AIT ZERO TREE
1300	ONE THREE ZERO ZERO	WUN TREE ZE-RO ZE-RO
2057	FIVE SEVEN or TWO ZERO FIVE SEVEN	FIFE SEV-en or TOO ZE-RO FIFE SEV-en



2-4-17

Note. - Co-ordinated universal time (UTC) shall be used.

2.5.2 Pilots may check the time with the appropriate ATS unit. Time checks shall be given to the nearest half minute.

2.5.2

30 가 가

	CASA 345 TIME 0611 or CASA 345 TIME 0715 AND A HALF		CASA 345 REQUEST TIME CHECK
---	---	---	--------------------------------

2.6 STANDARD WORDS AND PHRASES**2.6**

The following words and phrases shall be used in radiotelephony communications as appropriate and shall have the meaning given below.

<i>Word/Phrase</i>	<i>Meaning</i>
ACKNOWLEDGE	Let me know that you have received and understood this message.
AFFIRM	Yes
APPROVED	Permission for proposed action granted 가
BREAK	I hereby indicate the separation between portions of the message. (To be used where there is no clear distinction between the text and other portions of the message.) (가)
BREAK BREAK	I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment. 가
CANCEL	Annul the previously transmitted clearance. 가
CHECK	Examine a system or procedure. (No answer is normally expected.) ()

CLEARED	Authorized to proceed under the conditions specified. 가
CONFIRM	Have I correctly received the following . . .? <i>or</i> Did you correctly receive this message? 가 (...) 가? , 가?
CONTACT	Establish radio contact with
CORRECT	That is correct.
CORRECTION	An error has been made in this transmission (or message indicated). The correct version is . . .
DISREGARD	Consider that transmission as not sent.
GO AHEAD	Proceed with your message. <i>Note- the phrase "GO AHEAD" is not normally used in surface movement communications,</i>
HOW DO YOU READ	- What is the readability of my transmission? 가 가?
I SAY AGAIN	I repeat for clarity or emphasis.
MONITOR	Listen out on (frequency).
NEGATIVE	No <i>or</i> Permission not granted <i>or</i> That is not correct. NO, 가 ,
OUT	This exchange of transmissions is ended and no response is expected. <i>Note- The word "OUT" is not normally used in VHF communication</i> - <i>VHF</i>
OVER	My transmission is ended and I expect a response from you.
READ BACK	Repeat all, or the specified part, of this message back <i>to</i> me exactly as received.
RECLEARED	A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof. 가 가
REPORT	Pass me the following information.
REQUEST	I should like to know . . ., or I wish to obtain
ROGER	I have received all of your last transmission. <i>Note- Under no circumstances to be used in reply to a question requiring "READ BACK" or a direct answer in the affirmative (AFFIRM) or negative(NEGATIVE)</i> - "READ BACK"

SAY AGAIN	Repeat all, or the following part, of your last transmission.
SPEAK SLOWER	Reduce your rate of speech.
STANDBY	Wait and I will call you. 가
VERIFY	Check and confirm with originator.
WILCO	(Abbreviation for will comply .) I understand your message and will comply with it. (WILLCOMPLY)
WORDS TWICE	a) As a request: Communication is difficult. Please send every word or group of w&ds twice. b) As information: Since communication is difficult, every word or group of words in this message will be sent twice. a) : b) :

2.7 CALL SIGNS

2.7

2.7.1 Call signs for aeronautical stations

2.7.1

2.7.1.1 Aeronautical stations are identified by the name of the location followed by a suffix. The suffix indicates the type of unit or service provided.

2.7.1.1

Area control center	CONTROL CENTER
Radar(in general)	RADAR*
Approach control	APPROACH
Approach control radar arrivals	ARRIVAL
Approach control radar departure	DEPARTURE
Aerodrome control	TOWER
Surface movement control	GROUND
Clearance delivery	DELIVERY
precision approach radar	PRECISION*
Direction finding station	HOMER*
Flight information service	INFORMATION
Apron/Ramp control/management service	APRON
Company dispatch	DISPATCH
Aeronautical station	RADIO

* Indicates that those suffixes may not used in Korea

2.7.1.2 When satisfactory communication has been established, and provided that it will not be confusing, the name of the location or the call sign suffix may be omitted.

2.7.1.2
가

2.7.2 Aircraft call signs

2.7.2

2.7.2.1 An aircraft call sign shall be one of the following types:

2.7.2.1

2-4-20

<i>Type</i>	<i>Example</i>
a) the characters corresponding to the registration marking of the G-ABCD or aircraft; Cessna HL 5101.	HL 5101 or Cessna HL 5101
b) the telephony designator of the aircraft operating agency, followed by the last four characters of the registration marking of the aircraft; or CASA 4567	CASA 4567
4 c) the telephony designator of the aircraft operating agency, followed by the flight identification. CASA 345	CASA 345

Note. - the name of the aircraft manufacturer or name of aircraft model may be used as a radiotelephony prefix to the Type a) above.



- a)

2.7.2.2 After satisfactory communication has been established, and provided that no confusion is likely to occur, aircraft call signs specified in 2.7.2.1 may be abbreviated as follows:

2.7.2.2

2.7.2.1

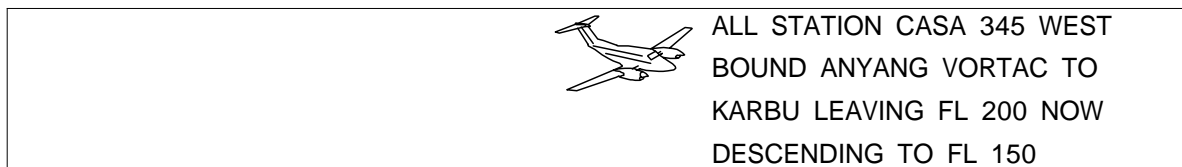
<i>Type</i>	<i>Example</i>
a) the first and at least the last two characters of the aircraft registration;	HL 05 Cessna HL 05

<i>Type</i>	<i>Example</i>
b) the telephony designator of the aircraft operating agency followed by at least the last two characters of the aircraft registration;	CASA 45
2	
c) No abbreviated form	-
2.7.2.2.1 An aircraft shall use its abbreviated call sign only after it has been addressed in this manner by the aeronautical station.	2.7.2.2.1 .
2.7.2.3 An aircraft shall not change its type of call sign or alter its call sign during flight except that where there is a likelihood that confusion may occur because of similar call signs, an aircraft may be instructed by an air traffic control unit to change the type of its call sign temporarily.	2.7.2.3 가
2.7.2.4 Aircraft in the heavy wake turbulence category shall include the word HEAVY immediately after the aircraft call sign in the initial call to the aerodrome control tower and the approach control unit.	2.7.2.4 "Heavy" "Heavy"
2.8 COMMUNICATIONS	2.8
2.8.1 Establishment and continuation of communications	2.8.1
2.8.1.1 When establishing communications, an aircraft should use the full call sign of both the aircraft and the aeronautical station.	2.8.1.1 .
	
HL 5101 GIMPO TOWER GO AHEAD	GIMPO TOWER HL 5101

2.8.1.2 When a ground station wishes to broadcast information, the message should be prefaced by the call ALL STATIONS. **2.8.1.2** "ALL STATION"



2.8.1.3 Also when an aircraft wishes to broadcast information to aircraft in its vicinity, the message should be prefaced by the call ALL STATIONS. **2.8.1.3** 가 ALL STATION



No reply is expected to such general calls unless individual stations are subsequently called upon to acknowledge receipt.

2.8.1.4 If there is doubt that a message has been correctly received, a repetition of the message shall be requested either in full or in part. **2.8.1.4**



<i>Phrase</i>	<i>Meaning</i>
SAY AGAIN	Report entire message
SAY AGAIN ...(item)	Report specific item
SAY AGAIN ALL BEFORE ... ()	Report part of message
SAY AGAIN ALL AFTER ... ()	Report part of message
SAY AGAIN ALL BETWEEN ... AND...	Report part of message

2.8.1.5 When a station is called but is uncertain of the identification of the calling station, the calling station should be requested to repeat its call sign until identification is established. **2.8.1.5**

	STATION CALLING GIMHAE		GIMHAE GROUND....345
	GROUND SAY AGAIN YOUR CALL SIGN		GIMHAE GROUND CASA 345

2.8.1.6 When an error is made in a transmission the word CORRECTION shall be spoken, the last correct group or phrase repeated and then the correct version transmitted.

2.8.1.6 "CORRECTION"

	CASA 345 ROGER		ATOTI 330 JEJU 07 CORRECTION JEJU 57. CASA 345

2.8.1.7 If a correction can best be made by repeating the entire message, the operator shall use the phrase CORRECTION I SAY AGAIN before transmitting the message a second time.


2.8.1.7 "CORRECTION
I SAY AGAIN"

2.8.1.8 After contact has been established, continuous communication may be performed without further identification or call sign until termination of the contact, provided that no confusion or ambiguity will result.

2.8.1.8

2.8.1.9 When it is considered that reception is likely to be difficult, important elements of the message should be spoken twice.

2.8.1.9

	GIMPO TOWER, HL 5101 2,500FEET, I SAY AGAIN 2,500 FEET, ENGINE LOSING POWER, ENGINE LOSING POWER.
---	--

2.8.2 Transfer of Communications

2.8.2

2.8.2.1 An aircraft shall be advised by the appropriate aeronautical station to change from one radio frequency to another in accordance with agreed procedures.

2.8.2.1

가

In the absence of such advice, the aircraft shall notify the aeronautical station before such a change takes place.

가

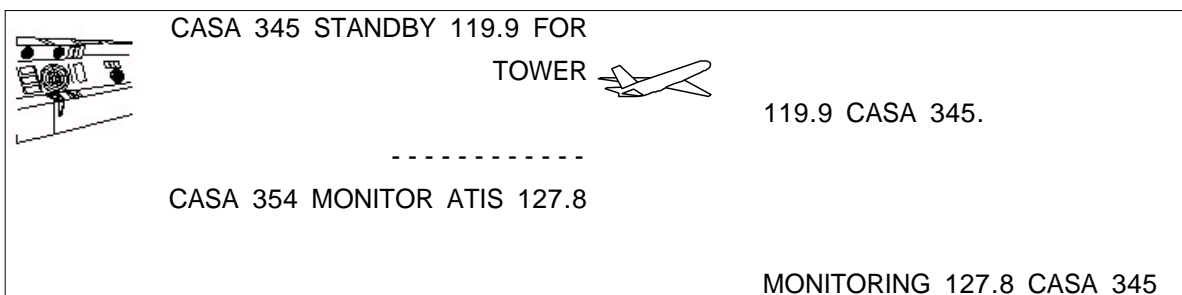


2.8.2.2 An aircraft may be instructed to standby on a frequency when it is intended that the ATS unit will initiate further communications, and to monitor a frequency on which information is being broadcast.

2.8.2.2

stand by
monitor

가



2-9-1, 2-9-2, 2-9-3

2.8.3 Issue of clearance and read back requirements

2.8.3 가

2.8.3.1 Provisions governing clearances are contained in the PANS-RAC. A clearance may vary in content from a detailed description of the route and levels to be flown to a brief landing clearance.

2.8.3.1

가

가

PANS-RAC

가

4-2-1

2.8.3.2 Controllers should pass a clearance slowly and clearly since the pilot needs to write it down and wasteful repetition will thus be avoided. Whenever possible a route clearance should be passed to an aircraft before start up. In any case controllers should avoid passing a clearance to a pilot engaged in complicated taxiing manoeuvres and on no occasion should a clearance be passed when the pilot is engaged in line up or take-off manoeuvres.

2.8.3.2 가
가
가
가
가
가

2.8.3.3 An ATC route clearance is not an instruction to take off or enter an active runway. The words TAKE OFF are used only when an aircraft is cleared for take-off, or when cancelling a take-off clearance. At other times the word DEPARTURE or AIRBORNE is used.

2.8.3.3 ATC 가
가
OFF 가
DEPARTURE 가
AIRBORNE

4-3-1 4-3-9

2.8.3.4 Read back requirements have been introduced in the interests of flight safety. The stringency of the read back requirement is directly related to the possible seriousness of a misunderstanding in the transmission and receipt of ATC clearances and instructions.

2.8.3.4 . ATC 가
가
가
가
가



Strict adherence to readback procedures ensures not only that the clearance has been received correctly but also that the clearance was transmitted as intended. It also serves as a check that the right aircraft, and only that aircraft, will take action on the clearance.

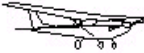
2.8.3.5 Clearances to enter, land on, take off on, cross and back-track on the runway in use shall be read back. ATC route clearances shall always be read back unless otherwise authorized by the

2.8.3.5 , ,
가
ATC 가

appropriate ATS authority in which case they shall be acknowledged in a positive manner.

4-4-1

	<p>CASA 345 CLEARED TO ANYANG ONE SIERRA DEPARTURE SQUAWK 5501</p>		<p>CLEARED TO ANYANG ONE SIERRA DEPARTURE SQUAWK 5501 CASA 345.</p>

<p>HL 5101 WHEN AIRBORNE TURN RIGHT, LEAVE CONTROL ZONE VIA POINT FOXTROT</p>			<p>TURN RIGHT VIA POINT FOXTROT HL 5101</p>

4-2-1 4-2-9

2.8.3.6 The runway in use, heading and speed instructions, level instructions, altimeter settings and SSR codes shall always be read back.

2.8.3.6

SSR

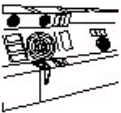

2-7-1 2-7-2, 5-7-1 5-7-2

2.8.3.7 Other clearances and instructions (including conditional clearances) shall be read back acknowledged in a manner which clearly indicates that they have been understood and accepted.

2.8.3.7 (가) 가


2.8.3.8 An aircraft should terminate the readback by its call sign.

2.8.3.8

	HL 5101 CROSS ANYANG VORTAC AT OR ABOVE 4,000 FEET		CROSS ANYANG VORTAC AT OR ABOVE 4,000 FEET HL 5101



	HL 5101 HOLD POSITION		HL 5101 HOLDING

	HL 5101 CONTACT GROUND 121.9		121.9 HL 5101

	CASA 354 SQUAWK 6402		6402 CASA 345

2.8.3.9 If an aircraft read back of a clearance or instruction is incorrect, the controller shall transmit the word "NEGATIVE" followed by the correct version.



2.8.3.9 가 "NEGATIVE"

	HL 5101 QNH 1003		QNH 1013 HL 5101
	NEGATIVE QNH 1003		

2.8.3.10 If there is a doubt as to whether a pilot can comply with an ATC clearance or instruction, the controller may follow the clearance or instruction by the phrase *if not possible advise*, and subsequently offer an alternative. If at any time a pilot receives a clearance or instruction which cannot be complied with, that pilot should advise the controller using the phrase **UNABLE TO COMPLY** and give the reasons.

2.8.3.10 가 ATC 가
가
"if not possible advise" 가
가
가
UNABLE TO COMPLY

4-5-1, 4-5-2

	<p>CASA 345 GIMPO CLEARANCE DELIVERY CLEARED TO JEJU VOR THEN AS FIELD FL 280, CROSS NAMJA FL 150 AT OR ABOVE</p>		<p>GIMPO DELIVERY CASA 345. UNABLE TO COMPLY. CANNOT CROSS NAMJA FL 150 DUE WEIGHT</p>
---	---	---	--

4-2-1 4-2-9

2.8.4 Test procedures

2.8.4

2.8.4.1 Test transmissions should take the following form:

2.8.4.1

- a) the identification of the aeronautical station being called;
- b) the aircraft call sign;
- c) the words RADIO CHECK ;
- d) the frequency being used.

- a)
- b)
- c) "RADIO CHECK"
- d)

2.8.4.2 Replies to test transmissions should be as follows:

2.8.4.2

- a) the identification of the station calling;
- b) the identification of the station replying;
- c) information regarding the readability of the transmission.

- a)
- b)
- c) 가

2.8.4.3 The readability of transmissions should be classified in accordance with the following readability scale:

2.8.4.3

1. Unreadable.
2. Readable now and then.
3. Readable but with difficulty.
4. Readable.
- 5 . Perfectly readable.

1. 가
2. 가
3. 가
4. 가
5. 가

Chapter 3 General Phraseology

3.1

3.1 INTRODUCTION

3.1.1

RTF

3.1.1 The phraseology detailed in this manual has been established for the purpose of ensuring uniformity in RTF communications. Obviously, it is not practicable to detail phraseology examples suitable for every situation which may occur. However, if standard phrases are adhered to when composing a message, any possible ambiguity will be reduced to a minimum.

3.1.2 Some abbreviations, which by their common usage have become part of aviation terminology, may be spoken using their constituent letters rather than the spelling alphabet, for example, ILS, QNH, RVR, etc. (see 1.2).

3.1.2

ILS, QNH, RVR (1.2)

3.1.3 The following words may be omitted from transmissions provided that no confusion or ambiguity will result:

3.1.3

가

- a) SURFACE in relation to surface wind direction and speed.
- b) DEGREES in relation to radar headings.
- c) VISIBILITY, CLOUD and HEIGHT in meteorological reports.
- d) HECTOPASCALS when giving pressure settings.

a) SURFACE :

b) DEGREES :

c) VISIBILITY, CLOUD, HEIGHT :

d) HECTOPASCALS :

3.1.4 The use of courtesies should be avoided.

3.1.4

3.1.5 The word IMMEDIATELY should only be used when immediate action is required for safety reasons.

3.1.5 "IMMEDIATELY"

3.2 LEVEL INSTRUCTIONS

3.2

3.2.1 Only basic level instructions are detailed in this chapter. More comprehensive phrases are contained in subsequent chapters in the context in which they are most commonly used.

3.2.1

3.2.2 The precise phraseology used in the transmission and acknowledgement of climb and descent clearances will vary, depending upon the circumstances, traffic density and nature of the flight operations. However, care must be taken to ensure that misunderstandings are not generated as a consequence of the phraseology employed during these phases of flight. For example, levels may be reported as altitude, height or flight levels according to the phase of flight and the altimeter setting.

3.2.2

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Height

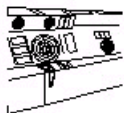

Flight Level

Altitude,


3.2.2.1 In the following examples the operations of climbing and descending are interchangeable and examples of only one form are given.

3.2.2.1

가

	HL 5267 REPORT YOUR LEVEL		HL 5267 MAINTAINING 3,000 FEET
	HL 5267 REPORT PASSING 4,000 FEET		HL 5267 PASSING 4,000


	HL 5267 REPORT 5,000 FEET		MAINTAINING 5,000 FEET HL 5267
	HL 5267 CLIMB TO 7,000		HL 5267 REQUEST DESCENT
	HL 5267 DESCENT TO 6,000 FEET		



CASA 345 AFTER PASSING
KALMA DESCENT TO 4,000 FEET

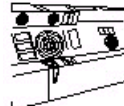
LEAVING 7,000 FEET
DESCENDING TO 6,000 FEET.
HL 5267

AFTER PASSING KALMA
DESCEND TO 4,000 FEET. CASA
354




3.2.2.2 Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot.

3.2.2.2 가
가 .



CASA 345, STOP DESCENT AT
FL 150



STOP DESCENT AT FL 150,
CASA 345

CASA 345 CONTINUE CLIMB
TO FL 330

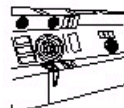
CLIMBING TO FL 330 CASA 345

CASA 345 RE-CLEARED FL
330


RE-CLEARED FL 330 CASA 345

3.2.2.3 Occasionally, for traffic reasons, a higher than normal rate of climb or descent may be required.

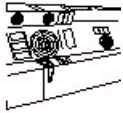

3.2.2.3



CASA 354, EXPEDITE DESCENT
TO 8,000 FEET



EXPEDITING DESCENT TO 8,000
FEET, CASA 345

	<p>CASA345 CLIMB TO FL 240 EXPEDITE UNTIL PASSING FL 180</p>		<p>CASA 345 CLIMBING TO FL 240, EXPEDITING UNTIL PASSING FL 180</p>
		<p>or</p>	
		<p>CASA 345 UNABLE COMPLY</p>	

3.3 POSITION REPORTING

3.3

3.3.1 Position reports shall contain the following elements of information, except that elements 4), 5) and 6) may be omitted when prescribed on the basis of regional air navigation agreements:

3.3.1

- | | |
|--------------------------------|----|
| 1) Aircraft identification | 1) |
| 2) Position | 2) |
| 3) Time | 3) |
| 4) Level | 4) |
| 5) Next position and time over | 5) |
| 6) Ensuing significant point | 6) |

4), 5), 6)

5-1-12, 5-10-7

3.3.2 When transmitting time, only the minutes of the hour should normally be required. Each digit should be pronounced separately. However, the hour should be included when any possibility of confusion is likely to arise.

3.3.2



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	<p>CASA 345, ROGER</p>		<p>GANWON 47 FL 330. KANSU NEXT. CASA 345</p>
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3.3.3 Where adequate flight progress data are available from other sources, such as surveillance radar, flights may be exempted from the requirement to make compulsory position reports.

3.3.3

5-1-1]5-1-13

	CASA 345, NEXT REPORT KANSU	
		
		CASA 345 WILCO

	CASA 345 REPORT UNTIL FIR BOUNDARY, NEXT REPORT NIRAT	
		CASA 345 WILCO

	CASA 345 RESUME POSITION REPORTING	
		CASA 345 WILCO



3.4 FLIGHT PLANS

3.4

3.4.1 A pilot may file a flight plan with an ATS unit during flight, although the use of busy air traffic control channels for this purpose should be avoided. Details should be passed using the flight plan format.

3.4.1

가

			SEOUL APPROACH CONTROL HL 5101 REQUEST FILE FLIGHT PLAN
	HL 5101AB SEOUL APPROACH READY TO COPY		

3.4.2 During a flight a pilot may change from IFR to VFR flight.

3.4.2



IFR VFR

			SEOUL APPROACH HL 5267 CANCELLING IFR FLIGHT PLAN. PROCEEDING VFR ESTIMATING GIMPO AT 1732
	HL 5267 IFR FLIGHT PLAN CANCELLED AT 47. CONTACT GIMPO TOWER 118.1		

3.4.3 When a pilot has expressed the intention to change from IFR to VFR flight, the ATS unit should pass to the pilot any available meteorological information which makes it likely that flight in VMC cannot be maintained.

3.4.3 가 IFR VFR

2-6-2

	<p>HL 5267 IMC REPORTED IN THE VICINITY OF JEJU</p>	 <p>HL 5267 ROGER MAINTAIN IFR</p>
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Chapter 4

4

Aerodrome Control: Aircraft

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4.1 INTRODUCTION

4.1

4.1.1 Concise and unambiguous phraseology used at the correct time is vital to the smooth, safe and expeditious operation of an aerodrome. It is not only the means by which controllers carry out their task, but it also assists pilots in maintaining an awareness of other traffic in their vicinity, particularly in poor visibility conditions.

4.1.2 Controllers should not transmit to an aircraft during take-off, the last part of final approach or the landing roll, unless it is necessary for safety reasons, as it may be distracting to the pilot at a time when the cockpit workload is often at its highest.

4.2 DEPARTURE INFORMATION AND ENGINE STARTING PROCEDURES

4.2

4.2.1 Where no ATIS is provided the pilot may ask for current aerodrome information before requesting start up. (ATIS)가

2-9-1, 2-9-2, 2-9-3

	<p>CASA 345 DEPARTURE RUNWAY 32, WIND 290 DEGREES 4 KNOTS, QNH 1022, TEMPERATURE MINUS 2, DEWPOINT MINUS 3, RVR 550 METERS</p>		<p>GIMPO GROUND CASA 345, IFR TO GIMHAE, REQUEST DEPARTURE INFORMATION</p>
			<p>RUNWAY 32, QNH 1022, WILL CALL FOR START UP, CASA 345</p>



4.2.2 Requests to start engines are normally made to facilitate ATC planning and to avoid excessive fuel wastage by aircraft delayed on the ground. At certain aerodromes the pilot will state, along with the request, the location of the aircraft and acknowledge receipt of the ATIS broadcast. When there will be a delay to the departure of the aircraft the controller will normally indicate a time to start up or expect to start up.

4.2.2

가



(ATIS)

2-9-1, 2-9-2, 2-9-3

	<p>CASA 345 START UP APPROVED QNH 1009 or CASA 345 START UP AT 35 QNH 1009 or CASA 345 EXPECT START UP AT 35 QNH 1009 or CASA 345 EXPECT DEPARTURE 49 START UP AT OWN DISCRETION QNH 1009</p>		<p>GIMPO GROUND CASA 345 STAND 24 REQUEST START UP, INFORMATION BRAVO</p>
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4.2.3 Having received ATC approval, the pilot starts the engines assisted as necessary by ground crew.

4.2.3 ATC 가

	<p>START NUMBER ONE</p>		<p>READY TO START UP STARTING NUMBER ONE</p>
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4.3 PUSH BACK

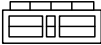

4.3

4.3.1 At many aerodromes at which large aircraft operate, the aircraft are parked nose-in to the terminal in order to save parking space. Aircraft have to be pushed backwards by tugs before they can taxi for departure. Requests for pushback are made to ATC or apron control/management service depending on the local procedures.

4.3.1

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가

	<p>CASA 345 PUSH BACK APPROVED or CASA 345 STANDBY. EXPECT ONE MINUTE DELAY DUE B747 TAXIING BEHIND</p>		<p>GIMPO GROUND CASA 345 STAND 7 REQUEST PUSH BACK</p>
---	---	---	--

4.3.2 The following phraseology should be used by the pilot and the ground crew to co-ordinate the pushback.

4.3.2

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	<p>CONFIRM BREAKING RELEASED COMMENCING PUSH BACK PUSH BACK COMPLETED, CONFIRM BREAKS SET DISCONNECTING STANDBY FOR VISUAL SIGNAL AT YOUR LEFT</p>		<p>READY FOR PUSH BACK BREAKS RELEASED BRAKES SET: DISCONNECT ROGER</p>
---	---	---	--

4.3.3 When the manoeuvre is complete the ground crew gives the pilot a visual signal to indicate that the aircraft is free to taxi. Should the pilot wish to stop the manoeuvre at any stage the phrase stop pushback should be used.

4.3.3

가
가

"STOP PUSH BACK"

4.4 TAXI INSTRUCTIONS



4.4



4.4.1 Taxi instructions issued by a controller will always contain a clearance limit, which is the point at which the aircraft must stop until further permission to proceed is given. For departing aircraft the clearance limit will normally be the holding point of the runway in use, but it may be any other position on the aerodrome depending on the prevailing traffic circumstances.

4.4.1



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가 가
가
가

3-7-1, 3-7-2

	<p>HL 5101 TAXI VIA TAXIWAY HOTEL TO HOLDING POSITION RUNWAY 32L WIND 250 DEGREES 8 KNOTS QNH 1010 TIME TWO THREE AND A HALF</p>		<p>GIMPO TOWER HL 5101 CESSNA SPOT 710 REQUEST TAXI FOR VFR LOCAL FLIGHT</p>
	<p>HL 5101 RE-CLEARED HOLDING POSITION RUNWAY 14R, TRAFFIC BEHIND HELICOPTER COMING FORM YOUR LEFT</p>		<p>HL 5101 QNH 1010 REQUEST RUNWAY 14R</p>
			<p>HL 5101 HOLDING POSITION RUNWAY 14L. TRAFFIC IN SIGHT</p>

	<p>HL 5101 RUNWAY 14L WIND 080 DEGREES 10 KNOTS QNH 1012 TAXI VIA TAXIWAY HOTEL TO HOLDING POINT RUNWAY 14L ----- HL 5101 EXPEDITED TAXI TRAFFIC ON FINAL RUNWAY 14</p>		<p>GIMPO TOWER HL 5101 VFR TO INCHEON REQUEST TAXI</p>
			<p>HL 5101 EXPEDITING</p> <p>HL 5101 RUNWAY 14 VACATED</p>

4.4.2 Where an aircraft acknowledges receipt of the ATIS broadcast the controller does not need to pass departure information to the pilot when giving taxi instructions. **4.4.2** 가 (ATIS) 가

	<p>CASA 345 TAXI TO HOLDING POSITION RUNWAY 27 GIVE WAY TO B747 PASSING LEFT TO RIGHT QNH 1019</p>		<p>GIMPO GROUND CASA 345 REQUEST TAXI INFORMATION CHARLIE</p>
			<p>CASA 345 TAXI TO HOLDING POSITION RUNWAY 27, QNH 1019 TRAFFIC IN SIGHT</p>

4.5 TAKE-OFF PROCEDURES

4.5

4.5.1 At busy aerodromes with separate GROUND and TOWER functions, aircraft are usually transferred to TOWER at or approaching the holding point.

4.5.1
(Ground) (Tower) 가
(Tower)


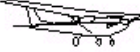
4.5.2 Since misunderstandings in the granting and acknowledgement of take-off clearances can result in serious consequences, care should be taken to ensure that the phraseology employed during the taxi manoeuvres cannot be interpreted as a take-off clearance.

4.5.2 가
,
가
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3-9-9

4.5.3 Some aircraft may be required to carry out checks prior to departure and are not always ready for take-off when they reach the holding point.

4.5.3 가
가

	HL 5101 REPORT WHEN READY FOR DEPARTURE		HL 5101 WILCO
			HL 5101 READY
	HL 5101 LINE UP AND WAIT		
			HL 5101 LINING UP AND WAIT



4.5.4 Except in cases of emergency, controllers should not transmit to an aircraft in the process of taking off or during the early stage of climb.



4.5.4

	HL 5101 CLEARED FOR TAKE-OFF		CLEARED FOR TAKE-OFF HL 5101

4.5.5 For traffic reasons it may be necessary for the aircraft to take off immediately after lining up.

4.5.5 가
가

	CASA 345 ARE YOU READY FOR IMMEDIATE DEPARTURE		CASA 354 AFFIRM
	CASA 354 LINE UP BE READY FOR IMMEDIATE DEPARTURE		CASA 354 LINE UP

	<p>CASA 354 CLEARED FOR TAKE-OFF</p>	 <p>CLEARED FOR TAKE-OFF CASA 354</p>
---	--	--

4.5.6 In poor visibility the controller may request the pilot to report when airborne. **4.5.6**

	<p>CASA 354 CLEARED FOR TAKE-OFF REPORT AIRBORNE</p>	 <p>CLEARED FOR TAKE-OFF WILCO CASA 345</p> <p>CASA 345 AIRBORNE</p>
	<p>CASA 354 CONTACT DEPARTURE 124.8</p>	<p>124.8 CASA 345</p>

4.5.7 Conditional clearances shall not be used for movements affecting the active runway(s), except when the aircraft or vehicles concerned are seen by both the controller and pilot. When the conditional clearance involves a departing aircraft and an arriving aircraft it is important that the departing aircraft correctly identifies the arriving aircraft on which the conditional clearance is based. Reference to the arriving aircraft type may be insufficient and it may be necessary to add a description of the colour or the company name to ensure correct identification. A conditional clearance shall be given as follows:

- | | |
|-------------------|------|
| a) call sign; | a) |
| b) the condition; | b) |
| c) the clearance. | c) 가 |

4.5.7

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가

가

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가

	CASA 345 REPORT THE AIRBUS ON FINAL IN SIGHT		CASA 345 AIRBUS IN SIGHT
	CASA 345 AFTER THE LANDING AIRBUS HAS PASSED, LINE UP AND HOLD(가)		AFTER THE AIRBUS, LINE UP AND HOLD. CASA 345




4.5.8 When several runways are in use and there is any possibility that the pilot may be confused as to which one to use, the runway number should be stated in the take-off clearance.

4.5.8 가 .
가 .

	CASA 345 CLEARED FOR TAKE-OFF RUNWAY 33L		CLEARED FOR TAKE-OFF RUNWAY 33L CASA 345
--	---	---	---

4.5.9 Local departure instructions may be given with the take-off clearance. Such instructions are normally given to ensure separation between aircraft operating in the vicinity of the aerodrome.

4.5.9 가 .
가 .

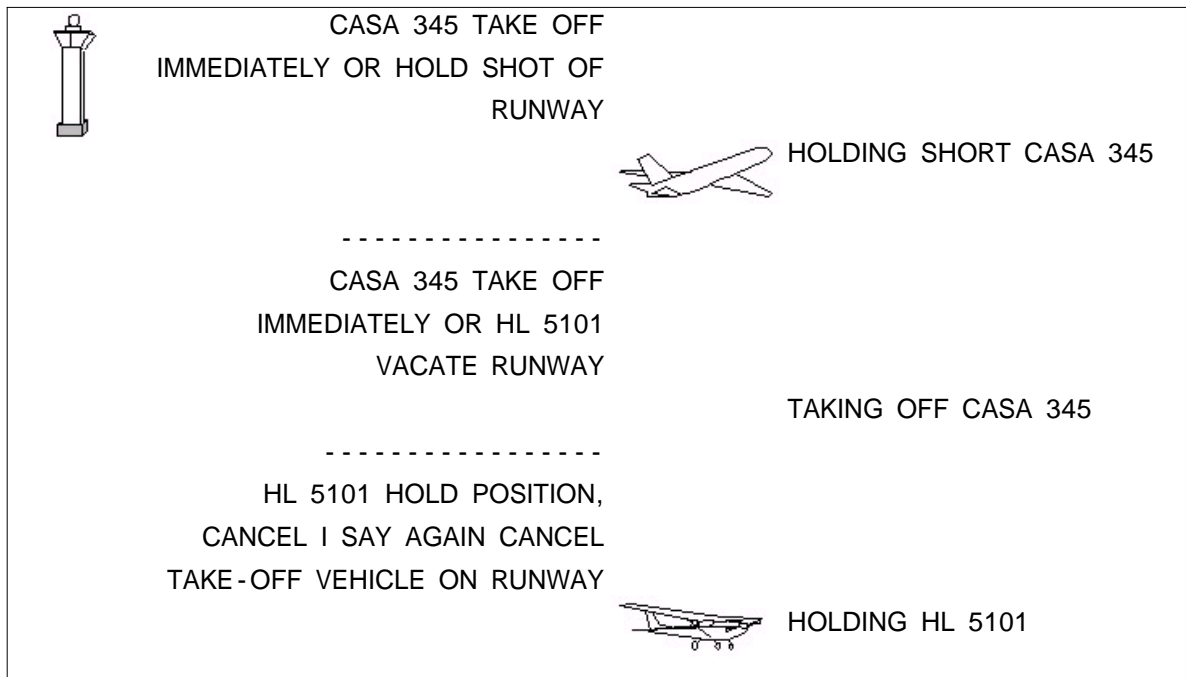
	CASA 345 CLIMB STRAIGHT AHEAD AFTER DEPARTURE TURN LEFT HEADING 240 CLEARED FOR TAKE OFF		STRAIGHT AHEAD AFTER DEPARTURE LEFT TURN, CLEARED FOR TAKE-OFF CASA 345
	HL 5101 RIGHT TURN APPROVED CLEARED FOR CLEARED-OFF		 HL 5101 REQUEST RIGHT TURN AFTER AIR BORN

CLEARED FOR TAKE-OFF
RIGHT TURN HL 5101

4.5.10 Due to unexpected traffic developments or a departing aircraft taking longer to take off than anticipated, it is occasionally necessary to cancel the take-off clearance or quickly free the runway for landing traffic.

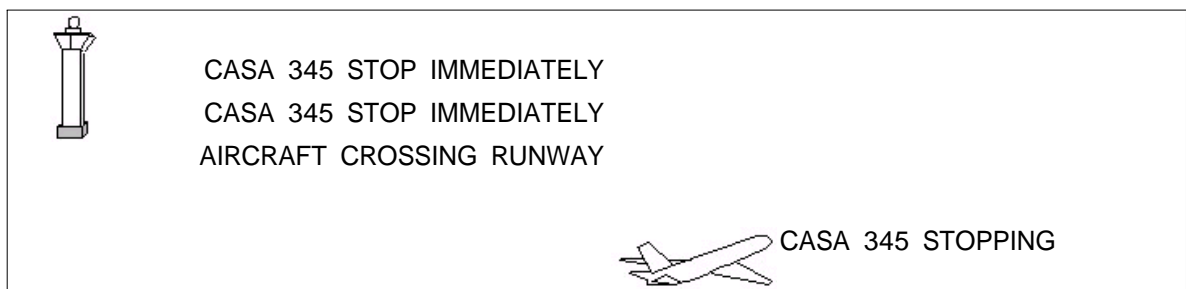
4.5.10 가
가
가

3-9-10





4.5.11 When an aircraft has commenced the take-off roll, and it is necessary for the aircraft to abandon take-off in order to avert a dangerous traffic situation, the aircraft should be instructed to stop immediately and this instruction and call sign repeated.

4.5.11 가
가



4.5.12 When a pilot abandons the take-off manoeuvre the control tower should be so informed as soon as practicable, and assistance or taxi instructions should be requested as required.

4.5.12 가
가



	CASA 345 ROGER		CASA 345 STOPPING
	CASA 345 TAKE NEXT RIGHT RETURN TO RAMP CONTACT GROUND 121.9		CASA 345 REQUEST RETURN TO RAMP
			NEXT RIGHT 121.9 CASA 345

4.6 AERODROME TRAFFIC CIRCUIT
(See Figure 3)

4.6 (3)

4.6.1 Requests for circuit-joining instructions should be made in sufficient time to allow for a planned entry into the circuit taking other traffic into account. When the traffic circuit is a right-hand pattern it should be specified. A left-hand pattern need not be specified although it may be advisable to do so if there has been a recent change where the circuit direction is variable.


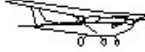
4.6.1 가

			INCHEON TOWER HL 5101 C172 10 MILES WEST 2,500 FEET FOR LANDING
	HL 5101 JONE DOWNWIND RUNWAY 15L WIND 270 DEGREES 5 KNOTS, QNH 1012		JOIN DOWNWIND RUNWAY 15L QNH 1012, HL 5101

4.6.2 Where ATIS is provided, receipt of the broadcast should be acknowledged in the initial call to the aerodrome.

4.6.2

(ATIS)가

	 INCHEON TOWER HL 5101 10 MILES WEST 2,500 FEET. INFORMATION BRAVO, FOR LANDING
	HL 5101 JOIN DOWNWIND RIGHT HAND RUNWAY 15R QNH 1012
RIGHT HAND RUNWAY 15R QNH 1012. HL 5101	



4.6.3 Depending on prevailing traffic conditions and the direction from which an aircraft is arriving, it may be possible to give a straight-in approach.

4.6.3

	 INCHEON TOWER HL 5101 10 MILES WEST 2500 FEET FOR LANDING
	HL 5101 MAKE STRAIGHT-IN APPROACH RUNWAY 33R WIND 190 DEGREES 5 KNOTS QNH 1009
STRAIGHT-IN RUNWAY 33R QNH 1009 HL 5101	


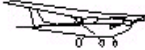
4.6.4 The pilot having joined the traffic circuit makes routine reports as required by local procedures.

4.6.4

	 HL 5101 DOWNWIND
	HL 5101 NUMBER 2 FOLLOW THE CESSNA ON BASE
	HL 5101 NUMBER 2, TRAFFIC IN SIGHT
	HL 5101 BASE
HL 5101 REPORT FINAL	
HL 5101	

	<p>HL 5101 CONTINUE APPROACH WIND 270 DEGREES 7 KNOTS</p>		<p>HL 5101 FANAL</p>
---	---	---	----------------------



4.6.5 It may be necessary in order to co-ordinate traffic in the circuit to issue delaying or expediting instructions. **4.6.5** 가 .

	<p>HL 5101 EXTEND DOWNWIND NUMBER 2 FOLLOW CESEENA 4 MILES FINAL</p>		<p>NUMBER 2 CESSNA IN SIGHT HL 5101</p>
	<p>HL 5101 MAKE ONE ORBIT RIGHT DUE TRAFFIC ON THE RUNWAY, REPORT AGAIN ON FINAL</p>		<p>HL 5101 ORBITING</p>
	<p>HL 5101 NUMBER 1 MAKE SHORT APPROACH ANOTHER TRAFFIC 6 MILES FINAL</p>		<p>SHORT APPROACH HL 5101</p>

4.7 FINAL APPROACH AND LANDING **4.7**



4.7.1 A FINAL report is made when an aircraft turns onto final within 7km (4NM) from touchdown. If and when the turn onto final is made at a greater distance, a LONG FINAL report is made. If the aircraft is making a straight-in-approach, a LONG FINAL report is made at about 15 km (8NM) from touchdown. If no landing clearance is received at that time, a FINAL report is made at 7km (4NM) from touchdown. **4.7.1** 가 7km (4NM) Final Long Final 가 15km (8NM) LONG FINAL 가 7km (4NM) "FINAL" .

3-10-5

	CASA 345 CONTINUE APPROACH WIND 270 DEGREES 18 KNOTS		CASA 345 LONG FINAL
			CASA 345
			CASA 345 FINAL
	CASA 345 CLEARED TO LAND WIND 270 DEGREES 20 KNOTS		CLEARED TO LAND CASA 345

4.7.2 A pilot may request to fly past the control tower or other observation point for the purpose of visual inspection from the ground.

4.7.2

	FASTER 345 CLEARED LOW APPROACH RUNWAY 27 NOT BELOW 500 FEET REPORT FINAL		CASA 345 REQUEST LOW PASS UNSAFE LEFT GEAR INDICATION
			RUNWAY 14R NOT BELOW 500 FEET CASA 345

4.7.3 If the low pass is made for the purpose of observing the undercarriage, one of the following replies could be used to describe its condition but these examples are not exhaustive:

4.7.3

- a) LANDING GEAR APPEARS DOWN;
- b) RIGHT (or LEFT, or NOSE) WHEEL APPEARS (or DOWN);
- c) WHEELS APPEAR UP;
- d) RIGHT (or LEFT, or NOSE) WHEEL DOES NOT APPEAR UP (or DOWN);



가

- a) LANDING GEAR APPEARS DOWN;
- b) RIGHT(or LEFT, or NOSE) WHEEL APPEARS (or DOWN);
- c) WHEELS APPEAR UP;
- d) RIGHT (or LEFT, or NOSE) WHEEL DOES NOT APPEAR UP (or DOWN);

4.7.4 For training purposes, a pilot may request permission to make an approach along, or parallel to the runway, without landing.

4.7.4

가

	<p>CASA 345 CLEARED FOR LOW APPROACH RUNWAY 09 NOT BELOW 500 FEET REPORT FINAL</p>	 <p>CASA 345 REQUEST LOW APPROACH RUNWAY 14R FOR TRAINING</p>
		<p>RUNWAY 09 NOT BELOW 500FEET CASA 345</p>



3-10-10

4.7.5 In order to save taxiing time when flying training in the traffic circuit pilots may request to carry out a *TOUCH AND GO*, i.e. the aircraft lands, continues rolling and takes-off, without stopping.

4.7.5

TOUCH AND GO

3-8-2

	<p>HL 5101 CLEARED FOR TOUCH AND GO</p>	 <p>HL 5101 REQUEST TOUCH AND GO</p>
	<p>or</p> <p>HL 5101 UNABLE TO APPROVED DUE TRAFFIC CONGESTION MAKE FULL STOP CLEARED TO LAND</p> <p>or</p> <p>HL 5101 MAKE ANOTHER CIRCUIT REPORT DOWNWIND</p>	<p>CLEARED TOUCH AND GO HL 5101</p> <p>CLEARED TO LAND FOR FULL STOP HL 5101</p> <p>HL 5101 WILCO</p>

4.8 GO AROUND

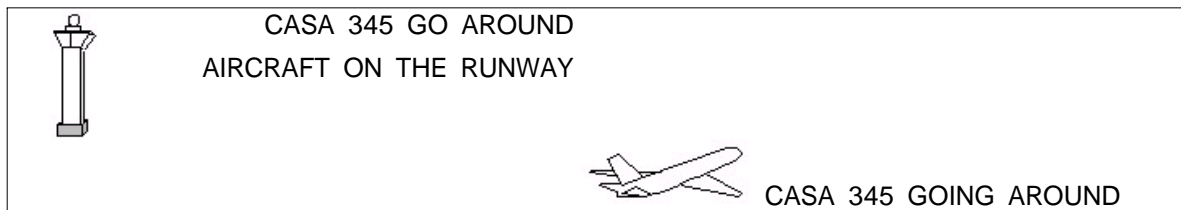
4.8

4.8.1 Instructions to carry out a missed approach may be given to avert an unsafe situation. When a missed approach is initiated cockpit workload is inevitably high. Any transmissions to aircraft going around should be brief and kept to a minimum.

4.8.1

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4-8-9, 5-10-11



4.8.2 Unless instructions are issued to the contrary, an aircraft on an instrument approach will carry out the missed approach procedure and an aircraft operating VFR will continue in the normal traffic circuit.

4.8.2

4-8-9, 5-10-11

4.8.3 In the event that the missed approach is initiated by the pilot the phrase GOING AROUND shall be used.

4.8.3

“GOING AROUND”

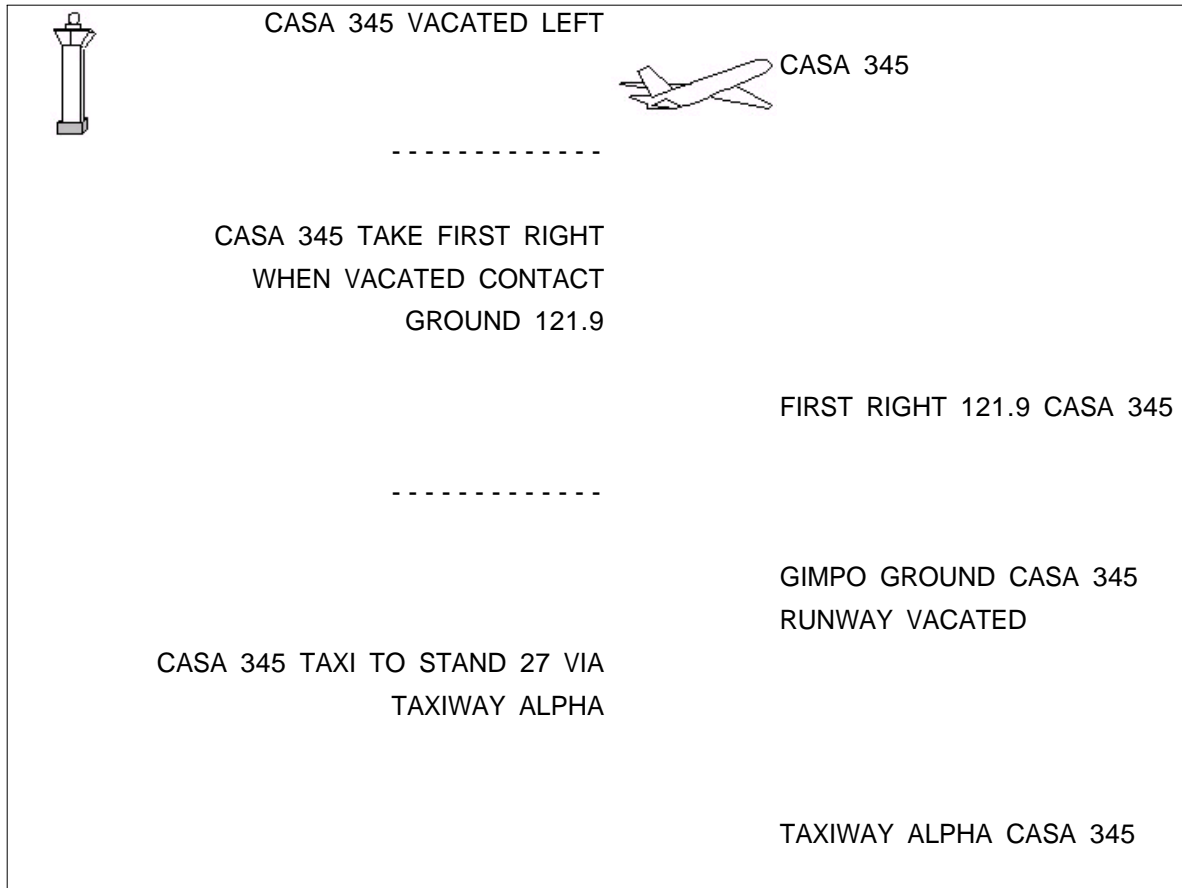


4.9 AFTER LANDING

4.9 착륙 후

Unless absolutely necessary, controllers should not direct taxi instructions to pilots until the landing roll is completed. Unless otherwise advised pilots should remain on tower frequency until the runway is vacated.

꼭 필요한 경우가 아니라면, 관제사는 착륙활주가 끝날때까지 조종사에게 지상활주지시를 하여서는 안된다. 특별한 경우를 제외하고는 조종사는 활주로를 벗어날때까지 관제탑주파수에 머물러 있어야 한다.



4.10 ESSENTIAL AERODROME INFORMATION

4.10

4.10.1 Essential aerodrome information is information regarding the manoeuvring area and its associated facilities which is necessary to ensure the safe operation of aircraft. Aerodrome information should be passed to aircraft whenever possible prior to start-up or taxi and prior to the commencement of final approach. It includes information regarding the following:

a) construction or maintenance work on, or immediately adjacent to the manoeuvring area;

b) rough or broken surfaces on a runway or a taxiway, whether marked or not;

4.10.1



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a)

b)

- c) snow or ice on a runway or a taxiway; c) ;
- d) water on a runway; d) ;
- e) snow banks or drifts adjacent to a runway or a taxiway; e) ;
- f) other temporary hazards, including parked aircraft and birds on the ground or in the air; f) ;
- g) failure or irregular operation of part or all of the aerodrome lighting systems; g) 가 가 ;
- h) any other pertinent information h)

	<p>CASA 345 CAUTIN CONSTRUCTION WORK ADJACENT TO GATE 37</p>	 <p>CASA 345</p>
<p>... WORK IN PROGRESS AHEAD NORTH SIDE OF TAXIWAY ALPHA</p>		
<p>... CENTRE LINE TAXIWAY LIGHTING UNSERVICEABLE</p>		
<p>... VASIS RUNWAY 36L UNSERVICEABLE</p>		
<p>... LARGE FLOCK OF BIRDS NORTH OF RUNWAY 36R NEAR CENTRAL TAXYWAY</p>		
<p>... ILS 36L UNSERVICEABLE</p>		
<p>... RUNWAY CONDITIONS 09: AVAILABLE WIDTH 32 METERS, COVERED WITH THIN PATCHES OF ICE, BRAKING ACTION POOR SNOW UP TO 30 CM ALONG EDGES</p>		

Chapter 5 Aerodrome Control: Vehicles

5 :

5.1 INTRODUCTION

5.1

5.1.1 The expeditious movement of vehicles plays an essential supporting role in the operation of an aerodrome. Wherever possible the areas in which vehicles and aircraft operate are segregated. However, there are many occasions when vehicles need to move on the manoeuvring area for maintenance purposes or in direct support of aircraft operations.

5.2.1

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3-1-8

5.1.2 Procedures governing the movement of vehicles vary widely from aerodrome to aerodrome, but certain factors to be taken into account when driving on an aerodrome are common to all:

5.1.2

a) in general, aircraft are by no means as manoeuvrable as ground vehicles;

a)

b) the visibility from an aircraft cockpit for ground movement purposes is often restricted compared to that from a ground vehicle. Therefore, when vehicles are operating in close proximity to aircraft, drivers should be extremely vigilant and comply in full with local procedures and ATC instructions.

b)

ATC

5.1.3 Correct RTF operating technique must be observed by all users. It is important that a continuous listening watch is maintained by all vehicles on the movement area, not only in case of further instructions from the control tower, but also so that drivers can be aware of the movements, and intended movements, of other traffic, thereby reducing the risk of conflict.

5.1.3

RTF

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5.2 MOVEMENT INSTRUCTIONS

5.2

5.2.1 Drivers on first call should identify themselves by their vehicle call sign, state their position and intended destination (and possibly required route).

5.2.1

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	<p>WORKER 21 PROCEED TO TAXIWAY HOTEL VIA KILO AND ALPHA</p>		<p>GROUND WORKER 21 GATE 27 REQUEST TO WORK IN PROGRESS TAXIWAY HOTEL</p>
---	--	---	---

5.2.2 The controller, if too busy to give instructions, will reply standby. This means that the driver should wait until the controller calls back. The driver shall *not* proceed until permission is given.



5.2.2



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"Stand By"
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5.2.3 When there is conflicting traffic the controller may reply HOLD POSITION. This means that the driver shall not proceed until the controller calls back with permission. All other replies should contain a clearly defined point to which the driver may proceed; this may or may not be the intended destination. If it is not the intended destination drivers must stop at this point and request permission before proceeding further.

5.2.3

"HOLD POSITION"
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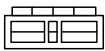

	<p>TRUCKER 5 PROCEED VIA PAPA, DELTA2, CROSS RUNWAY 14R HOLD SHORT RUNWAY 14L</p>		<p>GROUND TRUCKER 5 EXIT KILO REQUEST PROCEED TO HANGAR</p>
			<p>TRUCKER 5 VIA PAPA, DELTA2, CROSS RUNWAY 14R HOLD SHORT RUNWAY 14L</p>

	<p>TRUCKER 5 PROCEED VIA PAPA, DELTA2, CROSS RUNWAY 14R HOLD SHORT RUNWAY 14L</p>		<p>TRUCKER 5 CROSSING TRUCKER 5 RUNWAY 14 VACATED</p>
<p>TRUCKER 5 ROGER</p>			

5.2.4 Permission to proceed on the apron may include such instructions regarding other traffic as are thought necessary to ensure safe operations.

5.2.4

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	<p>TRUCKER 5 GIVE WAY TO THE CASA B737 ON YOUR RIGHT THEN PROCEED TO GATE 26, CAUTION JET BLAST</p>		<p>APRON TRUCKER 5 GATE 21 REQUEST PROCEED TO GATE 26</p>
<p>TRUCK 5</p>			

Note. - *The phrase GO AHEAD is not normally used in communications with vehicles.*

- "GO AHEAD"

5.3 CROSSING RUNWAYS

5.3

5.3.1 Drivers should note carefully the position to which they may proceed, particularly where the intended route involves crossing a runway. Some aerodromes may have procedures that will allow vehicles to proceed to a holding point on the movement area and then request runway crossing instructions. Under no circumstances shall a driver cross a runway unless *positive permission has been given and acknowledged*. A runway vacated report shall not be made until the vehicle (and tow) is clear of the designated runway area.

5.3.1



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	WORKER 21 PROCEED VIA INDIA AND BRAVO. HOLD SHORT OF RUNWAY 27		GROUND WORKER 21 BY THE CONTROL TOWER REQUEST PROCEED TO MAINTENANCE BASE
			VIA INDIA AND BRAVO HOLD SHORT OF RUNWAY 27 WORKER 21
			WORKER 21 HOLDING SHORT RUNWAY 27
	WORKER 21 STANDBY		
	WORKER 21 CROSS RUNWAY 27 TO TAXIWAY MIKE REPORT VACATED RUNWAY		WORKER 21 CROSSING RUNWAY 27
			WORKER 21 RUNWAY VACATED
	WORKER 21 CONTINUE ON MIKE TO MAINTENANCE		

5.3.2 If a vehicle is operating on the runway, it shall be instructed to leave the runway when it is expected that an aircraft will be landing or taking off.

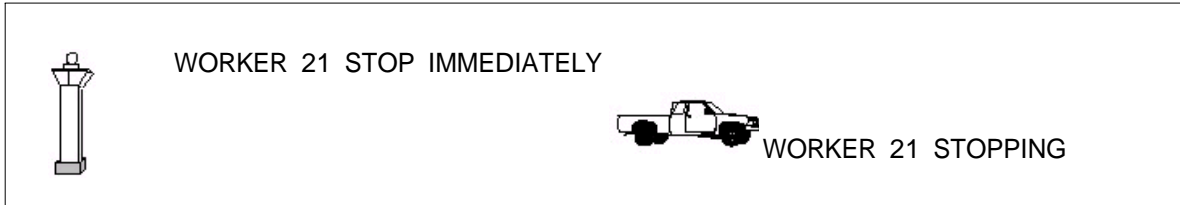
5.3.2

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	WORKER 21 VACATE RUNWAY 27 TAKE NEXT RIGHT, REPORT VACATED		WORKER 21 WILCO
			WORKER 21 RUNWAY 27 VACATED
	WORKER 21 ROGER		

5.3.3 When a vehicle is moving on the movement area it may be necessary to inform the vehicle of a potentially dangerous situation and to instruct it to stop.

5.3.3



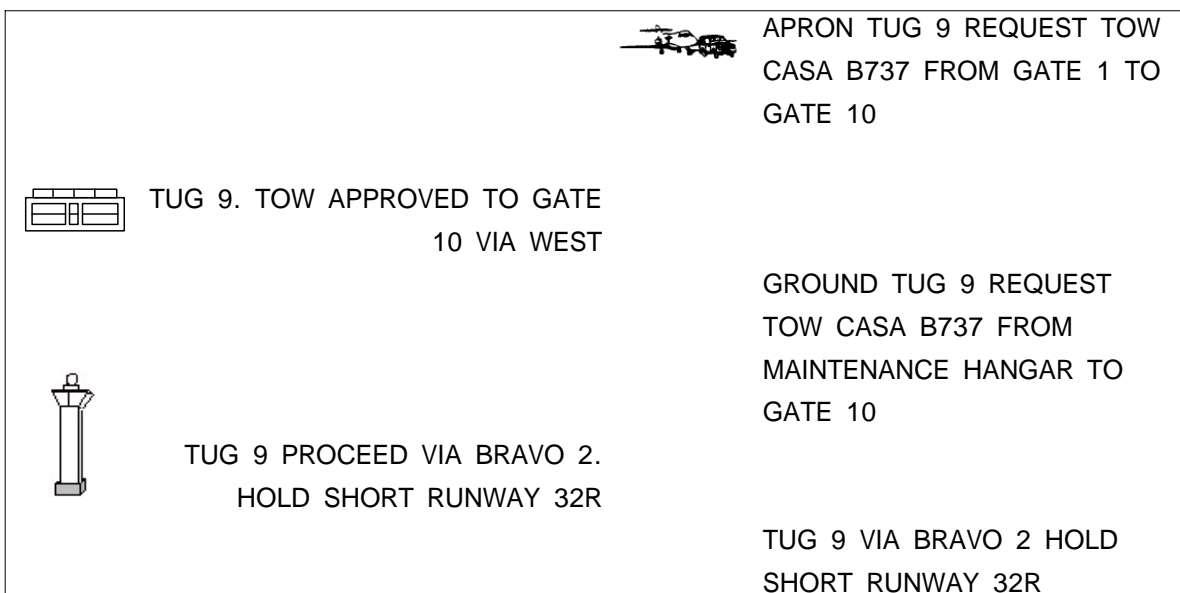
5.4 VEHICLES TOWING AIRCRAFT

5.4

Drivers of vehicles required to tow aircraft should not assume that the receiving station is aware that an aircraft is to be towed. The performance and manoeuvrability of ground vehicles is obviously considerably reduced when towing aircraft and this is taken into account when instructions to such vehicles are issued. Therefore, in order to avoid any confusion, and as an aid to identification, drivers should state the type, and where applicable the operator, of the aircraft to be towed.

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Chapter 6 General Radar Phraseology

6

6.1 INTRODUCTION

6.1

6.1.1 This chapter contains general radar phraseology which is commonly used in communications between aircraft and all types of radar units. Phraseology which is more applicable to approach radar control or area radar control is to be found in Chapters 7 and 8 as appropriate.

6.1.1

8

7

6.1.2 The phrase UNDER RADAR CONTROL shall only be used when a radar control service is being provided. Normally, however, the call sign suffix used by the radar unit is sufficient to indicate its function.

6.1.2 “UNDER RADAR CONTROL”
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6.1.3 In a radar environment heading information given by the pilot and heading instructions given by controllers are in degrees magnetic.

6.1.3

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가**6.2 RADAR IDENTIFICATION AND VECTORIZING**

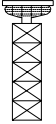

6.2

6.2.1 Radar vectors may be given to establish the identification of an aircraft. Other means of radar identification are the use of position report information, requesting the aircraft to make turns, the use of bearing and distance information from a prominent object or radio aid, and the use of SSR.

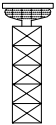

6.2.1

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5-3-1 5-3-8, 5-6-1 5-6-3

	HL 5267 REPORT YOUR HEADING AND LEVEL		HL 5267 HEADING 110 AT 2,500 FEET
	HL 5267 FOR IDENTIFICATION TURN LEFT HEADING 080		LEFT HEADING 080
	HL 5267 IDENTIFIED 20 MILES NORTH WEST OF GIMPO AIRPORT CONTINUE PRESENT HEADING		HL 5267
	or		
	HL 5267 NOT IDENTIFIED. NOT YET WITHIN RADAR COVER. RESUME OWN NAVIGATION TO ANYANG VORTAC		HL 5267

6.2.2 The pilot should be advised if identification is lost, or about to be lost, and appropriate instructions given. **6.2.2**

	HL 5267 RADAR IDENTIFICATION LOST DUE RADAR FAILURE. CONTACT INCHEON ACC ON 127.8		127.8 HL 5267
	HL 5267 WILL SHORTLY LOSE RADAR IDENTIFICATION TEMPORARILY DUE FADE AREA. REMAIN THIS FREQUENCY		HL 5267

6.3 RADAR VECTORING

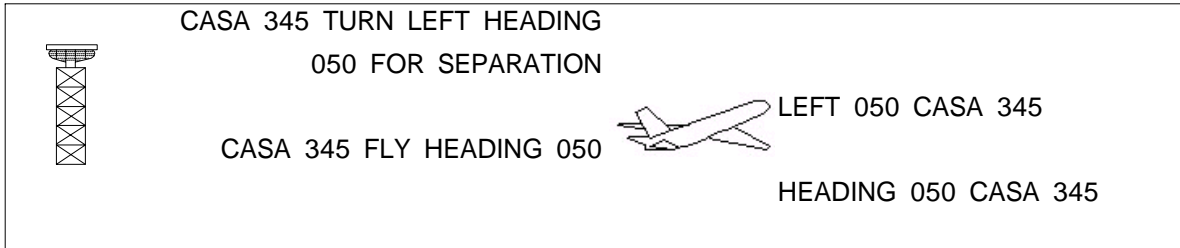
6.3

6.3.1 Aircraft may be given specific vectors to fly in order to establish lateral separation. Unless it is self-evident, pilots should be informed of the reasons why radar vectors are necessary.

6.3.1

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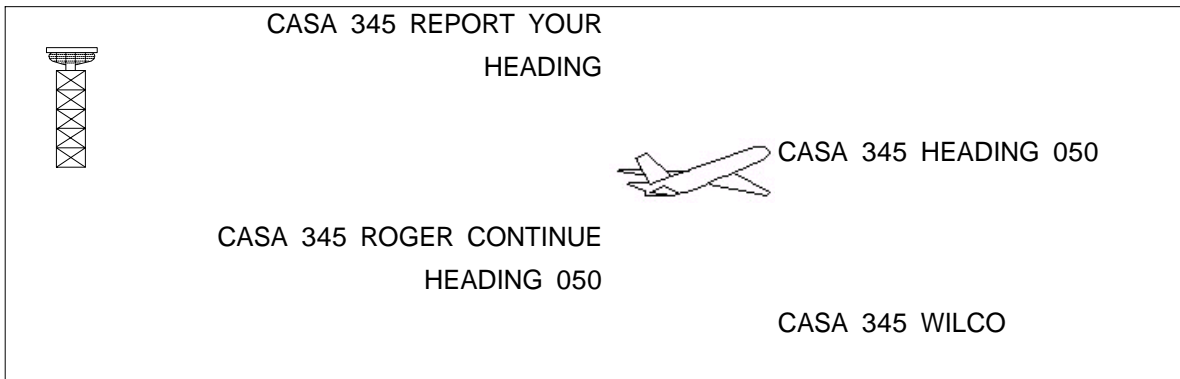
5-6-1 5-6-3



6.3.2 It may be necessary for ATC purposes to know the heading of an aircraft as lateral separation can often be established by instructing an aircraft to continue on its existing heading. Conflicting traffic can then be separated laterally.

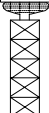

6.3.2

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6.3.3 When vectoring is completed, pilots shall be instructed to resume their own navigation and given position information and appropriate instructions as necessary.

6.3.3

	CASA 345 RESUME OWN NAVIGATION DIRECT ANYANG VORTAC		DIRECT ANYANG VORTAC CASA 345
	CASA 345 RESUME OWN NAVIGATION DIRECT ANYANG TRACK 070 DISTANCE 27 MILES		070 27 MILES DIRECT ANYANG CASA 345
	or		
	HL 5101 RESUME OWN NAVIGATION POSITION 15 MILES SOUTHEAST OF ANYANG VORTAC		HL 5101 WILCO

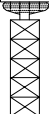


6.3.4 Occasionally an aircraft may be instructed to make a complete turn (known as an orbit or a 360 degree turn), for delaying purposes or to achieve a required spacing behind preceding traffic.

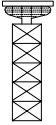

6.3.4

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	CASA 345 MAKE A THREE SIXTY TURN LEFT FOR DELAYING ACTION		THREE SIXTY TURN LEFT CASA 345
	HL 5267 MAKE ONE ORBIT LEFT FOR SEQUENCING		ORBIT LEFT HL 5267

	CASA 345 UNKNOWN TRAFFIC 10 O'CLOCK 11 MILES CROSSING LEFT TO RIGHT FAST MOVING		CASA 345 NEGATIVE CONTACT, REQUEST VECTORS
	CASA 345 TURN LEFT HEADING 050		LEFT 050 CASA 345
	CASA 345 CLEAR OF TRAFFIC, RESUME OWN NAVIGATION DIRECT ANYANG VORTAC		
	CASA 345 CLEAR OF TRAFFIC, RESUME OWN NAVIGATION DIRECT ANYANG VORTAC		
			DIRECT ANYANG VORTAC CASA 345
	HL 5101 TRAFFIC 2 O'CLOCK 5 MILES NORTH BOUND CESSNA AT 2,000 FEET		
			HL 5101 LOOKING
	HL 5101 DO YOU WANT VECTORS		
			HL 5101 NEGATIVE VECTORS, TRAFFIC IN SIGHT
	HL 5101		

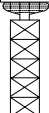

6.4.4 Avoiding action to be taken by the pilot is given when the controller considers that an imminent risk of collision will exist if action is not taken immediately.

6.4.4

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	CASA 345 TURN RIGHT IMMEDIATELY HEADING 110 TO AVOID TRAFFIC 12 O'CLOCK 4 MILES		RIGHT HEADING 110 CASA 345
	CASA 345 NOW CLEAR OF TRAFFIC RESUME OWN NAVIGATION DIRECT ANYANG VORTAC		DIRECT ANYANG VORTAC CASA 345

6.5 SECONDARY SURVEILLANCE RADAR

6.5 2

6.5.1 The following phrases together with their meanings are instructions which may be given by controllers to pilots regarding the operation of SSR transponders.

6.5.1 2
가

<i>Phrase</i>	<i>Mean</i>
SQUAWK (code)	Mode A Set the mode A code as instructed
CONFIRM SQUAWK	Mode A Confirm mode A code set on the transponder
RECYCLE (code)	Mode A Reselect assigned mode A code
SQUAWK IDENT	IDENT" Operate the IDENT feature
SQUAWK MAYDAY	Select emergency code
SQUAWK STANDBY	Stand By Select the standby feature
SQUAWK CHARLIE	Select pressure altitude transmission feature
CHECK ALTIMETER SETTING AND CONFIRM LEVEL	CHECK ALTIMETER SETTING AND Check pressure setting and confirm present level
STOP SQUAWK CHARLIE	Deselect pressure altitude transmission feature
WRONG INDICATION	INDICATION because of faulty operation
VERIFY LEVEL	Check and confirm your level
CHECK ID SQUAWK	Mode S For a mode S equipped aircraft, check the setting of the aircraft identification feature

* Used to verify the accuracy of the Mode C derived level information displayed to the controller.

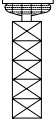

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Mode C

6.5.2 The pilot reply to SSR instructions is usually either an acknowledgement or read back.

6.5.2 2

5-2-1 5-2-24

	CASA 345 ADVISE TYPE OF TRANSPONDER		CASA 345 TRANSPONDER CHARLIE
	CASA 345 SQUAWK 6411		6411 CASA 345
	CASA 345 CONFIRM SQUAWK		CASA 345 SQUAWKING 6411
	CASA 345 RECYCLE 6411		CASA 345 RECYCLING 6411
	----- CASA 345 CHECK ALTIMETER SETTING AND CONFIRM LEVEL		CASA 345 ALTIMETER 1013 ALTITUDE 8,000 FEET
	----- CASA 345 CONFIRM TRANSPONDER OPERATING		CASA 345 NEGATIVE, TRANSPONDER UNSERVICEABLE

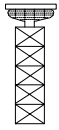
6.6 RADAR ASSISTANCE TO AIRCRAFT WITH RADIOCOMMUNICATIONS FAILURE

6.6

When a controller suspects that an aircraft is able to receive but not transmit messages, the radar may be used to confirm that the pilot has received instructions.

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HL 5267 REPLY NOT RECEIVED IF
YOU READ TURN LEFT HEADING
040

HL 5267 TURN OBSERVED
POSITION 5 MILES SOUTH OF
ANYANG VORTAC WILL CONTINUE
TO PASS INSTRUCTIONS

CASA 345 REPLY NOT RECEIVED
IF YOU READ SQUAWK IDENT

CASA 345 IDENT OBSERVED WILL
CONTINUE TO PASS
INSTRUCTIONS

*Note.- An aircraft experiencing a
radiocommunications failure is
expected to select SSR code 7600.*

주- 무선통신 두절시에 항공기에 SSR코드
7600을 선택하기로 되어 있다.

Chapter 7 Approach Control

7

7.1 IFR DEPARTURES

7.1 IFR

7.1.1 At many airports both arrivals and departures are handled by a single approach control unit. At busier airports departures and arrivals may be handled separately by specific arrival and departure control units.

7.1.1

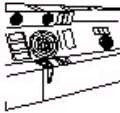

7.1.2 In addition to the ATC route clearance, departing IFR flights may be given departure instructions in order to provide separation. These may be given in plain language or in the form of a Standard Instrument Departure (SID).

7.1.2 ATC
IFR

가

가

(SID)

	<p>CASA 345 RADAR CONTACT ANYANG ONE SIERRA DEPARTURE MAINTAIN 7,000 FEET</p>		<p>SEOUL DEPARTURE CASA 345 AIR BORN</p>
	<p>CASA 345 REPORT LEACHING 7,000</p>		<p>ANYANG ONE SIERRA DEPARTURE MAINTAIN 7,000 FEET, CASA 345</p>
	<p>CASA 345 CONTACT OSAN APPROACH 127.8</p>		<p>CASA 345 WILCO CASA 345 LEACHING 7,000.</p>
			<p>127.8 CASA 345</p>

4-3-1 4-3-9

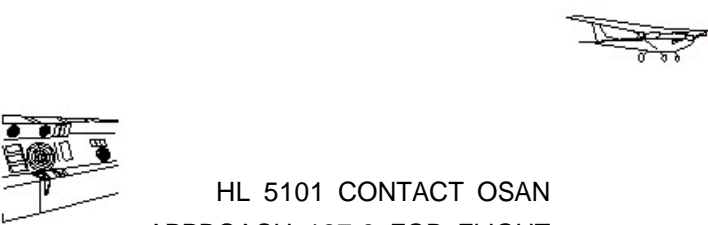
7.2 VFR DEPARTURES

7.2 VFR

7.2.1 Departing VFR flights, when handled by approach control, may be passed information on relevant known traffic in order to assist the pilots in maintaining their own separation. Pilots should report leaving the area of jurisdiction of the approach control unit.

7.2.1

VFR 가
가



HL 5101 CONTACT OSAN APPROACH 127.8 FOR FLIGHT INFORMATION

SEOUL APPROACH
HL 5101 PASSING THE ZONE BOUNDARY

124.8 HL 5101

7.2.2 Special VFR flights will be cleared to leave the control zone in accordance with laid down procedures.

7.2.2

가

7-5-1 7-5-4



HL 5101 REPORT LEAVING CONTROL ZONE. AT 3,000

REPORT LEAVING CONTROL ZONE. AT 3,000. HL 5101

HL 5101

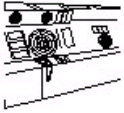

7.3 IFR ARRIVALS

7.3 IFR

7.3.1 Approach control will normally advise, on initial contact, the type of approach to be expected.

7.3.1

4-8-1 4-8-3

	CASA 345 MAINTAIN 8,000 FEET EXPECT ILS APPROACH RUNWAY 14R QNH 1005		SEOUL APPROACH CASA 345. 8,000 FEET ESTIMATING ANYANG CROSS 46 INFORMATION DELTA
			MAINTAIN 8,000 FEET RUNWAY 14R QNH 1005 CASA 345
			RUNWAY 32R QNH 1014 REQUEST STRAIGHT-IN APPROACH ON ILS/DME CASA 345
	----- CASA 345 EXPECT ILS/DME APPROACH RUNWAY 32R QNH 1014		
	CASA 345 EXPECT ILS/DME APPROACH RUNWAY 32R QNH 1014		RUNWAY 32R QNH 1014 REQUEST STRAIGHT-IN APPROACH ON ILS/DME CASA 345
	CASA 345 CLEARED STRAIGHT-IN APPROACH REPORT ESTABLISHED		CASA 345
	CASA 345 CONTACT TOWER 118.1		CASA 345 ESTABLISHES RUNWAY IN SIGHT
			118.1 CASA 345

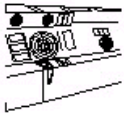


GIMPO TOWER CASA 345

CASA 345 REPORT 7 DME

CASA 345

CASA 345 7 DME

CASA 345 CLEARED TO LAND
WIND 280 DEGREES 8 KNOTS-----
CLEARED TO LAND CASA 345

HL 5267 SEOUL APPROACH



SEOUL APPROACH HL 5267

HL 5267 PA 31 FROM
ANYANG 7,000 FEET GIMPO
47 INFORMATION DELTAHL 5267 CLEARED DIRECT
ANYANG VORTAC. DESCEND TO
5,000. RUNWAY 32R QNH 1015CLEARED TO ANYANG
VORTAC DESCEND TO 5,000.
RUNWAY 32R QNH 1015. HL
5267HL 5267 EXPECT ILS/DME
APPROACH RUNWAY 32R

RUNWAY 32R HL 5267

HL 5267 REVISED EXPECTED
APPROACH TIME 48

ROGER HL 5267

HL 5267 DESCEND TO 3,500 FEET
QNH 1015LEAVING 5,000 FOR 3,500
FEET QNH 1015 HL 5267

HL 5267 ROGER

HL 5267 CLEARED FOR ILS/DME
 RUNWAY 32R APPROACH REPORT
 ESTABLISHED
 ON THE LOCALIZER



CLEARED FOR ILS/DME
 RUNWAY 32R APPROACH
 REPORT ESTABLISHED
 LOCALIZER. HL 5267

ESTABLISHED LOCALIZER HL
 5267

CASA 345 CONTACT TOWER
 118.1

118.1 HL 5267



HL 5267 CLEARED TO LAND WIND
 290 DEGREES 12 KNOTS

GIMPO TOWER HL 5261
 12MILES FINAL

CLEARED TO LAND HL 5267

7.3.2 On occasion IFR aircraft do not complete the instrument approach procedure but request permission to make a visual approach. A request for a visual approach does not imply that the aircraft is flying in VMC but only that the specified requirements for a visual approach have been met and that the pilot can maintain visual reference to the terrain.

7.3.2 IFR
 visual approach
 가 , visual
 approach
 가

7-4-1 7-4-3



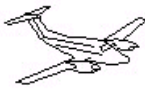
HL 5267 SEOUL APPROACH



SEOUL APPROACH HL 5267

HL 5267 CLEARED FOR ILS/DME
 RUNWAY 32R APPROACH. QNH
 1011, NO DELAY EXPECTED

HL 5267 ESTIMATING GIMPO
 AT 18. 7,000

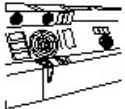

	<p>HL 5267 CLEARED FOR VISUAL APPROACH RUNWAY 32R CONTACT TOWER 118.1</p>		<p>CLEARED FOR ILS/DME RUNWAY 32R APPROACH LEAVING 7,000 DESCENDING TO 3,500 QNH 1011 HL 5267</p>
		<p>HL 5267 OVER CHENA 3,500 FEET. RUNWAY IN SIGHT, REQUEST VISUAL APPROACH</p>	
<p>118.1 HL 5267</p>			

7.3.3 Normally a holding procedure should be published. However, when the pilot requires a detailed description of the holding procedure based on a facility, the following phraseology should be used.

7.3.3

가

4-6-1 4-6-8, 4-8-1

	<p>CASA 345 CLEARED (or PROCEED) TO CHAMP CROSS 4,000</p>		<p>CASA 345 REQUEST HOLDING INSTRUCTIONS</p>
<p>CASA 345 HOLD AT CHAMP 4,000 FEET AS PUBLISHED</p>			

Note.- It may assist controllers to know that the above information should be passed in the following order:

- a) Fix
- b) Level
- c) Inbound track
- d) Right or left turns
- e) Time of leg (if necessary)

- a) Fix()
- b) Level()
- c) Inbound track()
- d) Right or Left turns()
- e) Time of leg(
:)

7.4 VFR ARRIVALS

Depending on the procedures in use, the pilot of an arriving VFR flight may be required to establish contact with the approach control unit and request instructions before entering its area of jurisdiction. Where there is an ATIS broadcast the pilot should acknowledge if it has been received; where no ATIS broadcast is provided the approach controller will pass the aerodrome data.

2-9-1 2-9-3

7.4 VFR

. ATIS
가
, ATIS
가

	HL 5101 SEOUL APPROACH		SEOUL APPROACH HL 5101
	HL 5101 CLEARED TO GIMPO QNH 1012 TRAFFIC SOUTHBOUND CESSNA 2,000 FEET		HL 5101 INCHEON TO GIMPO 4,000 FEET GIMPO AT 02 INFORMATION GOLF
	HL 5101 REPORT AIR PORT IN SIGHT		CLEARED TO GIMPO QNH 1012 TRAFFIC IN SIGHT HL 5101
	HL 5101 CONTACT GIMPO TOWER 118.1		HL 5101 HL 5101 AIRPORT IN SIGHT
			118.1 HL 5101

Note. - The phraseology for joining the aerodrome traffic circuit is detailed in Chapter 4.

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4

7.5 RADAR VECTORS TO FINAL APPROACH

7.5

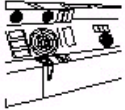
7.5.1 Radar vectors are given to arriving flights to position them onto a pilot-interpreted final approach aid, or to a point from which a radar-assisted approach can be made, or to a point from which a visual approach can be made. In the following example an identified aircraft inbound to Georgetown is given radar vectors to the ILS.

7.5.1

가 ILS

4-7-1

	CASA 345 VECTORED FOR ILS/DME APPROACH RUNWAY 32R QNH 1008		SEOUL ARRIVAL CASA 345 FL 160 APPROACHING NAMJA INFORMATION GOLF
	CASA 345 LEAVE NAMJA CROSS HEADING 050		RUNWAY 32R QNH 1008 CASA 345
	CASA 345 REPORT SPEED		LEAVE NAMJA CROSS HEADING 050 CASA 345
	CASA 345 REDUCE SPEED TO 210 KNOTS		CASA 345 SPEED 260 KNOTS
	CASA 345 DESCEND TO 8,000 FEET NUMBER 4 IN TRAFFIC		CASA 345 REDUCING TO 210 KNOTS
	CASA 345 POSITION 40 MILES SOUTHEAST OF GIMPO AIR PORT		LEAVING FL 160 FOR 8,000 FEET CASA 345

	CASA 345 TURN LEFT HEADING 340, NO ATC SPEED RESTRICTIONS	CASA 345
		HEADING 340 CASA 345
	CASA 345. 15 MILES FROM CHENA IAF CLEARED FOR ILS/DME RUNWAY 32R REPORT ESTABLISHED	CLEARED FOR ILS/DME RUNWAY 32R REPORT ESTABLISHED CASA 345
		CASA 345 ESTABLISHED
	CASA 345 CONTACT TOWER 118.1	
		118.1 CASA 345

Note- The radar controller should advise the aircraft of its position at least once prior to turning onto final approach

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7.5.2 In the example above the approach speed of the aircraft is reduced in order to ensure adequate separation from the preceding aircraft. Speed adjustment can often reduce the need for radar vectoring in establishing an approach sequence. Where speed adjustment would be insufficient to ensure correct spacing it may be necessary to issue additional vectors.

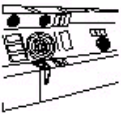
7.5.2

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5-7-1 5-7-4



CASA 345 MAKE A THREE SIXTY
TURN LEFT FOR DELAYING
ACTION



THREE SIXTY TURN LEFT
CASA 345

or

CASA 345 CONTINUE PRESENT
HEADING TAKING YOU THROUGH
THE LOCALIZER FOR SPACING

CASA 345

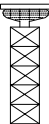
7.6 SURVEILLANCE RADAR APPROACH

On a surveillance radar approach (SRA) the pilot is given distances from touchdown, advisory altitude or height information and azimuth instructions so as to be able to carry out an approach. In the following example it is presupposed that the aircraft has been vectored to intercept the final approach track at 8 NM from touchdown at 2,200 ft QNH and that the touchdown elevation is 300 ft. Advisory altitudes relate to a 3 degree glide path.(see Figure 2)


7.6

가 8NM,
2,200 QNH, 300
가 .(2) 3°

5-11-1 5-11-6

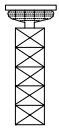


CASA 345 THIS WILL BE A
SURVELLANCE RADAR APPROACH
RUNWAY 27 TERMINATING AT ½
MILE FROM TOUCHDOWN
OBSTACLE CLEARANCE ALTITUDE
400 FEET MAINTAIN 2,200 FEET
CHECK YOUR MINIMA



RADAR CASA 345

2,200 FEET RUNWAY 27 CASA
345



CASA 345 TURN RIGHT HEADING
275 FINAL APPROACH REPORT
RUNWAY IN SIGHT (SEE NOTE 3)

CASA 345 APPROACHING 6 MILES
FROM TOUCHDOWN COMMENCE
DESCENT NOW TO MAINTAIN A 3
DEGREE GLIDE PATH



HEADING 275 CASA 345

CASA 345 CHECK WHEELS DOWN
AND LOCKED

CASA 345 DESCENDING

CASA 345 5½ MILES FROM
TOUCHDOWN ALTITUDE SHOULD
BE 2000 FEET

CASA 345

CASA 345 GOING RIGHT OF
TRACK TURN LEFT HEADING 270

CASA 345

CASA 345 5 MILES FROM
TOUCHDOWN ALTITUDE SHOULD
BE 1900 FEET

HEADING 270 CASA 345

CASA 345 CLOSING SLOWLY
FROM THE RIGHT 4½ MILES FROM
TOUCHDOWN ALTITUDE SHOULD
BE 1,700 FEET

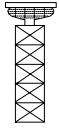
CASA 345

CASA 345

CASA 345 CLEARED TO LAND
WIND CALM

CLEARED TO LAND CASA 345

CASA 345 4 MILES FROM
TOUCHDOWN ALTITUDE SHOULD
BE 1,600 FEET DO NOT
ACKNOWLEDGE FURTHER
TRANSMISSIONS



3½ MILES FROM TOUCHDOWN
ALTITUDE SHOULD BE 1400 FEET

ON TRACK TURN RIGHT HEADING
272 3 MILES
FROM TOUCHDOWN ALTITUDE
SHOULD BE 1300 FEET

2½ MILES FROM TOUCHDOWN
ALTITUDE SHOULD BE 1100 FEET

2 MILES FROM TOUCHDOWN
ALTITUDE SHOULD BE 900 FEET

ON TRACK HEADING IS GOOD 1½
MILES FROM TOUCHDOWN
ALTITUDE SHOULD BE 800 FEET

ON TRACK 1 MILE FROM
TOUCHDOWN APPROACH
COMPLETED OUT

- Note 1.** - Where an SRA procedure terminates at 2 miles from touchdown, the distance from touchdown and advisory altitude checks are normally passed at 2 mile intervals. Where the SRA terminates at less than 2 miles from touchdown, such checks are given each half mile. 1- 2 가 , 2 가 0.5
- Note 2.** - Aircraft replies are expected to all transmissions. However, when the SRA terminates at less than 2 miles from touchdown, the controllers transmissions should not be interrupted for intervals of more than 5 seconds and aircraft replies are not expected once the aircraft is within 4 miles from touchdown. 2- . 2 5 가 4
- Note 3.** - When the pilot reports runway in sight during an SRA and there is reasonable assurance that a landing will be effected, the SRA may be terminated. 3- 가

7.7 PRECISION RADAR APPROACH

7.7

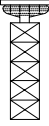

7.7.1 In a precision radar approach the controller, in addition to providing heading instructions during the continuous talk-down, provides information on altitudes relative to the glide slope, together with instructions on corrective action in the event that the aircraft is too high or too low. In the following example based on a 3-degree glide slope to runway 36R at GIMHAE airport, it is presupposed that the aircraft has been radar vectored into precision approach radar (PAR) coverage and has been identified to the PAR controller by radar transfer.

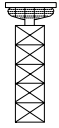
7.7.1

36R

3°

5-12-1 5-12-10

	CASA 345 GIMHAE APPROACH PRECISION REPORT HEADING AND ALTITUDE		HEADING 240 AT 3,000 FEET CASA 345
	CASA 345 POSITION 10 MILES SOUTH OF GIMHAE AIR PORT TURN LEFT HEADING 350 DESCEND TO 2,500 FEET QNH 1014		HEADING 350 DESCENDING TO 2,500 QNH 1014 CASA 345
	CASA 345 CLOSING FROM THE RIGHT TURN RIGHT HEADING 360		RIGHT HEADING 360 CASA 345
	CASA 345 APPROACHING GLIDE PATH HEADING IS GOOD		

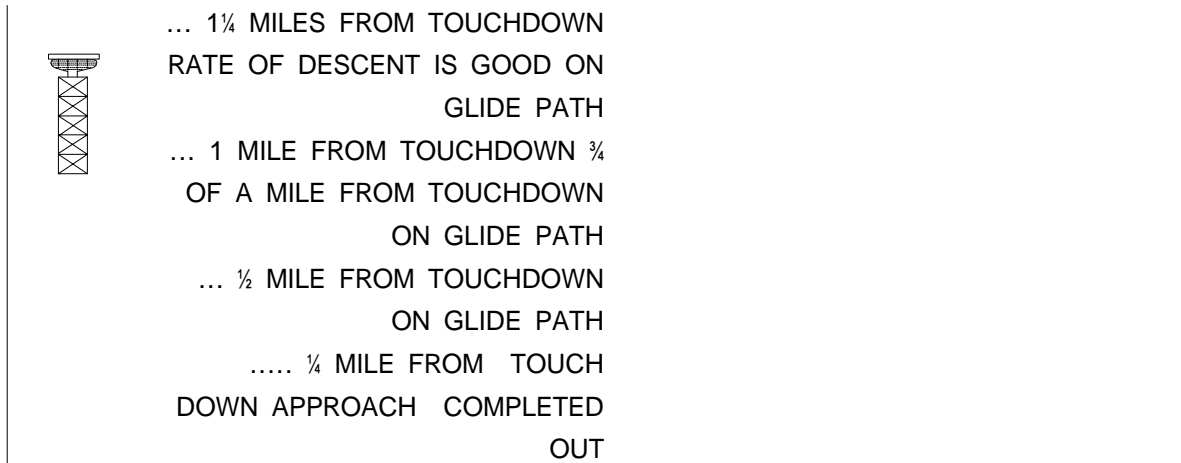


CASA 345 HOW DO YOU READ



READ YOU 5 CASA 345

CASA 345 DO NOT
ACKNOWLEDGE FURTHER
TRANSMISSIONS, ON TRACK
APPROACHING GLIDE PATH..
CHECK YOUR MINIMA...
COMMENCE DESCENT NOW AT
500 FEET PER MINUTE... I SAY
AGAIN 500 FEET PER MINUTE...
CHECK WHEELS DOWN AND
LOCKED...ON GLIDE PATH 5
MILES FROM TOUCHDOWN...
TURN RIGHT 5 DEGREES NEW
HEADING 275 I SAY
AGAIN 275... 4 MILES FROM
TOUCHDOWN SLIGHTLY BELOW
GLIDE PATH... BELOW GLIDE
PATH 100 FEET ADJUST RATE OF
DESCENT...
50 FEET BELOW GLIDE PATH
TURN LEFT HEADING 270 3 MILES
FROM TOUCHDOWN
...COMING BACK TO THE GLIDE
PATH... ON GLIDE
PATH 2½ MILES FROM
TOUCHDOWN...CASA 345
CLEARED TO LAND ... ON GLIDE
PATH... HEADING
270 IS GOOD SLIGHTLY
ABOVE GLIDE PATH ... 2 MILES
FROM TOUCHDOWN
... COMING
BACK TO THE GLIDE PATH... ON
GLIDE PATH 1¾ MILES FROM
TOUCHDOWN
... TURN RIGHT 2 DEGREES NEW
HEADING 272
... 1½ MILES FORM TOUCHDOWN
ON GLIDE PATH



7.7.2 When the radar returns on the elevation element of the PAR indicate that the pilot may be making a missed approach, the radar controller shall, when there is sufficient time to obtain a reply from the pilot, pass the aircraft height above the glide path and ask the pilot if a missed approach is intended.

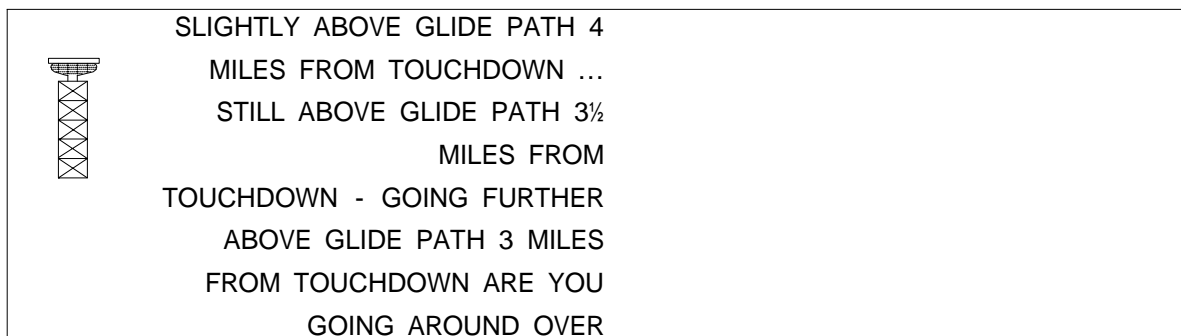
7.7.2

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4-8-9, 5-10-11



7.7.3 In similar circumstances, but when there is not sufficient time to obtain a reply from the pilot, the controller should continue the precision approach emphasizing the aircraft's displacement. If it becomes apparent that the pilot is making a missed approach, either before or after the normal termination point, the radar controller shall pass missed approach instructions.

7.7.3

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4-8-9

Chapter 8 Area Control

8

8.1 AREA CONTROL UNITS

8.1

8.1.1 Area control units vary in size from simple one person procedural units to large sophisticated centres which may contain departure, arrival and terminal control sections equipped with radar. RTF phraseology given below would be suitable for any of the above air traffic services.

8.1.1

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8.1.2 Much of the phraseology used in area control is of a general nature and is detailed in Chapter 3. However, many instructions used in area control (particularly where radar is not available) are related to specific conditions in order to maintain aircraft separation.

8.1.2



3

(가)

8.1.3 The following examples provide a cross-section of phraseology used in area control. They may be varied, or added to, by combining their component parts according to the requirements of the prevailing traffic situation.

8.1.3

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	CASA 345 MAINTAIN FL 350 EXPECT DESCENT AFTER ATOTI		CASA 345 REQUEST DESCENT
			MAINTAINING FL 350 CASA 345
	----- CASA 345 ARE YOU ABLE TO LOSE 10 MINUTES		
	CASA 345 REPORT REVISED ESTIMATE FOR HODOL CROSS		CASA 345 NEGATIVE ONLY 8 MINUTES
			CASA 345 HODOL CROSS 1246

4-5-8

8.2 POSITION INFORMATION**8.2**

In order to assist in establishing separation, pilots may be instructed to provide additional position report information as well as routine reports.

가

	CASA 345 REPORT KARBU		CASA 345
			CASA 345 KARBU 47 FL 250 GANGWON 55
	CASA 345 ROGER		
	CASA 345 REPORT 25 MILES GANGWON VORTAC		CASA 345

	CASA 345 REPORT DISTANCE FROM GIMPO		CASA 345. 37 MILES

	CASA 345 REPORT PASSING 270 RADIAL OSAN VOR		CASA 345

	CASA 345 REPORT 25 DME RADIAL 270 OSAN VOR		CASA 345

8.3 LEVEL INFORMATION**8.3**

8.3.1 Level information consists of climb and descent clearances or instructions and reports of leaving, reaching and passing levels as detailed in 3.2. Unless advice is received to the contrary, the aircraft is expected to vacate the level as soon as practicable.



8.3.1
3.2

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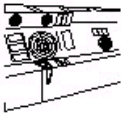

5-2-19 5-2-20

	CASA 345 DESCEND WHEN READY TO FL 180		DESCEND TO FL 180 WILL REPORT LEAVING FL 350 CASA 345
	----- CASA 345 DESCEND TO FL 180, REPORT PASSING EVEN LEVELS		LEAVING FL 350 FOR FL 180, CASA 345
	----- CASA 345 CLIMB TO FL 220 REPORT PASSING 9,000		CLIMBING TO FL 220 PASSING 9,000 CASA 345
	----- CASA 345 DESCEND IMMEDIATELY TO FL 200 DUE TRAFFIC		LEAVING FL 220 FOR FL 200 CASA 345

8.3.2 An aircraft may request permission to leave controlled airspace by descent.

8.3.2

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가

	CASA 345 CLEARED FOR DESCENT REPORT PASSING 7,000 FEET QNH 1014		CASA 345 REQUEST PERMISSION TO LEAVE CONTROLLED AIRSPACE BY DESCENT
			LEAVING 10,000 FEET WILL REPORT PASSING 7,000 FEET QNH 1014 CASA 345

8.3.3 An aircraft may request a clearance to climb or descend maintaining own separation while in VMC. The clearance shall include information on essential traffic.

8.3.3

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가

	<p>CASA 345 DESCEND TO 6,000, MAINTAIN OWN SEPARATION AND VMC FROM FL 150 TO 10,000 TRAFFIC FRIENDSHIP WESTBOUND FL 160</p>		<p>CASA 345 REQUEST VMC DESCENT TO 6,000 FEET</p>
			<p>LEAVING FL 250 FOR 6,000 MAINTAIN VMC FL 150 TO 10,000 FEET TRAFFIC AT FL 160 CASA 345</p>

8.4 FLIGHTS JOINING AIRWAYS

8.4

8.4.1 Aircraft requiring to join an airway should make their request to the appropriate ATS unit. Where no flight plan has been filed, the request should include the filing of an airborne flight plan (see 3.4). Where a flight plan has already been filed an abbreviated call may be made.

8.4.1

(3.4)

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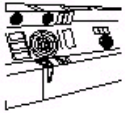

	<p>CASA 345 GO AHEAD</p> <p>CASA 345 CLEARED TO INCHEON FLIGHT PLANNED ROUTE FL 240. JOIN G597 AT GANWON VORTAC AT FL 240.</p>		<p>SEOUL APPROACH CASA 345</p>
			<p>CASA 345 REQUEST CLEARANCE TO JOIN G957 AT KARBU</p>
			<p>CLEARED TO INCHEON VIA GANWON FLIGHT PLANNED ROUTE FL 240. TO ENTER CONTROLLED AIRSPACE FL 240 CASA 345</p>
	<p>CASA 345 CORRECT</p>		

8.4.2 It may be that because of the prevailing traffic situation a clearance cannot be issued immediately:

8.4.2



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	<p>CASA 345 REMAIN OUTSIDE CONTROLLED AIRSPACE EXPECT CLEARANCE AT 55</p>		<p>CASA 345 REMAINING OUTSIDE</p>
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8.4.3 In the event that the requested flight level is already occupied, the controller should offer an alternative.

8.4.3
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	<p>CASA 345 FL 240 NOT AVAILABLE DUE TRAFFIC. ALTERNATIVE IS FL 220. ADVISE.</p>		<p>CASA 345 REQUEST FL 240</p>
			<p>CASA 345 ACCEPT FL 220</p>

8.5 FLIGHTS LEAVING AIRWAYS

8.5

Flights leaving controlled airspace will normally be given a specific point at which to leave, together with any other relevant instructions necessary to ensure separation.

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	<p>CASA 345 CLEARED TO LEAVE CONTROL AREA . MAINTAIN FL 230 WHILE IN CONTROL AREA</p>		<p>CLEARED TO LEAVE CONTROL AREA. MAINTAIN FL 230 WHILE IN CONTROL AREA. CASA 345</p>
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8.6 FLIGHTS CROSSING AIRWAYS

8.6

An IFR aircraft requiring to cross an airway should make its request to the appropriate ATS unit.

8.7 FLIGHTS HOLDING EN ROUTE

8.7


8.7.1 When an aircraft is required to hold en route, the controller will issue holding instructions and a time at which onward clearance can be expected. Where it is not self-evident, the reason for the delay should also be given.

8.7.1

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4-6-1 4-6-8



CASA 345 HOLD AT VAPKA FL
220, EXPECT FURTHER
CLEARANCE AT 02, LANDING
DELAYS AT GIMPO 20 MINUTES

CASA 345 HOLD AT DAEBU 8,000
FEET

CASA 345 EXPECTED DELAY 10
MINUTES



HOLD AT VAPKA FL 220
CASA 345

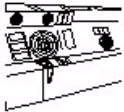
HOLD AT DAEBU CROSS
8,000. WHAT IS THE DELAY,
CASA 345

CASA 345 ROGER


8.7.2 In the case of *en-route* holding an aircraft will normally hold in a standard pattern based on the track of the ATS route. For an extended delay a pilot may request or receive an extended holding pattern.

8.7.2

ATS



CASA 345 HOLD BETWEEN SEL
AND DAEBU 8,000 TURN LEFT
EXPECT FURTHER CLEARANCE AT
1105

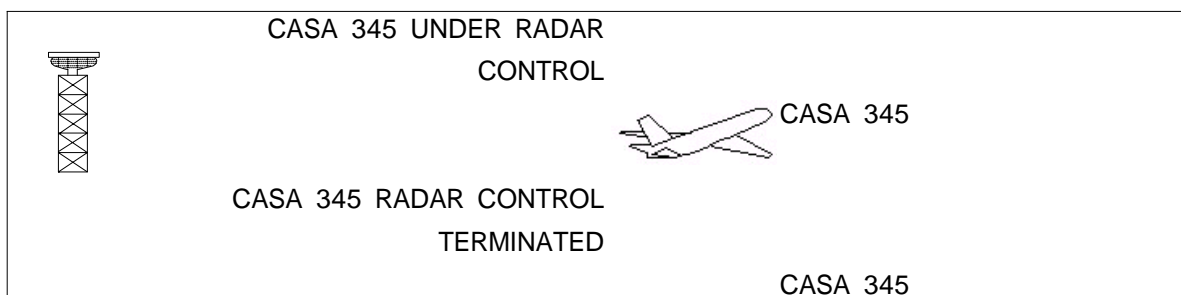


CASA 345 REQUEST
EXTENDED HOLDING

HOLD BETWEEN ANYANG
AND DAEBU 8,000 TURN
LEFT. CASA 345

8.8 RADAR**8.8**

- 8.8.1** The phraseology used in area radar control is usually a combination of the phraseology detailed in the earlier parts of this chapter, combined with the basic radar phraseology in Chapter 6. **8.8.1** 6 8
- 8.8.2** Where it is not self-evident pilots will normally be informed by the controller when they are under radar control. **8.8.2** 가

**8.9 OCEANIC CONTROL****8.9**

- 8.9.1** While radiotelephony phraseology used for oceanic control purposes is basically the same as that contained in this manual, it is recommended that reference should be made to the appropriate regional procedures for precise guidance. **8.9.1**
- 8.9.2** Oceanic control usually involves communication on HF frequencies. Thus the direct pilot-controller relationship which occurs on VHF air-ground channels is replaced by communication through a communications officer or air-ground operator. Consequently, messages from aircraft on oceanic routes have to be passed by the air-ground operator to the controller and replies must also be routed in this manner. Pilots and controllers in oceanic airspace, HF VHF 3

when exchanging control information and instructions, should bear in mind the inevitable delay factor which occurs when communications are conducted through a third party.

Chapter 9
Distress and Urgency Procedures and
Communications Failure Procedures

9

9.1 INTRODUCTION

9.1

9.1.1 Distress and urgency

9.1.1

communication procedures are fully detailed in Annex 10, Volume , Chapter 5.

10, 2 5

9.1.2 Distress and urgency conditions are defined as:

9.1.2

a) **Distress** : a condition of being threatened by serious and/or imminent danger and of requiring immediate

a) :

b) **Urgency** : a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within assistance, sight, but which does not require immediate assistance,

b) : ,

9.1.3 The word MAYDAY spoken at the start identifies a distress message, and the words PAN PAN spoken at the start identifies an urgency message. The words MAYDAY or PAN PAN , as appropriate, should preferably be spoken three times at the start of the initial distress or urgency call.

9.1.3 "MAYDAY"

, "PAN PAN"

MAY DAY PAN PAN

3

9.1.4 Distress messages have priority over all other transmissions, and urgency messages have priority over all transmissions except distress messages.

9.1.4

9.1.5 Pilots making distress or urgency calls should attempt to speak slowly and clearly so as to avoid any unnecessary repetition.

9.1.5

9.1.6 Pilots should adapt the phraseology procedures in this chapter to their specific needs and to the time available. **9.1.6**

9.1.7 Pilots should seek assistance whenever there is any doubt as to the safety of a flight. In this way the risk of a more serious situation developing can often be avoided. **9.1.7**

9.1.8 A distress or urgency call should normally be made on the frequency in use at the time. Distress communications should be continued on this frequency unless it is considered that better assistance can be provided by changing to another frequency. **9.1.8**

121.5MHz

The frequency 121.5 MHz has been designated the international aeronautical emergency frequency although not all aeronautical stations maintain a continuous watch on that frequency.

These provisions are not intended to prevent the use of any other communications frequency if considered necessary or desirable, including the maritime mobile service RTF calling frequencies.

9.1.9 If the ground station called by the aircraft in distress or urgency does not reply, then any other ground station or aircraft shall reply and give whatever assistance possible. **9.1.9** 가 가

9.1.10 A station replying (or originating a reply) to an aircraft in distress or urgency should provide only such advice, information and instructions as is necessary to assist the pilot. Superfluous transmissions may be distracting at a time when the pilot's hands are already full. **9.1.10** 가 가

9.1.11 Aeronautical stations shall refrain from further use of a frequency on which distress or urgency traffic is heard, unless directly involved in rendering assistance or until after the emergency traffic has been terminated.

9.1.11

가

가

9.1.12 When a distress message has been intercepted which apparently receives no acknowledgement, the aircraft interception the distress message should, if time and circumstances seen appropriate, acknowledge the message and then broadcast it.

9.1.12

가

9.2 DISTRESS MESSAGES

9.2

9.2.1 Aircraft in distress

9.2.1

9.2.1.1 A distress message should contain as many as possible of the following elements, if possible in the order shown:

9.2.1.1


가

- a) name of the station addressed;
- b) identification of the aircraft;
- c) nature of the distress condition;
- d) intention of the person in command;
- e) position, level and heading of the aircraft;
- f) any other useful information.

- a)
- b)
- c)
- d)
- e)
- f)




MAYDAY MAYDAY MAYDAY
 HL 5101 ENGINE ON FIRE
 MAKING FORCED LANDING 20
 MILES SOUTH OF INCHEON.
 PASSING 3000 FEET HEADING
 360



HL 5101 INCHEON TOWER ROGER
MAYDAY

HL 5101 INCHEON TOWER ROGER
MAYDAY CLEARED STRAIGHT-IN
RUNWAY 33 WIND 360 DEGREES
10 KNOTS QNH 1008, YOU ARE
NUMBER ONE



MAYDAY MAYDAY MAYDAY
INCHEON TOWER HL 5101
ENGINE FAILED. WILL ATTEMPT
TO LAND YOUR FIELD, 5
MILES SOUTH, 4000 FEET
HEADING 360

CLEARED STRAIGHT-IN
RUNWAY 35 QNH 1008 HL
5101

9.2.1.2 These provisions are not intended to prevent the aircraft using any means at its disposal to attract attention and make known its condition (including the activation of the appropriate SSR code 7700, nor any station taking any means at its disposal to assist an aircraft in distress. Variation on the elements listed under 9.2.1.1 is permissible when the transmitting station is not itself in distress, provided that such circumstance is clearly stated.

9.2.1.2
가
(SSR 7700) 가
,
가 ,
9.2.1.1
가 .

9.2.1.3 The station addressed will normally be that station communicating with the aircraft or the station in whose area of responsibility the aircraft is operating.

9.2.1.3
가 .

9.2.2 Imposition of silence

9.2.2


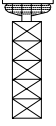
9.2.2.1 An aircraft in distress or a station in control of distress traffic may impose silence, either on all aircraft on the frequency or on a particular aircraft which interferes with the distress traffic. Aircraft so requested will maintain radio silence until advised that the distress traffic has ended.

9.2.2.1

가

가

가
가



	ALL STATIONS INCHEON TOWER STOP TRANSMITTING. MAYDAY	or	
	CASA 345 STOP TRANSMITTING. MAYDAY		

9.2.3 Termination of distress and silence

9.2.3

9.2.3.1

9.2.3.1 When an aircraft is no longer in distress, it shall transmit a message cancelling the distress condition.

	HL 5101 CLEARED TO LAND RUNWAY 35		INCHEON TOWER HL 5101 CANCEL DISTRESS. ENGINE SERVICEABLE, RUNWAY IN SIGHT. REQUEST LANDING
			RUNWAY 35 CLEARED TO LAND HL 5101

9.2.3.2 When the ground station controlling the distress traffic is aware that the aircraft is no longer in distress it shall terminate the distress communication and silence condition,

9.2.3.2

가



ALL STATIONS INCHEON TOWER
DISTRESS TRAFFIC ENDED

9.3 URGENCY MESSAGES

9.3

9.3.1 An urgency message should contain as many of the elements detailed in 9.2.1.1 as are required by the circumstances. The call should be made on the frequency in use at the time, and the station addressed will normally be that station communicating with the aircraft, or in whose area of responsibility the aircraft is operating. All other stations should take care not to interfere with the transmission of urgency traffic.

9.3.1

9.2.1.1



HL 5101 FLY HEADING 360



PAN PAN PAN, PAN PAN PAN
INCHEON TOWER HL 5101
C172 2,000 FEET HEADING
300 ABOVE CLOUD UNSURE
OF MY POSITION REQUEST
HEADING TO INCHEON

HEADING 360 HL 5101

PAN PAN PAN, PAN PAN PAN
INCHEON TOWER HL 5101 10
MILES SOUTH AT 2,000 FEET.
PASSENGER WITH SUSPECTED

HEART ATTACK REQUEST
PRIORITY LANDING

RUNWAY 33R QNH 1008 HL
5101

HL 5101 INCHEON NUMBER 1
STRAIGHT-IN RUNWAY 33R
WIND 180 DEGREES 10 KNOTS
QNH 1008 REQUEST

9.3.2 In the first example above further questions might be asked of the pilot in order to assist in ascertaining the position of the aircraft.

9.3.2

가 .

9.4 EMERGENCY DESCENT

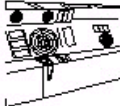
9.4

9.4.1 When an aircraft announces that it is making an emergency descent, the controller will take all possible action to safeguard other aircraft.

9.4.1

가

가 .

	<p>HL 5267 ROGER</p>		<p>HL 5267 ENGINE FAILURE EMERGENCY DESCENT HEADING 120</p>
<p>ALL STATIONS EMERGENCY DESCENT BETWEEN KARBU AND ANYANG, ALL AIRCRAFT BELOW 9,000 FEET BETWEEN KARBU AND ANYANG LEAVE G597 TO THE NORTH IMMEDIATELY</p>			<p>CASA 345 DECOMPRESSION EMERGENCY DESCEND TO 10,000 REQUEST QNH</p>
<p>CASA 345 STOP DESCENT AT 12,000 FEET TRAFFIC AT 11,000 FEET QNH 1007 ADVISE</p>		<p>CASA 345 WILL MAINTAIN 12 000 FEET, QNH 1007 REQUEST FURTHER DESCENT WHEN AVAILABLE</p>	

9.4.2 The general broadcast to warn aircraft of an emergency descent should be followed, as necessary, by specific instructions.

9.4.2

가 가 .

**9.5 AIRCRAFT COMMUNICATIONS
FAILURE**

9.5

Note. - General rules which are applicable in the event of communications failure are contained in Annex 10,

10, 2

9.5.1 When an aircraft station fails to establish contact with the aeronautical station on the designated frequency, it shall attempt to establish contact on another frequency appropriate to the route. If this attempt fails, the aircraft shall attempt to establish communication with other aircraft or other aeronautical stations on frequencies appropriate to the route.

9.5.1

가

가

9.5.2 If the attempts specified under 9.5.1 fail the aircraft shall transmit its message twice on the designated frequency(ies), preceded by the phrase TRANSMITTING BLIND and, if necessary, include the addressee(s) for which the message is intended.

9.5.2

9.5.1

가

"TRANSMITTING BLIND"

2

9.5.3 When an aircraft is unable to establish communication due to receiver failure, it shall transmit reports at the scheduled times, or positions, on the frequency in use, preceded by the phrase TRANSMITTING BLIND DUE TO RECEIVER FAILURE. The aircraft shall transmit the intended message, following this by a complete repetition. During this procedure, the aircraft shall also advise the time of its next intended transmission.

9.5.3

가

"TRANSMITTING BLIND DUE TO RECEIVER FAILURE"

<p>9.5.4 An aircraft which is provided with air traffic control or advisory service shall, in addition to complying with 9.5.3, transmit information regarding the intention of the pilot-in-command with respect to the continuation of the flight of the aircraft.</p>	<p>9.5.4</p>	<p>9.5.3</p>	
<p>9.5.5 When an aircraft is unable to establish communication due to airborne equipment failure it shall, if so equipped, select the appropriate SSR code to indicate radio failure.</p>	<p>9.5.5</p>	<p>SSR</p>	<p>가</p>
<p>9.5.6 When an aeronautical station has been unable to establish contact with an aircraft after calls on the frequencies on which the aircraft is believed to be listening, it shall:</p>	<p>9.5.6</p>		<p>가</p>
<p>a) request other aeronautical stations to render assistance by calling the aircraft and relaying traffic, if necessary;</p>	<p>a)</p>		
<p>b) request aircraft on the route to attempt to establish communication with the aircraft and relay messages, if necessary.</p>	<p>b)</p>		
<p>9.5.7 If the attempts specified in 9.5.6 fail, the aeronautical station should transmit messages addressed to the aircraft, other than messages containing air traffic control clearances, by blind transmission on the frequency(ies) on which the aircraft is believed to be listening.</p>	<p>9.5.7</p>	<p>9.5.6</p>	<p>가 가</p>
<p>9.5.8 Blind transmission of air traffic control clearances shall not be made to aircraft, except at the specific request of the originator.</p>	<p>9.5.8</p>		<p>가</p>

**Chapter 10 Transmission of Meteorological
and Other Aerodrome Information**

10



10.1 INTRODUCTION


10.1

Meteorological information in the form of reports, forecasts or warnings is made available to pilots using the aeronautical mobile service either by broadcast (e.g. VOLMET) or by means of specific transmissions from ground personnel to pilots. Standard meteorological abbreviations and terms should be used and the information should be transmitted slowly and enunciated clearly in order that the recipient may record such data as are necessary.


가

2-6-1, 2-6-2

	<p>HL 5101 INCHEON TOWER PRESENT WEATHER WIND 360 DEGREES 5 KNOTS VISIBILITY 10 KILOMETERS CLOUD 2 OCTAS 2,500 QNH 1008</p>		<p>1008 HL 5101</p>


	<p>CASA 345 GIMPO WIND 360 DEGREES 25 KNOTS VISIBILITY 1,000 METERS CONTINUOUS MODERATE RAIN 8 OCTAS 600 FEET QNH 1001</p>		
	<p>CASA 345 TEMPERATURE 7</p>		<p>CASA 345 1001 WHAT IS THE TEMPERATURE</p>
			<p>CASA 345</p>

<p>10.2 RUNWAY VISUAL RANGE (RVR)</p> <p>10.2.1 When transmitting the runway visual range the words RUNWAY VISUAL RANGE or the abbreviation RVR should be used followed by the runway number, the positions for multiple readings if necessary, and the RVR value(s).</p> <p style="text-align: center;">2-8-1 2-8-3</p> <p>10.2.2 Where multiple RVR observations are available, they are always transmitted commencing with the reading for the touchdown zone.</p>	<p>10.2 가 (RVR)</p> <p>10.2.1 가 “RUNWAY VISUAL RANGE” “RVR” , 가 , RVR .</p> <p>10.2.2 RVR 가 .</p>
---	--



CASA 345 RVR RUNWAY 27

TOUCHDOWN 650 METRES
MID-POINT 700 METRES
STOP END 600 METRES


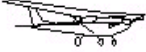



CASA 345

<p>10.3 RUNWAY SURFACE CONDITIONS</p> <p>10.3.1 Procedures for the measurement and reporting of runway surface conditions are detailed in Annex 14.</p> <p>10.3.2 Reports from pilots may be re-transmitted by a controller when it is felt that the information may prove useful to other aircraft:</p> <p style="padding-left: 20px;">BRAKING ACTION REPORTED BY (aircraft type) AT (time) (assessment of braking action).</p> <p>10.3.3 Whenever a controller deems it necessary, information that water is on a runway shall be passed to aircraft using the terms DAMP, WET, WATER PATCHES or FLOODED according to the amount of water present.</p>	<p>10.3</p> <p>10.3.1 14</p> <p>10.3.2 가 가 . “BRAKING ACTION REPORTED BY() AT()(가)”</p> <p>10.3.3 가 , “DAMP” “WET” “WATER PATCHES” “FLOODED” .</p>
--	---

10.3.4 Other runway surface conditions which may be of concern to a pilot shall be transmitted at an appropriate time.

10.3.4

	HL 5101 INCHEON GRASS MOWING IN PROGRESS NEAR CENTRE OF AERODROME		HL 5101 MOWERS IN SIGHT
	CASA 345 THRESHOLD RUNWAY 27 DISPLACED 500 FEET DUE BROKEN SURFACE		CASA 345
	CASA 345 TAXIWAY GOLF CLOSED DUE MAINTENANCE USE ALPHA TO VACATE		CASA 345

Chapter 11 Miscellaneous Flight Handling

11

11.1 SELECTIVE CALLING (SELCAL)

11.1.1 SELCAL is a system by which voice calling is replaced by the transmission of coded tones on the frequency in use. Receipt of the assigned SELCAL code activates a calling system in the cockpit, and the need for a continuous listening watch by the pilot is obviated. Detailed SELCAL procedures may be found in Annex 10, Volume .

11.1 (SELCAL)
11.1.1 SELCAL
SELCAL 가
가
SELCAL
10 2

11.1.2 For a flight during which it is anticipated that SELCAL will be used, the SELCAL code shall be included in the flight plan.

11.1.2 SELCAL
SELCAL
가

However, if there is doubt that the ground station has the information, the pilot shall include the code of the aircraft SELCAL in the initial call using the phrase SELCAL (code number) . If the SELCAL equipment is or becomes inoperative, the phrase INOPERATIVE SELCAL should be used.

()”
SELCAL
SELCAL 가 “INOPERATIVE
SELCAL”



11.1.3 Any necessary SELCAL check shall be initiated by using the phrase REQUEST SELCAL CHECK.

11.1.3 SELCAL 가
“REQUEST SELCAL CHECK”
SELCAL
“SELCAL OK”

Subsequent receipt of the SELCAL code tone should be acknowledged by the phrase SELCAL OK .

11.1.4 In case the coded signal is weak or unable to activate the cockpit call system, the pilot should advise by using the phrase NEGATIVE SELCAL, TRY AGAIN.

11.1.4 가
“NAGATIVE SELCAL. TRY AGAIN”

	CASA 345 SEOUL RADIO SELCAL CHECK		SEOUL RADIO CASA 345 SELCAL CHECK
	CASA 345 SEOUL RADIO WILCO (transmits SELCAL code applicable)		SEOUL RADIO CASA 345 REQUEST SELCAL CHECK
			CASA 345 SELCAL OK
			or
			CASA 345 NEGATIVE SELCAL, TRY AGAIN


11.2 FUEL DUMPING

11.2

When an aircraft has informed an ATS unit that it intends to dump fuel the ATS unit will broadcast a warning to other aircraft.

가

9-5-1 9-5-5

	ALL STATIONS SEOUL APPROACH B747 DUMPING FUEL 8,000 BEGINNING 10 MILES WEST OF ANYANG ON TRACK 271 FOR 20 MILES. AVOID FLIGHT BELOW 11,000 WITHIN 10 NM OF FUEL DUMPING TRACK
	ALL STATIONS SEOUL CONTROL DUMPING COMPLETED

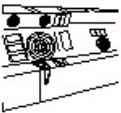
11.3 WAKE TURBULENCE

11.3


When wake turbulence is suspected or known to exist ATC will warn aircraft as appropriate.

가

가




HL 5101 EXTEND DOWNWIND DUE
WAKE TURBULENCE DC8 LANDING
AHEAD



HL 5101

HL 5101 HOLD POSITION DUE
WAKE TURBULENCE AIRBUS
DEPARTING AHEAD




HL 5101

11.4 WIND SHEAR


11.4

When wind shear is forecast or is reported by aircraft, ATC will warn other aircraft until such time as aircraft report the phenomenon no longer exists.

3-1-8



CASA 345 CAUTION WIND SHEAR
REPORTED AT 800 FEET 3 MILES
FINAL RUNWAY 14



CASA 345

11.5 DIRECTION FINDING

11.5



11.5.1 A pilot may request a bearing or heading using the appropriate phrase to specify the service required. The transmission shall be ended by the aircraft call sign.

11.5.1

The direction-finding station will reply in the following manner:

- 1) the appropriate phrase;
- 2) the bearing or heading in degrees in relation to the direction-finding station.

- 1) :
- 2)

	HL 5101 GIMPO TOWER HEADING 090 DEGREES		GIMPO TOWER HL 5101 REQUEST HEADING TO GIMPO HL 5101
			090 HL 5101

Chapter 12 EXECUTIVE WORK**12****12.1 EFFECTIVE DATE****12.1**

This Manual is effective from October 2, 2003.

2003.10.2

12.2 APPLICATION**12.2**

Standard Air Traffic Control Regulation (Civil Aviation Safety Authority Notification No. 2003-2) shall have priority over this Manual for any differences that exist between the them.

2003-2)

12.3 AMENDMENT**12.3**

This Manual shall be amended as necessary after regular review conducted twice a year in June and December.

2 (6 12)

12.4 NOTICE**12.4**

Please feel free to give any comments or suggestions regarding this Manual. These should be directed to:

Address :
274 Gwahae-dong, Gangseo-Gu Seoul, Korea.

: 274

Post Code : 157-711

: 157-711

Phone : 02)2662-5271, 02)2669-6429

: 02)2662-5271,02)2669-6429

FAX : 02)6342-7289

FAX : 02)6342-7289

E-mail : atmcasa@moct.go.kr

E-mail : atmcasa@moct.go.kr

그림 1 Enroute Chart

항공로 지도 ENROUTE CHART

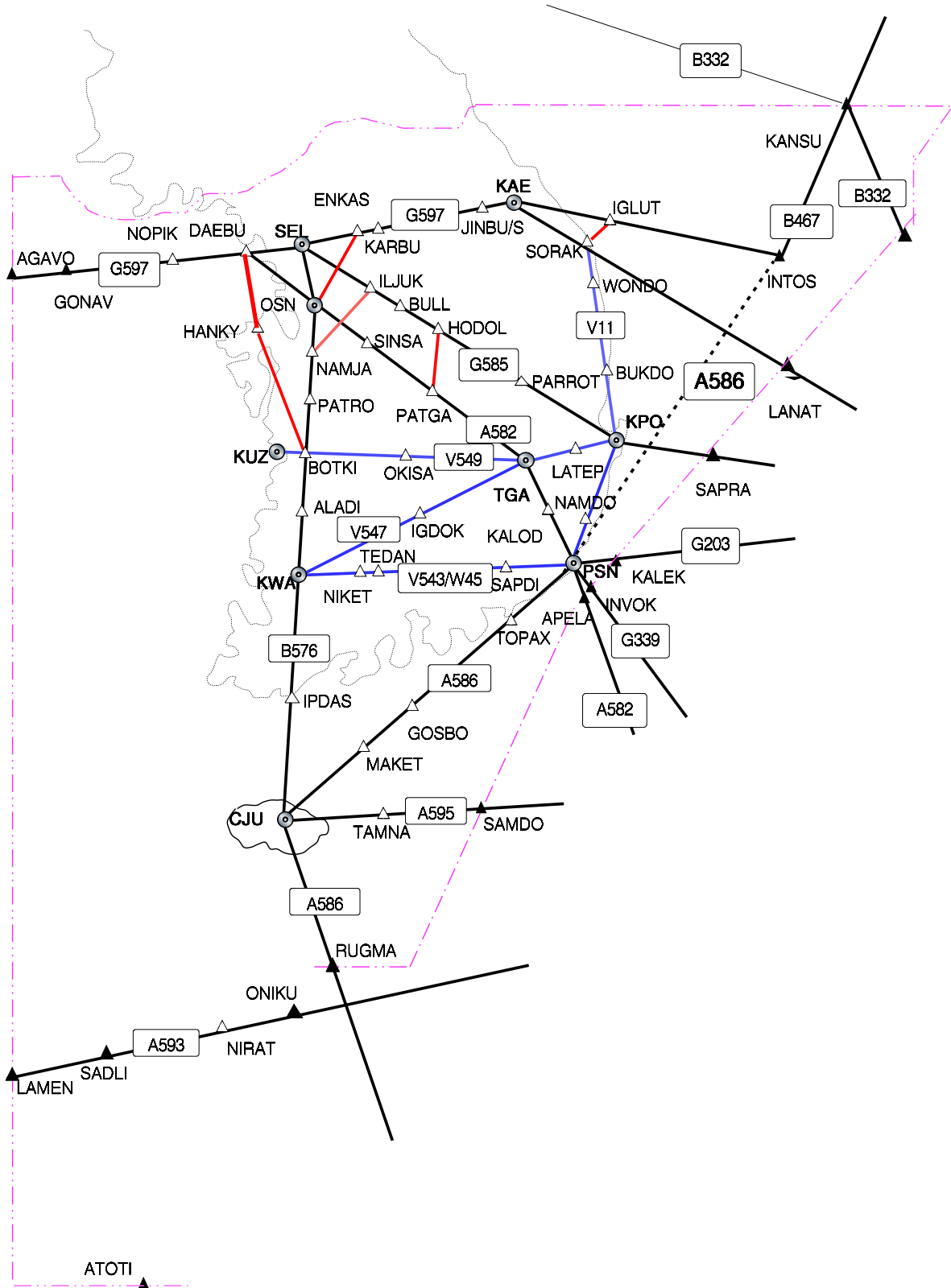


그림 2 Approach Area

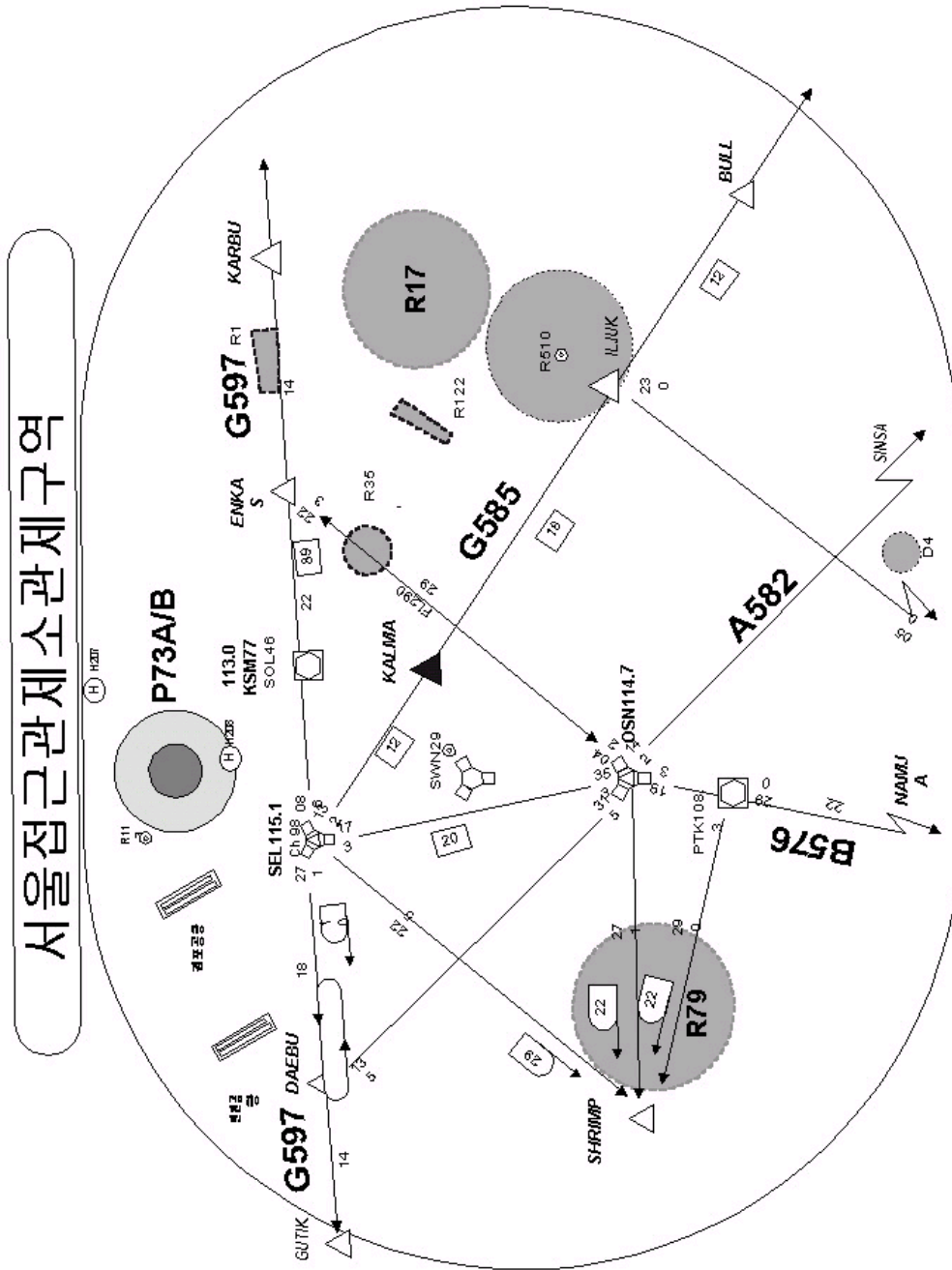


그림 3 Reporting in the traffic circuit

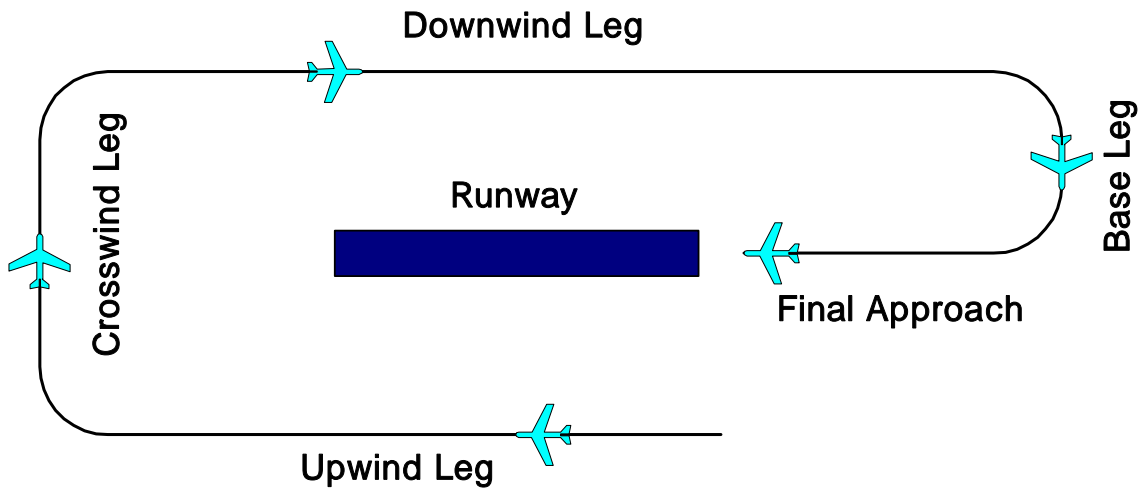
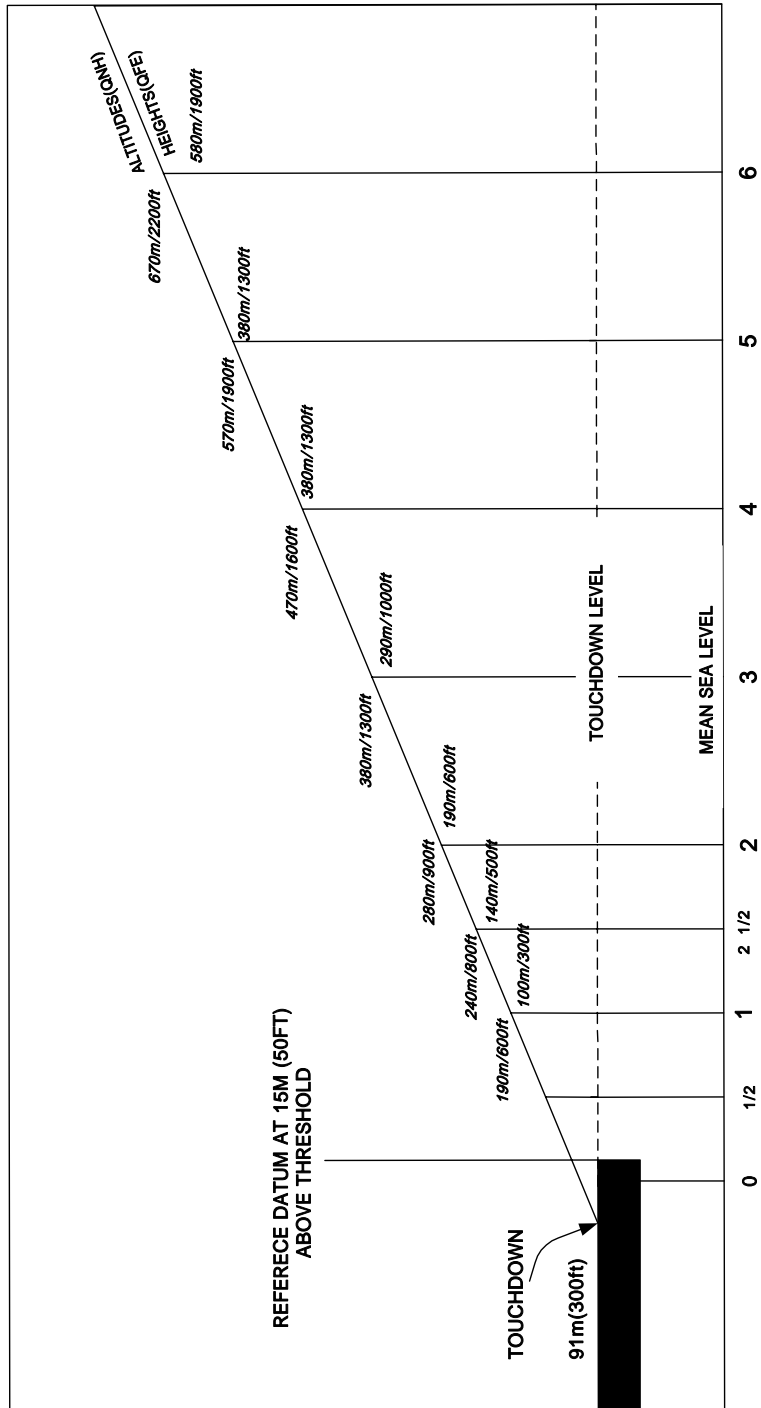


표 1 Symbol

Call sign	Symbol	Meaning
HL 5101		시계비행규칙으로 운항하는 항공기 Aircraft operating in accordance with VFR
HL 5267		계기비행규칙으로 운항하는 일반 항공기 General aviation aircraft operating in accordance with IFR
CASA 345		계기비행규칙으로 운항하는 항공사 항공기 Airline aircraft operating in accordance with IFR
TOWER/ GROUND		관제탑/지상관제 Aerodrome control service/Surface movement control
APPROACH		접근관제소, Approach control service
CENTER/ CONTROL		지역항공로관제센터/항공교통관제센터, Area control service
INFORMATION RADIO		비행정보센터/통신소 Flight information service/Aeronautical station
RADAR		레이더, RADAR
WORKER21		차량, Vehicles
TOW		견인되는 항공기 Aircraft under tow
GROUND CREW		지상요원 Ground crew
APRON		계류장 통제/관리업무 Apron control/management service

표2. 감시레이더 접근 : 활공각 3. 의 전형적인 사전계산고도



Surveillance radar approach: typical pre-computed levels for a three-degree glide path