

General Operating Procedures

1.1 Transmission of letters

The words in the table below shall be used when individual letters are required to be transmitted. The syllables to be emphasized are underlined.

LETTER	WORD	PRONUNCIATION
A	Alpha	<u>AL</u> FAH
B	Bravo	<u>BRAH</u> VOH
C	Charlie	<u>CHAR</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	Juliett	<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



LETTER	WORD	PRONUNCIATION
U	Uniform	<u>YOU</u> NEE FORM
V	Victor	<u>VIK</u> TAH
W	Whiskey	<u>WISS</u> KEY
X	X-ray	<u>ECKS</u> RAY
Y	Yankee	<u>YANG</u> KEY
Z	Zulu	<u>ZOO</u> LOO

Note

In a clearance:

- Each group of 3 letters means a navaid (VOR)
e.g. DRT, YKD, VYK
- Each group of 4 letters means an airport
e.g. ZBSJ, ZBAA

Practice

1. Read the following letters, words and phrases

1) A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

2) PILOT AIRPLANE SCHOOL BROWN
 QUICKLY JUMPS OVER LAZY
 DOGS CIJDS EIMFG IPLMN
 DSWSC ZWQTD CXEQZ OJNBV
 OIUYE FOX AZBMV CUGTO
 BYESX DGILP QSFIW KLURM

2. Spell your English name using the phonetic alphabet as quickly as possible.
 3. Write down the letters you hear.

1.2 Transmission of numbers

In the radiotelephony communications, numbers ought to be transmitted in accordance with ICAO standard pronunciation.

Numeral or numeral element	Alphabet representation
0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FOW-ER



Continued

Numeral or numeral element	Alphabet representation
5	FIFE
6	SIX
7	SEV-EN
8	AIT
9	NIN-ER
•	DAY-SEE-MAL or POINT
100	HUN-DRED
1000	TOU-SAND

3

Notes

1. Combinations of thousands and whole hundreds are transmitted by pronouncing each digit in the number of thousands followed by the word TOUSAND and the number of hundreds followed by the word HUNDRED.

- e.g. 76-----SEVEN SIX
 2500-----TOO TOUSAND FIFE HUNDRED
 35000-----TREE FIFE TOUSAND
 45863-----FOWER FIFE AIT SIX TREE

2. Numbers containing a decimal point should be transmitted as “DECIMAL”, or “POINT” in American usage.

- e.g. 118.30-----WUN WUN AIT DECIMAL TREE
 120.76-----WUN TOO ZERO DECIMAL SEVEN SIX

Altitudes

Below TA, state each digit of thousands and then the hundreds.

- e.g. 15,000 = ONE FIVE THOUSAND
 15,400 = ONE FIVE THOUSAND FOUR HUNDRED

Above TL, state Flight Level (FL)

- 18,000 = FL180

Time

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.

- e.g. 0803-----ZERO TREE or ZERO AIT ZERO TREE
 1300-----WUN TREE ZERO ZERO
 2057-----FIFE SEVEN or TOO ZERO FIFE SEVEN

Pilot may check the time with the appropriate ATIS unit. Time checks shall be given to the nearest half minute.



e.g. 1155' 18" -----WUN WUN FIFE FIFE AND A HALF
1155' 38"-----WUN WUN FIFE SIX



Fastair 345, request time check.



Fastair 345, time 0611.

Direction

In direction transmission, the three digits of direction should be pronounced individually

e.g. 035-----ZERO TREE FIFE
100-----WUN ZERO ZERO

Unit “degree” can be omitted in transmission

Note: we say: “Turn 30 degree left”

“Wind 350 degree 12 knots”

Speed

State each digit.

e.g. 250knots = TOO FIFE ZERO KNOTS
M0.82 = Mach NUMBER POINT AIT TOO
450km/h = FOWER FIFE ZERO KILOMETERS PER HOUR
7m/s = SEVEN METERS PER SECOND

Frequency

State each individual number, including the decimal point. (Note: last “0” is omitted.)

e.g. 121.45 = WUN TOO WUN DAY-SEE-MAL FOW-ER FIFE
118.30 = WUN WUN AIT DECIMAL TREE

Altimeter Settings

State each individual number.

e.g. 29.92 = TWO NINER NINER TWO
1013 = ONE ZERO ONE TREE

Transponder Codes

State each digit.

e.g. 3526 = TREE FIFE TOO SIX
6565 = SIX FIFE SIX FIFE KILO HERTZ



Practice

1. Read the following numbers

1)	10	45	100	138
2)	2100	6000	8020	12000
3)	905	30700	3000m	9600m
4)	10200m	2500f	1850f	35000
5)	RTOWE	ET96D	EJ083	NKI986DL3SBG.CSLW7640C
6)	DHLKJ	DMR84	BFJF4	39501J84KB5NDI398BB47VN
7)	VCJDS	DK02E	30K9E	98602849SM8DNE93MS9S3ND
8)	ZCSET	472AG	30LH4	3S93R6F09GE63VKW839EW
9)	SFH7R	503KF	F973MK	393JR0R74ND9PE04DO84YRE

2. Practice in pairs

A: PIL: Hong Kong departure, TUR, reaching 7000 feet.

CTL: TUR, climb 13000 feet and contact 124.3.

PIL: Climbing 13000 feet, 124.3, TUR.

----SYB 6000 10000 231.9

----WNV 8000 FL180 123.25

B: PIL: *London* Control, *GUIOT*, *FL350*, next report *BHJ 10*.

CTL: *GUIOT*, maintain FL350, report BHJ 10, contact D Control *123.1*.

PIL: Maintain FL350, report BHJ10, D Control 123.1, GUIOT.

-	Frankfurt	COACT	FL170	TIR	45	132.21
-	Seattle	LATIC	13000FT	ERW	24	124.25
-	Montreal	TNODP	FL320	FOP	46	119.1
-	Vancouver	DIKTU	10000M	NMK	34	134.2
-	Ottawa	WITYO	FL180	XFT	53	121.32
-	Toronto	JAITU	FL210	GHT	12	128.9
-	Bangkok	GLKIR	9600M	HVX	05	118.4
-	Manila	SHIRC	10800M	MKI	45	127.5
-	Nagoya	IEHOB	10200M	DAE	25	133.4
-	Osaka	DRAWI	FL280	BHD	55	112.5
-	Los Angeles	KSCBY	FL330	SGH	42	132.8

1.3 Standard words and phrases

ACKNOWLEDGE

Let me know that you have received and understood this message.



AFFIRM

Yes.

APPROVED

Permission for proposed action granted.

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.

BREAK BREAK

I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment.

CANCEL

Annul the previously transmitted clearance.

CHECK

Examine a system or procedure, and no answer is normally expected.

CHANGING TO

I intend to call ... (unit) on ... (frequency).

CLEARED

Authorized to proceed under the conditions specified.

CONFIRM

Have I correctly received the following ...? *or* Did you correctly receive this message.

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; ignore.

GO AHEAD

Proceed with your message. The phrase "GO AHEAD" is not normally used in surface movement communications.

HOLD SHORT

Stop before reaching the specified location. Note: Only used in limited circumstances where no defined point exists (e.g. where there is no suitably located holding point), or to reinforce a clearance limit.

HOW DO YOU READ?

What is the readability of my transmission?

I SAY AGAIN

I repeat for clarity or emphasis.

**MONITOR**

Listen or on (frequency).

NEGATIVE

No *or* Permission not granted *or* That is not correct.

OUT

This exchange of transmissions is ended and no response is expected. Note: The word “OUT” is not normally used in VHF communications.

OVER

My transmission is ended and I expect a response from you. Note: The word “OVER” is not normally used in VHF communications.

READ BACK

Report all, or the specified part, of this message back to 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.

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. 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).

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.

UNABLE

I cannot comply with your request, instruction or clearance. Unable is normally followed by a reason.

VERIFY

Check and confirm with originator.

WILCO

Abbreviation for “will comply.” I understand your message and will comply with it.

WORDS TWICE

As a request: Communication is difficult. Please send every word or group of words twice.

As information: Since communication is difficult, every word or group of words in this



message will be sent twice.

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1.4 Callsigns

1. Callsigns for aeronautical stations

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

Unit or service	Callsign suffix
Area control center	control
Radar (in general)	radar
Approach control	approach
Approach control radar arrival	arrival
Approach control radar departures	departure
Aerodrome control	tower
Surface movement control	ground
Clearance delivery	delivery
Precision approach radar	precision
Apron control management service	apron
Company dispatch	dispatch
Aeronautical station	radio

Note

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

2. Aircraft callsigns

TYPE	FULL	ABBREVIATED
(a) The five-character callsign corresponding to the registration of the aircraft;	G_ABCD	G_CD
(b) The five-character callsign referred to in (a) above, preceded by the type of the aircraft;	ILYUSHIN ERTED	ILYUSHIN ED
(c) The radiotelephony designator of the aircraft operating agency, followed by the flight identification;	SPEEDBIRD 753	No abbreviation
(d) The characters corresponding to the registration marking of the aircraft.	N783425	N425

**Note**

An aircraft shall use its abbreviated callsign only after it has been addressed in this manner by the aeronautical station.

Aircraft in the heavy wake turbulence category shall include the word “HEAVY” immediately after the aircraft callsign in the initial call to the aerodrome control tower and the approach control unit.

Practice

Abbreviation exercises

PIL: Beijing Control, *GTYIN*, good morning.

CTL: *GIN*, pass your message.

DFDPL	Speedbird	GDCSE	N238967
DAXST	Lufthansa	DTROL	N897543
ECSAN	Japan Air	JPINA	N389486
VHREA	Singapore	DVAHD	AFR 648

1.5 Communications procedures

1. Establishment and continuation of communications

(1) When establishing communication, an aircraft should use the full callsign of both the aircraft and the aeronautical station.

The format of initial contact:

PIL: —callsign of ATC
 —aircraft full callsign
 —type of message

CTL: —full callsign of aircraft
 —callsign of ATC
 —go ahead



Alpha Tower, G-ABCD.



G-ABCD, Alpha Tower, go ahead.

(2) When a ground station wishes to broadcast information to all aircraft likely to receive it, the message should be prefaced by the call “All stations.”



All stations, Alexander control, fuel dumping completed.

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

(3) 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.

Phrases	Meaning
SAY AGAIN	Repeat entire message
SAY AGAIN ...(item)	Repeat specific item
SAY AGAIN ALL BEFORE ...(the first word satisfactorily received)	Repeat part of message
SAY AGAIN ALL AFTER ...(the first word satisfactorily received)	Repeat part of message
SAY AGAIN ALL BETWEEN ... AND ...	Repeat part of message

(4) When a station is called but is uncertain of the identification of the calling station, the calling station should be requested to repeat its callsign until identification is established.



Georgetown Ground, ...345.

Georgetown Ground, Fastair 345.



Station calling Georgetown Ground,
say again your callsign.

2. Transfer of communications

(1)





129.1, Fastair 345.





Fastair 345, contact Beijing control
129.1.



(2)

	
<p>118.9, Fastair 345.</p>	<p>Fastair 345, contact Tower 118.9.</p>

(3)

	
<p>Monitoring 123.25, Fastair 345.</p>	<p>Fastair 345, monitor ATIS 123.25.</p>

3. Test procedures

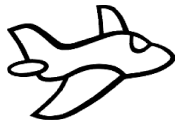
(1) Test transmissions should take the following format:

- the callsign of the aeronautical station being called;
- “the aircraft identification”;
- the words “RADIO CHECK”;
- “the frequency” being used;

(2) Replies to test transmissions should be as follows:

- “the aircraft identification”;
- “the callsign” of the aeronautical station replying;
- “READABILITY x”;
- “additional information” with respect to any noted abnormality;

Readability Scale	Meaning
1	Unreadable
2	Readable now and then
3	Readable but with difficulty
4	Readable
5	Perfectly readable



Borton Tower, G-ABCD, radio check 118.725.

G-ABCD, Borton Tower, readability 5.

Or

G-CD, Borton Tower, readability 3 with
a loud background whistle.

Or

Station calling Borton Tower,
readability 1.

1.6 Transmitting technique

- **Listen** before you transmit. Many times you can get the information you want through ATIS or by monitoring the frequency. Except for a few situations where some frequency overlap occurs, if you hear someone else talking, the keying of your transmitter will be futile and you will probably jam their receivers causing them to repeat their call. If you have just changed frequencies, pause, listen and make sure the frequency is clear.
- **Think** before keying your transmitter. Know what you want to say and if it is lengthy. e.g., a flight plan or IFR position report, jot it down.
- The microphone should be very close to your lips and after pressing the mike button, a slight pause may be necessary to ensure that the first word is transmitted. Speak in a normal conversational tone.
- When you release the button, wait a few seconds before calling again. The controller or FSS specialist may be jotting down your number, looking for your flight plan, transmitting on a different frequency, or selecting his transmitter to your frequency.
- Be alert to the sounds **or lack of sounds** in your receiver. Check your volume, recheck your frequency and **make sure that your microphone is not stuck in the transmit position.**
- Be sure that you are within the performance range of your radio equipment and the ground station equipment. Remote radio sites do not always transmit and receive on all of facilities available frequencies, particularly with regard to VOR sites where you can hear but not reach a ground station's receiver. Remember that higher altitude increases the range of VHF "line of sight" communications.



Unit check 1

13

1. Listen to five short pilot and controller transmissions. Complete each of the sentences below with the number you hear.
 - a. Eastern _____ heavy, taxi via _____ to holding point runway _____.
 - b. Qantas _____ for bay _____.
 - c. Eastern _____, cleared to Los Angeles, via Echo planned route, maintain _____ runway _____ Sydney _____ departure, squawk _____ departures frequency _____.
 - d. Qantas _____, behind the company _____ taxi to holding point runway _____, QNH _____.
 - e. Singapore Departures, Eastern _____, climbing _____ passing _____.
2. Write down what you think the missing word is in the spaces provided.
 - a. Controller: Southern 232, confirm you're for bay five.
Pilot: _____, bay five, Southern 232.
 - b. Pilot: Melbourne Ground, Southern 232, request start and pushback.
Controller: Southern 232, Melbourne Ground, start and push _____, face west.
 - c. Controller: Southern 232, _____ previous clearance, cleared now amended FL370.
 - d. Controller: Southern 232, climb FL140, _____, Qantas 10 turn left heading 170.
 - e. Controller: Southern 232, _____ to Singapore via flight planned route.
 - f. Controller: Southern 232, _____ received information Sierra.
Pilot: Affirm, received Sierra, Southern 232.
 - g. Controller: Southern 232, _____ Departures 134.0.
 - h. Controller: All stations general broadcast, QNH is now 1030, _____ 1003, wind 310 degree, 15 knots.
 - i. Controller: Southern 232, hold short runway 20L, _____, cross runway 20L.
 - j. Pilot: Singapore Clearance Delivery, Southern 232.
Controller: Southern 232, Singapore Clearance Delivery, _____.
 - k. Pilot: Ground, Southern 232, radio check on 124.7, _____?
 - l. Controller: Southern 232, runway 16R, cleared for takeoff, make left turn, _____, make left turn.
 - m. Controller: Southern 232, confirm your last position X-ray Charlie Mike.
Pilot: _____, last position Delta Tango Lima, Southern 232.
 - n. Controller: Southern 232, taxi via Alpha Bravo and Kilo to holding point runway 27, QNH 1016.
Pilot: Via Alpha, Bravo, Kilo, holding point runway 27, Southern 232.



Controller: Southern 232, _____ QNH.

Pilot: QNH 1016, Southern 232.

o. Controller: Southern 232, report approaching holding point Alpha.

Pilot: _____, Southern 232.

p. Pilot: Hong Kong Ground, Southern 232, _____ taxi, received information Mike.

Controller: Southern 232, Hong Kong Ground, taxi to holding point runway 07L.

q. Controller: Southern 232, for your information there are birds north of the intersection of taxiway Echo and runway 14.

Pilot: _____, thanks, Southern 232.

r. Controller: Southern 232, cleared to(Last part of message not clear).

Pilot: Southern 232, _____ all after cleared to.

s. Pilot: Singapore Approach, Southern 232, passing 1500 climbing 7000 (spoken too fast).

Controller: Southern 232, Singapore Approach, _____.

t. Controller: Southern 232, advise your delay.

Pilot: Southern 232, _____ one, we're talking to our engineer.

u. Pilot: Ground, Southern 232, can you contact our company to let them know of our problem?

Controller: Southern 232, Singapore Ground, _____.

3. Complete each transmission a pilot or controller would say using standard words and phrases.

One has been done for you as an example.

a. The pilot of Qantas 61 wishes to ask the Tower controller for the current QNH at Los Angeles Airport.

Los Angeles Tower, Qantas 61, *request QNH.*

b. A controller instructs the pilot of Eastern 414 to climb FL290 then call ATC when the aircraft arrives at FL290.

Eastern 414, climb FL290, _____ reaching.

c. The pilot of Southern 242 replies to a controller who calls and wishes to confirm POB as 265; however, the actual number of persons on board is 267.

_____, POB 267, Southern 242.

d. A controller wants to make sure that the pilot of Ibisair 489 has heard the correct transponder code given as 4723.

Ibisair 489, _____

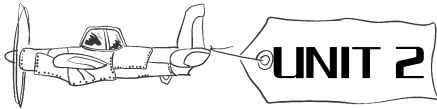
Squawking 4723.

e. A controller wishes to make sure that the pilot of Qantas 10 has heard and understood the new ATIS information which is Sierra.

Qantas 10, _____ received Information Sierra.



- f. A controller tells the pilot of Eastern 414 that he can takeoff from runway 20 left but wants him to make a right hand turn after takeoff, instead of the expected left hand turn.
Eastern 414, runway 20L, cleared for takeoff, after airborne, turn right, _____.
_____, turn right, after airborne.
- g. The controller wishes to tell Qantas 67 about helicopter Alpha 2 operating at 100 feet near the threshold of runway 26 while Qantas 61 is on short final. The controller does not require Qantas 67 to respond to the Controller's transmission.
Qantas 67, no need to _____, traffic is helicopter Alpha 2 operating abeam threshold runway 26 at one hundred feet.
- h. The pilot of Southern 232 responds to an initial call from Melbourne Approach and wants to tell Approach that he is ready to receive the message.
Melbourne Approach, Southern 232, _____.
- i. Singapore Departures wants Qantas 10 to change radio frequency to 125.25 and call Singapore centre.
Qantas 10, _____Singapore
centre, 125.25, good day.
- j. The pilot of Eastern 414 tells the controller that she initially cannot see nearby traffic but while speaking, she is suddenly able to see the traffic.
Eastern 414, negative contact, ahh, _____, traffic in sight.
- k. The pilot of Qantas 67 hears all of long transmission from Ground control informing him of the reason for a taxiing delay and then wishes to tell the controller that he has heard all of the information. The pilot does not need to read back any of the information given.
Qantas67, _____.



Pre-flight

2.1 Automatic Terminal Information Service (ATIS)

Key words and phrases

Check that you understand all the words and phrases in this list. Look up any new words in an aviation dictionary.

ATIS (Automatic Terminal Information Service)	millibars (mb)
surface wind	QNH
temperature	CAVOK (ceiling and visibility OK)
dew point	ILS (Instrument Landing System)
runway	noise abatement procedure
runway in use	transition level
gusting	okta
visibility	cumulonimbus
no sig (no significant change)	wet
kilometers (km)	braking action
feet (ft)	trend
degree	RVR (runway visual range)
knots	threshold
plus	taxi way
minus	SID (standard instrument departure)
centigrade	hectopascal
mist	flock of birds

Automatic Terminal Information Service, or ATIS, is a continuous broadcast of recorded information in busier terminal (i.e. airport) areas. ATIS broadcasts contain essential information, such as weather information, which runways are active, available approaches, and any other information required by the pilots, such as important (NOTAMS). Pilots usually listen to an ATIS



broadcast before contacting the local control unit, in order to reduce the controllers' workload and relieve frequency congestion.

The recording is updated in fixed intervals or when there is a significant change in the information, like a change in the active runway. It is given a letter designation (e.g. bravo), from the ICAO spelling alphabet. The letter progresses down the alphabet with every update and starts at Alpha after a break in service of 12 hours or more. When contacting the local control unit, the pilot will indicate he/she has "information" and the ATIS identification letter to let the controller know that the pilot is up to date with all current information.

ATIS broadcasts (which should be no more than thirty seconds duration) will include the following:

- airport name
- information code
- time
- runway(s) in use
- (runway condition: wet, snow, slush, ice, braking action) transition level
- (operational information: expect _____ departure, flocks of birds, restricted areas, etc.)
- wind direction (in degrees) and strength (in knots)
- visibility in meters, kilometers up to ten kilometers or more
- (RVR)
- (present weather: mist; fog, snow, drizzle, etc.)
- (cloud cover in oktas, height of base of clouds in feet or meters) (e.g. CAVOK, pronounced 'CAV-O-KAY')
- temperature and dew point
- QNH
- (QFE)
- trend («no sig» or expected weather changes)
- (extra information)

Sample messages:

On tuning to an ATIS frequency, a pilot might hear:

A. This is Stourton Approach Information Alpha. 0850 hours weather. 240° 12 kt. 10 km. Intermittent slight rain. Scattered 1000 ft, overcast 1800 ft. Temperature +12. Dew point +7. QNH 1011 mb. Landing runway 28. Report information Alpha received on first contact with Stourton.

This translates to:

Stourton Approach, the information Alpha is issued at 08:50 UTC. The winds are from 240° at 12 knots. Ten kilometers visibility. There is light rain for a short period. At 1,000 feet there are scattered clouds, and at 1,800 feet there are overcast clouds. The temperature is 12°C (some



airports don't include this due to variability). The dew point is 7°C. The QNH IS 1011 millibars. Landing runway is 28. Finally, inform the controller that you have information Alpha (i.e. this information).

B. Vancouver International information Bravo 1355 Zulu weather. Wind 300 at 8, visibility 5.500 few, 1200 scattered, ceiling 3000 overcast, temperature 15, dew point 8. Altimeter 2987. IFR approach is ILS or visual, runway 26L and runway 26R. Simultaneous parallel ILS approaches in use. Departures, runway 26L. GPS approaches available. VFR aircraft say direction of flight. All aircraft read back all hold short instructions. Advise controller on initial contact that you have Bravo.

This translates to:

Vancouver International Airport, the information Bravo is issued at 13:55 UTC. The winds are from 300 (~northwest) at 8 Knots. Five statute miles visibility. At 500 feet there are few clouds. At 1,200 there are scattered clouds. At 3,000 feet there is an overcast flight ceiling. The temperature is 15°C (some airports don't include this due to variability). The dew point is 8°C. The altimeter setting is 29.87 inches of mercury (however this could also be expressed in millibars or hectopascals.) Visual and simultaneous ILS landings available using Instrument Flight Rules, using runways 26L and 26R, while departures may use runway 26L. You can conduct an approach via a GPS system. When you first contact air traffic control, inform them your direction of flight if you are using Visual Flight Rules. Any "hold short" instructions the controller gives you need to be read back to the controller to confirm you have received them properly. Finally, inform the controller that you have information Bravo (i.e. this information).

Practice

Vocabulary

1. Order each group of words, a to d below by writing numbers 1 to 4 from the lowest to the highest or the weakest to the strongest.

Lowest or weakest	—————▶			Highest or strongest
1				4
a. good	low	medium to good	medium to poor	
b. water patches	wet	flooded	damp	
c. kilometers	centimeters	millimeters	meters	
d. slush	ice	frozen slush	snow	

2. What do these groups of words refer to? Match groups a to d from Activity 1 with the topics by writing a, b, c or d in the space provided.



Topics

- Water quantity on runway.
- Units of measurement.
- Braking action.
- Ways of describing frozen water.

Listen and write

Listen to the following ATIS recordings and make notes for each one in the tables below.
You will have to listen more than one time to each one to get all the details.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Listen for specific information - ATIS broadcasts

Listen to ATIS recordings and complete the table below.

Airport	Details
a. MELBOURNE	
Identifier	Information Tango.
Expect	_____ approach.
Runway	_____
Surface conditions	_____.
Wind	_____ degrees, _____ 25 knots, maximum _____.
Visibility	_____ 10 kilometers
Precipitation	_____ in area.
Cloud	_____ 1500.
Temperature	_____
QNH	_____
Expect	_____ in circuit area.



Airport	Details
b. BANGKOK	
Identifier	Information _____
Expect	Radar vectors for _____.
Runway	_____
Wind	_____ degrees, _____ knots.
Visibility	_____ kilometers.
Cloud	_____ 2500.
Temperature	_____.
Dew point	_____.
QNH	_____.
Caution	Bravo to Charlie _____ due _____.

Airport	Details
c. FRANKFURT	
Identifier	_____
Runways	_____
Wind	_____
Surface conditions	_____
Braking action	_____
QNH	_____
Temperature	_____
Visibility	_____
RVR	_____
Transition level	_____

Airport	Details
d. NEVEK INTERNATIONAL	
Identifier	_____
Runways	_____
Wind	_____
Cloud and Visibility	_____
Temperature	_____
Dew point	_____