DRAFT

Australian Government
Civil Aviation Safety Authority

MULTI-PART ADVISORY CIRCULAR AC 64.B-01, AC 91-35, AC 139-14 AND AC 172-04 v1.0

Radiotelephony manual

File ref: D24/442239

January 2025

DRAFT

Advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Advisory circulars should always be read in conjunction with the relevant regulations.

Audience

This advisory circular (AC) applies to:

- pilots
- airside aircraft maintainers
- air traffic service (ATS) personnel
- aerodrome vehicle drivers
- any person who uses an aviation radiocommunication system.

Purpose

This AC provides guidance about standard radiotelephony phraseology when using an aeronautical telecommunications system.

For further information

For further information or to provide feedback on this AC, visit CASA's contact us page.

Status

This version of the AC is approved by the National Manager, Flight Standards Branch.

Table 1: Status

Version	Date	Details
v1.0		Initial Multi-Part AC.

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

Contents

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and their continuing connection to land, water and community, and pays respect to Elders past, present and emerging.

Artwork: James Baban.

1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

Table 2: Acronyms

Acronym	Description
AC	advisory circular
ACD	airways clearance delivery
ADS-B	automatic dependent surveillance – broadcast
ADS-C	automatic dependent surveillance – contract
AFIS	aerodrome flight information service
AIP	aeronautical Information Publication
AMSL	above mean sea level
ATC	air traffic control
ATIS	aerodrome terminal information service
ATS	air traffic service(s)
BA	broadcast area
CA/GRS	certified air/ground radio service
CASR	*Civil Aviation Safety Regulations 1998*
CTAF	common traffic advisory frequency
EHS	enhanced surveillance
ERSA	EN-route Supplement – Australia
FL	flight level
ft	feet
GLS	ground-based augmentation system (GBAS - pronounced “GEE-BAS") landing system
GNSS	Global navigation satellite system
HF	high frequency (3-30 MHz)
hPa	hectoPascals
IFR	instrument flight rules
ILS	instrument Landing System
LNAV	lateral navigation (pronounced “EL-NAV")

Acronym	Description
LSALT	lowest safe altitude
MOS	manual of standards
MSA	minimum sector altitude
MVA	minimum vectoring altitude
NM	nautical mile(s)
NVIS	night vision imaging system
PDC	pre-departure clearance
RA	resolution advisory
RAIM	receiver autonomous integrity monitoring
RCR	runway condition report
RNAV	area navigation (pronounced “AR-NAV")
RNP	required navigation performance
RNP-AR	required navigation performance - authorisation required
RV	runway visibility
RVR	runway visual range
RVSM	reduced vertical separation minimum
RWYCC	runway condition code
SFIS	surveillance flight information service
SID	standard instrument departure
SMC	surface movement control
SSR	secondary surveillance radar
STAR	standard instrument arrival
TCAS	traffic alert and collision avoidance system
TIBA	traffic information broadcasts by aircraft
TORA	take-off run available (pronounced “TOR-AH”)
UTC	coordinated universal time
VFR	visual flight rules
VHF	very high frequency (30-300MHz)
VMC	visual meteorological conditions
VNAV	vertical navigation (pronounced “VEE-NAV")

1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by ‘grey shading'. Should there be a discrepancy between a definition given in this AC and the civil aviation legislation, the definition in the legislation prevails.

Table 3: Definitions

Term	Definition
QNH	An atmospheric pressure adjusted to sea level and measured in hPa so that when QNH is set the altimeter will read elevation AMSL.
SARTIME	The time nominated by a pilot for the initiation of SAR action if a report has not been received by the nominated unit.
SARWATCH	The time for a SAR alert, based on: a. full position reporting procedures; or b. scheduled reporting times (SKEDS); or c. SARTIME.

1.3 References

Legislation

Legislation is available on the Federal Register of Legislation website https://www.legislation.gov.au/

Table 4: Legislation references

Document	Title
Part 64 of CASR	Authorisations for non-licensed personnel
Part 91 of CASR	General operating and flight rules
Part 91 MOS	Part 91 (General Operating and Flight Rules) Manual of Standards 2020
Part 139 MOS	Part 139 (Aerodromes) Manual of Standards 2019
Part 172 of CASR	Air traffic service providers

International Civil Aviation Organization documents

International Civil Aviation Organization (ICAO) documents are available for purchase from http://store1.icao.int/

Many ICAO documents are also available for reading, but not purchase or downloading, from the ICAO eLibrary (https://elibrary.icao.int/home).

Table 5: ICAO references

Document	Title
Annex 10 Volume II	Annex 10 to the Convention on International Civil Aviation - Aeronautical Telecommunications, Volume II - Communication Procedures including those with PANS status
Doc. 4444	Doc 4444 AN/501 titled Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM)
Doc. 9432	Doc 9432 AN/925 Manual of Radiotelephony

2 Introduction

2.1 General matters

2.1.1 Radiotelephony (RTF) is the primary means by which people involved in aviation operations communicate with each other. The importance of using correct and precise standard phraseology cannot be over-emphasised Used properly, the information and instructions transmitted are of vital importance in assisting in the safe and expeditious operation of aircraft. However, the use of non-standard procedures and phraseology can cause misunderstanding. There have been incidents and accidents in which misunderstandings caused by using non-standard phraseology have been a contributing factor.

2.1.2 The phraseology in this AC aims to encourage and ensure uniformity in RTF communications. 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.

2.1.3 Some abbreviations, which by common usage have become part of aviation terminology, may be spoken using their constituent letters rather than the phonetic alphabet: for example, ILS, QNH.

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

- 'SURFACE' in relation to surface wind direction and speed
- 'DEGREES' in relation to vectors
- 'VISIBILITY', 'CLOUD', and 'HEIGHT' in MET reports
- 'HECTOPASCALS' when giving pressure settings.

2.1.5 The use of courtesies should be avoided.

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

2.2 Explanation of scenarios

2.2.1 To assist the reader to understand 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 similarity with actual aircraft and ground station call signs is coincidental.

2.2.2 The tables with RTF examples should be read in a linear fashion from top to bottom, with the transmitting station shown as a graphic in the left columns. Separate examples delineated by a double horizontal line - are sometimes included in a single table.

2.2.3 In the examples, the aircraft or ground station transmitting is shown by the symbol in Table 6. The station initiating the exchange of messages is in bold type. To facilitate the reader of this AC following the sequence of the messages, each subsequent message commences below the previous one throughout the exchange.

Table 6: Key to symbols

Symbol	Meaning
 pilot	Small VFR aircraft

Symbol	Meaning
 pilot	Small IFR aircraft
 pilot	Large IFR aircraft
 pilot	Military aircraft
 pilot	Small helicopter
 pilot	Large helicopter
 ATS	Air Traffic Services (air traffic control, flight information service)
 AGS	Aeronautical Ground Station (aerodrome flight information service, certified air/ground radio service)
 vehicle	Car or other smaller vehicle, which is operating or intending to operate on the manoeuvring area to perform specific tasks
 vehicle	Larger vehicle (e.g. fire tender), which is operating or intending to operate on the manoeuvring area to perform specific tasks

2.2.4 Aircraft are further identified by example call signs, however these are just examples and the aircraft involved could be any aircraft or operation type. Call sign examples include:

a. Fastair 345 representing an airliner
b. PQR, representing an IFR aircraft
c. XYZ, representing a VFR aircraft
d. MILJET representing military aircraft
e. Rescue One representing a large helicopter
f. RST or Polair Two representing a small helicopter.

2.2.5 Ground stations may also be further identified by example call signs as follows:

a. Capricorn Ground
b. Thornhill Tower
c. Suburbs Tower
d. Capricorn Centre
e. Capricorn Radio {High Frequency (HF) service}
f. Flightwatch
g. Sunny Beach Radio etc.

2.2.6 The title of the ground station addressed is generally omitted from aircraft responses.

2.3 Example scenarios only

2.3.1 Scenarios shown in the chapters 3 to 10 are examples only. More comprehensive lists of individual phrases {as originally published in the Aeronautical Information Publication (AIP) GEN 3.4} can be found in Appendix A of this AC.

3 General procedures and phraseology

3.1 Transmitting technique

3.1.1 The following transmitting techniques will help ensure that transmitted speech is clearly and delivered:

- Before transmitting, check that the receiver volume is set at the optimum level and listen out on the frequency to be used to ensure that your transmission will not interfere with a transmission from another station.
- Be familiar with microphone operating techniques and do not turn your head away from the microphone whilst talking or vary the distance between it and your mouth. Severe distortion of speech may arise from talking too close to the microphone, touching the microphone with the lips, or holding on to the microphone or boom (of a combined headset/microphone system).
- Use a normal conversational tone, speak clearly and with good diction.
- Maintain an even rate of speech, slightly slower than conversational speed. If you know parts of the message will be written down by the recipient, speak at a slightly slower rate.
- Maintain a constant speaking volume.
- Remember o a slight pause before and after numbers to assist in making them easier to understand.
- Avoid using hesitation markers such as “er” or “um”.
- Depress the transmit switch fully before speaking and do not release it until the message is complete.
- Do not depress the transmit switch until ready to speak and allow a slight pause before commencing so that the message is not ‘clipped’, thereby ensuring that the entire message is transmitted.
- Take care to use standard words and phrases as much as possible – remember that English may be a second language for some.

3.1.2 One of the most problematic and potentially dangerous situations in radiotelephony is a ‘stuck’ microphone button. Always ensure the button is released after a transmission and the microphone is placed appropriately to ensure it cannot inadvertently be activated.

3.2 Phonetic alphabet

3.2.1 Table 7 lists the phonetic alphabet for transmitting letters and the corresponding Morse Code identifier. Syllables to be emphasised are in UPPER CASE.

Table 7: Phonetic alphabet and morse code identifiers

Letter	Phonetic letter	Pronunciation	Morse Code
A	ALFA	AL-fah	Dot dash
B	BRAVO	BRAH-voh	Dash dot dot dot
C	CHARLIE	CHAR-lee or SHAR-lee	Dash dot dash dot

Letter	Phonetic letter	Pronunciation	Morse Code
D	DELTA	DELL-tah	Dash dot dot
E	ECHO	ECK-oh	Dot
F	FOXTROT	FOKS-trot	Dot dot dash dot
G	GOLF	GOLF	Dash dash dot
H	HOTEL	ho-TELL	Dot dot dot dot
I	INDIA	IN-dee-ah	Dot dot
J	JULIETT	JEW-lee-ETT	Dash dash dash
K	KILO	KEY-loh	Dash dot dash
L	LIMA	LEE-mah	Dot dash dot dot
M	MIKE	MIKE	Dash dash
N	NOVEMBER	no-VEM-ber	Dash dot
O	OSCAR	OSS-cah	Dash dash dash
P	PAPA	pah-PAH	Dot dash dash dot
Q	QUEBEC	keh-BECK	Dash dash dot dash
R	ROMEO	ROW-me-oh	Dot dash dot
S	SIERRA	see-AIR-rah	Dot dot dot
T	TANGO	TANG-go	Dash
U	UNIFORM	YOU-nee-form or OO-nee-form	Dot dot dash
V	VICTOR	VIK-tah	Dot dot dot dash
W	WHISKEY	WISS-key	Dash dash
X	X-RAY	ECKS-ray	Dash dot dot dash
Y	YANKEE	YANG-key	Dash dot dash dash
Z	ZULU	ZOO-loo	Dash dash dot dot

3.3 Pronunciation of numbers

3.3.1 Table 8 lists the phonetic spelling of numbers and number terms, and the corresponding Morse Code identifier. Syllables to be emphasised are in UPPER CASE.

Table 8: Numbers and morse code identifiers

Number	Pronunciation	Morse code
0	ZE-RO	Dash dash dash dash dash
1	WUN	Dot dash dash dash dash

Number	Pronunciation	Morse code
2	TOO	Dot dot dash dash dash
3	TREE	Dot dot dot dash dash
4	FOW-er	Dot dot dot dot dash
5	FIFE	Dot dot dot dot dot
6	SIX	Dash dot dot dot dot
7	SEV-en	Dash dash dot dot dot
8	AIT	Dash dash dash dot dot
9	NIN-er	Dash dash dash dash dot
Decimal	DAY-SEE-MAL	
Hundred	HUN-dred	
Thousand	TOU-SAND	

3.4 Transmission of numbers

3.4.1 All numbers, except as detailed in paragraphs 3.4.2 to 3.4.9, should be transmitted by pronouncing each digit separately. Table 4 through Table 6 inclusive show examples of numbers to be transmitted as separate digits.

Table 9: Headings

Example	Transmitted as	Pronounced as
100	heading one zero zero	heading WUN ZE-RO ZE-RO
080	heading zero eight zero	heading ZE-RO AIT ZE-RO

Table 10: Wind direction and speed

Example	Transmitted as	Pronounced as
300 degrees, 20 knots	wind three zero zero degrees two zero knots	wind TREE ZE-RO ZE-RO degrees TOO ZE-RO knots
160 degrees, 18 knots - gusting 30 knots	wind one six zero degrees one eight knots gusting three zero knots	wind WUN SIX ZE-RO degrees WUN AIT knots gusting TREE ZE-RO knots

Table 11: Runway designators

Example	Transmitted as	Pronounced as
19	Runway one nine	Runway WUN NIN-er

Example	Transmitted as	Pronounced as
06	Runway zero six	Runway ZE-RO SIX
19L	Runway one nine left	Runway WUN NIN-er LEFT

3.4.2 As shown in Table 7, flight levels should be transmitted by pronouncing each digit separately except for the case of flight levels in whole hundreds, which should be transmitted by pronouncing the digit of the whole hundred followed by the word “HUNDRED.

Table 12: Transmission of flight levels

Example	Transmitted as	Pronounced as
Fight level 180	flight level one eight zero	flight level WUN AIT ZE-RO
Flight level 200	flight level two hundred	flight level TOO HUN-dred

3.4.3 All numbers used in the transmission of altitude and cloud height, which contain whole hundreds and whole thousands, should be transmitted by pronouncing each digit in the number of hundreds or thousands followed by the word HUNDRED or THOUSAND as appropriate. Combinations of thousands and whole hundreds should be transmitted by pronouncing each digit in the number of thousands followed by the word THOUSAND followed by the number of hundreds followed by the word HUNDRED. See Table 13 and Table 14.

3.4.4 In the transmission of altitudes, the word ‘feet’ is normally omitted, but can be included to prevent confusion.

Table 13: Transmission of altitude

Example	Transmitted as	Pronounced as
800 feet	eight hundred feet	AIT HUN-dred feet
3 400	three thousand four hundred	TREE TOU-SAND FOW-er HUN-dred
12 000	one two thousand	WUN TOO TOU-SAND

Table 14: Transmission of cloud height

Example	Transmitted as	Pronounced as
2 200	two thousand two hundred	TOO TOU-SAND TOO HUN-dred
4 300	four thousand three hundred	FOW-er TOU-SAND TREE HUN-dred

3.4.5 As shown in Table 8, an altimeter setting is transmitted by pronouncing each digit separately except for the case of a setting of 1000 hPa which is transmitted as ONE THOUSAND.

Table 15: Transmission of altimeter settings

Example	Transmitted as	Pronounced as
984 hPa	QNH nine eight four	QNH NINer AIT FOW-er

Example	Transmitted as	Pronounced as
1000 hPa	QNH one thousand	QNH WUN TOU-SAND
1014 hPa	QNH one zero two seven	QNH WUN ZE-RO WUN FOW-er
29.95 inches	QNH two nine decimal nine five	QNH TOO NIN-er DAY-SEE-MAL NIN-er FIFE

3.4.6 As shown in Table 9, transmissions of transponder code are prefixed with the word 'Squawk and each digit pronounced separately, except that transponder code containing whole thousands should be transmitted by pronouncing the digit in the number of thousands followed by the word THOUSAND.

Table 16: Transmission of transponder codes

Example	Transmitted as	Pronounced as
2400	Squawk two four zero zero	squawk TOO FOW-er ZE-RO ZE-RO
3766	Squawk three seven six six	squawk TREE SEV-en SIX SIX
2000	Squawk two thousand	squawk TOO TOU-SAND

3.4.7 As shown in Table 17 and Table 18, transmissions of visibility and runway visual range (RVR) are prefixed by the type of visibility being reported with values containing whole hundreds and whole thousands being transmitted by pronouncing each digit in the number of hundreds or thousands followed by the word 'HUNDRED' or 'THOUSAND' as appropriate. Combinations of thousands and whole hundreds should be transmitted by pronouncing each digit in the number of thousands followed by the word 'THOUSAND' followed by the number of hundreds followed by the word 'HUNDRED'.

Table 17: Transmission of visibility and runway visibility

Example	Transmitted as	Pronounced as
350	runway visibility three five zero	runway visibility TREE FIFE ZE-RO
1 500	visibility one thousand five hundred	visibility WUN TOU-SAND FIFE HUN-dred
3 000	visibility three thousand	visibility TREE TOU-SAND
10 km	visibility one zero kilometres	visibility WUN ZE-RO kilometres

Table 18: Transmission of RVR

Example	Transmitted as	Pronounced as
175	RVR one seven five	RVR WUN SEV-en FIFE
700	RVR seven hundred	RVR SEV-en HUN-dred

Example	Transmitted as	Pronounced as
1 700	RVR one thousand seven hundred	RVR WUN TOU-SAND SEV-en HUN-dred

3.4.8 When providing information regarding relative bearing in terms of the 12-hour clock, the information should be transmitted by pronouncing the double digits as TEN, ELEVEN, or TWELVE [O'CLOCK].

3.4.9 As shown in Table 14, numbers containing a decimal point should be transmitted with the decimal point in appropriate sequence being indicated by the word DECIMAL.

Table 19: Transmission of numbers with decimal points

Application	Example	Transmitted as	Pronounced as
Frequency - 1 decimal point	**128.3**	one two eight decimal three	WUN TOO AIT DAY-SEE-MAL TREE
Frequency - 2 decimal points	**135.75**	one three five decimal seven five	WUN TREE FIFE DAY-SEE-MAL SEV-en FIFE
QNH (inches)	**29.95 inches**	QNH two nine decimal nine five	QNH TOO NIN-er DAY-SEE-MAL NIN-er FIFE
Mach no	**M0.84**	Mach decimal eight four	MACH DAY-SEE-MAL AIT FOW-er

3.4.10 When transmitting time, each digit should be pronounced separately, as shown in Table 20. Only the minutes of the hour are normally required. However, the hour should be included if there is any possibility of confusion.

Table 20: Transmission of time

Example	Transmitted as	Pronounced as
0803	time zero three or time zero eight zero three	time ZE-RO TREE or time ZE-RO AIT ZE-RO TREE
1300	time one three zero zero	time WUN TREE ZE-RO ZE-RO
2057	time five seven or time two zero five seven	time FIFE SEV-en or time TOO ZE-RO FIFE SEV-en

Note: Coordinated universal time (UTC) must be used.

3.4.11 As shown in Figure 1, pilots may check the time with the appropriate ATS unit. Time checks will be given to the nearest half minute.

Communicator	Communication
 pilot	FASTAIR 345 REQUEST TIME CHECK
 ATS	FASTAIR 345 TIME 0611 *or* FASTAIR 345 TIME 0715 AND A HALF

Figure 1: Time check

3.5 Standard words and phrases

3.5.1 The following words and phrases must be used in radiotelephony communications as appropriate. When used, they have the meaning given in Table 21 below.

Table 21: Standard words and phrases

Word/Phrase	Meaning
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 separation between messages transmitted to different aircraft in a very busy environment.
CANCEL	Annul the previously transmitted clearance.
CHECK	Examine a system or procedure (not to be used in any other context – no answer is normally expected).
CLEARED	Authorised to proceed under the conditions specified.
CONFIRM	I request verification of: (clearance, instruction, action, information).
CONTACT	Establish communications with …
CORRECT	True or Accurate.
CORRECTION	An error has been made in this transmission (or message indicated) the correct version is …
DISREGARD	Ignore.

Word/Phrase	Meaning
HOW DO YOU READ?	What is the readability of my transmission? The readability scale is: 1 → Unreadable 2 → Readable now and then 3 → Readable but with difficulty 4 → Readable 5 → Perfectly readable
I SAY AGAIN	I repeat for clarity or emphasis **Note:** This phrase should not be used for a correction.
MAINTAIN	Continue in accordance with the condition(s) specified, or in its literal sense, eg. “Maintain VFR”.
MAYDAY	My aircraft and its occupants are threatened by grave and imminent danger and/or I require immediate assistance.
MONITOR	Listen out on (frequency).
NEGATIVE	No or Permission is not granted or That is not correct or Not capable.
OUT	My transmission is ended and I expect no response from you (not normally used in Very High Frequency (VHF) communication).
OVER	My transmission is ended and I expect a response from you (not normally used in VHF communication).
PAN PAN	I have an urgent message to transmit concerning the safety of my aircraft or other vehicle or of some person on board or within sight but I do not require immediate assistance.
READ BACK	Repeat 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 *(under NO circumstances to be used in reply to a question requiring READ BACK or a direct answer in the affirmative or 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 (normally followed by a reason).

Word/Phrase	Meaning
VERIFY	Check and confirm with originator.
WILCO	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 group of words in this message will be sent twice.*

3.6 Ground station call signs

3.6.1 Ground stations are identified by the name of the location followed by the service name as shown in Table 22 below.

Table 22: Ground station call signs

Service name	Function
CENTRE	En route area control, surveillance information service (SIS) and flight information service (FIS).
APPROACH	Approach control (where provided as separate service).
DEPARTURES	Departure control (where provided as separate service).
FINAL/DIRECTOR	Surveillance control providing vectors onto final approach.
TOWER	Aerodrome control, or aerodrome/approach control where combined.
GROUND	Surface movement control.
DELIVERY	Airways clearance delivery (ACD).
RADIO[1]/INFORMATION	Aeronautical station (air-ground communications).
FLIGHTWATCH	FIS.

3.6.2 The name of the location or the service may be omitted after satisfactory communications have been established.

3.7 Aircraft call signs

3.7.1 Australian-registered aircraft on domestic flights should use a relevant call sign described in Table 18, when establishing 2-way communications and for subsequent communications on any frequency.

[1] '… Radio' is the normal identifier for a communication service provided via HF.

Table 23: Australian aircraft call signs

Type	Example
For VH--registered aircraft: a. the last 3 characters of the registration marking or b. Optionally – the name of the aircraft followed by last three characters of the registration marking.	TQK CESSNA TQK
The telephony designator of the aircraft operating agency, followed by the last 3 characters of a VH registration marking.	FASTAIR EBI
The telephony designator of the aircraft operating agency, followed by the flight identification.	FASTAIR 345
For recreation-category aircraft – the aircraft type followed by the last 4 characters of the aircraft's registration number.	JABIRU 1346
For rotary wing aircraft – the word 'helicopter', followed by the last 3 characters of a VH registration marking. Note: The word 'helicopter' is only required on first contact with any frequency.	HELICOPTER ELI
For civil formation flights, the word 'formation' appended at the end of the registration of the formation leader or the telephony designator of the lead aircraft's operating agency.	ABC FORMATION JETSPEED FORMATION
For Unmanned Aerial Vehicles – the word 'Unmanned', followed by a flight identification based on the aircraft manufacturer or model using a maximum of three syllables.	UNMANNED PRT

3.7.2 Foreign-registered aircraft or Australian-registered aircraft on international flights should use a relevant call sign described in Table 24, when establishing 2-way communications:

Table 24: Foreign aircraft call signs

Type	Example
The characters corresponding to the registration marking of the aircraft **Note:** The name of the aircraft manufacturer or name of aircraft model may be used as a radiotelephony prefix.	VH-TQK N35826 G-ABCD
The telephony designator of the aircraft operating agency, followed by the last 4 characters of the registration marking of the aircraft	UNITED 5826

Type	Example
The telephony designator of the aircraft operating agency, followed by the flight identification	FASTAIR 345
For rotary wing aircraft, the word 'HELICOPTER', followed by the last 4 characters of the registration marking of the aircraft **Note:** The word HELICOPTER is only required on first contact with any frequency.	HELICOPTER ABCD
For civil formation flights the word 'FORMATION' appended at the end of the registration of the formation leader or the telephony designator of the lead aircraft's operating agency	ABCD FORMATION JETSPEED FORMATION

3.7.3 As shown in Table 25, a foreign-registered aircraft or Australian-registered aircraft on an international flight may use an abbreviated call sign after satisfactory communication has been established and provided that no confusion is likely to occur.

Table 25: Abbreviated foreign aircraft call signs

Type	Example
The first character of the registration and at least the last 2 characters of the registration marking.	TQK N826 G-CD
The telephony designator of the aircraft operating agency, followed by at least the last 2 characters of the registration marking of the aircraft.	UNITED 26

3.7.4 An aircraft should not change its type of call sign during flight except when there is a likelihood that confusion may occur because of similar call signs. In such cases, an aircraft may be instructed by an ATC unit to change the type of its call sign either temporarily or for the remainder of its flight.

3.7.5 Aircraft in the Super or Heavy wake turbulence categories should include the word '**super'** or '**heavy'** respectively immediately after the aircraft call sign in the initial radiotelephony contact with approach, departures, director or tower.

3.7.6 Call-signs - using Group Form

3.7.6.1 Within Australian airspace, 'group form' is the preferred means of transmitting call-sign/flight number. Group form should also be used with military and other aircraft using a root word call-sign with numeric suffix.

Group form is the grouping of numbers into pairs, or where a number ending in "00" is spoken in hundreds. For three-digit numbers, the second and third numbers are grouped. See Table 26.

Table 26: Group form call signs

Callsign	Transmitted as
QLINK 122	QLINK ONE TWENTY-TWO
QANTAS 1220	QANTAS TWELVE TWENTY
Car 21	CAR TWENTY-ONE
Classic 12	CLASSIC TWELVE
Virgin 702	VIRGIN SEVEN ZERO TWO
BIRDOG 021	BIRDOG ZERO TWENTY-ONE

3.7.6.2 Use of 'group form' does not invalidate any transmissions made in conventional formats. However, to retain the integrity in the communication between ATS and operators, the identification format used should be consistent.

3.7.6.3 A pilot not using 'group form' in establishing communication, but subsequently addressed by ATS in this format, should adopt the use of 'group form' for the remainder of the flight in Australian airspace.

3.7.6.4 There is no additional abbreviated form when using flight number call-signs. The airline designator and all digits of the call-sign, including leading zeros, should always be pronounced.

3.7.7 Registration of Radiotelephony Designators

3.7.7.1 Operators wishing to use flight number call signs should obtain approval from Airservices Australia. Application information and materials are available from Airservices Australia website: www.airservicesaustralia.com/about-us/our-services/flightnumber-call-signs

3.7.8 Call-signs – Special Task Operations

3.7.8.1 With the agreement of ATS, aircraft engaged in special task operations may use a call-sign shown in Table 27, indicative of the nature of the task, with a numerical suffix (if applicable).

Table 27: Call-signs – Special Task Operations

Type of operation	Call sign	Flight plan designator
Ambulance	**AMBULANCE**	AM
Coordination of firebombing aircraft	**BIRDOG**	BDOG
Fire bombing	**BOMBER**	BMBR
Powerline and pipeline survey and construction	**ENERGY**	ENRG
Federal police	**FEDPOL**	FPL
Federal police (Priority)	**FEDPOL RED**	FPLR
Night-time NVG firefighting operations	**FIREAIR**	FYRA

Type of operation	Call sign	Flight plan designator
General fire support tasks (light rotary)	**FIREBIRD**	FBIR
Remote sensing fire operations	**FIRESCAN**	FSCN
Fire intelligence gathering	**FIRESPOTTER**	SPTR
General fire support tasks (medium rotary)	**HELITAK**	HLTK
Gliding operations	**GLIDER**	GLDR
Lifesaver operations	**LIFESAVER**	LIFE
Media operations	**MEDIA**	MDIA
Validation of instrument procedures	**NAVCHECK**	NVCK
Parks and wildlife service	**PARKAIR**	PKAR
Police	**POLAIR**	POL
Police (Priority)	**POLAIR RED**	POLR
Rescue mission	**RESCUE**	RSCU
Aerial survey	**SURVEY**	SVY

3.7.8.2 For special task operations, aircraft should be assigned call sign suffix numbers based on location of the operating base according to Table 28.

Table 28: Call sign suffix numbers for State/Territory-based special task operations

State/Territory	Suffix numbers
NSW/ACT	Commencing with 2 (e.g. 201, 214, 223).
VIC	Commencing with 3.
QLD	Commencing with 4.
SA	Commencing with 5.
WA	Commencing with 6.

3.7.8.3 Use of these numbers will ensure aircraft transiting state borders utilising the same call sign prefix do not duplicate an existing call sign suffix number or flight plan.

3.7.9 Selection of Aircraft Identification Numbers and Suffixes

3.7.9.1 When selecting an aircraft identification number or call--sign suffix, operators should avoid using numbers that:

a. end in “zero” or “five”, to avoid confusion with headings

b. correlate with potential level utilisation (e.g. 3000, 500, 350 etc), emergency SSR codes (e.g. 7600, 7700 etc), and numerical aircraft types (e.g. 767, 330 etc).

3.7.9.2 Flight numbers and call sign suffix numbers should be limited to 2 or 3 characters and take into account flight numbers already in use by the operator and other agencies in the intended control environment, operational area or nearby.

3.7.10 Interchange and Leased Aircraft

3.7.10.1 Controllers issue traffic information based on familiarity with airline equipment and colour/markings. When an airline dispatches a flight using another company's aircraft and the pilot does not advise the terminal ATC facility, the possible confusion in aircraft identification can compromise safety.

3.7.10.2 Pilots flying an 'interchange' or 'leased' aircraft, not bearing the normal colours/markings of the company operating the aircraft, should inform the terminal ATC facility (on first contact) according to Table 29.

Table 29: Call signs for interchange and leased Aircraft

Methodology	Example
Name of the operating company and aircraft call-sign, followed by the company name as displayed on the aircraft, and aircraft type.	VELOCITY THREE ELEVEN AIR NEW ZEALAND INTERCHANGE (OR LEASE) BOEING SEVEN EIGHT SEVEN

3.8 Call signs for ground vehicles

3.8.1 Ground vehicles should be identified by the type of vehicle; eg, car, truck, tractor, tug, etc, or an ATS approved format, followed by the assigned vehicle number spoken in group form. eg: fire tender: "**Tender one**", truck: "**Truck twelve**" and car: "**car twenty-three**".

3.9 Establishment and continuation of communications

3.9.1 The responsibility of establishing communications rests with the station having communications traffic to transmit. When establishing communications, an aircraft should use the full call sign of both the aircraft and the aeronautical station. Use of the name of the manufacturer, or of the aircraft model or type, is optional. Pilots can assess whether aircraft type could be helpful to the recipient for recognition or sequencing purposes. The use of the calling station's call sign and the receiving station's call sign is considered an invitation to proceed with the transmission; the phrase: "GO AHEAD" is not to be used. Figure 2is an example of an aircraft establishing communication with an ATS unit.

Communicator	Communication
 pilot	THORNHILL TOWER CESSNA XYZ
 ATS	XYZ THORNHILL TOWER

Figure 2: Establishing communication

3.9.2 The name of the location or the ground station may be omitted if satisfactory communication has been established.

3.9.3 When a ground station wishes to broadcast information, or an aircraft wishes to broadcast information to aircraft in its vicinity, the message should be prefaced by the call “ALL STATIONS” followed by the identification of the calling station. Figure 3 shows examples of all-stations broadcasts.

Communicator	Communication
 pilot	ALL STATIONS FASTAIR 689 WESTBOUND SMALLTOWN TO SUNNYTOWN LEAVING FLIGHT LEVEL 150 DESCENDING TO 8 000
 ATS	ALL STATIONS CAPRICORN CENTRE FUEL DUMPING COMPLETE

Figure 3: All stations broadcast

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

3.9.5 If there is doubt that a message has been correctly received, a repetition of the message should be requested in full or in part as shown in Table 30 below.

Table 30: Repetition of messages

Phrase	Meaning
Say again	Repeat entire message.
Say again … (item)	Repeat specific item.
Say again all before … (the first word satisfactorily received) Say again all after … Say again all between … and …	Repeat part of message.

3.9.6 When a station is called but is uncertain of the identity of the calling station, the calling station should be requested to repeat its call sign until the identity is established. Figure 4 illustrates this process.

Communicator	Communication
 pilot	THORNHILL TOWER 345
 ATS	STATION CALLING THORNHILL TOWER SAY AGAIN YOUR CALL SIGN
 pilot	THORNHILL TOWER FASTAIR 345

Figure 4: Uncertain about identity

3.9.7 When an error is made in a transmission, the word “CORRECTION” is used. As shown in Figure 5, the last correct group or phrase is repeated and then the correct version transmitted.

Communicator	Communication
 pilot	FASTAIR 345 PAMSVILLE 47 FLIGHT LEVEL 330 BIGTOWN 07 CORRECTION BIGTOWN 57
 ATS	FASTAIR 345 ROGER

Figure 5: Correcting transmissions

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

3.9.9 As illustrated in Figure 6, when it is considered that reception is likely to be difficult, important elements of the message should be spoken twice.

Communicator	Communication
 pilot	THORNHILL TOWER XYZ WORDS TWICE PAMSVILLE 2500 PAMSVILLE 2500 ENGINE LOSING POWER ENGINE LOSING POWER

Figure 6: Words twice

3.9.10 When instructed, flights must change frequency and contact the specified ATS unit (which may be the same ATS unit), either immediately or at the time or place specified. Figure 7 shows several examples of frequency change transmissions.

Communicator	Communication
 ATS	FASTAIR 345 CONTACT CAPRICORN APPROACH 121.1
 pilot	121.1 FASTAIR 345
 ATS	PQR CONTINUE HEADING 340 CONTACT ME 123.5
 pilot	HEADING 340 123.5 PQR
 pilot	*SUBSEQUENTLY…* CAPRICORN CENTRE PQR ON 123.5 HEADING 340
 ATS	PQR CAPRICORN CENTRE
 ATS	FASTAIR 345 AT SUNNYTOWN CONTACT CAPRICORN CENTRE 126.0
 pilot	126.0 AT SUNNYTOWN FASTAIR 345

Figure 7: Frequency change

3.10 Radio test procedures

3.10.1 Test transmissions should take the following form:

a. the identification of the station being called

b. the aircraft call sign

c. the words RADIO CHECK

d. the frequency being used.

3.10.2 Replies to test transmissions should be as follows:

a. the identification of the station calling

b. the identification of the station replying

c. information regarding the readability of the transmission.

3.10.3 The readability of the transmission should be classified in accordance with the readability scale in Table 31.

Table 31: Readability scale

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

3.10.4 Figure 8 shows example radio checks.

Communicator	Communication
 pilot	Thornhill Tower CESSNA XYZ RADIO CHECK 118.7 *or* CENTRE CESSNA XYZ HOW DO YOU READ
 ATS	STATION CALLING THORNHILL TOWER READABILITY TWO TRANSMISSIONS BROKEN *or* XYZ TOWER READABILITY THREE LOUD BACKGROUND WHISTLE *or* XYZ TOWER READABILITY FIVE

Figure 8: Radio checks

3.10.5 When it is necessary for a ground station to make test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals must not

continue for more than 10 seconds. They must be composed of spoken numbers (one, two, three, etc) followed by the radio call sign of the station transmitting the test signals.

3.11 Read back requirements

3.11.1 As required by section 11.12 of the Part 91 Manual of Standards (MOS), a pilot is required to read back the safety-related parts of any ATC clearance or instruction.

3.11.2 The following parts of a relevant ATC clearance or instruction must always be read back to ATC:

a. ATC route clearances, including any amendments;

> **Note:** ATC route clearances include departure, en route, arrival and approach clearances.

b. en route holding instructions

c. route and runway-holding positions specified in a taxi clearance

d. clearances, conditional clearances and instructions to taxi on, enter, line up on, wait on, land on, take off from, hold short of, cross, or backtrack on, any runway

e. the assigned runway or HLS, altimeter settings, Mode A transponder codes, data link logon addresses, altitude instructions, heading and speed instructions

f. radio frequency instructions.

3.11.3 ATC will listen to the read back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and will take immediate action to correct any discrepancies revealed by the read back.

3.11.4 As illustrated in Figure 9, when an ATC clearance, information or instruction is passed to an aircraft for relay:

- the relaying party must read back the entire message content to the originator
- key elements of the subsequently relayed message must be read back to the relaying party in accordance with paragraph 3.11.1 and 3.11.2 above.

Communicator	Communication
 ATS	XYZ CAPRICORN CENTRE FOR RELAY TO FASTAIR 345 CLIMB TO REACH FLIGHT LEVEL 370 BY UPTOWN
 pilot	XYZ FOR FASTAIR 345 CLIMB TO REACH FLIGHT LEVEL 370 BY UPTOWN
 pilot - relaying	FASTAIR 345 XYZ CAPRICORN CENTRE CLEARS FASTAIR 345 CLIMB TO REACH FLIGHT LEVEL 370 BY UPTOWN
 pilot - receiving	CLIMB TO REACH FLIGHT LEVEL 370 BY UPTOWN FASTAIR 345
 pilot - relaying	CAPRICORN CENTRE XYZ FASTAIR 345 WILL COMPLY

Figure 9: Relay

3.11.5 Figure 10 shows that when a read back is incorrect, the responsible station should transmit the word “NEGATIVE” followed by the correct version.

Communicator	Communication
 ATS	XYZ QNH 1003
 pilot	QNH 1013 XYZ
 ATS	XYZ NEGATIVE QNH 1003
 pilot	QNH 1003 XYZ

Figure 10: Incorrect readback

3.11.6 Messages that do not require a read back must be acknowledged by the aircraft transmitting its call sign.

3.11.7 When instructions are received that do not require a full read-back they must be acknowledged in a manner which clearly indicates that they have been understood and accepted. “WILCO”, “ROGER” or “COPIED” will generally suffice in this case.

3.11.8 Where there is difficulty in reading a transmission, a read back should be made or requested to verify the content.

3.11.9 If at any time a pilot receives a clearance or instruction which cannot be complied with, the pilot should advise the controller using the word “UNABLE” and give the reasons where appropriate. Figure 11 is an example of this.

Communicator	Communication
 ATS	FASTAIR 345 CAN YOU REACH FLIGHT LEVEL 290 BY SUNNYTOWN?
 pilot	FASTAIR 345 UNABLE TO COMPLY DUE WEIGHT

Figure 11: Unable to comply

3.11.10 Ground vehicle read back requirements are generally the same for safety-related parts of an ATC transmission. Refer to Sections 4.25 and 9.9 in this AC for details.

3.12 Airways Clearances

3.12.1 An airways clearance is a clearance, issued by ATC, to operate in controlled airspace along a designated track or route at a specified level to a specified point or flight planned destination. An airways clearance is not an instruction or permission is not an instruction or permission to take-off or to enter an active runway.

3.12.2 Following sufficient routing details to establish an aircraft on its route, the phrase “FLIGHT PLANNED ROUTE” may be used to describe any route or portion thereof that is identical to that filed in the flight notification.

Communicator	Communication
ATS	PQR CLEARED TO GASTOWN VIA BAVEM FLIGHT PLANNED ROUTE 8 000 BAVEM TWO PAPA DEPARTURE SQUAWK 4330
pilot	CLEARED TO GASTOWN VIA BAVEM FLIGHT PLANNED ROUTE 8 000 BAVEM TWO PAPA DEPARTURE SQUAWK 4330 PQR

Figure 12: Airways clearance

3.13 Amended Route or Level

3.13.1 When ATS provide an initial airways clearance that is not in accordance with the details currently held by ATC system, ATS will prefix the route and/or cruising level details with the word “amended”.

3.13.2 When an issued airways route clearance needs to be changed ATS will prefix the new route with the word “RECLEARED”. The level will be stated in all clearance changes regardless of whether there is a change to the cleared level. Figure 13 shows examples of amended clearances and amendments to clearances.

3.13.3 The prefixes ‘amended’ and ‘recleared’ will not be used:

a. for SID or STAR clearances

or

b. during normal progressive climb/descent instructions.

3.13.4 If an airways clearance is amended en route, the phrase “REST OF CLEARANCE UNCHANGED” may be used to indicate that the amended route re-joins the original route clearance at the last point specified and the remainder of the clearance remains the same as previously issued.

Communicator	Communication
ATS	FASTAIR 345 CLEARED TO GASTOWN VIA BAVEM FLIGHT PLANNED ROUTE 8 000 BAVEM TWO PAPA DEPARTURE SQUAWK 4330
pilot	CLEARED TO GASTOWN VIA BAVEM FLIGHT PLANNED ROUTE 8 000 BAVEM TWO PAPA DEPARTURE SQUAWK 4330 FASTAIR 345
ATS	*Later:* FASTAIR 345 RECLEARED TO GASTOWN VIA AMENDED ROUTE STRAIN DOCKA THENCE FLIGHT PLANNED ROUTE 8 000 STRAIN ONE DEPARTURE
pilot	RECLEARED TO GASTOWN VIA AMENDED ROUTE STRAIN DOCKA THENCE FLIGHT PLANNED ROUTE 8 000 STRAIN ONE DEPARTURE FASTAIR 345

Figure 13: Amended clearance or recleared

3.14 Level instructions

3.14.1 "Level” is a general term used when referring to altitude or flight level.

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

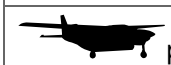
3.14.3 The precise phraseology used in the transmission and acknowledgement of climb and descent clearances will vary, depending upon the circumstances, traffic density, and nature of the flight operations. Care must be taken to ensure that misunderstandings are not generated by the phraseology employed during these phases of flight.

3.14.4 The word “maintain” is not to be used in an instruction to an aircraft to change level. For level changes, the appropriate phrases are “descend to” or “climb to” (as the case may be). However, when there is an expectation that the aircraft will maintain the level or to eliminate confusion, the instruction “and maintain” may be included in a climb or descent instruction.

3.14.5 A level instruction may be conditional. For example:

- require a certain rate of climb or descent
- require an aircraft to reach or pass a certain level before a time or point
- restrict level change until after a certain time or point.

3.14.6 In the examples in Figure 14 below, the operations of climbing and descending are interchangeable and examples of only one form are given.

Communicator	Communication
 ATS	PQR CLIMB TO FLIGHT LEVEL 110
 pilot	CLIMB TO FLIGHT LEVEL 110 PQR
 ATS	PQR MAINTAIN 2 500
 pilot	MAINTAIN 2 500 PQR
 ATS	PQR CENTRE REPORT PRESENT LEVEL *or* PQR CENTRE REPORT LEVEL
 pilot	CENTRE PQR PASSING 9 000 *or* CENTRE PQR MAINTAINING 8 000
 ATS	PQR REPORT PASSING 10 000
 pilot	REPORT PASSING 10 000 PQR
 pilot	PQR PASSING 10 000
 ATS	FASTAIR 345 AFTER PASSING BLITY DESCEND TO FLIGHT LEVEL 180
 pilot	AFTER PASSING BLITY DESCEND TO FLIGHT LEVEL 180 FASTAIR 345

Communicator	Communication
 ATS	FASTAIR 345 DESCEND AT NOT LESS THAN 500 FEET PER MINUTE
 pilot	DESCEND AT NOT LESS THAN 500 FEET PER MINUTE FASTAIR 345

Figure 14: Basic level instructions

3.14.7 As illustrated in Figure 15, once given an instruction to climb or descend, a further overriding instruction may be given to a pilot.

Communicator	Communication
 ATS	FASTAIR 345 STOP DESCENT AT FLIGHT LEVEL 150
 pilot	STOP DESCENT AT FLIGHT LEVEL 150 FASTAIR 345
 ATS	FASTAIR 345 CLIMB TO FLIGHT LEVEL 160
 pilot	CLIMBING TO FLIGHT LEVEL 240 EXPEDITE UNTIL PASSING FLIGHT LEVEL 180 FASTAIR 345
 ATS	FASTAIR 345 CONTINUE CLIMB TO FLIGHT LEVEL 200
 pilot	CLIMB TO FLIGHT LEVEL 200 FASTAIR 345

Figure 15: Overriding level instructions

3.14.8 Occasionally, for traffic reasons, a higher-than-normal rate of climb or descent may be required. Figure 16 shows typical RTF exchanges.

Communicator	Communication
 ATS	FASTAIR 345 EXPEDITE DESCENT TO FLIGHT LEVEL 180
 pilot	EXPEDITE DESCENT TO FLIGHT LEVEL 180 FASTAIR 345
 ATS	FASTAIR 345 CLIMB TO FLIGHT LEVEL 240 EXPEDITE UNTIL PASSING FLIGHT LEVEL 180
 pilot	CLIMBING TO FLIGHT LEVEL 240 EXPEDITE UNTIL PASSING FLIGHT LEVEL 180 FASTAIR 345

Figure 16: Expedited level changes

3.15 Use of the word “require”

3.15.1 A pilot should use the word “REQUIRE” to notify ATC if a particular operation, runway or other matter is essential to the safe operation of the aircraft. Figure 17 is an example of the use of “REQUIRE".

Communicator	Communication
 ATS	FASTAIR 345 THE TAILWIND ON RUNWAY 34 IS INCREASING TO 10 KNOTS ARE YOU ABLE TO CONTINUE APPROACH OR WOULD YOU PREFER RUNWAY 16?
 pilot	FASTAIR 345 REQUIRE RUNWAY 16

Figure 17: Use of ‘require'

3.16 Essential traffic

3.16.1 Essential traffic is defined as controlled traffic to which the provision of separation by ATC is applicable, but which, in relation to a particular controlled flight is not, or will not be, separated from other controlled traffic by the appropriate separation minimum. Essential traffic includes flights which are maintaining own separation and flights affected by an aircraft responding to a TCAS RA.

3.16.2 Essential traffic information may include:

a. direction of flight of aircraft concerned

b. type and wake turbulence category (if relevant) of aircraft concerned

c. cruising level of aircraft concerned

d. estimated time over the reporting point nearest to where the level will be crossed

or

e. disposition of the traffic in terms of:

i. relative bearing of the aircraft concerned in terms of the 12-hour clock

ii. distance from the actual or estimated position of the aircraft concerned,

or

iii. actual or estimated position of the aircraft concerned,

or

iv. for parallel runway operations, the runway being used by the aircraft concerned.

3.16.3 As shown in Figure 18, messages containing essential traffic information to IFR flights outside controlled airspace is preceded by “TRAFFIC” or “ADDITIONAL TRAFFIC”.

Communicator	Communication
 ATS	PQR TRAFFIC XYZ CESSNA 172 AERIAL WORK 5 MILES NORTHEAST OF SMALLVILLE 5 500 AND BELOW

Communicator	Communication
 pilot	COPIED TRAFFIC PQR

Figure 18: Traffic information

3.17 Change of flight rules

3.17.1 During a flight a pilot may change from IFR to VFR or VFR to IFR. Any changes to the flight plan are to be included in the message. When changing from IFR to VFR, pilots are required to provide a SARTIME (in hours and minutes) for destination and aircraft registration if not already passed. Figure 19 shows typical phraseology for this purpose.

Note: This is not a termination of flight plan.

Communicator	Communication
 pilot	PQR CANCEL IFR REQUEST DESCENT TO TRACK VIA LAKE DAM AND DAMTOWN TO CENTRALTOWN SARTIME FOR ARRIVAL 0645
 ATS	PQR IFR CANCELLED OPERATE VFR LEAVE CONTROLLED AIRSPACE DESCENDING VIA LAKE DAM REPORT PASSING 9500 COPIED SARTIME 0645
 pilot	LEAVE CONTROLLED AIRSPACE DESCENDING VIA LAKE DAM WILCO PQR
 pilot	PQR CHANGE OF FLIGHT RULES REQUEST IFR CLEARANCE AT CENTRALTOWN THEN DIRECT THORNHILL 8 000 ESTIMATE THORNHILL AT 47
 ATS	PQR AT CENTRALTOWN OPERATE IFR CLEARED DIRECT THORNHILL 8 000 REPORT 30 MILES
 pilot	AT CENTRALTOWN OPERATE IFR CLEARED DIRECT THORNHILL 8 000 REPORT 30 MILES PQR

Figure 19: Changing flight rules

3.18 Position reporting — IFR

3.18.1 A position report normally consists of:

a. Aircraft identification.

b. Position.

c. Time.

d. Level.

e. Next position and ETA.

3.18.2 Position reporting procedures are set out in AIP ENR 1.1. Figure 20 shows examples of IFR position reports at different stages of flight.

Communicator	Communication
 pilot	DEPARTURES FASTAIR 345 PASSING 1500 CLIMBING TO FLIGHT LEVEL 330
 pilot	PQR DEPARTED AT 18 PASSING 4000 CLIMBING TO FLIGHT LEVEL 170 ESTIMATING KELSO AT 33
 pilot	CAPRICORN CENTRE FASTAIR 345 POSITION
 ATS	FASTAIR 345 CAPRICORN CENTRE
 pilot	FASTAIR 345 GASTOWN 14 FLIGHT LEVEL 340 SUNNYTOWN 33
 ATS	FASTAIR 345

Figure 20: Position reports - IFR

3.18.2.1 Where distance information is provided in a position report, the distance reference should be included. Figure 21 shows examples of reports about distance.

Communicator	Communication
 pilot	FASTAIR 345 20 MILES DME FROM TOURISTOWN
 pilot	FASTAIR 345 31 MILES GNSS FROM DECOTOWN
 pilot	FASTAIR 345 3 MILES FROM APINU
 ATS	FASTAIR 345 REPORT 45 MILES GNSS FROM DECOTOWN
 pilot	FASTAIR 345 3 MILES FROM FINAL APPROACH FIX

Figure 21: Distance reports

3.19 Position reporting — VFR

3.19.1 Similar to an IFR flight, a position report from a VFR flight normally consists of:

a. Aircraft identification.

b. Position.

c. Time.

d. Level.

e. Next position and ETA.

3.19.2 Position reporting procedures are set out in AIP ENR 1.1. Figure 22 shows examples of VFR position reports.

Communicator	Communication
 pilot	XYZ 10 MILES LAKETOWN AT 35 MAINTAINING 6 500 ESTIMATING BATTLETOWN AT 58
 ATS	XYZ ORCHARDTOWN QNH 1024
 pilot	QNH 1024 XYZ
 pilot	XYZ DEPARTED BOPTOWN AT 2244 DIRECT LAKETOWN ESTIMATING LAKETOWN AT 2325 AMEND SARTIME TO 2355
 ATS	XYZ AREA QNH 1014 COPIED SARTIME 2355
 pilot	AREA QNH 1014 XYZ
 pilot	XYZ SQUAWKING 4321 BEACHTOWN 2 500 REQUEST VFR TO CAPE SCOT 4 500
 ATS	XYZ IDENTIFIED 4 500 NOT AVAILABLE ENTER CONTROLLED AIRSPACE ON TRACK BEACHTOWN SKI POINT TO CAPE SCOT AT 2 500 VFR QNH 1010
 pilot	ENTER CONTROLLED AIRSPACE ON TRACK BEACHTOWN SKI POINT TO CAPE SCOT AT 2 500 VFR QNH 1010 XYZ
 pilot	XYZ POINTTOWN 1 500 REQUEST CLEARANCE TO ENTER CONTROL ZONE FOR TOUCH AND GO THEN ONWARDS TO LAKETOWN POB 2
 ATS	XYZ ENTER CONTROL ZONE AT 1 500 TRACK TO MOUNT HARBOUR ENTRANCE REPORT AT MOUNT HARBOUR ENTRANCE QNH 1018 TRAFFIC IS AN ARCHER ON EARLY DOWNWIND
 pilot	ENTER CONTROL ZONE AT 1 500 TRACK TO MOUNT HARBOUR ENTRANCE WILCO QNH 1018 COPIED THE TRAFFIC XYZ

Figure 22: Position reports - VFR

3.20 Holding

3.20.1 Details of joining and holding procedures are contained in AIP ENR 1.5. ATC generally does not use the phrase “NO DELAY EXPECTED”, except in response to direct enquiry about expected holding delay. Figure 23 shows examples of holding instructions.

Communicator	Communication
ATS	FASTAIR 345 HOLD AT POKOM FLIGHT LEVEL 150 EXPECT FURTHER CLEARANCE AT 24
pilot	HOLD AT POKOM FLIGHT LEVEL 150 FASTAIR 345
ATS	PQR HOLD AT UPDUR MAINTAIN 6 000 EXPECTED APPROACH TIME 15
pilot	HOLD AT UPDUR MAINTAIN 6 000 PQR
ATS	PQR HOLD AT SMALDO 8 000
pilot	PQR REQUEST HOLDING INSTRUCTIONS
ATS	PQR HOLD AT SMALDO INBOUND TRACK 090 DEGREES RIGHT PATTERN OUTBOUND TIME 2 MINUTES MAINTAIN 8 000 EXPECT FURTHER CLEARANCE AT 45
pilot	HOLD AT SMALDO INBOUND TRACK 090 DEGREES RIGHT PATTERN OUTBOUND TIME 2 MINUTES 8 000 PQR
ATS	MILJET ONE HOLD ON THE 080 RADIAL OF THE AIRFORCETOWN TACAN BETWEEN 35 AND 40 MILES INBOUND TRACK 080 LEFT HAND PATTERN FLIGHT LEVEL 150 EXPECT FURTHER CLEARANCE AT 05
pilot	HOLD ON THE 080 RADIAL OF THE AIRFORCETOWN TACAN BETWEEN 35 AND 40 MILES INBOUND TRACK 080 LEFT HAND PATTERN FL150 MILJET ONE

Figure 23: Holding instructions

3.21 Broadcasts of information for both controlled and non-controlled airspace

3.21.1 As shown in Figure 24, ATS provides broadcast services to all aircraft in both controlled and non-controlled airspace, including the provision of essential flight and weather information.

Communicator	Communication
ATS	ALL STATIONS CENTRE RESTRICTED AREA ROMEO 123 ACTIVE AVAILABLE FOR TRANSIT
ATS	ALL STATIONS CENTRE SIGMET BRAVO 02 VALID 100800 UNTIL 101200 BRISBANE FIR SEVERE TURBULENCE FORECAST WITHIN THE AREA OF SMALLTOWN ROMER BAT HURST SURFACE TO 9 000 MOVING SOUTH AT 15 KNOTS NO CHANGE
ATS	ALL STATIONS AREA QNH AREA 21 SOUTH OF BIGVILLE TO MERRYTOWN 1020 REST 1017

Figure 24: Information broadcasts

3.22 Meteorological Conditions

3.22.1 Meteorological information in the form of reports, forecasts or warnings is made available to pilots using the aeronautical mobile service either by broadcast or by directed transmissions. Full details of meteorological services and information are contained in AIP GEN.

3.22.2 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 is necessary.

3.22.3 Figure 25 shows examples of meteorological reports and reports of inflight conditions.

Communicator	Communication
 ATS	ALL STATIONS SPECI CAPRICORN TIME 0544 WIND 170 07 KNOTS VISIBILITY 6000 IN RAIN SCATTERED 1 200 BROKEN 3 800 TEMPERATURE 18 DEW POINT 17 QNH 1020
 ATS	PQR METAR THORNHILL 170530Z WIND 070 03 KNOTS CAVOK TEMPERATURE 23 DEW POINT 9 QNH 1019
 ATS	PQR REPORT FLIGHT CONDITIONS
 pilot	PQR IMC IN CLOUD
 ATS	PQR

Figure 25: Meteorological information

3.23 Surveillance equipment reporting

3.23.1 ATS may request details of an aircraft's transponder or ADS-B capability, if this is not readily apparent by other means – for example – the aircraft's flight plan. Refer also to section 5.9 for transponder/ADS-B operating procedures. Figure 26 shows examples of phraseology.

Communicator	Communication
 ATS	XYZ CAPRICORN TOWER ADVISE TRANSPONDER CAPABILITY
 pilot	XYZ TRANSPONDER (ALFA, CHARLIE, SIERRA - *as appropriate for the equipment on the aircraft*) *or* XYZ NEGATIVE TRANSPONDER
 ATS	XYZ CAPRICORN TOWER ADVISE ADS-B CAPABILITY
 pilot	XYZ ADS-B TRANSMITTER (and RECEIVER - *as appropriate for the equipment on the aircraft*)

Communicator	Communication
	or XYZ NEGATIVE ADS-B

Figure 26: Transponder/ADS-B capability

3.23.2 The pilot of an aircraft operating in airspace where transponder is required must immediately advise the ATS unit having jurisdiction over the relevant airspace of any failure or partial failure of the transponder equipment. ATC may request confirmation of transponder operation. Figure 27 is an example of an exchange between ATS and an aircraft about an unserviceable transponder.

Communicator	Communication
ATS	FASTAIR 345 CONFIRM TRANSPONDER OPERATING
pilot	FASTAIR 345 NEGATIVE TRANSPONDER UNSERVICEABLE

Figure 27: Transponder status

3.24 Military aircraft

3.24.1 This section covers the communications that typically occur for military operations that potentially impact on a civil aircraft or when military aircraft operate at a civil aerodrome.

3.24.2 Figure 28 shows examples of phraseology involving military en route operations.

Communicator	Communication
ATS	ALL STATIONS CAPRICORN CENTRE ABRUPT VERTICAL MANOEUVRES BY MILITARY JET AIRCRAFT AT GYRON UP TO FLIGHT LEVEL 150
ATS	ALL STATIONS CAPRICORN CENTRE MILITARY LOW LEVEL OPERATIONS NOT ABOUT 5000 TAKING PLACE BETWEEN GYRON AND 15 MILES WEST OF MINETOWN FROM TIME 30 UNTIL TIME 45

Figure 28: Military en-route operations

3.24.3 Figure 29 shows examples of phraseology during operations by military aircraft at an aerodrome. ATC will react to routine gear check reports from military aircraft.

Communicator	Communication
pilot	THORNHILL TOWER MILJET ONE TRACKING FOR INITIAL AND PITCH
ATS	MILJET ONE THORNHILL TOWER REPORT RIGHT INITIAL

Communicator	Communication
 pilot	REPORT RIGHT INITIAL MILJET ONE
 pilot	MILJET ONE RIGHT INITIAL
 ATS	MILJET ONE RIGHT INITIAL CHEROKEE ON BASE PITCH LONG
 pilot	TRAFFIC SIGHTED PITCH LONG MILJET ONE
 pilot	MILJET ONE BASE THREE GREENS
 ATS	MILJET ONE CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND MILJET ONE (BEEPER ACTIVATED)

Figure 29: Military aircraft operations at aerodrome

3.24.4 Figure 30 shows examples of phraseology possibly used at aerodromes supporting military operations where the runway is equipped with an arresting system.

Communicator	Communication
 pilot	MILJET ONE BASE THREE GREENS
 ATS	MILJET ONE DEPARTURE CABLE UP CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND MILJET ONE (BEEPER ACTIVATED)
 pilot	MILJET ONE DOWNWIND WILL BE TAKING THE APPROACH END CABLE
 ATS	MILJET ONE ROGER
 pilot	MILJET ONE BASE THREE GREENS HOOK DOWN
 ATS	MILJET ONE APPROACH END CABLE UP CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND MILJET ONE (BEEPER ACTIVATED)

Figure 30: Runways equipped with an arresting system

3.24.5 A formation of military aircraft landing at a controlled aerodrome may either split into individual elements prior to landing or may execute a pairs or simultaneous landing. The split into individual elements may be done during the pitch into the circuit. Figure 31 shows the radiotelephony for landing as individual elements. a simultaneous landing as a pair, and an in-trail landing.

Communicator	Communication
 pilot	MILJET RED BASE THREE GREENS
 ATS	MILJET RED CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND MILJET RED RED ONE (BEEPER ACTIVATED)
 pilot 2	RED TWO (BEEPER ACTIVATED)
 pilot	MILJET BLUE FINAL APPROACH SIX GREENS
 ATS	MILJET BLUE CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND MILJET BLUE BLUE ONE (BEEPER ACTIVATED)
 pilot 2	BLUE TWO (BEEPER ACTIVATED)
 pilot	THORNHILL TOWER MILJET GREEN IN TRAIL 6 MILES THREE GREENS
 ATS	MILJET GREEN THORNHILL TOWER IN TRAIL CLEARED TO LAND CHECK WHEELS
 pilot	CLEARED TO LAND GREEN ONE (BEEPER ACTIVATED)
 pilot 2	GREEN TWO SIX MILES THREE GREENS (BEEPER ACTIVATED)
 ATS	GREEN TWO

Figure 31: Military formation landings

4 Aerodrome control

4.1 General

4.1.1 Except for reasons of safety, controllers should not transmit to an aircraft in the process of taking off or in the final stages of an approach and landing.

4.2 Departure information and engine starting procedures

4.2.1 Where ATIS is not available the pilot may ask for current aerodrome information before requesting start up. Figure 32 shows a typical exchange.

Communicator	Communication
 pilot	THORNHILL TOWER FASTAIR 345 REQUEST DEPARTURE INFORMATION
 ATS	FASTAIR 345 THORNHILL TOWER RUNWAY 22 WIND 290 DEGREES 14 KNOTS QNH 1022 TEMPERATURE 2 RVR FOR DEPARTURE 700 M
 pilot	RUNWAY 22 QNH 1022 FASTAIR 345

Figure 32: Pre-departure information

4.2.2 Any airways clearance with a SID that includes a level assignment prefixed by the key phrase “CLIMB VIA SID TO” is an explicit requirement for the aircraft to comply with speed and level restrictions specified for the particular SID procedure until reaching that assigned level.

4.2.3 At aerodromes with Airways Clearance Delivery (ACD) in operation where a pre-departure clearance (PDC) has not been received, the pilot should contact clearance delivery and request clearance. Figure 33 shows a typical exchange.

Communicator	Communication
 pilot	CAPRICORN DELIVERY FASTAIR 345 FOR LOS ANGELES REQUEST CLEARANCE
 ATS	FASTAIR 345 DELIVERY CLEARED TO LOS ANGELES VIA BOLDO FLIGHT PLANNED ROUTE BOLDO FOUR DEPARTURE CLIMB VIA SID TO 8 000 SQUAWK 4561
 pilot	CLEARED TO LOS ANGELES VIA BOLDO FLIGHT PLANNED ROUTE BOLDO FOUR DEPARTURE CLIMB VIA SID TO 8 000 SQUAWK 4561 FASTAIR 345

Figure 33: Clearance delivery

4.2.4 Requests to start engines are normally made to facilitate ATC planning and to avoid fuel wastage by aircraft delayed on the ground. Along with the request, the pilot will state the

location of the aircraft and acknowledge receipt of the ATIS broadcast. Figure 34 shows a typical exchange.

Communicator	Communication
 pilot	CAPRICORN GROUND FASTAIR 345 STAND (OR GATE) 4 REQUEST START INFORMATION BRAVO
 ATS	FASTAIR 345 START APPROVED
 pilot	FASTAIR 345

Figure 34: Start up

4.3 Pre-departure clearance

4.3.1 As shown in the example in Figure 35, if an aircraft has been issued a PDC, the following items should be read back on the ACD frequency, or SMC frequency if ACD is not in operation, prior to pushback or taxi request:

a. the assigned SID, including runway and/or transition (if issued)

b. transponder code

c. additional requirements specified in the PDC

d. current parking position/bay.

Communicator	Communication
 pilot	CAPRICORN DELIVERY FASTAIR 345 PDC READBACK
 ATS	FASTAIR 345 CAPRICORN DELIVERY
 pilot	FASTAIR 345 BOLDOK FOUR DEPARTURE SQUAWK 4561 STAND 4 INFORMATION BRAVO

Figure 35: Pre-departure clearance

4.4 Pushback

4.4.1 At some aerodromes, aircraft are parked nose-in to the terminal and have to be pushed backwards before they can taxi for departure. Requests for pushback are to be made according to local procedures. See Figure 36 for examples.

Communicator	Communication
 pilot	CAPRICORN GROUND FASTAIR 345 REQUEST PUSHBACK

Communicator	Communication
ATS	FASTAIR 345 GROUND PUSHBACK APPROVED *OR* FASTAIR 345 GROUND PUSHBACK AT OWN DISCRETION
pilot	FASTAIR 345
ATS	FASTAIR 345 GROUND PUSHBACK APPROVED TAIL SOUTH
pilot	PUSHBACK APPROVED TAIL SOUTH FASTAIR 345
ATS	PQR PUSH BACK CLEARANCE NOT AVAILABLE DUE FLOW MANAGEMENT EXPECT CLEARANCE AT TIME 50
pilot	PQR WAITING

Figure 36: Pushback

4.5 Regional Class D aerodromes – Departing or arriving without flight notification

4.5.1 At regional Class D aerodromes, VFR flights wishing to depart without submitting flight notification should initiate contact with ATC with aircraft call sign and “flight details for departure”, and then await a response from ATC before making the full request.

4.5.2 Similarly, an airborne aircraft in non-controlled airspace may contact ATC to pass “FLIGHT DETAILS INBOUND or FOR TRANSIT” “ and request clearance.

4.5.3 Figure 37 shows examples for both departing and arriving flights.

Note: The phraseologies in this section do not apply at metropolitan Class D aerodromes. For these aerodromes, see sections 4.10 and 4.13 of this AC.

Communicator	Communication
pilot	THORNHILL TOWER XYZ FLIGHT DETAILS FOR DEPARTURE
ATS	XYZ THORNHILL TOWER
pilot	XYZ REQUEST VFR TO WESTVILLE VIA THE BLUFF 1 500 RECEIVED ALFA REQUEST TAXI
ATS	XYZ DEPART THE CONTROL ZONE VIA THE BLUFF 1 500 SQUAWK 5432 TAXI TO HOLDING POINT ALFA

Communicator	Communication
 pilot	DEPART THE CONTROL ZONE VIA THE BLUFF 1 500 SQUAWK 5432 TAXI TO HOLDING POINT ALFA XYZ
 pilot	THORNHILL TOWER XYZ FLIGHT DETAILS INBOUND
 ATS	XYZ THORNHILL TOWER
 pilot	XYZ CESSNA 172 5 MILES NORTH OF POINT HOCKS 2 500 FOR LANDING AT THORNHILL POB 2 INFORMATION ECHO
 ATS	XYZ CLEARED POINT HOCKS DIRECT TO THORNHILL 2 500 REPORT POINT HOCKS
 pilot	CLEARED POINT HOCKS DIRECT TO THORNHILL 2 500 WILCO XYZ

Figure 37: Departing/Arriving aircraft– no details

4.6 Taxi instructions

4.6.1 In all cases, pilots of departing aircraft must state the location of the aircraft when requesting engine start, push back, or taxi clearance.

4.6.2 When an aircraft wishes to operate off a non-duty runway, IFR flights must make this request at the earliest of start/pushback/taxi request, and VFR aircraft must include this in the request for taxi clearance.

4.6.3 Pilots of civil VFR training flights should advise ‘dual’ or ‘solo', as appropriate, when requesting clearance.

4.6.4 Requests for a reduced length for take-off or backtrack from a runway entry point must be included in the request for taxi clearance, along with any other intentions of a pilot which are significant to ATC.

4.6.5 Taxi instructions issued by a controller will always contain a clearance limit, which is the point at which the aircraft must stop unless further permission to proceed is given. The clearance limit may not necessarily be a position from which an aircraft can enter the runway for departure, or enter the apron, but may be some other position on the aerodrome depending on prevailing circumstances. Taxi instructions may also include a taxi route.

4.6.6 In Australia, a taxi clearance will not include positions beyond the first required holding position. If the taxi route to the departure runway crosses a runway, ATC will give explicit instructions to cross the runway.

4.6.7 Pilots may only cross or enter a runway if ATC has specifically given clearance or instruction to do so.

4.6.8 When issuing clearances to aircraft to cross a runway ATC may require an aircraft to report when it has vacated and is clear of the runway.

4.6.9 Figure 38 shows examples of different forms of taxi instructions.

Communicator	Communication
 pilot	FASTAIR 345 HEAVY STAND 2 INFORMATION CHARLIE REQUEST TAXI
 ATS	FASTAIR 345 HEAVY TAXI TO HOLDING POINT GOLF ONE VIA ALFA HOLD SHORT OF RUNWAY 14
 pilot	HOLDING POINT GOLF ONE VIA ALFA HOLD SHORT OF RUNWAY 14 FASTAIR 345
 pilot	SUBURBS TOWER CESSNA 172 XYZ SOUTH SIDE OF HANGARS REQUEST TAXI 20 MINUTES CIRCUITS POB 2 NEGATIVE ATIS
 ATS	XYZ TAXI TO HOLDING POINT ALFA FIVE RUNWAY 06 WIND LIGHT AND VARIABLE QNH 1010 TIME 52
 pilot	XYZ QNH 1010 REQUEST RUNWAY 24
 ATS	XYZ BEHIND THE SENECA COMING FROM YOUR LEFT TAXI TO HOLDING POINT – CHANGE OF RUNWAY - RUNWAY 24 CROSS RUNWAY 20
 pilot	BEHIND THE SENECA TAXI TO HOLDING POINT - RUNWAY 24 CROSS RUNWAY 20 XYZ
 ATS	PQR EXPEDITE TAXI TRAFFIC ON FINAL RUNWAY 14 REPORT RUNWAY 14 VACATED
 pilot	EXPEDITING PQR
 pilot	PQR RUNWAY 14 VACATED

Figure 38: Taxi instructions

4.6.10 As shown in the example in Figure 39, where an aircraft acknowledges receipt of the ATIS broadcast or acknowledges receipt of conditions just recently broadcast to other aircraft, the controller does not need to pass departure information to the pilot when giving taxi instructions.

Communicator	Communication
 pilot	CAPRICORN GROUND FASTAIR 345 STAND 6 REQUEST TAXI INFORMATION DELTA QNH 1019
 ATS	FASTAIR 345 GIVE WAY TO 777 PASSING LEFT TO RIGHT TAXI TO HOLDING POINT ALFA ONE RUNWAY 29 TIME 19
 pilot	HOLDING POINT ALFA ONE CROSS RUNWAY 29 TRAFFIC IN SIGHT FASTAIR 345

Figure 39: No repeat of departure information

4.6.11 As shown in the examples in Figure 40, an aircraft may request or be offered departure from a runway intersection other than at the threshold.

Communicator	Communication
 pilot	FASTAIR 345 REQUEST INTERSECTION DEPARTURE FROM BRAVO
 ATS	FASTAIR 345 TAXI TO HOLDING POINT BRAVO RUNWAY 29
 pilot	HOLDING POINT BRAVO RUNWAY 29 FASTAIR 345
 ATS	PQR INTERSECTION DEPARTURE AVAILABLE FROM CHARLIE (DISTANCE) REMAINING (IF THIS INFORMATION IS NOT READILY AVAILABLE TO THE PILOT)
 pilot	PQR REQUEST RUNWAY LENGTH REMAINING
 ATS	PQR 1 600 METRES
 pilot	PQR ACCEPT CHARLIE
 ATS	PQR TAXI TO HOLDING POINT CHARLIE RUNWAY 29
 pilot	HOLDING POINT CHARLIE RUNWAY 29 PQR

Figure 40: Intersection departures

4.7 Pre-departure manoeuvring

4.7.1 As shown in Figure 41, at aerodromes with separate surface movement control (SMC) ('Ground') and aerodrome control ('Tower'), aircraft are usually transferred to the aerodrome control at or approaching the runway holding point. Since misunderstandings in the granting and acknowledgement of take-off clearances can result in serious consequences, meticulous care has been taken to ensure that the phraseology to be employed during the pre-departure manoeuvres cannot be interpreted as a take-off clearance.

Communicator	Communication
 ATS	FASTAIR 345 CONTACT TOWER 118.9
 pilot	118.9 FASTAIR 345

Figure 41: Switching to Tower

4.7.2 As far as practicable, pilots should carry out engine and other pre-take-off checks in time that the ready call can be made when approaching the holding point. Figure 42 shows an example.

Communicator	Communication
ATS	PQR REPORT WHEN READY FOR DEPARTURE
pilot	WILCO PQR
pilot	PQR READY
ATS	PQR LINE UP
pilot	LINING UP PQR
ATS	PQR LINE UP AND WAIT
pilot	LINE UP AND WAIT PQR

Figure 42: Reporting ready

4.7.3 Conditional clearances affecting the active runway will only be used when both the pilot and the controller have the conflicting traffic in sight, and the traffic causing the conditional clearance is the first to pass the affected aircraft. As shown in Figure 43, when the conditional clearance involves a departing aircraft and an arriving aircraft, or two departing aircraft, the clearance will be given as follows:

a. call sign

b. the condition

c. the clearance

d. a brief reiteration of the condition.

Communicator	Communication
ATS	FASTAIR 345 REPORT THE BLUE DASH 8 ON FINAL IN SIGHT
pilot	FASTAIR 345 BLUE DASH 8 IN SIGHT
ATS	FASTAIR 345 BEHIND THE LANDING DASH 8 ON SHORT FINAL LINE UP BEHIND
pilot	BEHIND THE LANDING DASH 8 LINE UP BEHIND FASTAIR 345
ATS	FASTAIR 345 BEHIND THE DEPARTING 737 LINE UP BEHIND
pilot	BEHIND THE DEPARTING 737 LINE UP BEHIND FASTAIR 345

Figure 43: Conditional clearances

4.8 Take-off procedures and departure instructions

4.8.1 Receipt of an airways clearance or a departure instruction is not an instruction or permission to take-off or to enter an active runway. The phrase “TAKE-OFF” is only used by ATC to clear an aircraft for take-off, or to cancel a take-off clearance. In other situations, ATC and pilots should use different words such as “TORA” (pronounced “TOR-AH” - for communications about take-off run available), “DEPARTURE”, or “AIRBORNE” – as appropriate.

4.8.2 Figure 44 shows examples of take-off clearances. During multiple runway operations where the possibility of confusion exists, the runway designator will be stated. The runway designator may also be stated if it is necessary to emphasise the runway to be used. For parallel runway operations on discrete frequencies, at Class D aerodromes, the runway designator may be omitted.

Communicator	Communication
ATS	FASTAIR 345 CLEARED FOR TAKE-OFF
pilot	CLEARED FOR TAKE-OFF FASTAIR 345
ATS	FASTAIR 345 RUNWAY 23 LEFT CLEARED FOR TAKE-OFF
pilot	RUNWAY 23 LEFT CLEARED FOR TAKE-OFF FASTAIR 345
ATS	XYZ GRASS RIGHT CLEARED FOR TAKE-OFF MAKE LEFT TURN
pilot	GRASS RIGHT CLEARED FOR TAKE-OFF LEFT TURN XYZ

Figure 44: Cleared for take-off

4.8.3 As shown in Figure 45, if ATC is unable to issue a take-off clearance the reason will be given, if needed. For example, if it might not be clear to the pilot.

Communicator	Communication
pilot	PQR READY
ATS	PQR HOLD POSITION AWAITING DEPARTURE INSTRUCTIONS
pilot	HOLD POSITION PQR

Figure 45: Unable to issue take-off clearance

4.8.4 As shown in Figure 46, for traffic reasons, it may be necessary for the aircraft to take-off immediately, including after lining up.

Communicator	Communication
ATS	FASTAIR 345 ARE YOU READY FOR IMMEDIATE DEPARTURE
pilot	FASTAIR 345 AFFIRM
ATS	FASTAIR 345 CLEARED IMMEDIATE TAKE-OFF
pilot	CLEARED IMMEDIATE TAKE-OFF FASTAIR 345
ATS	FASTAIR 345 LINE UP BE READY FOR IMMEDIATE DEPARTURE
pilot	LINING UP FASTAIR 345
ATS	FASTAIR 345 RUNWAY 18 CLEARED IMMEDIATE TAKE-OFF
pilot	RUNWAY 18 CLEARED IMMEDIATE TAKE-OFF FASTAIR 345

Figure 46: Immediate take-off

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

4.8.6 At aerodromes where land and hold short operations (LAHSO) are in use, ATC will tell the pilot of a departing aircraft about any aircraft instructed to hold short of the crossing runway. Figure 47 is an example of a typical LAHSO take-off instruction.

Communicator	Communication
ATS	FASTAIR 345 BOEING 737 LANDING ON THE CROSSING RUNWAY WILL HOLD SHORT RUNWAY 27 CLEARED FOR TAKE-OFF
pilot	RUNWAY 27 CLEARED FOR TAKE-OFF FASTAIR 345

Figure 47: LAHSO take-off instruction

4.8.7 Figure 48 shows examples of departure instructions that may be given with the take-off clearance.

Communicator	Communication
 ATS	PQR TRACK EXTENDED CENTRE LINE TO 3000 BEFORE TURNING RIGHT RUNWAY 24 CLEARED FOR TAKE-OFF
 pilot	TRACK EXTENDED CENTRE LINE TO 3000 RIGHT TURN RUNWAY 24 CLEARED FOR TAKE-OFF PQR
 ATS	XYZ CLEARED FOR TAKE-OFF MAKE RIGHT TURN
 pilot	CLEARED FOR TAKE-OFF RIGHT TURN XYZ
 ATS	PQR TRACK OUTBOUND ON THE 360 GNSS TRACK FROM THORNHILL CLIMB TO 4 000 CLEARED FOR TAKE-OFF MAKE LEFT TURN
 pilot	360 GNSS TRACK FROM THORNHILL CLIMB TO 4 000 CLEARED FOR TAKE-OFF LEFT TURN PQR
 ATS	FASTAIR 345 CAPRICORN TOWER ASSIGNED HEADING RIGHT 280 CLIMB VIA SID TO 4 000 RUNWAY 19 CLEARED FOR TAKE-OFF
 pilot	HEADING RIGHT 280 CLIMB VIA SID TO 4 000 RUNWAY 19 CLEARED FOR TAKE-OFF FASTAIR 345

Figure 48: Departure instructions

4.8.8 Figure 49 shows example of when, due to unexpected traffic developments or a departing aircraft taking longer to take off than anticipated, it is occasionally necessary to rescind the take-off clearance or quickly free the runway for landing traffic. In these situations, the pilot must acknowledge the instruction with call sign and intentions.

Communicator	Communication
 ATS	FASTAIR 345 TAKE-OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY
 pilot	HOLDING SHORT FASTAIR 345
 ATS	FASTAIR 345 TAKE-OFF IMMEDIATELY OR VACATE RUNWAY
 pilot	TAKING OFF FASTAIR 345
 ATS	PQR HOLD POSITION
 pilot	HOLDING PQR

Communicator	Communication
 ATS	PQR HOLD POSITION CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF VEHICLE ON THE RUNWAY
 pilot	HOLDING PQR

Figure 49: Rescinding or expediting take-off clearance

4.8.9 As shown in Figure 50, when a perilous situation develops after an aircraft has commenced the take-off roll the pilot may be instructed to abandon the take-off. This instruction will only be used in extreme circumstances when an aircraft is in imminent danger. (The decision to abandon take-off remains with the pilot).

Communicator	Communication
 ATS	FASTAIR 345 STOP IMMEDIATELY FASTAIR 345 STOP IMMEDIATELY TRUCK ENTERING THE RUNWAY
 pilot	STOPPING FASTAIR 345

Figure 50: Emergency cancellation of take-off clearance

4.8.10 As shown in Figure 51, when a pilot abandons a take-off, they should, as soon as practicable, inform tower. Likewise, as soon as practicable, they should inform tower of the reasons for abandoning take-off, if applicable, and request further manoeuvring instructions.

Communicator	Communication
 **pilot**	FASTAIR 345 STOPPING RUNWAY 24
 ATS	FASTAIR 345 ROGER
 **pilot**	FASTAIR 345 REQUEST RETURN TO APRON
 ATS	FASTAIR 345 TAKE NEXT RIGHT RETURN TO APRON CONTACT GROUND 121.9
 **pilot**	NEXT RIGHT RETURN TO APRON 121.9 FASTAIR 345

Figure 51: Information after rejected take-off

4.9 VFR departures

4.9.1 As shown in Figure 52, departure clearances for VFR aircraft may include a clearance to operate within or depart the CTR or a clearance in accordance with a specific request. Pilots must request a Special VFR clearance when conditions are below VFR minima.

Communicator	Communication
 ATS	XYZ LEAVE CONTROL ZONE VIA 2BG AT 1 500 REPORT CLEAR OF THE CONTROL ZONE
 pilot	LEAVE CONTROL ZONE VIA 2BG AT 1 500 WILCO XYZ
 pilot	TOWER XYZ REQUEST DEPART THE CONTROL ZONE TO THE SOUTH 1 500 SPECIAL VFR
 ATS	XYZ TOWER LEAVE CONTROL ZONE TO THE SOUTH NOT ABOVE 1 500 SPECIAL VFR CLEARED FOR TAKE-OFF
 pilot	LEAVE CONTROL ZONE TO THE SOUTH NOT ABOVE 1 500 SPECIAL VFR CLEARED FOR TAKE-OFF XYZ

Figure 52: VFR departures

4.10 VFR departures at Class D aerodromes

4.10.1 As shown in Figure 53, at a Class D aerodrome, a clearance to take-off is a clearance to operate within or depart the CTR into Class G airspace in accordance with the ready report.

Communicator	Communication
 pilot	SUBURBS TOWER XYZ READY FOR CIRCUITS
 ATS	XYZ SUBURBS TOWER CLEARED FOR TAKE-OFF
 pilot	CLEARED FOR TAKE-OFF XYZ
 pilot	XYZ DOWNWIND TOUCH AND GO
 pilot	SUBURBS TOWER XYZ READY FOR THE TRAINING AREA
 ATS	XYZ SUBURBS TOWER CLEARED FOR TAKE-OFF
 pilot	CLEARED FOR TAKE-OFF XYZ

Figure 53: VFR departures at Class D aerodromes

4.11 Helicopter operations

4.11.1 As shown in Figure 54, unique phraseology is used for helicopter operations, particularly when take-off and landing takes place on surfaces other than runways.

Communicator	Communication
 pilot	SUBURBS TOWER HELICOPTER RST REQUEST AIR TAXI FROM THE APRON TO THE FUELLING POINT
 ATS	RST SUBURBS TOWER AIR TAXI FROM THE APRON TO THE FUELLING POINT CAUTION CESSNA 150 ON TAXIWAY CHARLIE
 pilot	AIR TAXI FROM THE APRON TO THE FUELLING POINT TRAFFIC IN SIGHT RST
 pilot	RST READY PAD ALFA FOR DEPARTURE TO THE TRAINING AREA
 ATS	RST PAD ALFA CLEARED FOR TAKE-OFF
 pilot	PAD ALFA CLEARED FOR TAKE-OFF RST
 pilot	RST AT THE HANGERS READY FOR DEPARTURE
 ATS	RST DEPARTURE APPROVED REPORT AIRBORNE
 pilot	DEPARTURE APPROVED REPORT AIRBORNE RST
 ATS	RESCUE TWO CLEARED VISUAL APPROACH FOR ST STEPHENS HOSPITAL REPORT ON THE GROUND
 pilot	VISUAL APPROACH FOR ST STEPHENS HOSPITAL WILCO RESCUE TWO

Figure 54: Helicopter clearances

4.12 VFR arrivals

4.12.1 The initial call to aerodrome control requesting clearance to enter a CTR must be made in sufficient time to allow the controller to assess the VFR and IFR traffic situation and issue a clearance or instructions prior to the aircraft reaching the CTR boundary. Pilots must request a Special VFR clearance when conditions are below VFR minima, and approval to operate in the CTR should not be assumed.

4.12.2 As show in Figure 55, arrival clearances may include circuit joining instructions or plain language instructions.

Communicator	Communication
 pilot	THORNHILL TOWER XYZ

Communicator	Communication
 ATS	XYZ THORNHILL TOWER
 pilot	XYZ CESSNA 172 POINT HOCKS 2 500 FOR LANDING POB 2 INFORMATION DELTA
 ATS	XYZ OVERFLY TO JOIN DOWNWIND RUNWAY 36 1 500 REPORT OVERHEAD
 pilot	OVERFLY TO JOIN DOWNWIND RUNWAY 36 1 500 WILCO XYZ
 pilot	CAPRICORN TOWER HELICOPTER RST
 ATS	RST CAPRICORN TOWER
 pilot	RST COASTAL 500 FEET FOR LANDING INFORMATION TANGO POB 3
 ATS	RST TRACK DIRECT TO THE PAD NOT ABOVE 1 000 HOLD NORTH OF THE RUNWAY
 pilot	TRACK DIRECT TO THE PAD NOT ABOVE 1 000 HOLD NORTH OF THE RUNWAY RST

Figure 55: VFR arrivals

4.13 Clearance by establishment of two-way communications

4.13.1 Two-way communications established between a pilot and ATC constitutes a clearance for the aircraft to enter Class D airspace.

4.13.2 To establish two-way communications the pilot must initiate communications and advise current position, altitude, intention, ATIS received and any request(s).

4.13.3 If ATC acknowledges the initial communications with only the aircraft's call sign, two-way communications have been established and the pilot is expected to:

a. fly the track, level and intentions stated when initiating two-way communications

b. comply with any subsequent ATC instructions

c. for an arriving aircraft where ATC does not issue a specific level instruction — descend as necessary to join the aerodrome traffic circuit.

4.13.4 If ATC acknowledges the initial communications with the aircraft's call sign and instructions, two-way communications have been established and the pilot is expected to:

a. comply with the issued instructions

b. if no level instruction is issued, descend as necessary to join the aerodrome traffic circuit.

4.13.5 If ATC acknowledges the initial communications without using the aircraft's call sign and instructions, two-way communications have NOT been established. The pilot is expected to remain outside Class D airspace and either:

a. wait for an opportune moment to re-attempt a clearance request

or

b. await communications/instructions from ATC.

4.13.6 Figure 56 illustrates typical radiotelephony exchanges in establishing 2-way communications.

Communicator	Communication
 pilot	THORNHILL TOWER XYZ CESSNA 172 POINT HOCKS 2 500 FOR LANDING POB 2 INFORMATION DELTA
 ATS	XYZ THORNHILL TOWER
Explanation	*XYZ's implied clearance is to track from Point Hocks to the aerodrome maintain 2 500 ft until descending to circuit altitude and positioning to join the circuit for the runway specified in Information Delta*
 pilot	THORNHILL TOWER ABC CITABRIA POINT HOCKS 2 500 FOR LANDING POB 2 INFORMATION DELTA
 ATS	ABC THORNHILL TOWER TRACK PRESENT POSITION DIRECT THORNHILL OVERFLY JOIN RIGHT DOWNWIND 1 500 REPORT OVERHEAD
 pilot	PRESENT POSITION DIRECT THORNHILL OVERFLY JOIN RIGHT DOWNWIND 1 500 WILCO ABC
Explanation	*ABC has received an explicit clearance and must comply with that clearance*
 pilot	THORNHILL TOWER XYZ CESSNA 172 POINT HOCKS 2 500 FOR LANDING POB 2 INFORMATION DELTA
 ATS	AIRCRAFT CALLING THORNHILL TOWER STANDBY *or* AIRCRAFT CALLING THORNHILL TOWER SAY AGAIN
Explanation	*XYZ has not established communications does not have an implied clearance and must remain outside Class D airspace*

Figure 56: Establishing 2-way communications

4.14 Aerodrome traffic circuit

4.14.1 As shown in Figure 57, circuit joining instructions will be issued as necessary to enable a pilot to sight other aircraft and position in a safe and orderly manner into the circuit.

Communicator	Communication
 ATS	XYZ JOIN RIGHT DOWNWIND RUNWAY 24 REPORT SIGHTING CESSNA 172 DOWNWIND
 pilot	RIGHT DOWNWIND RUNWAY 24 CESSNA 172 IN SIGHT XYZ

Communicator	Communication
ATS	XYZ NUMBER TWO FOLLOW THE CESSNA 172
pilot	NUMBER TWO WILCO XYZ
ATS	XYZ JOIN DOWNWIND RUNWAY 09 NUMBER TWO FOLLOW TECNAM ON LEFT BASE
pilot	DOWNWIND RUNWAY 09 NUMBER TWO XYZ
pilot	XYZ DOWNWIND FLAPLESS APPROACH TECNAM IN SIGHT.
ATS	XYZ ROGER
ATS	XYZ, JOIN BASE RUNWAY 16, NUMBER TWO, FOLLOW SAAB 340 THREE MILE FINAL, REPORT SIGHTING
pilot	LEFT BASE RUNWAY 16 NUMBER TWO SAAB 340 IN SIGHT, XYZ
ATS	XYZ
ATS	XYZ OVERFLY JOIN RIGHT DOWNWIND RUNWAY 25
pilot	OVERFLY JOIN RIGHT DOWNWIND RUNWAY 25, XYZ

Figure 57: Circuit joining instructions

4.14.2 As per the example in Figure 58, pilots – having joined the traffic circuit – make routine reports as required.

Communicator	Communication
pilot	XYZ DOWNWIND
ATS	XYZ NUMBER TWO FOLLOW CHEROKEE ON BASE
pilot	NUMBER TWO TRAFFIC IN SIGHT XYZ
ATS	XYZ REPORT BASE
pilot	XYZ *Later…*

Communicator	Communication
	XYZ BASE

Figure 58: Circuit position reports

4.14.3 As shown in Figure 59, it may be necessary for ATC to sequence the traffic in the circuit or issue delaying or expediting instructions.

Communicator	Communication
 ATS	XYZ EXTEND DOWNWIND NUMBER TWO FOLLOW CHEROKEE 4 MILES FINAL
 pilot	NUMBER TWO TRAFFIC IN SIGHT XYZ
 ATS	XYZ ORBIT RIGHT REPORT COMPLETE TRAFFIC ON RUNWAY
 pilot	ORBIT RIGHT XYZ
 ATS	XYZ NUMBER ONE MAKE SHORT APPROACH* CHEROKEE SIX MILES FINAL
 pilot	SHORT APPROACH XYZ

Figure 59: Circuit sequencing instructions

> **Note:** A low time student pilot is likely unable to make a short approach. ATC might first need to query a pilot whether they are able to accept a short approach prior to issuing this instruction.

4.14.4 It is sometimes necessary for ATC to instruct a pilot to manipulate the aircraft or use aircraft lighting to aid identification or to confirm actions. Table 32 below shows a selection of phrases that may be used for this purpose:

Table 32: Visual identification and acknowledgement

Circumstances	Phraseology
Identification of Aircraft	SHOW LANDING LIGHT
Acknowledgment by Visual Means	a. ACKNOWLEDGE BY MOVING AILERONS (OR RUDDER). b. ACKNOWLEDGE BY ROCKING WINGS. c. ACKNOWLEDGE BY FLASHING LANDING LIGHTS.

4.15 Final approach and landing

4.15.1 If requested, a ‘final’ report is made when an aircraft turns onto final approach. If the turn onto final is made at a distance greater than four miles from touchdown, a ‘long final’ report is made.

4.15.2 During multiple runway operations where the possibility of confusion exists, the runway designator will be stated. The runway designator may also be stated if it is necessary to emphasise the runway to be used. For parallel runway operations on discrete frequencies, at Class D aerodromes, the runway designator may be omitted.

4.15.3 Figure 60 shows examples of radiotelephony exchanges relating to final approach and landing.

Communicator	COMMUNICATION
pilot	FASTAIR 345 LONG FINAL
ATS	FASTAIR 345 CONTINUE APPROACH
pilot	CONTINUE APPROACH FASTAIR 345
ATS	FASTAIR 345 WIND 240 DEGREES 20 KNOTS RUNWAY 02 CLEARED TO LAND
pilot	RUNWAY 02 CLEARED TO LAND FASTAIR 345
pilot	XYZ FINAL
ATS	XYZ RUNWAY LEFT CLEARED TO LAND
pilot	RUNWAY LEFT CLEARED TO LAND XYZ
ATS	PQR CONTINUE APPROACH CESSNA AHEAD SLOW TO VACATE
pilot	CONTINUE APPROACH PQR
pilot	PQR SHORT FINAL
ATS	PQR CLEARED TO LAND
pilot	CLEARED TO LAND PQR

Figure 60: Final approach

4.15.4 At aerodromes where LAHSO is in use, ATC will issue instructions for the landing aircraft to hold short of the runway intersection and will provide pertinent traffic information. ATC may

rescind the hold short requirement if the full runway length becomes available. Figure 61 shows examples of LAHSO landing instructions.

Communicator	Communication
 ATS	FASTAIR 345 AIRBUS 330 DEPARTING ON CROSSING RUNWAY HOLD SHORT RUNWAY 27 CLEARED TO LAND RUNWAY 34
 pilot	HOLD SHORT RUNWAY 27 CLEARED TO LAND RUNWAY 34 FASTAIR 345
 ATS	FASTAIR 345 FULL RUNWAY LENGTH NOW AVAILABLE
 pilot	FASTAIR 345

Figure 61: LAHSO landing instructions

4.15.5 Figure 62 shows an example of an aircraft on final approach being issued a landing clearance despite not being in the sight of the aerodrome controller.

Communicator	Communication
 pilot	FASTAIR 345 5 MILES
 ATS	FASTAIR 345 NOT IN SIGHT - CLEARED TO LAND RUNWAY 06
 pilot	CLEARED TO LAND RUNWAY 06 FASTAIR 345

Figure 62: Landing – not in sight

4.15.6 As shown in Figure 63, ATC may ask the pilot of a civil aircraft to confirm gear position if there is doubt that the landing gear is fully extended or whenever a general aviation aircraft with retractable undercarriage has experienced abnormal operations. ATC will also react to routine gear check reports from military aircraft - see Section 3.24 of this AC. Figure 63 shows examples.

Communicator	COMMUNICATION
 pilot	FASTAIR 345 FINAL
 ATS	FASTAIR 345 CHECK GEAR DOWN
 pilot	FASTAIR 345 GEAR DOWN

Figure 63: Landing gear checks

4.15.7 As shown in Figure 64, a pilot may request to fly past the control tower or other observation point for the purpose of visual inspection from the ground.

Communicator	Communication
pilot	FASTAIR 345 REQUEST LOW PASS UNSAFE LEFT GEAR INDICATION
ATS	FASTAIR 345 CLEARED LOW PASS RUNWAY 27 NOT BELOW 500 FEET REPORT FINAL
pilot	RUNWAY 27 NOT BELOW 500 FEET WILCO FASTAIR 345

Figure 64: Landing gear inspection

4.15.8 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 (these examples are not exhaustive):

a. "LANDING GEAR APPEARS DOWN"

b. "RIGHT (OR LEFT, OR NOSE) WHEEL APPEARS UP (OR DOWN)"

c. "WHEELS APPEAR UP"

d. "RIGHT (OR LEFT, OR NOSE) WHEEL DOES NOT APPEAR UP (OR DOWN)".

4.16 Training manoeuvres

4.16.1 Pilots may request a variety of training manoeuvres, including:

a. a low approach followed by go around

b. a touch and go – whereby an aircraft lands and takes off without coming to a stop

c. a stop and go – whereby an aircraft lands, stops momentarily on the runway then takes off again

d. for an IFR aircraft, a precision approach involving a coupled or autoland operation in conditions where ATC is not required to protect the ILS critical or sensitive area

4.16.2 A pilot may also request and be assigned ‘the option’; that is the option for touch and go, full stop, stop and go, or go around.

4.16.3 Figure 65 shows examples of training manoeuvres.

Communicator	Communication
pilot	PQR REQUEST LOW APPROACH RUNWAY 09 FOR TRAINING
ATS	PQR CLEARED LOW APPROACH RUNWAY 09 REPORT FINAL
pilot	RUNWAY 09 PQR

Communicator	Communication
 pilot	XYZ REQUEST TOUCH AND GO
 ATS	XYZ RUNWAY CENTRE CLEARED TOUCH AND GO
 pilot	RUNWAY CENTRE CLEARED TOUCH AND GO XYZ
 pilot	XYZ REQUEST TOUCH AND GO
 ATS	XYZ DUE TRAFFIC - MAKE FULL STOP RUNWAY CENTRE CLEARED TO LAND
 pilot	CLEARED TO LAND FOR FULL STOP XYZ
 pilot	XYZ REQUEST THE OPTION
 ATS	XYZ CLEARED FOR THE OPTION
 pilot	CLEARED FOR THE OPTION XYZ
 pilot	*After touchdown:* XYZ ROLLING
 pilot	FASTAIR 345 PRACTICE AUTOLAND
 ATS	FASTAIR 345 ILS CRITICAL AREA NOT PROTECTED

Figure 65: Training manoeuvres

4.17 Automatic Terminal Information Service (ATIS)

4.17.1 At controlled aerodromes, operational information required by aircraft for take-off or landing is broadcast via ATIS on a dedicated frequency and/or on the voice channel of radio navigation aids. **Error! Reference source not found.** shows a typical example.

Communicator	Communication
 ATS	CAPRICORN TERMINAL INFORMATION ALFA TIME 0850 EXPECT ILS APPROACH RUNWAY 28 WIND 240 DEGREES 12 KT VISIBILITY 5 000 M INTERMITTENT SLIGHT RAIN

Communicator	Communication
	SCATTERED AT 1000 FT, OVERCAST AT 1800 FT TEMPERATURE +12 QNH 1011 ON FIRST CONTACT WITH GROUND OR APPROACH NOTIFY RECEIPT OF ALFA

4.17.2 Outside the hours of tower activation, operational information of an unchanging nature may be broadcast over ATIS.

4.17.3 Pilots inbound to these airports are expected, on first contact with the unit providing approach control services, to acknowledge receipt of current information by quoting the code letter of the broadcast. Pilots of outbound aircraft are expected to acknowledge receipt of departure ATIS on first contact with unit provided surface movement control.

4.17.4 At non-controlled aerodromes with an aerodrome flight information service (AFIS) or certified air/ground radio service (CA/GRS), essential aerodrome information may be provided by an Automatic Aerodrome Information Service (AAIS) broadcast on a dedicated frequency (similar to ATIS).

4.18 Visibility

4.18.1 In conditions of reduced visibility at a controlled aerodrome, ATC will provide information about visibility in terms of general visibility, runway visibility (RV) or runway visual range (RVR). RV and RVR reports may be reported from multiple locations along the runway. Multiple RV/RVR observations are always representative of the touchdown zone, midpoint zone and the roll-out/stop end zone, respectively. RVR positions not in service or not available should be notified as ‘not available'. An RV report may include the time at which the observation was made. Figure 66 shows examples of various visibility reports.

Communicator	Communication
ATS	PQR VISIBILITY 4 000 METRES
pilot	ROGER PQR
ATS	RUNWAY VISIBILITY RUNWAY 13 THRESHOLD 400 METRES MIDPOINT 400 METRES STOP END 600 METRES ASSESSED AT TIME 30
ATS	RVR RUNWAY 16 THRESHOLD 175 METRES MIDPOINT 200 METRES STOP END 600 METRES
ATS	FASTAIR 345 RVR RUNWAY 34 650 METRES 700 METRES AND 600 METRES
pilot	ROGER FASTAIR 345

Figure 66: Visibility reports

4.19 Runway surface conditions

4.19.1 At controlled aerodromes, runway surface conditions are reported whenever ATC is informed or becomes aware of the presence of water or contaminants on an operational runway. Conditions are reported by the following methods:

a. by use of runway condition report (RCR) – assessed by an aerodrome operator and passed to ATC for relay to aircraft

b. by a Tower-assessed report of observed conditions on the aerodrome.

4.19.2 An RCR contains a Runway Condition Code (RWYCC) and information that describes the runway surface condition, i.e., type of contaminants, depth, coverage for each runway third. See Multi-Part AC 91-32 and AC 139-22 'Global reporting format - Runway surface condition' for a full explanation of the assessment and reporting of runway surface conditions

4.19.3 As shown in Figure 67, ATIS is the primary means for communicating runway surface conditions. An RCR will describe conditions for each runway third in the direction of landing / take-off.

Communicator	Communication
ATS	CAPRICORN TERMINAL INFORMATION KILO EXPECT INSTRUMENT APPROACH RUNWAY 21 FOR ARRIVALS AND DEPARTURES RUNWAY 21 SURFACE CONDITION CODE FIVE FIVE FIVE WHOLE RUNWAY WET *{then rest of ATIS}*
ATS	CAPRICORN TERMINAL INFORMATION KILO EXPECT INSTRUMENT APPROACH RUNWAYS 34 LEFT AND 34 RIGHT FOR ARRIVALS AND DEPARTURES RUNWAY 34 LEFT SURFACE CONDITION CODE TWO TWO FIVE STANDING WATER STANDING WATER WET DEPTH 10 MILLIMETRES 10 MILLIMETRES NOT REPORTED *{then rest of ATIS}*

Figure 67: ATIS reports of runway surface conditions

4.19.4 ATC will only provide RCR information through voice communications to inform about changes to the information provided via ATIS, or when specifically requested by a pilot. Normally, only the change in RWYCC will be communicated. Changes to the contamination type, contamination depth, and coverage will only be provided upon request by the pilot. ATC will also provide 'tower observes' updates as appropriate. Figure 68 shows examples.

Communicator	Communication
ATS	FASTAIR 345 CAPRICORN TOWER RUNWAY 21 RIGHT SURFACE CONDITION CODE TWO FIVE FIVE CLEARED TO LAND
pilot	RUNWAY 21 RIGHT CLEARED TO LAND FASTAIR 345

Communicator	Communication
 pilot	FASTAIR 345 REQUEST FULL RUNWAY CONDITION REPORT
 ATS	FASTAIR 345 RUNWAY 21 RIGHT SURFACE CONDITION CODE TWO FIVE FIVE FIRST THIRD STANDING WATER DEPTH 5 MILLIMETRES LAST TWO THIRDS WET
 pilot	FASTAIR 345 ROGER
 ATS	FASTAIR 345 CAPRICORN TOWER RUNWAY 21 RIGHT TOWER OBSERVES RUNWAY IS WET CLEARED TO LAND
 pilot	RUNWAY 21 RIGHT CLEARED TO LAND FASTAIR 345

Figure 68: ATC reports of runway surface conditions

4.19.5 As shown in Figure 69, a pilot should advise ATS, and the aerodrome operator at non-controlled aerodromes about any deterioration or improvement of reported runway surface conditions or braking action. Additionally, it may provide a safety benefit to alert other pilots in the vicinity.

Communicator	communication
 pilot	CENTRE PQR VACATING RUNWAY 12 AT SMALLTOWN BRAKING ACTION IS GOOD TO MEDIUM
 ATS	PQR CENTRE ROGER
 ATS	FASTAIR 345 BRAKING ACTION REPORTED BY AIRBUS 321 AT 1456 – MEDIUM
 pilot	FASTAIR 345 ROGER

Figure 69: Reports of braking action

4.20 Wind shear and microbursts

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

4.20.2 Wind shear encountered by aircraft should be reported to ATC as aircraft following may not have sufficient performance to recover from the same wind shear encounter.

4.20.3 Figure 70 shows examples of wind shear and microburst alerts and reports.

Communicator	Communication
 ATS	RUNWAY 34 LEFT ARRIVAL WIND SHEAR ALERT 20 KNOT GAIN 3 MILE FINAL
 ATS	RUNWAY 16 LEFT ARRIVAL MICROBURST ALERT 32 KNOT LOSS 2 MILE UPWIND
 ATS	XYZ CAUTION MODERATE WIND SHEAR REPORTED 3 MILE FINAL
 pilot	XYZ ROGER
 ATS	TOWER FASTAIR 345 MODERATE UNDERSHOOT WIND SHEAR ENCOUNTERED WHEN DESCENDING THROUGH 2 000
 pilot	FASTAIR 345 ROGER

Figure 70: Wind shear and microbursts

4.20.4 As described in Figure 71, wind shear may sometimes be severe enough to require an aircraft to carry out a wind shear escape manoeuvre. As soon as possible, ATC should be alerted about the action being taken.

Communicator	Communication
 pilot	FASTAIR 345 WIND SHEAR ESCAPE
 ATS	FASTAIR 345 ROGER SAFETY ALERT TRAFFIC SIX MILES AHEAD BOEING 787 HEADING EAST AT 4 000
 pilot	FASTAIR 345
 pilot	FASTAIR 345 CLEAR OF WIND SHEAR LEVELING AT 4 000 REQUEST VECTORS FOR FINAL
 ATS	FASTAIR 345 MAINTAIN 4 000 TURN LEFT HEADING 310 VECTORS FOR FINAL
 pilot	MAINTAIN 4 000 TURN LEFT HEADING 310 FASTAIR 345

Figure 71: Wind shear escape

4.21 Aircraft turbulence

4.21.1 When aircraft turbulence is suspected or known to exist, ATC will warn aircraft as appropriate. ATC will also issue a wake turbulence caution if ATC requires a pilot of an aircraft to follow or

maintain own separation from a preceding of a higher wake turbulence category. Figure 72 shows examples.

Communicator	Communication
ATS	XYZ CAUTION WAKE TURBULENCE A320 LANDING AHEAD
ATS	XYZ CAUTION JET BLAST BOEING 737 IN BAY 20 ENGINE TESTING
ATS	XYZ CAUTION DOWNWASH SIKORSKY S92 HOVER-TAXING TAXIWAY BRAVO

Figure 72: Aircraft turbulence warnings

4.21.2 As shown in Figure 73, the pilot of a departing aircraft may, in VMC by day only, advise ATC that they wish the application of the normal wake turbulence separation standards to be waived. When a pilot so advises, this indicates to ATC that the pilot accepts total responsibility for providing their own wake turbulence separation.

Note: ATC will only waive the application of wake turbulence separation when the preceding aircraft is in the medium wake turbulence category. ATC is not permitted to waive wake turbulence separation if the preceding aircraft is in the heavy (e.g. Boeing 777) or super category (Airbus A380).

Communicator	Communication
ATS	PQR HOLD POSITION 2 MINUTES DELAY DUE WAKE TURBULENCE
pilot	PQR ACCEPT WAIVER
ATS	PQR ROGER CAUTION WAKE TURBULENCE DUE PRECEDING BOEING 737 CLEARED FOR TAKE-OFF
pilot	COPIED TRAFFIC CLEARED FOR TAKE-OFF PQR

Figure 73: Wake turbulence waiver

4.22 Go around

4.22.1 ATC may instruct an aircraft to go around if the runway is not available for landing, or to ensure separation or avert an unsafe situation. As shown in Figure 74, transmissions to aircraft will be brief and kept to a minimum.

Communicator	Communication
ATS	FASTAIR 345 GO AROUND TRACK EXTENDED CENTRELINE CLIMB TO 3 000

Communicator	Communication
 pilot	GOING AROUND TRACK EXTENDED CENTRELINE CLIMB TO 3 000 FASTAIR 345
 pilot	XYZ FINAL
 ATS	XYZ AT THE MINIMA GO AROUND WORK IN PROGRESS ON THE RUNWAY
 pilot	AT THE MINIMA GO AROUND XYZ
 pilot	XYZ GOING AROUND

Figure 74: ATC-initiated Go around

4.22.2 Figure 75 shows that the phrase “GOING AROUND” would be used by a pilot when initiating a go around.

Communicator	Communication
 pilot	PQR GOING AROUND
 ATS	PQR ROGER

Figure 75: Pilot-initiated Go around

4.23 After landing

4.23.1 After landing, pilots should remain on aerodrome control frequency until clear of the runway-in-use, then, unless otherwise instructed, contact SMC on the appropriate frequency with advice of intended location on the aerodrome, and obtain a taxi clearance. Figure 76 shows examples of radiotelephony after landing.

Communicator	Communication
 ATS	FASTAIR 345 TAKE FIRST RIGHT *or* FASTAIR 345 TAKE FIRST RIGHT WHEN VACATED CONTACT GROUND 121.9
 pilot	FIRST RIGHT FASTAIR 345 *or* FIRST RIGHT GROUND 121.9 FASTAIR 345
 pilot	GROUND FASTAIR 345 RUNWAY VACATED GATE 7

Communicator	Communication
 ATS	FASTAIR 345 GROUND TAXI TO GATE 7 VIA TAXIWAY ALFA
 pilot	GATE 7 VIA TAXIWAY ALFA FASTAIR 345
 ATS	XYZ CONTINUE TO THE END REPORT VACATING LEFT
 pilot	XYZ
 pilot	XYZ RUNWAY VACATED
 ATS	XYZ TAXI TO AERO CLUB VIA BRAVO
 pilot	AERO CLUB VIA BRAVO XYZ

Figure 76: Instructions after landing

4.24 Vehicles on controlled aerodromes

4.24.1 An airside vehicle operating on a runway strip, a runway, a taxiway strip or a taxiway of a controlled aerodrome must be either:

a. for a non-controlled aerodrome or an aerodrome where ATC is not in operation — at least a VHF receiver capable of monitoring the CTAF or ATC frequencies, as applicable

or

b. equipped with a VHF radio capable of two-way communications with ATC

or

c. under escort by another vehicle meeting the requirement of b.

4.24.2 Chapter 14 of the Part 139 Manual of Standards (MOS) also states that if using a transmitter, the operator of an airside vehicle operating on a runway strip, a runway, a taxiway strip or a taxiway must:

a. be certified under Part 64 of CASR for the use of radiocommunication equipment

b. monitor the relevant frequency at all times when operating on the manoeuvring area.

4.24.3 It is essential that drivers of airside vehicles comply with ATC instructions and requirements while in the manoeuvring area. Ground movement instructions for vehicles issued by ATC will use the word “proceed”.

> **Note:** The word “TAXI” is only to be used for the surface movement of aircraft.

4.24.4 It is also essential for drivers of airside vehicles operating or intending to operate on the manoeuvring area to read back to the air traffic controller safety-related parts of instructions

which are transmitted by voice. For example, instructions to enter, hold short of, cross and operate on any runway or taxiway.

4.24.5 Figure 77 shows examples of typical vehicle communications on a controlled aerodrome.

Communicator	Communication
 vehicle	TOWER CAR 1 AT BRAVO REQUEST CROSS RUNWAY 34
 ATS	CAR 1 TOWER AT BRAVO CROSS RUNWAY 34
 vehicle	AT BRAVO CROSS RUNWAY 34 CAR 1
 vehicle	TENDER 5 RUNWAY VACATED REQUEST PROCEED TO STAND 7
 ATS	TENDER 5 PROCEED TO STAND 7 VIA TAXIWAY ALFA
 vehicle	STAND 7 VIA TAXIWAY ALFA TENDER 5
 ATS	CAR 1 PROCEED TO AERO CLUB VIA BRAVO
 vehicle	AERO CLUB VIA BRAVO CAR 1
 vehicle	GROUND TUG 6 REQUEST TOW BIGJET A330 FROM GATE 5A TO THE MAINTENANCE HANGER
 ATS	TUG 6 GROUND TOW APPROVED VIA TAXIWAYS ALFA AND CHARLIE THREE
 vehicle	TAXIWAYS ALFA AND CHARLIE 6 TUG ALFA AND CHARLIE THREE

Figure 77: Vehicle communications on a controlled aerodrome

4.24.6 As shown in Figure 78, ATC may sometimes issue a holding instruction, or a clearance only to a point along the requested route. In such cases, an additional clearance is required to proceed further.

Communicator	Communication
 vehicle	TOWER CAR 1 AT BRAVO REQUEST CROSS RUNWAY 34
 ATS	CAR 1 TOWER HOLD POSITION
 vehicle	HOLDING CAR 1
 ATS	CAR 1 AT BRAVO CROSS RUNWAY 34

Communicator	Communication
 vehicle	AT BRAVO CROSS RUNWAY 34 CAR 1
 vehicle	TOWER TENDER 2 AT HOLDING POINT BRAVO REQUEST PROCEED TO WESTERN HANGAR
 ATS	TENDER 2 TOWER PROCEED TO HOLDING POINT BRAVO HOLD SHORT OF RUNWAY 34
 vehicle	PROCEED TO HOLDING POINT BRAVO HOLD SHORT OF RUNWAY 34 TENDER 2

Figure 78: Vehicle holding instructions

4.24.7 The controller will listen to the read-back to ascertain that the instruction has been correctly acknowledged by the vehicle driver and should take immediate action to correct any discrepancies revealed by the read back.

5 ATS surveillance services

5.1 Introduction

5.1.1 This section contains general phraseology which is commonly used in communications between aircraft and units providing ATS surveillance services.

5.1.2 Normally the call sign suffix used by the unit providing ATS surveillance services is sufficient to indicate its function.

5.1.3 In an ATS surveillance service environment heading information given by the pilot and heading instructions given by controllers are in degrees magnetic.

5.2 Surveillance identification

5.2.1 As shown in the examples in Figure 79, ATC will occasionally instruct an aircraft to make a turn for identification purposes.

Communicator	Communication
ATS	XYZ REPORT HEADING AND LEVEL
pilot	XYZ HEADING 110 AT 3 500
ATS	XYZ FOR IDENTIFICATION TURN LEFT HEADING 080
pilot	LEFT HEADING 080 XYZ
ATS	XYZ IDENTIFIED 20 MILES NORTHWEST OF ROCKINGTON CONTINUE HEADING 080 MAINTAIN 3 500 VECTORING TO THORNHILL
pilot	HEADING 080 3 500 XYZ

Figure 79: Turns for identification

As shown in Figure 80, ATC will inform a pilot when identification is lost or terminated. “IDENTIFICATION TERMINATED” is the phrase used to indicate the termination of ATS surveillance – for example at the boundary of controlled airspace or the termination of a surveillance information service.

Communicator	Communication
ATS	XYZ IDENTIFICATION LOST RECYCLE TRANSPONDER
pilot	WILCO XYZ
ATS	XYZ IDENTIFICATION AND CONTROL SERVICE TERMINATED FREQUENCY CHANGE APPROVED

Communicator	Communication
 pilot	XYZ

Figure 80: Identification lost or terminated

5.3 Surveillance vectoring

5.3.1 Aircraft may be given specific vectors to fly in order to establish or maintain horizontal separation.

5.3.2 When necessary to specify a reason for a manoeuvre, ATC should use the following phraseologies as appropriate:

- "… DUE TRAFFIC"
- "… FOR SPACING"
- "… FOR DELAY"
- "… FOR DOWNWIND (or BASE, or FINAL)".

5.3.3 Figure 81 shows examples of phraseologies used in vectoring.

Communicator	Communication
 ATS	FASTAIR 345 TURN LEFT HEADING 050 FOR SEPARATION
 pilot	LEFT HEADING 050 FASTAIR 345
 ATS	FASTAIR 345 FLY HEADING 050
 pilot	HEADING 050 FASTAIR 345
 ATS	FASTAIR 345 CONTINUE PRESENT HEADING
 pilot	WILCO FASTAIR 345
 ATS	FASTAIR 345 TURN LEFT 10 DEGREES REPORT NEW HEADING
 pilot	NEW HEADING 350 DEGREES FASTAIR 345
 ATS	FASTAIR 345 REPORT HEADING

Communicator	Communication
 pilot	FASTAIR 345 HEADING 050
 ATS	FASTAIR 345 CONTINUE PRESENT HEADING
 pilot	WILCO FASTAIR 345
 ATS	FASTAIR 345 STOP TURN HEADING 350
 pilot	STOP TURN HEADING 350 FASTAIR 345

Figure 81: Vectoring phrases

5.3.4 As shown in Figure 82, if a vector involves a heading change of 180 degrees or more and it is necessary to emphasise a particular direction of turn, ATC will repeat the direction of turn.

Communicator	Communication
 ATS	FASTAIR 345 TURN LEFT I SAY AGAIN – LEFT HEADING 090 FOR SPACING
 pilot	LEFT HEADING 090 FASTAIR 345

Figure 82: Repeating direction of turn

5.3.5 When vectoring is completed, ATC will instruct the pilot to resume own navigation. ATC will also give position information and additional instructions, if necessary and appropriate. Figure 83 shows examples

Note: Position information is not required at termination of vectoring unless the aircraft has been significantly diverted away from a previously assigned or flight-planned route.

Communicator	Communication
 ATS	FASTAIR 345 RESUME OWN NAVIGATION DIRECT MAKIR
 pilot	DIRECT MAKIR FASTAIR 345

Communicator	Communication
ATS	XYZ RESUME OWN NAVIGATION POSITION 15 MILES SOUTHEAST OF WAVERLEY
pilot	WILCO XYZ

Figure 83: Termination of vectoring

5.3.6 As shown in Figure 84, ATC may sometimes instruct an aircraft to make a complete turn through 360 degrees for delaying purposes or to achieve a required spacing behind preceding traffic.

Communicator	Communication
ATS	FASTAIR 345 MAKE A THREE SIXTY TURN LEFT FOR SEQUENCING
pilot	THREE SIXTY TURN LEFT FASTAIR 345
ATS	XYZ ORBIT LEFT
pilot	ORBIT LEFT XYZ

Figure 84: 360 turn or orbit

5.4 Traffic information and avoiding action

5.4.1 ATC providing surveillance services may issue an aircraft with traffic information about another aircraft or if the situation requires a heading to avoid conflict. In unsafe situations, ATC may include ‘SAFETY ALERT’ with the transmission - see Section 10.7.

5.4.2 Whenever practicable, information regarding traffic on a conflicting path should be given in the following form:

a. relative bearing of the conflicting traffic in terms of the 12-hour clock

b. distance from the conflicting traffic

c. direction of the flight of the conflicting traffic

d. any other pertinent information such as: unknown, slow moving, fast moving, closing, opposite (or same) direction, overtaking, crossing left to right (or right to left), and if known, aircraft type and level, climbing or descending.

5.4.3 Figure 85 shows examples of communication concerning traffic information and avoiding action.

Communicator	Communication
pilot	CENTRE PQR REQUEST TRAFFIC

Communicator	Communication
 ATS	PQR CENTRE NO REPORTED TRAFFIC
 pilot	PQR
 ATS	FASTAIR 345 UNKNOWN TRAFFIC 10 O'CLOCK 11 MILES CROSSING LEFT TO RIGHT
 pilot	FASTAIR 345 NEGATIVE CONTACT REQUEST VECTORS
 ATS	FASTAIR 345 TURN LEFT HEADING 050
 pilot	LEFT HEADING 050 FASTAIR 345
 ATS	FASTAIR 345 CLEAR OF TRAFFIC RESUME OWN NAVIGATION DIRECT PUKKA
 pilot	DIRECT PUKKA FASTAIR 345
 ATS	PQR TRAFFIC 2 O'CLOCK 4 MILES NORTHBOUND CHEROKEE AT 2 000
 pilot	PQR LOOKING
 ATS	PQR IF NO SIGHTING SUGGEST TURN LEFT 60 DEGREES
 pilot	PQR TRAFFIC IN SIGHT
 ATS	PQR MAINTAIN OWN SEPARATION WITH THE CHEROKEE *or* PQR MAINTAIN OWN SEPARATION WITH AND PASS BEHIND THE CHEROKEE
 pilot	OWN SEPARATION WITH THE CHEROKEE PQR *or* OWN SEPARATION AND PASS BEHIND THE CHEROKEE PQR
 ATS	FASTAIR 345 AVOIDING ACTION TURN RIGHT HEADING 110 TRAFFIC 12 O'CLOCK 4 MILES CROSSING LEFT TO RIGHT
 pilot	RIGHT HEADING 110 FASTAIR 345
 ATS	FASTAIR 345 NOW CLEAR OF TRAFFIC RESUME OWN NAVIGATION DIRECT PUKKA

Communicator	Communication
 pilot	DIRECT PUKKA FASTAIR 345

Figure 85: Traffic information and avoiding action

5.5 Speed control

5.5.1 ATC may issue a variety of speed control instructions to ensure separation or to efficiently process the flow of air traffic.

5.5.2 Figure 86 shows an example of speed control instructions.

Communicator	Communication
 ATS	FASTAIR 345 REPORT SPEED
 pilot	FASTAIR 345 SPEED 250 KNOTS
 ATS	FASTAIR 345 REDUCE SPEED TO 210 KNOTS
 pilot	REDUCE TO 210 KNOTS FASTAIR 345

Figure 86: Example speed control instructions

5.5.3 When no longer necessary, ATC will rescind speed control with use of a relevant instruction. Figure 87 shows an example of ATC cancelling speed (phrase not associated with SID and STAR operations).

Communicator	Communication
 ATS	FASTAIR 345 NO ATC SPEED RESTRICTIONS
 pilot	FASTAIR 345

Figure 87: Example of ATC cancelling speed control instructions

5.6 Vectors to final approach

5.6.1 ATC may vector an arriving flight to position it onto a pilot-interpreted final approach aid, or to a point from which a radar-assisted approach can be made. In the example shown in Figure 88, an identified aircraft is given vectors for the precision approach.

Communicator	Communication
pilot	CAPRICORN APPROACH FASTAIR 345 OMDOX 28 PASSING FLIGHT LEVEL 180 DESCENDING TO 7 000 AVKEX 32 INFORMATION CHARLIE
ATS	FASTAIR 345 CAPRICORN APPROACH EXPECT VECTORING FOR ILS APPROACH RUNWAY 16
pilot	FASTAIR 345
ATS	FASTAIR 345 LEAVE AVKEX HEADING 050
pilot	LEAVE AVKEX HEADING 050 FASTAIR 345
ATS	FASTAIR 345 DESCEND TO 4 000
pilot	4 000 FASTAIR 345
ATS	FASTAIR 345 POSITION 20 MILES WEST OF CAPRICORN
pilot	FASTAIR 345
ATS	FASTAIR 345 TURN RIGHT HEADING 080 BASE LEG
pilot	HEADING 080 FASTAIR 345
ATS	FASTAIR 345 12 MILES FROM TOUCHDOWN TURN RIGHT HEADING 130 CLEARED ILS APPROACH RUNWAY 16 REPORT ESTABLISHED
pilot	HEADING 130 CLEARED ILS RUNWAY 16 FASTAIR 345
pilot	FASTAIR 345 ESTABLISHED
ATS	FASTAIR 345 CONTACT CAPRICORN TOWER 118.1
pilot	118.1 FASTAIR 345

Figure 88: Vectors to final approach

Note: The surveillance controller should advise the aircraft of its position at least once prior to turning onto final approach.

5.6.2 As shown in Figure 89, ATC may provide additional instructions or information when vectoring an aircraft to the final approach track. This may include advice about the controller intending to vector an aircraft through the final approach track and of the reason for the track extension.

Communicator	Communication
ATS	FASTAIR 345 CONTINUE PRESENT HEADING YOU WILL INTERCEPT FINAL APPROACH COURSE 9 MILES FROM TOUCHDOWN
pilot	FASTAIR 345 REQUEST 12 MILE FINAL
ATS	FASTAIR 345 TURN RIGHT HEADING 090 FOR 12 MILE FINAL
pilot	RIGHT HEADING 090 FASTAIR 345
ATS	FASTAIR 345 EXPECT VECTOR ACROSS THE LOCALISER FOR SPACING
pilot	FASTAIR 345
ATS	FASTAIR 345 CONTINUE PRESENT HEADING TAKING YOU THROUGH THE FINAL APPROACH TRACK FOR SEQUENCING
pilot	PRESENT HEADING FASTAIR 345
ATS	FASTAIR 345 MAINTAIN 2 100 UNTIL GLIDE PATH INTERCEPTION REPORT ESTABLISHED ON GLIDE PATH
pilot	MAINTAIN 2 100 UNTIL GLIDE PATH INTERCEPTION WILCO FASTAIR 345
ATS	FASTAIR 345 INTERCEPT RNP FINAL APPROACH COURSE RUNWAY 16 REPORT ESTABLISHED
pilot	INTERCEPT RNP FINAL APPROACH COURSE RUNWAY 16 WILCO FASTAIR 345

Figure 89: Additional instructions and information during vectoring

5.7 Independent approach operations

5.7.1 For independent approach operations to parallel runways, ATC carefully monitors aircraft as they intercept final approach and whilst flying the final approach leg for each aircraft's assigned runway. To confirm with the pilot that the correct ILS or GLS facility has been selected, ATC will include the relevant ILS or GLS identifier with the runway assignment.

5.7.2 During final approach and if a deviation is detected, ATC response will range from a deviation alert, which allows the pilot to self-correct the deviation, to a break-out alert whereby ATC issues a safety vector to one or both aircraft.

5.7.3 Figure 90 shows examples of typical radiotelephony associated with independent parallel approach operations.

Communicator	Communication
ATS	FASTAIR 345 EXPECT GLS APPROACH RUNWAY 34 LEFT IDENT IS G34A
pilot	G34A FASTAIR 345
ATS	FASTAIR 345 YOU HAVE CROSSED THE FINAL APPROACH COURSE TURN RIGHT IMMEDIATELY AND RETURN TO THE LOCALISER
pilot	TURNING RIGHT FASTAIR 345
ATS	FASTAIR 345 YOU ARE DEVIATING FROM THE FINAL APPROACH COURSE TURN LEFT IMMEDIATELY AND RETURN TO YOUR CLEARED APPROACH
pilot	TURNING LEFT FASTAIR 345
ATS	BREAK-OUT ALERT FASTAIR 345 TURN LEFT IMMEDIATELY HEADING 320 CLIMB TO 3 000
pilot	LEFT HEADING 320 CLIMB TO 3 000 FASTAIR 345

Figure 90: Independent parallel approaches

5.8 ATS surveillance assistance and flight following

5.8.1 An aircraft within VHF and surveillance coverage may request a variety of services in Class E and G airspace based on available surveillance information. Services include position information, traffic information, or ongoing surveillance information service (SIS)–flight following. An SIS is subject to controller workload and may be terminated by the controller at any time that higher priority duties require.

5.8.2 Figure 91 shows examples of surveillance-based assistance.

Communicator	Communication
 pilot	CENTRE XYZ
 ATS	XYZ CENTRE
 pilot	XYZ 10 MILES NORTH OF BATHURST 2 500 REQUEST FLIGHT FOLLOWING TO MOUNTAIN HILL
 ATS	XYZ SQUAWK 4321 WITH IDENT
 pilot	4321 IDENT XYZ
 ATS	XYZ IDENTIFIED TRAFFIC ELEVEN O'CLOCK 10 MILES OPPOSITE DIRECTION UNVERIFIED LEVEL[2] 3 500
 pilot	ROGER XYZ
 ATS	XYZ POSITION 15 MILES SOUTH OF MOUNTAIN HILL FLIGHT FOLLOWING TERMINATED
 pilot	ROGER XYZ
 pilot	XYZ CANCEL FLIGHT FOLLOWING MOUNTAIN HILL IN SIGHT
 ATS	XYZ POSITION 10 MILES SOUTH OF MOUNTAIN HILL FLIGHT FOLLOWING TERMINATED
 pilot	XYX
 pilot	PQR REQUEST POSITION WITH REFERENCE TO SHEEP STATION
 ATS	PQR SHEEP STATION IS THREE O'CLOCK 4 MILES
 pilot	ROGER PQR

Figure 91: ATS surveillance assistance

5.9 Transponder and ADS-B operations

5.9.1 Figure 92 below shows typical communications relating to transponder and ADS-B operations.

[2] 'unverified level' means that ATS has not cross checked that the aircraft's transmitted level information is within prescribed tolerances of the aircraft's actual level.

Communicator	Communication
ATS	FASTAIR 345 SQUAWK 6411
pilot	6411 FASTAIR 345
ATS	FASTAIR 345 CONFIRM SQUAWK 6411
pilot	SQUAWKING 6411 FASTAIR 345
ATS	FASTAIR 345 RESET 6411
pilot	RESETTING 6411 FASTAIR 345
ATS	FASTAIR 345 CHECK ALTIMETER SETTING AND CONFIRM LEVEL
pilot	ALTIMETER 1026 8 000 FASTAIR 345
ATS	FASTAIR 345 CONFIRM TRANSPONDER OPERATING
pilot	FASTAIR 345 NEGATIVE TRANSPONDER UNSERVICEABLE

Figure 92: Responses to transponder instructions

6 Approach control

6.1 Departures

6.1.1 At some aerodromes both arrivals and departures are handled by a single controller on a single frequency. At busier aerodromes arrivals and departures may be handled by separate controllers on separate frequencies.

6.1.2 In addition to the ATC airways clearance, instructions for separation purposes may be issued prior to or after take-off.

6.1.3 At aerodromes with a Class D tower service, where the tower also provides a procedural approach control service, a departing aircraft should make a departure report to ATC. Figure 93 shows an example.

Communicator	COMMUNICATION
 pilot	PQR TRACKING 340 CLIMBING TO 6 000 *or* PQR TRACKING VIA THORNHILL ONE DEPARTURE CLIMBING TO FLIGHT LEVEL 160
 ATS	PQR AT 15 MILES CONTACT CENTRE ON 124.7
 pilot	CENTRE 124.7 AT 15 MILES PQR

Figure 93: Departure at a Class D aerodrome

6.1.4 As shown in Figure 94, an aircraft departing from an aerodrome with approach surveillance control services should include their present level when establishing contact with Approach/Departures. This enables ATC to verify the aircraft's Mode C or altitude return.

Communicator	Communication
 pilot	CAPRICORN APPROACH FASTAIR 345 PASSING 1 600 CLIMBING TO 6 000 *or* CAPRICORN APPROACH FASTAIR 345 TURNING LEFT HEADING 340 PASSING 1 500 CLIMBING TO FLIGHT LEVEL 170 *or* CAPRICORN APPROACH FASTAIR 345 MAINTAINING RUNWAY HEADING PASSING 1 500 CLIMBING TO 10 000
 ATS	FASTAIR 345 CAPRICORN APPROACH IDENTIFIED

Figure 94: Departing an aerodrome with ATS surveillance service

6.2 Standard instrument departure procedures

6.2.1 As shown in Figure 95, ATC uses the key phrase “CLIMB VIA SID TO” in standard instrument departure (SID) operations to assign a level and to require the aircraft to comply with the lateral profile of, and any speed or level restrictions published for, the particular SID procedure.

Communicator	Communication
pilot	CAPRICORN DEPARTURES FASTAIR 345 PASSING 1 200 CLIMBING TO 6 000
ATS	FASTAIR 345 CAPRICORN DEPARTURES IDENTIFIED CLIMB VIA SID TO 10 000
pilot	CLIMB VIA SID TO 10 000 FASTAIR 345
ATS	FASTAIR 345 CLIMB VIA SID TO FLIGHT LEVEL 150
pilot	CLIMB VIA SID TO FLIGHT LEVEL 150 FASTAIR 345

Figure 95: Typical “CLIMB VIA SID TO” communication

Note: During SID and STAR operations, ATC in Australia will not generally use the phrase “CLIMB TO (level)” (without including “VIA SID”). This is to reduce the risk of inadvertently cancelling essential speed or level restrictions.

6.2.2 As shown in Figure 96, during a departure via a SID, ATC may tactically cancel a particular SID restriction.

Communicator	Communication
ATS	FASTAIR 345 CLIMB VIA SID TO 9 000 CANCEL LEVEL RESTRICTIONS
pilot	CLIMB VIA SID TO 9 000 CANCEL LEVEL RESTRICTIONS FASTAIR 345
ATS	FASTAIR 345 CLIMB VIA SID TO FLIGHT LEVEL 160 CANCEL LEVEL RESTRICTION AT AMBLE
pilot	CLIMB VIA SID TO FLIGHT LEVEL 160 CANCEL LEVEL RESTRICTION AT AMBLE FASTAIR 345
ATS	FASTAIR 345 CLIMB VIA SID TO FLIGHT LEVEL 140 CANCEL SPEED RESTRICTIONS

Communicator	Communication
pilot	CLIMB VIA SID TO FLIGHT LEVEL 140 CANCEL SPEED RESTRICTIONS FASTAIR 345
ATS	FASTAIR 345 CLIMB VIA SID TO FLIGHT LEVEL 140 CANCEL LEVEL AND SPEED RESTRICTIONS
pilot	CLIMB VIA SID TO FLIGHT LEVEL 140 CANCEL LEVEL AND SPEED RESTRICTIONS FASTAIR 345

Figure 96: Cancelling a SID restriction

6.2.3 As shown in Figure 97, ATC may instruct the aircraft to bypass a particular waypoint or waypoints. The pilot does not need to comply with level or speed restrictions published at waypoints being bypassed, but must comply with any level and speed restrictions published at and after the point of rejoining the SID.

> **Note:** In this circumstance, the aircraft will not be cleared to rejoin the SID. Direct tracking between waypoints is considered part of the SID.

Communicator	Communication
ATS	FASTAIR 345 CLEARED DIRECT ABBEY CLIMB VIA SID TO FLIGHT LEVEL 160
pilot	DIRECT ABBEY CLIMB VIA SID TO FLIGHT LEVEL 160 FASTAIR 345

Figure 97: Bypassing waypoints on a SID

6.2.4 As shown in the examples in Figure 98, ATC may vector a flight off the SID. The pilot does not need to comply with level or speed restrictions published at waypoints being bypassed. ATC will notify the pilot if it is expected that the aircraft will subsequently rejoin the SID.

Communicator	Communication
ATS	FASTAIR 345 TURN RIGHT HEADING 180 VECTORS FOR TRAFFIC CLIMB TO 10 000 EXPECT TO REJOIN SID AT ABBEY
pilot	RIGHT HEADING 180 CLIMB TO 10 000 FASTAIR 345
ATS	FASTAIR 345 CLEARED DIRECT ABBEY REJOIN SID CLIMB VIA SID TO FLIGHT LEVEL 120
pilot	DIRECT ABBEY REJOIN SID CLIMB VIA SID TO FLIGHT LEVEL 120 FASTAIR 345

Communicator	Communication
ATS	FASTAIR 345 TURN RIGHT HEADING 180 VECTORS FOR TRAFFIC CLIMB TO FLIGHT LEVEL 110
pilot	RIGHT HEADING 180 CLIMB TO FLIGHT LEVEL 110 FASTAIR 345
ATS	FASTAIR 345 CLEARED DIRECT TO ABBEY REJOIN ABBEY 3 DEPARTURE CLIMB VIA SID TO FLIGHT LEVEL 120
pilot	DIRECT TO ABBEY REJOIN ABBEY 3 DEPARTURE CLIMB VIA SID TO FLIGHT LEVEL 120 FASTAIR 345

Figure 98: Vectoring away from a SID

6.3 IFR arrivals

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

6.3.2 If issued clearance for descent, the pilot is expected to commence descent within one minute, unless another time or point is specified, or the clearance is issued in terms of “when ready". Figure 99 shows a typical example of an IFR aircraft receiving instructions from Approach and Tower for an instrument approach.

Communicator	Communication
pilot	THORNHILL APPROACH FASTAIR 345 PASSING FLIGHT LEVEL 150 DESCENDING TO 8 000 INFORMATION BRAVO
ATS	FASTAIR 345 THORNHILL APPROACH DESCEND TO 6 000 EXPECT RNP ZULU APPROACH RUNWAY 12
pilot	DESCEND TO 6 000 FASTAIR 345
ATS	FASTAIR 345 WHEN READY DESCEND TO 4 000 CLEARED RNP ZULU APPROACH RUNWAY 12 REPORT WHISKEE FOXTROT
pilot	LEAVING 6 000 DESCENDING TO 4 000 CLEARED RNP ZULU APPROACH RUNWAY 12 REPORT WHISKEE FOXTROT FASTAIR 345
pilot	FASTAIR 345 WHISKEE FOXTROT
ATS	FASTAIR 345 CONTACT TOWER 118.9
pilot	TOWER 118.9 FASTAIR 345

Communicator	Communication
pilot	THORNHILL TOWER FASTAIR 345 ESTABLISHED RNP ZULU RUNWAY 12
ATS	FASTAIR 345 CLEARED TO LAND WIND 130 DEGREES 20 KNOTS
pilot	CLEARED TO LAND FASTAIR 345

Figure 99: IFR arrival for instrument approach

6.3.3 The chart title for an instrument approach procedure is used for all radiotelephony relating to the procedure (including entry procedures), subject to the following:

a. The word 'Approach' is included between 'type of approach' (VOR, ILS, RNP etc. including any procedure suffix) and the runway designator (RUNWAY 01, RWY 33 etc).

b. If multiple approach procedures are on the same chart, e.g. 'NDB-A and VOR-A', only the approach procedure being conducted should be referred to.

c. If the chart title has a parenthetical '(…)' suffix, e.g. (LNAV/VNAV ONLY), (AR), the text in the parentheses is not included in radiotelephony.

d. A runway designator shown as optional in a radiotelephony phrase (e.g. [RUNWAY (number)]) should only be omitted when there is no possibility of confusion.

e. Other than for circling approaches, a procedure suffix (X, Y, etc.) may be omitted if there is no possibility of confusion.

6.3.4 As shown in Figure 100, a pilot may request, or ATC may instruct an aircraft, to carry out an instrument approach via a particular leg of the procedure or directly to the final approach leg.

Communicator	Communication
ATS	FASTAIR 345 DESCEND TO 6 000 EXPECT RNP ZULU APPROACH VIA UPDUR RUNWAY 12
pilot	DESCEND TO 6 000 FASTAIR 345 … FASTAIR 345 REQUEST THE RNP ZULU APPROACH VIA WHISKEE INDIA
ATS	FASTAIR 345 WHEN READY DESCEND TO 4 000 CLEARED RNP ZULU APPROACH RUNWAY 12 VIA WHISKEE INDIA REPORT WHISKEE INDIA
pilot	LEAVING 6 000 DESCENDING TO 4 000 CLEARED RNP ZULU APPROACH RUNWAY 12 VIA WHISKEE INDIA REPORT WHISKEE INDIA FASTAIR 345
ATS	PQR EXPECT ILS APPROACH RUNWAY 30 RIGHT VIA THE 12 DME ARC
pilot	PQR REQUEST TRACK PRESENT POSITION DIRECT TO INTERCEPT THE LOCALISER AT 8 MILES FOR STRAIGHT-IN APPROACH

Communicator	Communication
 ATS	PQR TRACK AS REQUESTED DESCEND TO 3 000 REPORT ESTABLISHED ON THE LOCALISER
 pilot	TRACK TO INTERCEPT THE LOCALISER AT 8 MILES DESCEND TO 3 000 WILCO PQR

Figure 100: Instrument approach via different procedure legs

6.3.5 As shown in Figure 101, ATC may clear an aircraft for a DME or GNSS arrival procedure or utilise the procedure to facilitate descent.

Communicator	Communication
 pilot	THORNHILL TOWER PQR WEYDON 25 MAINTAINING 8 000 ESTIMATING THORNHILL 42 INFORMATION CHARLIE QNH 999
 ATS	PQR THORNHILL TOWER ENTER CONTROLLED AIRSPACE ON TRACK THORNHILL AT 8 000 EXPECT GNSS ARRIVAL
 pilot	ENTER CONTROLLED AIRSPACE ON TRACK THORNHILL 8 000 PQR
 ATS	PQR CLEARED GNSS ARRIVAL FOLLOWED BY CIRCLING TO RUNWAY 33 QNH NOW 1014 REPORT VISUAL
 pilot	CLEARED GNSS ARRIVAL FOLLOWED BY CIRCLING TO RUNWAY 33 QNH 1014 WILCO PQR
 ATS	PQR DESCEND TO 3 000 NOT BELOW GNSS STEPS REPORT 9 MILES
 pilot	DESCEND TO 3 000 NOT BELOW GNSS STEPS WILCO PQR

Figure 101: DME/GNSS arrival or descent

6.3.6 ATC may sometimes impose a temporary level restriction on a civil aircraft conducting practice approach in VMC or a military aircraft conducting any instrument approach. Figure 102 shows an example of an aircraft being cleared to track via the horizontal profile of an instrument flight procedure, but with a temporary level restriction that ensures separation with aircraft operating at lower levels.

Communicator	Communication
 pilot	PQR REQUEST PRACTICE RNP APPROACH RUNWAY 14
 ATS	PQR TRACK VIA RNP APPROACH RUNWAY 14 NOT BELOW 2 500 REPORT AT NOVEMBER INDIA
 pilot	TRACK VIA RNP ZULU APPROACH RUNWAY 12 NOT BELOW 2 500 PQR

Communicator	Communication
 pilot	PQR NOVEMBER INDIA PASSING 2 800
 ATS	PQR CLEARED RNP APPROACH RUNWAY 14
 pilot	CLEARED RNP APPROACH RUNWAY 14 PQR

Figure 102: Practice instrument approach

6.4 Standard instrument arrival procedures

6.4.1 In standard instrument arrival (STAR) operations, ATC uses the key phrase “descend via STAR to” to assign a level and to require the aircraft to comply with the lateral profile of, and any speed or level restrictions published for, the particular STAR procedure.

6.4.2 Prior to issuance, ATC may notify expectation or availability of a STAR with either “EXPECT STAR CLEARANCE” or “STAR CLEARANCE AVAILABLE".

Important safety message: *Receipt of a STAR procedure without a cleared level does not authorise the aircraft to descend on the STAR vertical profile.*

6.4.3 Figure 103 shows an example of ATC issuing a STAR clearance without assigning descent. Accordingly, the aircraft is expected to maintain Flight Level 310 until ATC issues explicit “DESCEND VIA STAR TO” instructions

Communicator	Communication
 pilot	CAPRICORN CENTRE FASTAIR 345 FLIGHT LEVEL 320
 ATS	FASTAIR 345 CAPRICORN CENTRE CLEARED SALTY THREE ALFA ARRIVAL ARGOS TRANSITION RUNWAY 23 MAINTAIN FLIGHT LEVEL 320
 pilot	CLEARED SALTY THREE ALFA ARRIVAL ARGOS TRANSITION RUNWAY 23 MAINTAIN FLIGHT LEVEL 320 FASTAIR 345
 ATS	FASTAIR 345 DESCEND VIA STAR TO 10 000
 pilot	DESCEND VIA STAR TO 10 000 FASTAIR 345

Figure 103: Issuance of a STAR clearance with later descent

6.4.4 Issuance of a STAR clearance with level assignment ‘VIA STAR TO’ is an ATC instruction for the aircraft to commence descent immediately to the assigned level, in accordance with the speed and level restrictions for that STAR. As shown in Figure 104, descent at pilot discretion is only acceptable if cleared “when ready".

Communicator	COMMUNICATION
ATS	FASTAIR 345 CLEARED SALTY THREE ZULU ARRIVAL KLAVA TRANSITION RUNWAY 05 WHEN READY DESCEND VIA STAR TO 9 000 QNH 1013
pilot	CLEARED SALTY THREE ZULU ARRIVAL KLAVA TRANSITION RUNWAY 05 WHEN READY DESCEND VIA STAR TO 9 000 QNH 1013 FASTAIR 345
pilot	FASTAIR 345 LEAVING FLIGHT LEVEL 320
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000
pilot	DESCEND VIA STAR TO 3 000 FASTAIR 345

Figure 104: STAR clearance with descent when ready

6.4.5 As shown in Figure 105, ATC may tactically cancel a particular STAR restriction. The pilot is expected to comply with all the speed and level restrictions specified for the STAR procedure other than the cancelled STAR restriction.

Communicator	Communication
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 CANCEL LEVEL RESTRICTIONS
pilot	DESCEND VIA STAR TO 3 000 CANCEL LEVEL RESTRICTIONS FASTAIR 345
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 CANCEL LEVEL RESTRICTION AT PORTS
pilot	DESCEND VIA STAR TO 3 000 CANCEL LEVEL RESTRICTION AT PORTS FASTAIR 345
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 CANCEL SPEED RESTRICTION AT MUMOS
pilot	DESCEND VIA STAR TO 3 000 CANCEL SPEED RESTRICTION AT MUMOS FASTAIR 345

Figure 105: Cancelled STAR restriction

6.4.6 ATC may issue an ATC speed restriction, which would remain in force until specifically cancelled or amended by ATC or until a later slower speed restriction comes in effect in accordance with the STAR procedure. Figure 106 shows a typical radiotelephony exchange.

Communicator	Communication
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 REDUCE SPEED TO 240 KNOTS OR LESS
pilot	DESCEND VIA STAR TO 3 000 REDUCE SPEED TO 240 KNOTS OR LESS FASTAIR 345

Figure 106: STAR with ATC speed restriction

6.4.7 As shown in Figure 107, ATC may apply a speed restriction or cancel published restrictions, but later require the aircraft to resume published STAR restrictions.

Communicator	Communication
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 CANCEL SPEED RESTRICTIONS
pilot	DESCEND VIA STAR TO 3 000 CANCEL SPEED RESTRICTIONS FASTAIR 345
ATS	FASTAIR 345 RESUME PUBLISHED SPEED
pilot	RESUME PUBLISHED SPEED FASTAIR 345
ATS	FASTAIR 345 DESCEND TO 3 000 CANCEL LEVEL AND SPEED RESTRICTIONS
pilot	DESCEND TO 3 000 CANCEL LEVEL AND SPEED RESTRICTIONS FASTAIR 345
ATS	FASTAIR 345 DESCEND VIA STAR TO 2 000 RESUME PUBLISHED LEVEL AND SPEED RESTRICTIONS
pilot	DESCEND VIA STAR TO 2 000 RESUME PUBLISHED LEVEL AND SPEED RESTRICTIONS FASTAIR 345

Figure 107: Resuming restrictions on a STAR

6.4.8 As shown in Figure 108, ATC may instruct the aircraft to bypass a particular waypoint or waypoints.

Communicator	Communication
ATS	FASTAIR 345 CLEARED DIRECT KEVEK DESCEND VIA STAR TO 3 000
pilot	CLEARED DIRECT KEVEK DESCEND VIA STAR TO 3 000 FASTAIR 345

Figure 108: Bypassing a waypoint on a STAR

6.4.9 ATC may vector a flight off the STAR and may or may not give prior notice about rejoining the STAR. ATC instructions to rejoin the STAR will not include the STAR designator if a rejoin expectation was provided. Figure 109 shows typical examples.

Communicator	Communication
ATS	FASTAIR 345 TURN RIGHT HEADING 3-5-0 DESCEND TO 8 000 EXPECT TO REJOIN STAR AT KEVEK
pilot	TURN RIGHT HEADING 3-5-0 DESCEND TO 8 000 FASTAIR 345
ATS	FASTAIR 345 CLEARED DIRECT KEVEK REJOIN STAR DESCEND VIA STAR TO 3 000
pilot	DIRECT KEVEK REJOIN STAR DESCEND VIA STAR TO 3 000 FASTAIR 345
ATS	FASTAIR 345 CLEARED DIRECT KEVEK REJOIN PORTS NINE PAPA ARRIVAL DESCEND VIA STAR TO 3 000
pilot	DIRECT KEVEK REJOIN PORTS NINE PAPA ARRIVAL DESCEND VIA STAR TO 3 000 FASTAIR 345

Figure 109: Vectoring off a STAR

6.4.10 When an aircraft is cleared via a STAR and ATC subsequently clears the aircraft for visual approach, the aircraft is expected to follow the horizontal profile of the procedure and comply with published speed restrictions. When issuing a visual approach, ATC may re-emphasis the requirement to track via the STAR horizontal profile. Figure 110 shows an example of a clearance for visual approach after a STAR.

Communicator	Communication
ATS	FASTAIR 345 DESCEND VIA STAR TO 3 000 REPORT VISUAL
pilot	DESCEND VIA STAR TO 3 000 WILCO FASTAIR 345
pilot	FASTAIR 345 VISUAL
ATS	FASTAIR 345 CLEARED VISUAL APPROACH TRACKING VIA THE STAR *or* FASTAIR 345 CLEARED VISUAL APPROACH

Communicator	Communication
 pilot	VISUAL APPROACH TRACKING VIA THE STAR FASTAIR 345 *or* VISUAL APPROACH FASTAIR 345

Figure 110: Visual approach after a STAR

7 Visual

7.1 General

7.1.1 This section deals with:

- visual approach operations
- operations by an IFR aircraft operating with visual reference to ground or water (thus the pilot is responsible to see and avoid obstacles)
- occasions where the pilot of an IFR aircraft temporarily adopts VFR procedures.

7.1.2 The word ‘visual’ in radiotelephony means:

a. When used by ATC – an instruction to a pilot to see and avoid obstacles while conducting flight below the minimum vectoring altitude (MVA), minimum sector altitude (MSA) or lowest safe altitude (LSALT)

b. When used by a pilot:

i. acceptance of responsibility to see and avoid obstacles while operating below the MVA or MSA/LSALT

ii. for an arriving aircraft, the ability to comply with the requirements of a visual approach if so cleared.

7.1.3 Where applicable, ATC will append the word “VISUAL” to ATC clearances or instructions.

7.1.4 By night, ATC will clear an arriving aircraft to descend below LSALT so that descent will occur within the aerodrome circling area or for an aircraft operating VFR at night – within 3 NM of destination.

7.1.5 Figure 111 shows examples of phraseologies associated with the word “visual", and expectation or request for visual approach

Communicator	Communication
 pilot	CAPRICORN APPROACH FASTAIR 435 DESCENDING TO 6 000 VISUAL RECEIVED QUEBEC
 ATS	FASTAIR 345 CAPRICORN APPROACH DESCEND TO 3 500 VISUAL
 pilot	DESCEND TO 3 500 VISUAL FASTAIR 345
 pilot	PQR DESCENDING TO 5 000 PASSING 10 000
 ATS	PQR REPORT VISUAL
 pilot	WILCO PQR
 ATS	FASTAIR 345 REPORT RUNWAY IN SIGHT

Communicator	Communication
 pilot	FASTAIR 345 RUNWAY IN SIGHT
 ATS	PQR REPORT RUNWAY LIGHTS IN SIGHT
 pilot	PQR RUNWAY LIGHTS IN SIGHT
 ATS	PQR WHEN ESTABLISHED IN THE CIRCLING AREA DESCEND TO 2 000 VISUAL
 pilot	WHEN ESTABLISHED IN THE CIRCLING AREA DESCEND TO 2 000 VISUAL PQR

Figure 111: ‘Visual'

7.1.6 A pilot should immediately tell ATC if conditions change such that the pilot will not be able to continue with visual reference to the ground or water or continue a visual approach.

7.2 Visual approach

7.2.1 Visual approach applies to both IFR and VFR aircraft. For IFR aircraft, a visual approach is an approach when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain. For VFR aircraft, carrying out a visual approach ensures a VFR aircraft will follow a predicable path when arriving at an aerodrome.

7.2.2 The pilot of an arriving aircraft may request a visual approach either directly or by reporting “VISUAL” at some point. However, at some locations and where the weather is suitable, visual approach may be the nominated approach type for all aircraft – ATIS: “Expect independent visual approach”.

Figure 112 shows examples of phraseologies associated with the word ‘visual', and expectation or request for visual approach

Communicator	Communication
 pilot	CAPRICORN APPROACH FASTAIR 345 DESCENDING TO 6 000 VISUAL RECEIVED QUEBEC
 ATS	FASTAIR 345 CAPRICORN APPROACH DESCEND TO 3 500 VISUAL EXPECT VISUAL APPROACH
 pilot	DESCEND TO 3 500 VISUAL FASTAIR 345
 pilot	PQR REQUEST VISUAL APPROACH
 ATS	PQR CLEARED VISUAL APPROACH REPORT SIGHTING DASH 8 4 MILE FINAL
 pilot	CLEARED VISUAL APPROACH WILCO PQR

Communicator	Communication
 pilot	PQR DASH 8 IN SIGHT
 ATS	PQR NUMBER TWO FOLLOW THE DASH 8 CAUTION WAKE TURBULENCE
 pilot	NUMBER 2 COPIED WAKE TURBULENCE PQR
 ATS	*{A night-time scenario}* XYZ FROM 3 MILES CLEARED VISUAL APPROACH REPORTING ENTERING DOWNWIND
 pilot	FROM 3 MILES CLEARED VISUAL APPROACH WILCO XYZ
 ATS	FASTAIR 345 WHEN ESTABLISHED IN THE CIRCLING AREA CLEARED VISUAL APPROACH REPORT PASSING 3 000
 pilot	WHEN ESTABLISHED IN THE CIRCLING AREA CLEARED VISUAL APPROACH WILCO FASTAIR 345
 ATS	FASTAIR 345 WHEN ESTABLISHED ON THE VASIS CLEARED VISUAL APPROACH
 pilot	WHEN ESTABLISHED ON THE VASIS CLEARED VISUAL APPROACH FASTAIR 345
 ATS	ATIS: “CAPRICORN TERMINAL INFORMATION X-RAY …EXPECT INDEPENDENT VISUAL APPROACH …”
 pilot	CAPRICORN DIRECTOR FASTAIR 435 HEADING 070 MAINTAINING 3 000
 ATS	FASTAIR 435 CAPRICORN DIRECTOR TURN LEFT HEADING 010 JOIN FINAL RUNWAY 34 LEFT FROM THAT HEADING CLEARED INDEPENDENT VISUAL APPROACH
 pilot	LEFT HEADING 010 JOIN FINAL RUNWAY 34 LEFT CLEARED INDEPENDENT VISUAL APPROACH FASTAIR 345
 ATS	FASTAIR 345 TRAFFIC BOEING 737 RUNWAY RIGHT AHEAD
 pilot	FASTAIR 345 TRAFFIC SIGHTED

Figure 112: ‘Visual'

7.3 IFR aircraft making a VFR or visual departure or VFR arrival

7.3.1 With use of the word ‘visual', the pilot of an IFR flight may request a visual departure, or ATC may issue a visual departure. The pilot of an IFR flight departing a Class D aerodrome may also request a VFR departure with the expectation of obtaining an IFR clearance en route. Figure 113 shows examples of the phraseology.

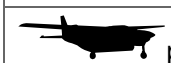
Communicator	Communication
 ATS	FASTAIR 345 CANCEL SID ASSIGNED HEADING RIGHT 360 *VISUAL* CLEARED FOR TAKE-OFF
 pilot	CANCEL SID ASSIGNED HEADING RIGHT 360 *VISUAL* CLEARED FOR TAKE-OFF FASTAIR 345
 pilot	PQR REQUEST VISUAL DEPARTURE
 ATS	PQR CLEARED FOR TAKE-OFF MAKE RIGHT TURN VISUAL
 pilot	CLEARED FOR TAKE-OFF MAKE RIGHT TURN VISUAL PQR
 pilot	PQR REQUEST VFR DEPARTURE
 ATS	PQR VFR DEPARTURE APPROVED TRAFFIC IS MULTIPLE VFR AIRCRAFT IN THE TRAINING AREA CLEARED FOR TAKE-OFF MAKE LEFT TURN
 pilot	COPIED TRAFFIC CLEARED FOR TAKE-OFF MAKE LEFT TURN PQR
 pilot	*… later when PQR enters Class G airspace and wishes to resume IFR* CENTRE PQR 4 000 RESUMING IFR
 ATS	PQR CENTRE NO IFR TRAFFIC
 pilot	SUBURBS TOWER CARAVAN PQR 15 MILES NORTHWEST REQUEST CLEARANCE RECEIVED VICTOR
 ATS	PQR SUBURBS TOWER DUE PRECEDING IFR TRAFFIC EXPECT 5 MINUTES DELAY FOR CLEARANCE
 pilot	PQR CANCEL IFR REQUEST VFR ARRIVAL
 ATS	PQR IFR CANCELLED OPERATE VFR CLEARED DIRECT TO SUBURBS ON A VISUAL APPROACH REPORT AT THE ZONE BOUNDARY
 pilot	IFR CANCELLED OPERATE VFR DIRECT TO SUBURBS ON A VISUAL APPROACH WILCO PQR

Figure 113: VFR or visual departure/arrival

7.4 Operations below lowest safe altitudes

7.4.1 The pilot of an IFR aircraft may request and be granted clearance for operations below published minimum altitudes. This may involve use of night vision imaging system (NVIS) or the pilot advising intent to maintain own terrain clearance. Figure 114 shows examples of phraseologies.

Communicator	Communication
 pilot	TOWER HELICOPTER RESCUE ONE REQUEST NOT ABOVE 2 000 PILOT CALCULATED LOWEST SAFE NVIS
 ATS	RESCUE ONE TOWER OPERATE NOT ABOVE 2 000 PILOT CALCULATED LOWEST SAFE NVIS
 pilot	OPERATE NOT ABOVE 2 000 NVIS RESCUE ONE
 pilot	HELICOPTER POLAIR TWO REQUEST NOT ABOVE 3 000 NVIS
 ATS	POLAIR TWO OPERATE NOT ABOVE 3 000 NVIS
 pilot	NOT ABOVE 3 000 NVIS POLAIR TWO
 pilot	PQR REQUEST OPERATIONS WITHIN AREA ALFA NOT ABOVE 3 000 OWN TERRAIN CLEARANCE
 ATS	PQR OPERATE WITHIN AREA ALFA NOT ABOVE 3 000 MAINTAIN OWN TERRAIN CLEARANCE
 pilot	AREA ALFA NOT ABOVE 3 000 MAINTAIN OWN TERRAIN CLEARANCE PQR

Figure 114: Phraseologies for operations published minimum altitudes

7.5 VFR climb/descent, VFR-on-top and IFR pick-up

7.5.1 In Class D or E airspace, the pilot of an IFR flight may request VFR climb or descent to avoid delays otherwise necessary for IFR separation.

7.5.2 In Class E airspace, the pilot of an IFR flight may request to operate VFR-on-top, or climb IFR through cloud, haze, smoke, or other meteorological formation to VFR-on-top.

7.5.3 The pilot of a flight operating to the IFR in Class G airspace may change to VFR upon entering Class E airspace to avoid delay. The pilot should inform ATC about expectation for IFR clearance - once available - via the phrase “REQUEST IFR PICK-UP”.

7.5.4 Figure 115 shows examples of phraseology for VFR climb/descent, VFR-on-top and the IFR pick-up.

Communicator	Communication
 pilot	PQR REQUEST DESCENT

Communicator	Communication
 ATS	PQR MAINTAIN 7 000 DUE TRAFFIC
 pilot	PQR REQUEST VFR DESCENT
 ATS	PQR DESCEND VFR TO 3 000 TRAFFIC IS A BARON SAME TRACK 3 MINUTES AHEAD MAINTAINING 6 000 REPORT PASSING 5 000
 pilot	DESCEND VFR TO 3 000 COPIED TRAFFIC WILCO PQR
 pilot	CENTRE PQR MAINTAINING FLIGHT LEVEL 110 REQUEST VFR-ON-TOP FLIGHT LEVEL 115 UNTIL PAMSVILLE
 ATS	PQR CENTRE MAINTAIN VFR-ON-TOP FLIGHT LEVEL 115 REPORT LEAVING FLIGHT LEVEL 110
 pilot	MAINTAIN VFR-ON-TOP LEFT FLIGHT LEVEL 110 AND NOW MAINTAINING FLIGHT LEVEL 115 PQR
 ATS	PQR
 pilot	CENTRE PQR MAINTAINING 3 000 REQUEST CLIMB TO VFR-ON-TOP
 ATS	PQR CENTRE CLIMB TO VFR-ON-TOP NOT ABOVE 9 500 REPORT REACHING VFR-ON-TOP NO TOPS REPORTS
 pilot	CLIMB TO VFR-ON-TOP NOT ABOVE 9 500 WILCO PQR
 pilot	PQR VFR-ON-TOP 8 500
 ATS	PQR MAINTAIN VFR-ON-TOP
 pilot	MAINTAIN VFR-ON-TOP PQR
 pilot	*… later and no longer wishing to operate VFR-on-top* PQR REQUEST 10 000 IFR
 ATS	PQR CLIMB TO 10 000 IFR
 pilot	10 000 PQR
 pilot	CENTRE PQR DEPARTED MINETOWN 50 TRACKING 120 PASSING 3 000 CLIMBING TO FLIGHT LEVEL 120 REQUEST CLEARANCE
 ATS	PQR CENTRE CLEARANCE NOT AVAILABLE DUE [REASON] REMAIN OUTSIDE CLASS E AIRSPACE EXPECT 10 MINUTES DELAY AREA QNH 1014

Communicator	Communication
 pilot	PQR AREA QNH 1014 CLIMBING VFR TO 9 500 REQUEST IFR PICK-UP
 ATS	PQR WILL ADVISE

Figure 115: VFR climb/descent, VFR-on-top and IFR pick-up

8 Area control

8.1 General

8.1.1 Much of the phraseology used in area control is of a general nature. 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 ATC may require that an assigned level must be reached by a specific time, distance or place. ATC must be advised immediately if a pilot doubts that the restriction can be met.

8.1.3 ATC advice of an expectation of a level restriction does not authorise a pilot to climb or descend to meet that restriction.

8.1.4 The examples in Figure 116 below 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.

Communicator	COMMUNICATION
 pilot	FASTAIR 345 REQUEST DESCENT
 ATS	FASTAIR 345 MAINTAIN FLIGHT LEVEL 350 EXPECT DESCENT AFTER SUNNYTOWN
 pilot	MAINTAINING FLIGHT LEVEL 350 FASTAIR 345
 ATS	PQR DESCEND TO 8 000 CROSS LAKETOWN NOT BELOW FLIGHT LEVEL 120
 pilot	DESCENDING TO 8 000 CROSS LAKETOWN NOT BELOW FLIGHT LEVEL 120 PQR
 ATS	FASTAIR 345 ARE YOU ABLE TO REACH FLIGHT LEVEL 210 BY SUNNYTOWN
 pilot	FASTAIR 345 AFFIRM
 ATS	FASTAIR 345 CLIMB TO FLIGHT LEVEL 350 CROSS SUNNYTOWN AT FLIGHT LEVEL 210 OR ABOVE
 pilot	CLIMB TO FLIGHT LEVEL 350 CROSS SUNNYTOWN AT FLIGHT LEVEL 210 OR ABOVE FASTAIR 345
 ATS	FASTAIR 345 REPORT REVISED ESTIMATE FOR MAKIR
 pilot	FASTAIR 345 ESTIMATE MAKIR 1246

Figure 116: General area phraseology

8.1.5 Aircraft arriving at aerodromes where land and hold short operations (LAHSO) are in use will be informed via ATIS when LAHSO is in operation. Pilots of Australian civil aircraft operating under a flight number call sign and pilots of Australian military aircraft generally do not need to inform ATC about their eligibility for LAHSO, However, pilots of other aircraft able to participate in LAHSO should so inform ATC when the aircraft reaches 200 miles from destination or as soon as possible after entering controlled airspace en route to the LAHSO airport. On the other hand, if an aircraft or crew that would normally participate actively or passively in LAHSO does not meet the criteria for participation, this should be communicated to ATC at the earliest opportunity.

8.1.6 Figure 117 shows examples of communications about participating in LAHSO.

Communicator	Communication
 pilot	PQR LAHSO APPROVED
 pilot	FASTAIR 345 NEGATIVE LAHSO
 pilot	FASTAIR 345 NEGATIVE ACTIVE LAHSO
 pilot	FASTAIR 345 NEGATIVE PASSIVE LAHSO

Figure 117: Participating in LAHSO

8.2 Position information

8.2.1 As shown in Figure 118, ATC may instruct a pilot to provide additional position report information as well as routine reports.

Communicator	Communication
 pilot	FASTAIR 345 REPORT PASSING MAKIR
 ATS	WILCO FASTAIR 345
 pilot	FASTAIR 345 MAKIR 47 FLIGHT LEVEL 350 UNAGI 55
 ATS	FASTAIR 345 ROGER
 ATS	FASTAIR 345 REPORT 25 MILES GNSS FROM BRIDGETOWN
 pilot	WILCO FASTAIR 345

Communicator	Communication
 ATS	FASTAIR 345 REPORT DISTANCE FROM SUNRISETOWN
 pilot	FASTAIR 345 IS 37 DME FROM SUNRISETOWN
 ATS	FASTAIR 345 REPORT PASSING 270 RADIAL LAKETOWN VOR
 pilot	WILCO FASTAIR 345

Figure 118: Position information

8.3 Block level clearances

8.3.1 Level information consists of climb and descent clearances or instructions and reports of leaving, reaching and passing levels, as detailed in section 3.14 of this AC.

8.3.2 ATC may issue block level clearances to facilitate operations in adverse weather or to allow flight crews to optimise fuel burn for an aircraft.

8.3.3 A block level clearance is cancelled or amended by the issuing of a new vertical clearance.

8.3.4 Figure 119 shows typical examples of phraseologies for initiating and terminating block level clearances.

Communicator	Communication
 pilot	PQR REQUEST BLOCK LEVEL 6 000 TO 10 000
 ATS	PQR MAINTAIN BLOCK 6 000 TO 10 000
 pilot	MAINTAIN BLOCK 6 000 TO 10 000 PQR
 ATS	FASTAIR 345 REPORT LEVEL
 pilot	FASTAIR 345 FLIGHT LEVEL 290
 ATS	FASTAIR 345 CANCEL BLOCK CLEARANCE CLIMB TO FLIGHT LEVEL 310 REPORT MAINTAINING
 pilot	CANCEL BLOCK CLEARANCE CLIMBING TO FLIGHT LEVEL 310 WILCO FASTAIR 345

Figure 119: Typical block level clearances

8.3.5 ATC providing a surveillance service will receive a Predicted Level Mismatch alert if the selected level entered into the mode control panel/flight control unit of an enhanced surveillance (EHS) Mode-S equipped aircraft does not match the cleared level issued by the controller or intermediate level contained in the standard route clearance. ATC will advise the aircraft of the discrepancy by: “Fastair 345, check selected level, cleared level is 10 000”

8.4 Flights entering controlled airspace

8.4.1 As shown in Figure 120, IFR or VFR aircraft requiring to enter controlled airspace should make their request to the appropriate ATS unit in sufficient time to allow ATC to assess the traffic situation and issue a clearance prior to the aircraft reaching controlled airspace.

Communicator	COMMUNICATION
pilot	CAPRICORN CENTRE PQR
ATS	PQR CAPRICORN CENTRE
pilot	PQR ESTIMATING MALCOLMTOWN 45 MAINTAINING 9 000 REQUEST CLEARANCE
ATS	PQR ENTER CONTROLLED AIRSPACE AT MALCOLMTOWN CLEARED TO RIVERTOWN VIA GARDENCITY FLIGHT PLANNED ROUTE MAINTAIN 9 000 SQUAWK 5472 QNH 1014
pilot	ENTER CONTROLLED AIRSPACE AT MALCOLMTOWN CLEARED TO RIVERTOWN VIA GARDENCITY FLIGHT PLANNED ROUTE MAINTAIN 9 000 SQUAWK 5472 QNH 1014 PQR

Figure 120: Clearance to enter controlled airspace

8.4.2 As shown in Figure 121, ATC may not be able to immediately issue clearance to enter controlled airspace. This may be because of the prevailing traffic situation. ATC may issue a transponder (squawk) code to assist with assessing the traffic situation. This does not constitute a clearance to enter controlled airspace.

Communicator	Communication
ATS	PQR REMAIN OUTSIDE CLASS D AIRSPACE EXPECT 10 MINUTES DELAY
pilot	REMAIN OUTSIDE CLASS D AIRSPACE PQR
ATS	XYZ REMAIN OUTSIDE CLASS C AIRSPACE REMAIN THIS FREQUENCY SQUAWK 4503
pilot	REMAIN OUTSIDE CLASS C AIRSPACE SQUAWK 4503 WILCO XYZ
ATS	XYZ CLEARANCE NOT AVAILABLE REMAIN OUTSIDE RESTRICTED AIRSPACE
pilot	REMAIN OUTSIDE RESTRICTED AIRSPACE XYZ

Figure 121: Clearance not available

8.5 Flights leaving controlled airspace

8.5.1 As shown in Figure 122 below, flights leaving controlled airspace will normally be given instructions or information for the level or specific point at which controlled airspace is vacated.

Communicator	Communication
 pilot	FASTAIR 345 SUNNYTOWN 17 FLIGHT LEVEL 160 MINETOWN 33
 ATS	FASTAIR 345 LEAVE CONTROLLED AIRSPACE DESCENDING TO MINETOWN ON PASSING FLIGHT LEVEL 125 - CONTACT CENTRE ON 123.4 REPORT SWITCHING
 pilot	LEAVE CONTROLLED AIRSPACE DESCENDING CENTRE 123.4 PASSING FLIGHT LEVEL 125 WILCO FASTAIR 345

Figure 122: Leaving controlled airspace

8.5.2 As shown in Figure 123, aircraft sometimes require a clearance to leave and re-enter controlled airspace. For example, an unpressurised aircraft requiring a shallow descent profile that cannot be contained within the control area steps.

Communicator	Communication
 pilot	PQR REQUEST DESCENT
 ATS	PQR LEAVE AND REENTER CONTROLLED AIRSPACE DESCENDING TO 2 000 QNH 1014 NO REPORTED IFR TRAFFIC
 pilot	LEAVING 8 000 FOR 2 000 QNH 1014 PQR

Figure 123: Clearance to leave and enter controlled airspace

8.6 Reduced Vertical Separation Minimum (RVSM) Phraseology

8.6.1 The phraseologies in **Error! Reference source not found.** below should be used for controller-pilot communications for RVSM operations.

Communicator	Communication
 ATS	FASTAIR 345 CONFIRM RVSM APPROVED
 pilot	NEGATIVE RVSM FASTAIR 345 *or* AFFIRM RVSM FASTAIR 345

Communicator	Communication
 pilot	FASTAIR 345 FLIGHT LEVEL 320 UNABLE RVSM DUE TURBULENCE
 ATS	FASTAIR 345 ROGER NO RESTRICTING TRAFFIC MAINTAIN FLIGHT LEVEL 320
 pilot	MAINTAIN FLIGHT LEVEL 320 FASTAIR 345
 pilot	FASTAIR 345 PASSING FLIGHT LEVEL 200 UNABLE RVSM DUE EQUIPMENT FAILURE
 ATS	FASTAIR 345 ROGER RECLEARED FLIGHT LEVEL 290
 pilot	FLIGHT LEVEL 290 FASTAIR 345

Figure 124: RVSM communications

8.6.2 Pilots should report non-approved status during operations in, or vertical transit through, RVSM airspace as follows:

a. at initial call on any channel within RVSM airspace;

b. in all requests for level changes; and

c. in all read backs of level clearances.

8.6.3 ATS should explicitly acknowledge receipt of messages from aircraft reporting RVSM non-approved status.

8.7 Weather deviations

8.7.1 When weather deviation is likely, the pilot of an aircraft should notify ATC and request clearance to deviate from track or ATS route, advising, when possible, the extent of the deviation from track or route requested. The flight crew will use whatever means are appropriate (i.e. voice and/or CPDLC) to communicate during a weather deviation.

8.7.2 When the urgency for weather deviation increases, the pilot should consider making the request by stating “weather deviation required”, or if critical situations dictate by using the urgency call “PAN PAN” (preferably spoken three times) or by using a CPDLC urgency downlink message.

8.7.3 Pilots should inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

8.7.4 Figure 125 has examples of communications associated with weather deviations.

Communicator	Communication
 pilot	CENTRE FASTAIR 345 REQUEST TO DEVIATE UP TO 20 MILES LEFT OF ROUTE DUE WEATHER

Communicator	Communication
 ATS	FASTAIR 345 DEVIATE UP TO 20 MILES LEFT OF ROUTE
 pilot	UP TO 20 MILES LEFT OF ROUTE FASTAIR 345
 pilot	CENTRE FASTAIR 345 CLEAR OF WEATHER REQUEST DIRECT MAKIR
 ATS	FASTAIR 345 CLEARED DIRECT MAKIR FLIGHT LEVEL 320
 pilot	DIRECT MAKIR FLIGHT LEVEL 320 FASTAIR 345
 pilot	*After weather deviation if so requested…* FASTAIR 345 BACK ON ROUTE
 ATS	FASTAIR 345

Figure 125: Communications for weather deviations

8.8 GNSS operating integrity

8.8.1 Flight operations and air traffic services, in particular aircraft separation, are critically dependent on accurate aircraft navigation and position fixing. ATS should be notified of any loss of GNSS integrity due to loss of RAIM or RAIM ALERT or any inability to comply with RNP.

8.8.2 Figure 126 shows examples of phraseology relating to GNSS availability, loss of RAIM or unable RNP.

Communicator	Communication
 ATS	PQR REPORT GNSS DISTANCE FROM BRIDGETOWN
 pilot	PQR 26 MILES GNSS BRIDGETOWN NEGATIVE RAIM
 ATS	PQR CONFIRM GNSS NAVIGATION
 pilot	PQR AFFIRM GNSS NAVIGATION *or* PQR GNSS UNAVAILABLE DUE TO LOSS OF RAIM
 pilot	FASTAIR 345 UNABLE RNP DUE TO RAIM ALERT

Communicator	Communication
ATS	FASTAIR 345 ROGER
pilot	PQR GNSS AVAILABLE
ATS	FASTAIR 345 ROGER

Figure 126: GNSS availability, loss of RAIM or unable RNP

8.9 Parachute operations

8.9.1 The pilot of an aircraft carrying out parachuting operations should make a broadcast advising the intention to drop parachutists prior to parachutists exiting the aircraft. The broadcast should be made on all relevant frequencies for airspace through which the parachutists may descend.

8.9.2 If the parachuting occurs in the vicinity of a non-controlled aerodrome, an additional broadcast should be made not less than 4 minutes before the parachutists leave the aircraft.

8.9.3 ATC may require the pilot of the aircraft to report when the aircraft and parachutists are clear of controlled airspace.

8.9.4 Figure 127 shows an example of parachuting communications where the parachutists will exit the aircraft within Class C airspace, then descent through non-controlled airspace for landing at a non-controlled aerodrome.

Communicator	Communication
pilot	CENTRE XYZ OVERHEAD BACKIST MARCH FLIGHT LEVEL 145 READY TO DROP
ATS	XYZ CLEAR TO DROP
pilot	CLEAR TO DROP XYZ
pilot	ALL STATIONS BACKIST MARCH XYZ FLIGHT LEVEL 145 PARACHUTISTS ABOUT TO DROP OVER BACKIST MARCH AERODROME
pilot	ALL STATIONS BACKIST MARCH XYZ FLIGHT LEVEL 145 CHUTES AWAY
ATS	XYZ REPORT CLEAR OF CLASS C AIRSPACE
pilot	XYZ WILCO
pilot	CENTRE XYZ AIRCRAFT AND PARACHUTISTS CLEAR OF CLASS C AIRSPACE

Communicator	Communication
 ATS	XYZ ROGER

Figure 127: Parachuting communications

8.10 Automatic Dependent Surveillance - Contract and Controller-Pilot Datalink Communications

8.10.1 As shown in Figure 128, when the Automatic Dependent Surveillance - Contract (ADS-C) services are degraded, the pilot may be informed by voice.

Communicator	Communication
 ATS	FASTAIR 345 ADS-C OUT OF SERVICE *or* FASTAIR 345 ADS-CONTRACT OUT OF SERVICE
 pilot	FASTAIR 345

Figure 128: ADS-C out of service

8.10.2 Figure 129 shows typical voice communications relating to the status of Controller-Pilot Datalink Communications (CPDLC).

Communicator	Communication
 ATS	ALL STATIONS CPDLC FAILURE ALL COMMUNICATIONS ON HF CAPRICORN RADIO 5410
 ATS	FASTAIR 345 DISREGARD CPDLC CLIMB MESSAGE BREAK CLIMB TO FLIGHT LEVEL 350
 ATS	ALL STATIONS RESUME NORMAL CPDLC OPERATIONS

Figure 129: CPDLC status

8.11 Traffic information broadcasts by aircraft (TIBA)

8.11.1 TIBA are reports and information transmitted by pilots for the information of pilots of other aircraft in the vicinity following a significant disruption to air traffic or aeronautical telecommunications services. Transmissions under TIBA procedures are to be prefixed with “ALL STATIONS” and call sign. Figure 130 shows examples of TIBA broadcasts.

Communicator	Communication
 pilot	ALL STATIONS FASTAIR 345 WESTBOUND SMALLTOWN TO SUNNYTOWN LEAVING FLIGHT LEVEL 150 DESCENDING TO 8 000 ESTIMATING SUNNYTOWN ON THE HOUR
 pilot	ALL STATIONS PQR GASTOWN 14 FLIGHT LEVEL 120 SUNNYTOWN 43

Figure 130: TIBA broadcast

9 Non-controlled airspace and non-controlled aerodromes

9.1 Best practice in non-controlled communications

9.1.1 Concise, effective, timely communications can enhance pilot situation awareness in non-controlled airspace and helps to overcome some of the limitations of see and avoid. On the other hand, using aviation communication channels for chatter and announcement of every move causes congestion and increases the chance of essential communications being missed.

9.2 ATS traffic information for aircraft

9.2.1 As shown in Figure 131, ATS will provide information to IFR flights and VFR aircraft receiving a surveillance information service about known or observed traffic.

Communicator	Communication
 pilot	CENTRE PQR DEPARTED LAVERTON AT 45 TRACKING DIRECT CELSO ON CLIMB 8 000 ESTIMATING CELSO AT 55
 ATS	PQR CENTRE TRAFFIC IS FASTJET 345 AIRBUS 220 DEPARTED MINETOWN 42 DIRECT CELSO CLIMBING TO FLIGHT LEVEL 350
 pilot	COPIED TRAFFIC PQR

Figure 131: Traffic information

9.3 Traffic broadcasts in Class E or G airspace

9.3.1 Pilots of radio-equipped VFR aircraft should monitor the appropriate VHF frequency and announce if in potential conflict. Pilots intercepting broadcasts from aircraft which are considered to be in potential conflict must acknowledge by transmitting own call sign and, as appropriate, aircraft type, position, actual level and intentions. Figure 132 shows a typical example of an exchange of traffic information between two aircraft.

Communicator	COMMUNICATION
 pilot	MINETOWN TRAFFIC CARAVAN PQR IFR DEPARTED MINETOWN 50 TRACKING 120 CLIMBING TO 8 000 MINETOWN
 pilot	PQR CESSNA 172 XYZ 10 MILES SOUTH EAST OF MINETOWN 4 500 OVERFLYING MINETOWN THEN TRACKING NORTHWEST
 pilot	XYZ PCR ROGER MAINTAINING 3 500 LOOKING FOR YOU
 pilot	PCR XYZ LOOKING

Figure 132: Traffic information exchange

9.4 Operations at non-controlled aerodromes

9.4.1 Subsection 21.04 of the Part 91 MOS requires the pilot in command of an aircraft must make broadcasts when reasonably necessary to avoid risk of a collision with another aircraft if:

a. the pilot is operating at, or in the vicinity of, a non-controlled aerodrome (including a certified or military aerodrome when non-controlled)

b. the aircraft is equipped with an operative VHF radio

c. the pilot is qualified to use the radio.

9.4.2 A broadcast should include the:

- name of the aerodrome
- aircraft's type and call sign
- position of the aircraft and the pilot's intentions.

9.4.3 Effective radio communication requires the pilot to use standard aviation phraseology. Effective communication and increased traffic awareness will help prevent a collision or an Airprox event. In addition, avoid the use of local terminology in position reports, for example use 'Bundaberg' instead of 'Bundy'

9.4.4 Pilot broadcasts should be brief and clear. Pilots are advised to think about their message before transmitting.

9.4.5 Table 33 and Table 34 set out the recommended broadcasts on the aerodrome frequency (depending on circumstance). However, pilots may use discretion in determining the number and type of broadcasts they make. For example, when operating from a private or remote airstrip, a single broadcast declaring an intention to take-off and track in particular direction may be all that is required where there is no response to the initial transmission.

Table 33 – Recommended positional broadcasts - all circumstances

Situation	Broadcast
The pilot intends to take-off	Immediately before or during taxiing
The pilot is inbound to an aerodrome	10 NM from the aerodrome or earlier commensurate with aeroplane performance and pilot workload with an estimated time of arrival (ETA) for the aerodrome
The pilot intends to fly through the vicinity of but not land at a non-controlled aerodrome	10NM from the aerodrome or earlier commensurate with aeroplane performance and pilot workload with an estimated time of arrival

Table 34: Recommended positional broadcasts - depending on traffic situation

Situation	Broadcast
The pilot intends to enter a runway	Immediately before entering a runway
The pilot is ready to join the circuit	Immediately before joining the circuit
The pilot intends to make a straight-in approach	On final approach at not less than 3 NM from the threshold (See Note)

Situation	Broadcast
The pilot intends to join on base leg	Prior to joining on base
During an Instrument Approach when: • departing FAF or established on final approach segment inbound • terminating the approach, commencing the missed approach.	Including details of position and intentions that are clear to all pilots (both IFR and VFR)
The aircraft is clear of the active runway(s)	Once established outside the runway strip

Note: Some distances above refer to the runway threshold and others to the aerodrome reference point. Pilots should be aware that a GNSS indication of 3 NM from an aerodrome may not be 3 NM from the runway threshold.

9.5 Arrival at a non-controlled aerodrome

9.5.1 The fundamental principle of operating in the vicinity of a non-controlled aerodrome is for pilots to only make the broadcasts necessary to ensure other aircraft are aware of each other.

9.5.2 When arriving at a non-controlled aerodromes, pilots should monitor their radios and broadcast their intentions in accordance with the following and in paragraph 9.4.5:

a. when in the vicinity of an aerodrome published on aeronautical charts, listen and broadcast as necessary on the CTAF (126.7 MHz or discrete)

b. when aerodromes are located within a Mandatory Broadcast Area, listen and broadcast as necessary on the frequency for the Mandatory Broadcast Area

c. in all other cases, it is recommended to listen and broadcast as necessary on the Area VHF.

9.5.3 Pilots of IFR aircraft arriving at a non-controlled aerodrome should inform ATS if switching from the area frequency so that communications are entirely to the CTAF.

9.5.4 As shown in Figure 133 below, the standard broadcast format for low and medium performance aircraft arriving or operating at a non-controlled aerodrome is:

- *(Location)* Traffic.
- Aircraft Type.
- Call sign.
- Flight rules if IFR.
- Position/Level/Intentions
- *(Location).*

Communicator	Communication
 pilot	CENTRE PQR 10 MILES NORTH-EAST OF MINETOWN CHANGING TO CTAF WILL CANCEL SARWATCH THIS FREQUENCY AFTER LANDING
 ATS	PQR CENTRE

Communicator	Communication
 pilot	MINETOWN TRAFFIC CESSNA CARAVAN PQR IFR 10 MILES NORTH-EAST OF MINETOWN PASSING 3 000 POSITIONING FOR STRAIGHT-IN APPROACH RUNWAY 20 MINETOWN
 pilot	MINETOWN TRAFFIC AIRBUS 220 FASTJET 345 IFR BEARING 310 MINETOWN 20 MILES PASSING 10 000 TO OVERFLY FOR DOWNWIND RUNWAY 20 MINETOWN
 pilot	MINETOWN TRAFFIC CESSNA 172 XYZ BASE RUNWAY 20 FULLSTOP MINETOWN
 pilot	XYZ FASTJET 345 ESTIMATING OVERHEAD ON THE HOUR
 pilot	FASTJET 345 XYZ NOW ON FINAL

Figure 133: Communications during arrival at a non-controlled aerodrome

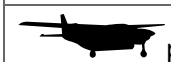
9.6 IFR departures from non-controlled aerodromes

9.6.1 The pilot of an IFR aircraft intending to depart from a non-controlled aerodrome should report to ATC on taxiing. If the pilot is unable to establish contact, the flight may proceed on a broadcast basis if contact is established as soon as possible after take-off.

Note: For some flight operations, requirements may apply in regards assured contact with an operator or representative, or a SARTIME for departure.

9.6.2 Reports to ATC are additional to recommended positional broadcasts on the CTAF.

9.6.3 Figure 134 shows typical exchanges between an aircraft and Centre in surveillance airspace

Communicator	Communication
 pilot	CAPRICORN CENTRE CARAVAN PQR IFR MINETOWN FOR THORNHILL POB 4 TAXIING RUNWAY 20 REQUEST CLEARANCE
 ATS	PQR CAPRICORN CENTRE CLEARED TO THORNHILL VIA MAKIR FLIGHT PLANNED ROUTE FLIGHT LEVEL 120 SQUAWK 4512 AREA QNH 1014 NO REPORTED IFR TRAFFIC
 pilot	CLEARED TO THORNHILL VIA MAKIR FLIGHT PLANNED ROUTE FLIGHT LEVEL 120 SQUAWK 4512 AREA QNH 1014 PQR
 pilot	*PQR makes all standard broadcasts on the CTAF using the format described in paragraph 9.4.5, for example:* MINETOWN TRAFFIC CESSNA CARAVAN PQR IFR TAXING VIA ALFA TO HOLDING POINT RUNWAY 20 MINETOWN
 pilot	CENTRE PQR DEPARTURE

Communicator	Communication
ATS	PQR CENTRE
pilot	PQR 5 MILES NORTHEAST OF MINETOWN PASSING 3 000 CLIMBING TO FLIGHT LEVEL 110 ESTIMATING MAKIR 45
ATS	PQR IDENTIFIED

Figure 134: Non-controlled aerodrome departure into surveillance airspace

9.6.4 Figure 135 shows typical exchanges between an aircraft and Centre in non-surveillance airspace

Communicator	Communication
pilot	CAPRICORN CENTRE CARAVAN PQR IFR MINETOWN FOR ASCOT POB 4 TAXIING RUNWAY 20
ATS	PQR CAPRICORN CENTRE NO REPORTED IFR TRAFFIC AREA QNH 1014
pilot	AREA QNH 1014 PQR
	[PQR makes all standard broadcasts on the CTAF]
pilot	CENTRE PQR DEPARTURE
ATS	PQR CENTRE
pilot	PQR DEPARTED MINETOWN 23 TRACKING 310 PASSING 3 000 CLIMBING TO 7 000 ESTIMATING ASCOT 50
ATS	PQR NO ADDITIONAL TRAFFIC
pilot	PQR

Figure 135: Non-controlled aerodrome departure into non-surveillance airspace

9.7 Operations at a non-controlled aerodrome with an aerodrome information service

9.7.1 Aerodrome information services are local flight information services provided at several non-controlled aerodromes. There are several forms of aerodrome information services:

- Aerodrome Flight Information Service (AFIS)
- Surveillance Flight Information Service (SFIS)
- Certified Air/Ground Radio Service (CA/GRS).

9.7.2 Communications at aerodromes with local flight information services is similar to those at non-controlled aerodromes without these services, except that:

a. the identifier of the service should be included together with the "(relevant location identifier if different) traffic' for the initiation of communications (e.g. 'Hedland information and traffic)

b. positional reports specified for the 10NM position should instead be made at or before the boundary of the relevant Broadcast Area

c. the service at some locations requires a departure report for both IFR and VFR aircraft on the BA frequency (see AIP ERSA for the requirements that apply at each location).

9.7.3 Figure 136 shows examples of radio communications at an aerodrome with aerodrome information service.

Communicator	Communication
 pilot	SUNNY BEACH RADIO AND TRAFFIC AIRBUS 220 FASTJET 345 IFR FOR CAPRICORN TAXIING RUNWAY 20 INFORMATION BRAVO
 AGS	FASTJET 345 SUNNY BEACH RADIO NO REPORTED TRAFFIC SQUAWK 3412 AIRWAYS CLEARANCE AVAILABLE[3]
 pilot	SQUAWK 3412 GO AHEAD CLEARANCE FASTJET 345
 AGS	FASTJET 345 CLEARED SUNNY BEACH TO CAPRICORN VIA MAKIR FLIGHT PLANNED ROUTE FLIGHT LEVEL 320
 pilot	SUNNY BEACH TO CAPRICORN VIA MAKIR FLIGHT PLANNED ROUTE FLIGHT LEVEL 320 FASTJET 345
 pilot	SUNNY BEACH TRAFFIC AIRBUS 220 FASTJET 345 ENTERING AND BACKTRACKING RUNWAY 20 SUNNY BEACH
 pilot	SUNNY BEACH TRAFFIC AIRBUS 220 FASTJET 345 ROLLING RUNWAY 20 SUNNY BEACH
 pilot	SUNNY BEACH TRAFFIC AIRBUS 220 FASTJET 345 DEPARTED 42 PASSING 4 000 CLIMBING TO FLIGHT LEVEL 320 ESTIMATING MAKIR AT 55 SUNNY BEACH
 AGS	FASTJET 345 CONTACT CAPRICORN CENTRE 120.1
 pilot	CAPRICORN CENTRE 120.1 FASTJET 345
 pilot	SUNNY BEACH RADIO AND TRAFFIC CARAVAN PQR 15 MILES NORTHEAST OF SUNNY BEACH ON DESCENT PASSING 6 000

[3] Some aerodrome information services can relay an SSR code and airways clearance from the relevant Centre.

Communicator	Communication
	POSITIONING FOR STRAIGHT-IN APPROACH RUNWAY 19 RECEIVED INFORMATION CHARLIE SUNNY BEACH
 AGS	PQR SUNNY BEACH RADIO NO TRAFFIC
 pilot	PQR
 pilot	SUNNY BEACH TRAFFIC CARAVAN PQR 5-MILE FINAL RUNWAY 19 SUNNY BEACH

Figure 136: Aerodrome information service communications

9.8 SARWATCH and SARTIME

9.8.1 Initiation or extension of SARWATCH other than SARTIME

9.8.1.1 SARWATCH for IFR flights is automatically initiated on first contact with ATC, either taxiing or on departure. No special radiotelephony phrase is used.

9.8.1.2 As shown in Figure 137 below, pilots of IFR flights conducting local training, an instrument approach, or a holding pattern, may extend their SARWATCH by advising intention to report normal operations at scheduled times.

Communicator	Communication
 pilot	CENTRE PQR NAVAID TRAINING AT MONTVILLE
 ATS	PQR CENTRE REPORT OPERATIONS NORMAL BY TIME 30
 pilot	OPERATIONS NORMAL BY TIME 30 PQR

Figure 137: Extending SARWATCH time

9.8.2 Cancellation of SARWATCH other than SARTIME

9.8.2.1 As shown in the examples in Figure 138, when cancelling SARWATCH, pilots must include in the transmission:

- the aircraft radio call sign
- place of arrival or point from which SARWATCH services are no longer required
- the words “CANCEL SARWATCH”
- when communicating with a unit other than the unit with which SARWATCH was nominated — the name of the ATS unit to which the report should be relayed.

Communicator	Communication
 pilot	CENTRE FASTAIR 345 LANDED MINETOWN CANCEL SARWATCH
 ATS	FASTAIR 345 CENTRE MINETOWN SARWATCH TERMINATED
 pilot	FLIGHTWATCH PQR LANDED MINETOWN CANCEL SARWATCH ADVISE CAPRICORN CENTRE
 AGS	PQR FLIGHTWATCH SARWATCH CANCELLED WILCO

Figure 138: Cancelling SARWATCH

9.8.3 Nomination and cancellation of SARTIME

9.8.3.1 The pilot of a VFR flight wishing to use a SARTIME should provide ATS with the following details:

- call sign
- aircraft type
- departure point
- route to be flown
- destination
- POB
- SARTIME.

Note: Only one SARTIME may be current at any time. To prevent the existence of multiple SARTIMEs for aircraft used by more than one pilot, SARTIMEs should be nominated immediately before the start of each flight.

9.8.3.2 Having nominated a SARTIME, the pilot of a VFR aircraft must ensure that the SARTIME is cancelled on completion of the flight.

9.8.3.3 Figure 139 shows examples of SARTIMEs nominated and cancelled

Communicator	Communication
 pilot	FLIGHTWATCH XYZ SARTIME DETAILS
 AGS	XYZ FLIGHTWATCH
 pilot	XYZ CESSNA 172 MONTVILLE DIRECT TO MINETOWN POB 2 SARTIME FOR ARRIVAL MINETOWN 0530

Communicator	Communication
 AGS	XYZ COPIED SARTIME FOR ARRIVAL MINETOWN 0530
 pilot	CENTRE XYZ LANDED MINETOWN CANCEL SARTIME
 ATS	XYZ CENTRE MINETOWN SARTIME CANCELLED

Figure 139: Nominating and cancelling a SARTIME

9.8.4 SARTIME for Departure

9.8.4.1 A pilot of an IFR public transport flight may nominate a SARTIME for departure either as part of the arrival report or when submitting flight notification by the phrase “SARTIME for departure”.

9.8.4.2 An IFR departure report is not sufficient to cancel a SARTIME for Departure. Pilots who have nominated a SARTIME for Departure must use the phrase “CANCEL SARTIME” with the departure report.

9.8.4.3 Figure 140 shows examples of nominating and cancelling a SARTIME for departure.

Communicator	Communication
 pilot	CENTRE PQR CIRCUIT AREA RIDGEVILLE SARTIME FOR DEPARTURE 0230
 ATS	PQR RIDGEVILLE SARWATCH TERMINATED COPIED SARTIME FOR DEPARTURE 0230
 pilot	CENTRE PQR DEPARTURE
 ATS	PQR CENTRE
 pilot	PQR DEPARTED RIDGEVILLE AT 20 TRACKING DIRECT MINETOWN ON CLIMB 8 000 ESTIMATING MAKIR AT 50 CANCEL SARTIME
 ATS	PQR SARTIME CANCELLED NO REPORTED TRAFFIC AREA QNH 1011
 pilot	AREA QNH 1011 PQR

Figure 140: Nominating and cancelling a SARTIME for departure

9.9 Vehicles on non-controlled aerodromes

9.9.1 An airside vehicle operating on a runway strip, a runway, a taxiway strip or a taxiway of a non-controlled aerodrome must be either:

a. equipped with at least a VHF receiver capable of monitoring the CTAF or ATC frequencies, as applicable;

or

b. under escort by another vehicle meeting the requirement of b.

9.9.2 Chapter 14 of the Part 139 MOS also states that if using a transmitter, the operator of an airside vehicle operating on a runway strip, a runway, a taxiway strip or a taxiway:

a. must be certified under Part 64 of CASR for the use of radiocommunication equipment

b. must monitor the relevant frequency at all times when operating on the manoeuvring area.

9.9.3 As shown in Figure 141 below, transmissions from a vehicle operating on the manoeuvring area of a non-controlled aerodrome should follow the same format as applies to an aircraft. Specifically, a transmission should consist of:

- *(Location)* Traffic
- Vehicle identifier (e.g. Car 1)
- Position/Intentions
- *(Location).*

9.9.4 Figure 141 shows examples of vehicle communications on a non-controlled aerodrome.

Communicator	Communication
 vehicle	MINETOWN TRAFFIC CAR 1 ON TAXIWAY BRAVO ENTERING RUNWAY 20 FOR AN INSPECTION MINETOWN
 vehicle	MINETOWN TRAFFIC CAR 1 VACATED RUNWAY 20 MINETOWN
 vehicle	MINETOWN TRAFFIC TENDER 2 ON TAXIWAY CHARLIE CROSSING RUNWAY 20 MINETOWN
 vehicle	MINETOWN TRAFFIC TENDER 2 VACATED RUNWAY 20 MINETOWN

Figure 141: Vehicle communications on a non-controlled aerodrome

10 Distress and urgency phraseology

10.1 States of emergency

10.1.1 The states of emergency are classified as follows:

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

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

10.1.2 A pilot should start the emergency call with the appropriate international prefix as follows:

a. Distress “MAYDAY, MAYDAY, MAYDAY."

b. Urgency “PAN PAN, PAN PAN, PAN PAN."

10.2 General procedures

10.2.1 Pilots are urged – in their own interests – to request assistance as soon as there is any doubt about the safe conduct of their flight. Even then, the provision of assistance may be delayed if a pilot does not pass clear details of their difficulties and requirements, using the international standard RTF prefix ‘MAYDAY, MAYDAY, MAYDAY’ or ‘PAN PAN, PAN PAN, PAN PAN’ as appropriate. For example, a vague request from a pilot for ‘confirmation of position’ is unlikely to be accorded as much priority as would be given to a statement that they are lost. If, subsequent to the transmission of a ‘MAYDAY’ or ‘PAN’, a pilot considers the problem not to be as serious as first thought and priority attention is no longer required, the emergency condition may be cancelled at the pilot’s discretion. It is invariably preferable for pilots believing themselves to be facing emergency situations to declare them as early as possible and then cancel later if they decide the situation allows.

10.2.2 If a pilot is already in communication with ATS, before the emergency arises, assistance should be requested from the controller on the frequency in use. In this case, any SSR code setting previously assigned by ATC may be retained at the discretion of either the pilot or the controller.

10.2.3 If, however, the pilot is not in direct communication with ATS and the aircraft is equipped with an SSR transponder it should be switched to Emergency Code 7700, with Mode C if available. If the aircraft is within surveillance system cover, the selection of the Emergency 7700 Code will alert ATS to the presence of an incident by means of an audio and visual warning. The received SSR response will show the precise location of the aircraft on the controller’s ATS surveillance system display, and potentially avoid the need for time consuming identification measures.

10.2.4 Emergency message

10.2.4.1 The emergency message shall contain the following information (time and circumstance permitting) and, whenever possible, should be passed in the order given:

a. “MAYDAY, MAYDAY, MAYDAY” (or “PAN PAN, PAN PAN, PAN PAN”).

b. Name of the station addressed (when appropriate and time and circumstances permitting).

c. Call sign.

d. Type of aircraft.

e. Nature of the emergency.

f. Intention of the person-in-command.

g. Present or last known position, flight level/altitude and heading.

h. Pilot qualifications (See Note below), including:

   i. Student pilot.

   ii. No Instrument Qualification.

   iii. Private IFR Rating.

   iv. Instrument Rating.

i. Any other useful information. For example, . endurance remaining, number of people on board (POB), aircraft colour/markings, any survival aids.

Note: There is no requirement to include pilot qualifications in a distress message. However, this information should be included whenever possible as it may help the ats to plan a course of action best suited to the pilot's ability.

10.3 Distress message

10.3.1 Figure 142 shows examples of distress (MAYDAY) messages.

Communicator	Communication
 pilot	MAYDAY MAYDAY MAYDAY XYZ ENGINE ON FIRE UNABLE TO MAINTAIN HEIGHT MAKING FORCED LANDING POSITION 2 MILES SOUTH OF STONYTOWN PASSING 3 000 HEADING 360 POB 1
 ATS	XYZ CENTRE ROGER MAYDAY
 pilot	MAYDAY MAYDAY MAYDAY THORNHILL TOWER XYZ ENGINE FAILED ATTEMPTING LANDING AT THORNHILL POSITION 10 MILES NORTH OF SUNRISETOWN AT 8 000 HEADING 180
 ATS	XYZ THORNHILL TOWER ROGER MAYDAY CLEARED STRAIGHT-IN RUNWAY 22 WIND LIGHT AND VARIABLE QNH 1008 YOU ARE NUMBER ONE
 pilot	STRAIGHT-IN RUNWAY 22 QNH 1008 XYZ

Figure 142: Distress message

10.3.2 The station in distress is permitted to impose silence, either to all stations or any station which interferes with the distress traffic. Figure 143 shows examples of radio silence being imposed.

Communicator	Communication
 ATS	ALL STATIONS STOP TRANSMITTING MAYDAY
 ATS	XYZ STOP TRANSMITTING MAYDAY

Communicator	Communication
ATS	XYZ REMAIN THIS FREQUENCY BREAK BREAK ALL OTHER AIRCRAFT CONTACT THORNHILL TOWER 118.1

Figure 143: Radio silence for distress traffic

10.3.3 Radio silence should be observed by other stations until:

a. distress traffic is transferred to another frequency

or

b. controlling station gives permission

or

c. it has itself to render assistance,

or

d. the distress is cancelled/terminated.

10.3.4 As shown in Figure 144, when the pilot of the distress aircraft considers the emergency complete and cancels the distress; the controlling station will then transmit a message on the frequency used for the distress traffic.

Communicator	Communication
pilot	XYZ CANCEL DISTRESS ENGINE POWER RESTORED
ATS	XYZ CENTRE ROGER ALL STATIONS DISTRESS TRAFFIC ENDED

Figure 144: Cancel distress traffic

10.4 Urgency messages

10.4.1 Figure 145 shows examples of urgency (PAN PAN) messages.

Communicator	Communication
pilot	PAN PAN – PAN PAN – PAN PAN CAPRICORN CENTRE XYZ ROUGH-RUNNING ENGINE REQUEST ASSISTANCE FOR LANDING AT CAPRICORN POSITION APPROXIMATELY 15 MILES WEST MAINTAINING 2 000 HEADING 180
ATS	XYX CAPRICORN CENTRE ROGER PAN SQUAWK IDENT
pilot	IDENT XYZ
ATS	XYX IDENTIFIED TURN LEFT HEADING 090 MAINTAIN 2 000

Communicator	Communication
 pilot	LEFT HEADING 090 MAINTAIN 2 000 XYX
 ATS	XYZ CONTINUE HEADING 090 CAPRICORN AERODROME IS IN YOUR 12 O'CLOCK 5 MILES REPORT AERODROME IN SIGHT
 pilot	CONTINUE HEADING 090 AERODROME IN SIGHT XYZ
 ATS	XYZ CLEARED FOR VISUAL APPROACH STRAIGHT IN RUNWAY 11 CONTACT CAPRICORN TOWER 118.1
 pilot	STRAIGHT-IN RUNWAY 11 CAPRICORN TOWER 118.1 XYZ
 pilot	CAPRICORN TOWER XYZ
 ATS	XYZ CAPRICORN TOWER PAN ACKNOWLEDGED CLEARED TO LAND RUNWAY 11 WIND 120 DEGREES 5 KNOTS
 pilot	CLEARED TO LAND RUNWAY 11 XYZ
 pilot	PAN PAN – PAN PAN – PAN PAN THORNHILL TOWER XYZ PASSENGER WITH SUSPECTED HEART ATTACK REQUEST PRIORITY LANDING POSITION FIVE MILES EAST OF THORNHILL HEADING 270 LEAVING 3000
 ATS	XYZ THORNHILL TOWER ROGER PAN NUMBER ONE JOIN BASE RUNWAY 22 WIND 180 DEGREES 10 KNOTS QNH 1008
 pilot	RUNWAY 22 QNH 1008 XYZ

Figure 145: Urgency message

10.5 Emergency descent

10.5.1 When an emergency descent is in progress, ATC may broadcast an emergency message on appropriate frequencies to warn other aircraft. The broadcast may include specific instructions, clearances or traffic information as necessary. Figure 146 shows examples of communications during an emergency descent.

Communicator	Communication
 ATS	ALL STATIONS EMERGENCY DESCENT AT BEACHTOWN NORTH ALL AIRCRAFT BETWEEN BEACHTOWN AND RIVERTOWN BELOW FL200 FLY HEADING 250 IMMEDIATELY
 pilot	FASTAIR 345 EMERGENCY DESCENT TO 10 000
 ATS	FASTAIR 345 NO TRAFFIC ON DESCENT TO 10 000 QNH 1015 ADVISE WHEN MAINTAINING LEVEL

 pilot	10 000 QNH 1015 WILCO FASTAIR 345

Figure 146: Emergency descent

10.6 Traffic alert and collision avoidance system (TCAS)

TCAS equipment reacts to transponders of other aircraft in the vicinity to determine whether or not there is a potential confliction The equipment can give a warning about proximate traffic {Traffic advisory (TA)} escalating if necessary to an escape manoeuvre {Resolution advisory (RA)} Pilots should report all TCAS RA manoeuvres. Figure 147 shows examples of TCAS RA communications

Communicator	Communication
 pilot	FASTAIR 345 TCAS RA
 ATS	FASTAIR 345 ROGER
 pilot	FASTAIR 345 CLEAR OF CONFLICT RETURNING TO FLIGHT LEVEL 350
 ATS	FASTAIR 345 ROGER
 pilot	FASTAIR 345 CLEAR OF CONFLICT FLIGHT LEVEL 320 RESUMED
 ATS	FASTAIR 345 ROGER
 ATS	FASTAIR 345 DESCEND IMMEDIATELY TO FLIGHT LEVEL 150
 pilot	*If an ATC clearance or instruction is contradictory to the TCAS RA; the pilot will follow the RA and inform ATC directly…* FASTAIR 345 UNABLE TO COMPLY TCAS RA
 ATS	FASTAIR 345 ROGER

Figure 147: TCAS RA communications

10.7 Safety alerts

10.7.1 As shown in Figure 148, ATC will issue a Safety Alert to aircraft, in all classes of airspace, when they become aware that an aircraft is in a situation that is considered to place it in unsafe proximity to:

a. terrain

b. obstruction

c. active restricted or prohibited areas

or

d. other aircraft.

Communicator	COMMUNICATION
 ATS	XYZ SAFETY ALERT UNKNOWN TRAFFIC 1 O'CLOCK 3 MILES OPPOSITE DIRECTION FAST MOVING
 pilot	XYZ LOOKING
 ATS	PQR SAFETY ALERT LOW ALTITUDE WARNING CHECK YOUR ALTITUDE IMMEDIATELY QNH IS 1014 THE MINIMUM SAFE ALTITUDE IS 3 900
 pilot	PQR CLIMBING TO 3 900
 ATS	PQR SAFETY ALERT TERRAIN CHECK YOUR ALTITUDE IMMEDIATELY THE MINIMUM SAFE ALTITUDE IS 2 100
 pilot	PQR VISUAL WITH TERRAIN
 ATS	PQR SAFETY ALERT ACTIVE RESTRICTED AREA AHEAD TURN LEFT IMMEDIATELY HEADING 360
 pilot	LEFT HEADING 360 PQR
 ATS	XYZ SAFETY ALERT YOU ARE INSIDE ACTIVE RESTRICTED AIRSPACE SUGGEST DESCEND IMMEDIATELY TO 3 500 OR BELOW
 pilot	XYZ UNABLE TO DESCEND DUE CLOUD REQUEST CLEARANCE
 ATS	XYZ UNABLE TO ISSUE CLEARANCE PROCEED AT YOUR OWN RISK SQUAWK 7700
 pilot	7700 XYZ

Figure 148: Safety alert communication

10.8 Fuel shortage

10.8.1 A declaration from a pilot of "MINIMUM FUEL" informs ATC that having committed to land at a specific aerodrome, the pilot in command calculates that any change to the existing clearance to that aerodrome may result in landing with less than fixed fuel reserve.

10.8.2 When a pilot reports a state of minimum fuel, the controller must inform the pilot as soon as practicable of any anticipated delays or that no delays are expected. Pilots can expect ATC to tell them of any change to expected delays as soon as practicable.

10.8.3 Pilots should not expect any form of priority handling as a result of a “MINIMUM FUEL” declaration.

10.8.4 The pilot in command must declare a situation of emergency fuel by broadcasting the distress message “MAYDAY MAYDAY MAYDAY FUEL", when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the final reserve fuel. In circumstances where a normal approach and landing is expected and the pilot assesses there is no requirement for emergency services, ATS should be so advised as early as possible.

10.8.5 Figure 149 shows examples of fuel shortage communications.

Communicator	Communication
pilot	CAPRICORN APPROACH FASTAIR 345 MINIMUM FUEL
ATS	FASTAIR 345 CAPRICORN APPROACH MINIMUM FUEL ACKNOWLEDGED EXPECTED APPROACH TIME ON THE HOUR
pilot	FASTAIR 345
pilot	MAYDAY MAYDAY MAYDAY FUEL FASTAIR 345
ATS	FASTAIR 345 ROGER MAYDAY FUEL TURN RIGHT HEADING 130 VECTORS DIRECT TO FINAL APPROACH
pilot	RIGHT HEADING 130 EXPECTING NORMAL APPROACH AND LANDING EMERGENCY SERVICES NOT REQUIRED

Figure 149: Fuel shortage communications

10.9 Aircraft communications failure

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

10.9.2 If the attempts specified under 10.9.1 fail, the aircraft should 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.

10.9.3 When an aircraft is unable to establish communication due to receiver failure, it should 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 should transmit the intended message, following this by a complete repetition. During this procedure, the aircraft should also advise the time of its next intended transmission.

10.9.4 An aircraft which is provided with ATC or advisory service should, in addition to complying with 10.9.3, transmit information regarding the intention of the pilot-in-command with respect to the continuation of the flight of the aircraft.

10.9.5 When an aircraft is unable to establish communication due to airborne equipment failure, it should, if so equipped, select the appropriate SSR code to indicate radio failure (7600) and/or set the ADS-B transmitter to indicate the loss of air-ground communications.

10.9.6 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 should:

a. request other aeronautical stations to render assistance by calling the aircraft and relaying traffic, if necessary

and/or

b. request aircraft on the route to attempt to establish communication with the aircraft and relay messages, if necessary.

10.9.7 If the attempts specified in paragraph 10.9.6 fail, the aeronautical station should transmit messages addressed to the aircraft, other than messages containing ATC clearances, by blind transmission on the frequency(ies) on which the aircraft is believed to be listening.

10.9.8 Blind transmission of ATC clearances should not be made to aircraft, except at the specific request of the originator.

10.9.9 Speechless communications

10.9.9.1 Table 35 details actions that a pilot can take to alert ATC that the aircraft is able to receive communications, but unable to transmit voice communications. The procedure can be used to receive and acknowledge instructions and guidance.

Table 35: Speechless communications

Circumstances	Phraseologies
1. Pilot request for assistance from ATS	a. Pilot transmits four (4) separate and distinct unmodulated transmissions of one second duration.
2. Pilot response to questions from ATS:	
a. Affirm or acknowledgment	i. one (1) distinct transmission.
b. Negative	i. two (2) separate and distinct transmissions.
c. Say again	i. three (3) separate and distinct transmissions.
3. Pilot indication of a further and pertinent unserviceability or an emergency	a. Five (5) separate and distinct transmissions.
4. Pilot indication of abandoning the aircraft	a. A single continuous transmission as long as practicable.
5. Controller requires pilot to indicate when an instruction has been completed	a. "when (condition or instruction is completed) make a two second transmission".

10.10 Assistance to aircraft with communications or navigation failure

10.10.1 When a controller suspects that an aircraft can receive but not transmit messages, the ATS surveillance system may be used to confirm that the pilot has received instructions. Figure 150 shows examples of methods used to establish that an aircraft can receive messages.

Communicator	Communication
ATS	FASTAIR 345 REPLY NOT RECEIVED IF YOU READ CAPRICORN CENTRE SQUAWK IDENT … FASTAIR 345 IDENT OBSERVED POSITION 50 MILES EAST OF MONTA WILL CONTINUE TO PASS INSTRUCTIONS
ATS	XYZ REPLY NOT RECEIVED IF YOU READ - TURN LEFT HEADING 040 … XYZ TURN OBSERVED POSITION FIVE MILES SOUTH OF SUNNYTOWN WILL CONTINUE TO PASS INSTRUCTIONS
ATS	PQR IF YOU READ THORNHILL APPROACH SQUAWK 3214 … PQR SQUAWK OBSERVED POSITION 10 MILES WEST OF SUNNYTOWN VOR WILL CONTINUE TO PASS INSTRUCTIONS
ATS	PQR SUSPECT YOUR DIRECTION INDICATOR HAS FAILED
pilot	PQR REQUEST NAVIGATION ASSISTANCE TO BORDERTOWN
ATS	PQR ATS SURVEILLANCE SERVICE WILL CONTINUE MAKE ALL TURNS RATE ONE EXECUTE INSTRUCTIONS IMMEDIATELY UPON RECEIPT
ATS	PQR TURN LEFT NOW
pilot	TURN LEFT PQR
ATS	PQR STOP TURN NOW
pilot	PQR

Figure 150: Surveillance assistance for radio failures

Appendix A
Detailed radio communication phrases

A.1 Introduction

A.1.1 This annex is a comprehensive listing of individual phrases used in radio communications.

A.1.2 In the tables, a phrase prefixed with:

- an asterisk (*) denotes a pilot or vehicle driver transmission
- a hash (#) denotes a phrase unique to Australia
- a triangle symbol (▲) denotes a phrase used in military operations.

A.1.3 Words in parentheses "( )" indicate that specific information, such as a level, a place, or a time, etc, must be inserted to complete the phrase, or alternatively, that optional phrases may be used.

A.1.4 Words in square parentheses "[ ]" indicate optional additional words or information that may be necessary in specific instances.

A.2 General phraseology

A.2.1 This section covers phraseologies that apply generally.

A.2.2 Vertical levels, separation and procedures

A.2.2.1 Table 36 lists phraseologies relating to vertical levels, vertical separation and associated procedures.

Table 36: Vertical levels, separation and procedures

Circumstances	Phraseologies
1. Description of Levels (subsequently referred to as "(level)"	a. FLIGHT LEVEL (number) or b. (number) [FEET]
2. Level Instructions when there is an expectation that the aircraft will maintain the level or to eliminate confusion, the instruction "AND MAINTAIN" shall be included	a. CLIMB (or DESCEND) followed as necessary by: (i) TO (level) (ii) TO AND MAINTAIN (level) (iii) TO REACH (level) AT (or BY) (time or significant point) (iv) TO (level) REPORT LEAVING (or REACHING or PASSING or APPROACHING) (level) (v) AT (number) FEET PER MINUTE [MINIMUM (or MAXIMUM)]
when rate is required to be in accordance with "STANDARD RATE" specifications	(vi) AT STANDARD RATE
when advising expectation of a level restriction	b. EXPECT A RESTRICTION TO REACH (level) BY (time or position) followed as necessary by (a)

Circumstances	Phraseologies
	c. STEP CLIMB (or DESCENT) (aircraft identification) ABOVE (or BENEATH) YOU d. REQUEST LEVEL CHANGE FROM (name of unit) AT (time or significant point) e. STOP CLIMB (or DESCENT) AT (level) f. CONTINUE CLIMB (or DESCENT) TO [AND MAINTAIN] (level) g. EXPEDITE CLIMB (or DESCENT) [UNTIL PASSING (level)] h. EXPECT CLIMB (or DESCENT) AT (time or location)
pilot requesting a change of level	i.* REQUEST CLIMB (or DESCENT) [AT (time or location)] [TO (level)]
when a descent clearance is issued in relation to the DME (or GNSS) steps	#j. DESCEND TO (level) NOT BELOW DME (or GNSS) STEPS
for a request by an IFR flight to climb/descend VFR	#k.* REQUEST VFR CLIMB (or DESCENT) [TO (level)] l.* CLIMB (or DESCEND) VFR to (level)
IFR separation is available for part of the climb/descent	m. CLIMB (or DESCEND) [TO (assigned level)] followed as necessary by: (i) CLIMB (or DESCEND) VFR BETWEEN (level) AND (level)] (ii) CLIMB (or DESCEND) VFR BELOW (or ABOVE) (level)
3. NVIS Operations for operations not above a published or pilot calculated LSALT using NVIS.	a.* REQUEST NOT ABOVE (altitude) (PILOT CALCULATED [or PUBLISHED] LOWEST SAFE) NVIS b. CLIMB (or DESCEND) TO (or OPERATE NOT ABOVE) (altitude) [PILOT CALCULATED LOWEST SAFE] NVIS
for operations at (or not above) a level which is below the published or pilot calculated LSALT using NVIS.	c.* REQUEST [NOT ABOVE] (altitude) NVIS d. CLIMB (or DESCEND) TO (or OPERATE NOT ABOVE) (altitude) NVIS
when climbing to regain LSALT/MSA other than in accordance with assigned airways clearance	e.* CLIMBING TO (level), (reason e.g. NVIS failure or inadvertent IMC)
4. Pilots without NVIS requesting operations below the published LSALT at night or in IMC.	a.* REQUEST (DESCENT or CLIMB or OPERATIONS) [AT (NOT ABOVE)] (altitude) OWN TERRAIN CLEARANCE b. CLIMB TO (or DESCEND TO or OPERATE) [AT (NOT ABOVE)] (altitude) MAINTAIN OWN TERRAIN CLEARANCE
5. Maintenance of Specified Levels	a. MAINTAIN (level) [TO (significant point)] [condition]

Circumstances	Phraseologies
Note: The term "MAINTAIN" will not to be used in lieu of "DESCEND" or "CLIMB" when instructing an aircraft to change level	
6. Use of Block Levels	#a.* REQUEST BLOCK LEVEL (level) TO (level) #b.* CLIMB (or DESCEND) TO AND MAINTAIN BLOCK (level) TO (level)
established in the level range	#c. MAINTAIN BLOCK (level) TO (level)
cancelling block level clearance	#d. CANCEL BLOCK CLEARANCE. CLIMB (or DESCEND) TO AND MAINTAIN (level)
7. Specification of Cruising Levels	a. CROSS (significant point) AT (or ABOVE, or BELOW) (level) b. CROSS (significant point) AT (time) OR LATER (or BEFORE) AT (level)
reply to cruise climb request	c. CRUISE CLIMB NOT AVAILABLE [reason]
8. Where an aircraft operation requires random climb and descent at and below (or at and above) a specified level.	#a. OPERATE NOT ABOVE (or BELOW) (level)

A.2.3 SIDs and STARs

A.2.3.1 Table 37 lists phrases relating to standard instrument departures.

Table 37: Standard instrument departures

Circumstances	Phraseologies
1. Issuing a SID	a. CLEARED (SID designator) DEPARTURE (level instruction)
2. Clearance to climb on a SID a. comply with published level restrictions b. follow the lateral profile of the SID c. comply with published speed restrictions and ATC-issued speed control instructions	a. CLIMB VIA SID TO (level)
3. During a SID climb: a. published level restrictions are cancelled b. follow the lateral profile of the SID c. comply with published speed restrictions and ATC-issued speed control instructions	a. [CLIMB VIA SID TO (level)], CANCEL LEVEL RESTRICTION(S)
4. During a SID climb:	a. [CLIMB VIA SID TO (level)], CANCEL LEVEL RESTRICTION(S) AT (point(s))

Circumstances	Phraseologies
a. published level restrictions at the specified point(s) are cancelled b. follow the lateral profile of the SID c. comply with published speed restrictions and ATC-issued speed control instructions	
5. During a SID climb: a. comply with published level restrictions b. follow the lateral profile of the SID c. published speed restrictions and ATC-issued speed control instructions are cancelled	a. [CLIMB VIA SID TO (level)], CANCEL SPEED RESTRICTION(S)
6. During a SID climb: a. comply with published level restrictions b. follow the lateral profile of the SID c. published speed restriction are cancelled at the specific point(s) d. comply with ATC-issued speed control instructions	a. [CLIMB VIA SID TO (level)], CANCEL SPEED RESTRICTION(S) AT (point(s))
7. During a SID climb: a. published level restrictions are cancelled b. follow the lateral profile of the SID c. published speed restrictions and ATC-issued speed control instructions are cancelled **Note:** The phrase “CLIMB UNRESTRICTED TO...” is not used.	a. [CLIMB TO (level)], CANCEL LEVEL AND SPEED RESTRICTIONS
8. Clearance to proceed direct during a SID: a. track direct to the specified waypoint and then follow the lateral profile of the SID b. published level and speed restrictions for bypassed waypoints are cancelled c. comply with published speed and level restrictions at and after the specified waypoint **Note:** Direct tracking on a SID does not require a rejoin instruction.	a. CLEARED DIRECT (waypoint)
9. Initiation of vectoring during SID	a. TURN LEFT (or RIGHT) HEADING (three digits) [(reason)], (level instruction), [EXPECT TO REJOIN SID] [AT (waypoint)]
Clearance to proceed direct to a waypoint that is not on a SID	b. CLEARED DIRECT (waypoint) (level instruction)

Circumstances	Phraseologies
10. Rejoining a SID	a. REJOIN SID (or (SID designator)) [AT (waypoint)] [(transition restrictions)]
11. When a SID has been cancelled	a. CANCEL SID (instructions)

A.2.3.2 Table 38 lists phrases relating to standard instrument arrivals (STARs).

Table 38: Standard instrument arrivals

Circumstances	Phraseologies
1. Notification of STAR	
clearance availability (on first contact) when associated with a frequency transfer	a. EXPECT STAR CLEARANCE
Notification of STAR clearance availability when NOT associated with a frequency transfer	b. STAR CLEARANCE AVAILABLE
2. Issuing a STAR clearance	a. CLEARED (STAR designator) ARRIVAL [(name) TRANSITION] [RUNWAY(number)] (level instruction)
3. Descend to the cleared level: a. comply with published level restrictions b. follow the lateral profile of the STAR c. comply with published speed restrictions and ATC-issued speed control instructions	a. DESCEND VIA STAR TO (level)
4. During a STAR descent: a. a.published level restrictions are cancelled b. b.follow the lateral profile of the STAR c. c.comply with published speed restrictions and ATC-issued speed control instructions	a. [DESCEND VIA STAR TO (level)], CANCEL LEVEL RESTRICTION(S)
5. 5. During a STAR descent: a. published level restrictions at the specified point(s) are cancelled b. follow the lateral profile of the STAR c. comply with published speed restrictions and ATC-issued speed control instructions	a. [DESCEND VIA STAR TO (level)], CANCEL LEVEL RESTRICTION(S) AT (point(s))
6. During a STAR descent: a. comply with published level restrictions b. follow the lateral profile of the STAR c. published speed restrictions and ATC-issued speed control instructions are cancelled	a. [DESCEND VIA STAR TO (level)], CANCEL SPEED RESTRICTION(S)

Circumstances	Phraseologies
7. During a STAR descent: a. comply with published level restrictions b. follow the lateral profile of the STAR c. published speed restrictions are cancelled at the specific point(s) d. comply with ATC-issued speed control instructions	a. [DESCEND VIA STAR TO (level)], CANCEL SPEED RESTRICTION(S) AT (point(s))
8. During a STAR descent: a. published level restrictions are cancelled b. follow the lateral profile of the STAR c. published speed restrictions and ATC-issued speed control instructions are cancelled **Note:** The phrase "DESCEND UNRESTRICTED TO..." is not used.	a. DESCEND TO (level), CANCEL LEVEL AND SPEED RESTRICTIONS
9. Clearance to proceed direct during a STAR: a. track direct to the specified waypoint and then follow the lateral profile of the STAR b. published level and speed restrictions for bypassed waypoints are cancelled c. comply with published speed and level restrictions at and after the specified waypoint **Note:** Direct tracking on a STAR does not require a rejoin instruction.	a. CLEARED DIRECT (waypoint)
10. Initiation of vectoring after STAR has been issued	a. TURN LEFT (or RIGHT) HEADING (three digits) [(reason)], (level instruction), [EXPECT TO REJOIN STAR] [AT(waypoint)]
Clearance to proceed direct to a waypoint that is not on a STAR	b. CLEARED DIRECT (waypoint) (level instruction)
11. Rejoining a STAR	a. REJOIN STAR (or (STAR designator)) [AT (waypoint)] [(transition restrictions)]
12. When a STAR clearance is cancelled	a. CANCEL STAR (instructions)

A.2.4 Frequency management

A.2.4.1 Table 39 lists phrases relating to communication frequency management.

Table 39: Frequency management

Circumstances	Phraseologies
1. Transfer of Control and/or Frequency Change **Note:** An aircraft may be requested to "STAND BY" on a frequency when the intention is that the ATS unit will initiate communications, and to "MONITOR" a frequency when information is being broadcast thereon.	a. CONTACT (unit call sign) (frequency) b.* (frequency) c. AT (or OVER) (time or place) CONTACT (unit call sign) (frequency) d. IF NO CONTACT (instructions) e.* REQUEST CHANGE TO (frequency) (service) f. FREQUENCY CHANGE APPROVED
pilot requesting to maintain radio silence for a specific time or event (e.g. fuel dump)	g.* REQUEST TO MAINTAIN RADIO SILENCE DUE (reason) [UNTIL (time)]
	h. MONITOR (unit call sign) (frequency) i.* MONITORING (frequency) j. REMAIN THIS FREQUENCY
nominating scheduled reporting times	k. REPORT followed as necessary by: (i) (situation) (ii) AT (iii) BY (iv) TIME (time)
	l. STAND BY FOR (unit call sign) (frequency)
an IFR pilot changing to the CTAF	#m.* CHANGING TO (location) CTAF (frequency)
a pilot contacting next frequency when on a heading	n.* HEADING (as previously assigned)
when a pilot/ATC broadcasts general information	o.* ALL STATIONS (appropriate information)
when a pilot broadcasts location specific general information	#p.* (location) TRAFFIC (appropriate information) (location)
notifying wake turbulence category to approach, departures, director, ground and tower	q.* SUPER (or HEAVY)
ATC acknowledgment	r. SUPER (or HEAVY)
2. Termination of Identification and Control Services or Control Services only	a. [IDENTIFICATION AND] CONTROL SERVICE TERMINATED followed as necessary by: i) [DUE (reason)] ii) (instructions) iii) FREQUENCY CHANGE APPROVED
3. Flights Contacting Approach Control not identified or procedural tower	#a.* (call sign): (i)* (distance) MILES (GNSS or DME) [FROM] (aerodrome)

Circumstances	Phraseologies
	(ii) (GNSS track) TRACK ((or (VOR radial) RADIAL) or (STAR designator) or (compass quadrant from aerodrome)) (iii) MAINTAINING (or DESCENDING TO) (level) (iv) VISUAL if visual approach can be made (v) INFORMATION (ATIS identification)
4. Change of call sign to instruct an aircraft to change call sign to advise an aircraft to revert to the call sign indicated in the flight notification to ATS	a. CHANGE YOUR CALL SIGN TO (new call sign) [UNTIL FURTHER ADVISED] b. REVERT TO FLIGHT PLAN CALL SIGN (call sign) (AT (significant point))
5. After landing	a. CONTACT GROUND [frequency] b. WHEN VACATED CONTACT GROUND [frequency]
6. To request a station relay a clearance or information to a third party	a. FOR [RELAY TO] (third party call sign) (clearance or information)

A.2.5 Traffic information

A.2.5.1 Table 40 lists phrases relating to traffic information.

Table 40: Traffic information

Circumstances	Phraseologies
1. Traffic Information pilot request for traffic information to pass traffic information to acknowledge traffic information interception of relevant traffic information transmitted by other aircraft or ATS facility	 a.* REQUEST TRAFFIC #b. NO REPORTED (IFR) TRAFFIC c. [IFR] TRAFFIC (relevant information) [REPORT SIGHTING] d. [ADDITIONAL] [IFR] TRAFFIC (direction) BOUND (type of aircraft) (level) ESTIMATED (or OVER) (significant point) AT (time) e.* LOOKING f.* TRAFFIC IN SIGHT g.* NEGATIVE CONTACT (reasons) #h.* COPIED (call sign of traffic intercepted)
2. Advice of Military Aircraft Conducting Abrupt Vertical Manoeuvres	#a. ABRUPT VERTICAL MANOEUVRES AT (position) UP TO (level)
3. Advice of Military Low Jet Operations Known to be Taking Place	#a. MILITARY LOW JET OPERATIONS (relevant information)

A.2.6 Meteorology

A.2.6.1 Table 41 lists phrases relating to meteorological information.

Table 41: Meteorological information

Circumstances	Phraseologies
1. Meteorological Conditions **Note:** Wind is always expressed by giving the mean direction and speed and any significant variations.	a. [THRESHOLD] WIND (number) DEGREES (number) KNOTS b. WIND AT (height/altitude/flight level) (number) DEGREES (number) KNOTS c. WIND AT UP WIND END (number) DEGREES (number) KNOTS d. VISIBILITY (distance) (direction) e. RUNWAY VISUAL RANGE (RVR) or RUNWAY VISIBILITY (RV) [RUNWAY (number)] (distance) (for RV assessments – ASSESSED AT TIME (minutes))
During RVR/RV operations where an assessment is not available or not reported.	f. RUNWAY VISUAL RANGE (RVR) or RUNWAY VISIBILITY (RV) [RUNWAY (number)] NOT AVAILABLE (or NOT REPORTED).
Where multiple RVR/RV observations are made. **Note 1:** Multiple RVR/RV observations are always representative of the touchdown zone, midpoint zone and the roll-out/stop end zone, respectively.	g. RUNWAY VISUAL RANGE (RVR) or RUNWAY VISIBILITY (RV) RUNWAY (number) (first position) (distance) (units), (second position) (distance) (units), (third position) (distance) (units) (for RV assessments – ASSESSED AT TIME (minutes))
Note 2: Where reports for three locations are given, the indication of these locations may be omitted, provided that the reports are passed in the order of touchdown zone, followed by the midpoint zone and ending with the roll-out/ stop end zone report. When RVR/RV information on any one position is not available this information will be included in the appropriate sequence.	h. RUNWAY VISUAL RANGE (RVR) or RUNWAY VISIBILITY (RV) RUNWAY (number) (first position) (distance) (units), (second position) NOT AVAILABLE, (third position) (distance) (units) (for RV assessments – ASSESSED AT TIME (minutes))
	i. PRESENT WEATHER (details) j. CLOUD (amount, [type] and height of base) (or SKY CLEAR) k. CAVOK l. TEMPERATURE [MINUS] (number) (and/or DEWPOINT [MINUS] (number)) m. QNH (number) (units) n. MODERATE (or SEVERE) ICING (or TURBULENCE) [IN CLOUD] (area) o. REPORT FLIGHT CONDITIONS
unless responding to a request for turbulence or icing information	#p.* IMC (or VMC)

A.2.7 Reports and information

A.2.7.1 Table 42 lists phrases relating to aeronautical reports and information.

Table 42: Reports and information

Circumstances	Phraseologies
1. Position Reporting **Note:** Phrases for use in en route position and MET reports are listed in ENR 1.1 APPENDIX 1.	a. NEXT REPORT AT (significant point)
2. Additional Reports to request a report at a specified place or distance to request a report of present position when descending a non-DME equipped aircraft to LSALT above CTA steps the pilot will give this only when satisfied that the CTA step has been passed, allowing for navigational tolerances.	a. REPORT PASSING (significant point) b. REPORT (distance) MILES [GNSS (or DME)] FROM (significant point) c. REPORT PASSING (three digits) RADIAL (name of VOR) VOR d. REPORT [GNSS (or DME)] DISTANCE FROM (significant point) #e. REPORT PASSING CONTROL AREA STEPS FOR FURTHER DESCENT #f.* INSIDE (distance of a CTA step) MILES
3. GNSS tracking	a. CONFIRM (or REPORT) ESTABLISHED ON THE [(three digits)] GNSS TRACK [BETWEEN (significant point) AND (significant point)] b. MAINTAIN TRACK BETWEEN (significant point) AND (significant point). REPORT ESTABLISHED ON THE TRACK c.* ESTABLISHED ON THE [(three digits)] TRACK [BETWEEN (significant point) AND (significant point)]
4. Aerodrome Information **Note:** Additional surface descriptors may apply in countries with polar weather conditions. Only for contaminants	a. RUNWAY (number) SURFACE CONDITION [CODE (three-digit number)] followed as necessary by: (i) ISSUED AT (date and time UTC) (ii) WET [or DRY, or STANDING WATER, or FROST, or DRY SNOW, or WET SNOW or SLUSH] (iii) DEPTH ((depth of deposit) MILLIMETERS or NOT REPORTED) (iv)COVERAGE ((number) PER CENT or NOT REPORTED) (v) BRAKING ACTION GOOD (or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR or POOR, or LESS THAN POOR)

Circumstances	Phraseologies
Taxiway conditions only reported if operationally significant. Apron conditions only reported if operationally significant. Where appropriate, any additional significant operational information about the surface conditions	(vi)TAXIWAY (identification of taxiway) POOR (vii) APRON (identification of apron) POOR (viii) Plain language remarks b. [(location)] RUNWAY SURFACE CONDITION RUNWAY (number) NOT CURRENT c. LANDING SURFACE (condition) d. CAUTION (WORK IN PROGRESS) (OBSTRUCTION) (position and any necessary advice) e. BRAKING ACTION REPORTED BY (aircraft type) AT (time) GOOD (or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR or POOR, or LESS THAN POOR) f. TAXIWAY WET [or STANDING WATER, FROST, or DRY SNOW, or WET SNOW or SLUSH] g. TOWER OBSERVES (weather information) h. PILOT REPORTS (weather information)
5. Information to Aircraft wake turbulence jet blast on apron or taxiway propeller-driven aircraft slipstream helicopter downwash	a. CAUTION (i) WAKE TURBULENCE (ii) JET BLAST (iii)SLIPSTREAM (iv)DOWNWASH
6. Pilot Initiated Waiver of Wake Turbulence Separation Standards	#a.* ACCEPT WAIVER
7. ATS relay of information from aircraft operator to flight crew	#a. YOUR COMPANY ADVISES (information)

A.2.8 Operational capabilities

A.2.8.1 Table 43 lists phrases relating to reduced vertical separation minimum (RVSM) and RNP operations, as well as GNSS status and availability.

Table 43: RVSM, GNSS, RNP and RNAV

Circumstances	Phraseologies
1. ATC requesting confirmation of equipment, capability or approval e.g. RVSM, ADS-B, PRM. for reports about equipment capability or approval status	#a. CONFIRM (equipment, capability or approval) APPROVED (or EQUIPPED) #q.* AFFIRM (or NEGATIVE) (equipment, capability or approval) (reason if applicable)

Circumstances	Phraseologies
2. RVSM capability and operations	
to report RVSM approved status	b.* AFFIRM RVSM
to report RVSM non-approved status followed by supplementary information	c.* NEGATIVE RVSM [(supplementary information, e.g. State aircraft)]
to deny ATC clearance into RVSM airspace	d. UNABLE ISSUE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] (level)
to report when severe turbulence affects the capability of an aircraft to maintain height-keeping requirements for RVSM	e.* UNABLE RVSM DUE TURBULENCE
to report that the equipment of an aircraft has degraded below minimum aviation system performance standards	f.* UNABLE RVSM DUE EQUIPMENT
to request an aircraft to provide information as soon as RVSM-approved status has been regained or the pilot is ready to resume RVSM operations	g. REPORT WHEN ABLE TO RESUME RVSM
to request confirmation that an aircraft has regained RVSM-approved status or a pilot is ready to resume RVSM operations	h. CONFIRM ABLE TO RESUME RVSM
to report ability to resume RVSM operations after an equipment or weather-related contingency	d.* READY TO RESUME RVSM
3. GNSS availability and capability	
Reporting service status	a. GNSS REPORTED UNRELIABLE (or GNSS MAY NOT BE AVAILABLE [DUE TO INTERFERENCE]); (i) IN THE VICINITY OF (location) (radius) [BETWEEN (levels)]; or (ii) IN THE AREA OF (description) (or IN (name) FIR) [BETWEEN (levels)]; b. GNSS (or SBAS, or GBAS) UNAVAILABLE FOR (specify operation) [FROM (time) TO (time) (or UNTIL FURTHER NOTICE)];
GNSS unavailable	c.* GNSS UNAVAILABLE [DUE TO (reason e.g. LOSS OF RAIM or RAIM ALERT)]
Resuming GNSS operation	d.* GNSS AVAILABLE [(supplementary information)]
GNSS navigation capability	d. CONFIRM GNSS NAVIGATION e.* AFFIRM GNSS NAVIGATION

Circumstances	Phraseologies
4. Degradation of aircraft navigation performance	a.* UNABLE RNP (or RNAV) (specify type) [DUE TO (reason, e.g. LOSS OF RAIM or RAIM ALERT)].

A.3 Clearances

A.3.1 Table 44 lists phrases relating to ATC clearances.

Table 44: ATC clearances

Circumstances	Phraseologies
1. Clearances	
	a.* REQUEST CLEARANCE
If the route and/or level issued in the initial airways clearance is not in accordance with the flight plan	b. CLEARED TO c. CLEARED TO (destination) [AMENDED ROUTE] (route clearance details) [AMENDED LEVEL] (level)
If an airways clearance is amended en route	d. RECLEARED (amended clearance details) [REST OF CLEARANCE UNCHANGED] [(level)] e. RECLEARED (amended route portion) TO (significant point of original route) [REST OF CLEARANCE UNCHANGED] (level)
when the clearance is relayed by a third party; e.g. pilot/ FLIGHT WATCH (ATC excepted)	f. (name of unit) CLEARS (aircraft identification)
when clearance will be issued subject to a delay	g. REMAIN OUTSIDE CLASS (airspace class) (or RESTRICTED) [AND CLASS (airspace class)] AIRSPACE AND STANDBY
when clearance will be issued at a specified time or place	h. REMAIN OUTSIDE CLASS (airspace class) (or RESTRICTED) [AND CLASS (airspace class)] AIRSPACE, EXPECT CLEARANCE AT (time/place)
when a clearance will not be available	i. CLEARANCE NOT AVAILABLE, REMAIN OUTSIDE CLASS (airspace class) (or RESTRICTED) [AND CLASS (airspace class)] AIRSPACE
when requesting a deviation from cleared route	j.* REQUEST TO DEVIATE UP TO (distance) MILES LEFT (or RIGHT) OF ROUTE DUE (reason)
when requesting a deviation from cleared track	k.* REQUEST TO DEVIATE UP TO (distance) MILES LEFT (or RIGHT) OF TRACK DUE (reason)
when a deviation from cleared route or track is requested	#l. DEVIATE UP TO (distance) MILES LEFT (or RIGHT) OF ROUTE (or TRACK)

Circumstances	Phraseologies
when clearance for deviation cannot be issued	m. UNABLE, TRAFFIC (direction) BOUND (type of aircraft) (level) ESTIMATED (or OVER) (significant point) AT (time) CALL SIGN (call sign) ADVISE INTENTIONS
when a weather deviation has been completed and onwards clearance is requested	n. *CLEAR OF WEATHER [REQUEST (route clearance)]
when a weather deviation has been completed and the aircraft has returned to its cleared route	o. * BACK ON ROUTE (or TRACK)
when subsequent restrictions/ requirements are imposed in addition to previous restrictions to be complied with	#p. FURTHER RESTRICTION
	q. [RE] ENTER CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (significant point or route)] AT (level) [AT (time)] r. LEAVE CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (significant point or route)] AT (level) (or CLIMBING, or DESCENDING) LEAVE AND RE-ENTER CONTROLLED AIRSPACE AT (level) (or CLIMBING TO (level), or DESCENDING TO (level) or ON (type of approach)) JOIN (specify) AT (significant point) AT (level) [AT (time)]
to require action at a specific time or place	u. IMMEDIATELY v. AFTER PASSING (significant point) w. AT (time or significant point)
to require action when convenient	x. WHEN READY (instruction)
2. Indication of Route and Clearance Limit	FROM (location) TO (location) TO (location) followed as necessary by: (i) DIRECT (ii) VIA (route and/or significant points) (iii) FLIGHT PLANNED ROUTE (iv) VIA (distance) DME ARC (direction) OF (name of DME station) c. (level or route) NOT AVAILABLE DUE (reason) ALTERNATIVE[S] IS/ARE (levels or routes) ADVISE
issuing a specific clearance limit	#d. CLEARANCE LIMIT (place/aid)
when a pilot requests, or ATC issues a visual departure in lieu of a SID	#e. [clearance details] VISUAL DEPARTURE
3. When a Clearance has been Cancelled	#a. CANCEL CLEARANCE #b.* CANCEL CLEARANCE

Circumstances	Phraseologies
4. when unable to comply with a clearance or instruction	a.* UNABLE TO COMPLY
5. Change of Flight Rules	
canceling IFR (to be initiated only by the pilot)	#a.* CANCEL IFR, [REQUEST] (intention)
	#b. IFR CANCELLED, OPERATE VFR (instruction or clearance)
changing from VFR to IFR	#c.* CHANGE OF FLIGHT RULES, REQUEST IFR [CLEARANCE] [AT (time or place)] (IFR level)
	#d. [AT (time or place)] OPERATE IFR, [CLEARED] (clearance or instructions)
6. Requesting Clearance	
when notification of flight details has not been submitted to ATS	#a.* FLIGHT DETAILS [INBOUND or FOR (DEPARTURE or TRANSIT)]
flight details to be passed after ATS response	#b.* (Aircraft type) (position) (route in controlled airspace and next estimate) (preferred level)
if clearance cannot be issued immediately upon request)	#c. EXPECT CLEARANCE AT (time or place)
if giving warning of clearance requirement	#d.* EXPECT CLEARANCE REQUEST (aircraft type) VFR (if appropriate) FOR (destination) VIA (point outside controlled airspace at which clearance will be requested) ESTIMATE (estimate at destination) AT (altitude proposed for entry to controlled airspace)
when requesting IFR Pick-up	#e.* REQUEST IFR PICK-UP
7. Pilot of IFR flight requests to climb to VFR-on-top	a.* REQUEST VFR-ON-TOP b. CLIMB TO [(level)] AND REPORT REACHING VFR-ON- TOP, TOPS REPORTED (level), or NO TOPS REPORTS
Pilot of an IFR flight is established VFR-on-top	c.* VFR-ON-TOP d. MAINTAIN VFR ON TOP
Where vertical restrictions apply	e. MAINTAIN VFR-ON-TOP AT OR BELOW/ABOVE/BETWEEN (level(s))
Pilot request to cancel VFR-on- top Note: Full IFR separation is applied when ATC re-clears the aircraft to maintain an IFR level	f.* REQUEST (IFR level) g. MAINTAIN (IFR level)
8. VFR Departure:	

Circumstances	Phraseologies
Pilot of IFR flight requests VFR departure	#a.* REQUEST VFR DEPARTURE #b. VFR DEPARTURE APPROVED
Pilot of IFR flight approved to depart VFR wishing to revert to IFR Note: The pilot is responsible for separation until IFR separation can be applied by ATC	#c.* REQUEST IFR CLEARANCE [AT (time or place)] (IFR level)
Pilot of IFR flight having departed VFR, on first contact with ATC entering Class G airspace **Note:** Pilots wishing to continue VFR should CANCEL IFR. See sub-para 4. above.	#d.* RESUMING IFR
9. Parachute Operations: Clearance for parachutists to exit the aircraft and transit Restricted Area(s), Military Operating Area(s) or Classes A, C or D airspace	a. CLEAR TO DROP

A.4 Approach and area control operations

A.4.1 Table 45 lists general phrases used in the conduct of approach and area control operations.

Table 45: General approach and area control phrases

Circumstances	Phraseologies
1. Departures Instructions	a. TRACK (three digits) DEGREES [MAGNETIC] TO (or FROM) (significant point) [UNTIL (time) (or REACHING) (fix or significant point or level)]
2. Approach Instructions	#a. CLEARED DME (or GNSS) ARRIVAL [SECTOR (identifying letter of the sector)] b. CLEARED (type of approach) APPROACH [RUNWAY (number)] c.* REQUEST STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY (number)] d. CLEARED STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY (number)] e. CLEARED (type of approach) APPROACH RUNWAY (number) FOLLOWED BY CIRCLING TO RUNWAY (number)
RNAV (GNSS) (or RNP APCH) approach via an IAF or IF	f.* REQUEST (type of approach) APPROACH VIA (last two letters of the IAF or IF designator) [RUNWAY (number)] #g. RECLEARED DIRECT (last two letters of the IAF or IF designator) CLEARED (type of approach) APPROACH [RUNWAY (number)] h. COMMENCE APPROACH AT(time)

Circumstances	Phraseologies
RNAV (RNP) (or RNP AR APCH) approach where an aircraft has been subject to vectoring or random tracking and is subsequently re-cleared direct to the IAF.	i. RECLEARED DIRECT (IAF/ Latest Intercept Point designator) followed as necessary by: (i) TRACK VIA (type of approach) APPROACH [RUNWAY (number)] MAINTAIN (or DESCEND TO) (level) (ii) WHEN ESTABLISHED, CLEARED (type of approach) APPROACH [RUNWAY (number)]
3. When instructing an aircraft to turn 180° or more when tracking instructions follow	a. TURN LEFT (or RIGHT) - I SAY AGAIN - LEFT (or RIGHT) [tracking instructions]
4. Where a temporary level restriction is to be imposed. (Applicable to civil aircraft during practice approaches in VMC; or MIL aircraft NPA, or precision if clearance will allow descent in accordance with procedure)	#a. TRACK VIA (type of approach) APPROACH [RUNWAY (number)] NOT BELOW (level)
pilot to advise when able to conduct a visual approach	b. REPORT VISUAL
	c. REPORT RUNWAY [LIGHTS] IN SIGHT d. REPORT (significant point) [OUTBOUND or INBOUND]
visual approach (by day or night)	e. CLEARED VISUAL APPROACH [RUNWAY (number)] [TRACKING VIA THE STAR]
visual approaches by night	#f. WHEN ESTABLISHED (position) CLEARED VISUAL APPROACH [RUNWAY (number)]
when including a VFR climb/ descent instruction:	
– when VFR descent clearance applies for the entire approach	g. DESCEND VFR, CLEARED (type of approach) APPROACH [RUNWAY (number)]
– when VFR descent clearance applies for a portion of the approach	h. CLEARED (type of approach) APPROACH [RUNWAY (number)] DESCEND VFR ABOVE (or BETWEEN) (level(s))
5. when a pilot is assigned and required to maintain separation with a sighted aircraft	#a. FOLLOW (or MAINTAIN OWN SEPARATION WITH [AND PASS BEHIND]) (aircraft type or identification) [instructions or restriction]
6. Holding Instructions	
visual	a. HOLD VISUAL [OVER] (position)
published holding procedure over a waypoint, facility or fix	b. HOLD AT (waypoint, facility or fix) (level) EXPECT APPROACH (or FURTHER CLEARANCE) AT (time)

Circumstances	Phraseologies
when pilot requires an oral description of holding procedure based on a facility	c.* REQUEST HOLDING INSTRUCTIONS d. HOLD AT (waypoint, facility or fix) (callsign and frequency, if necessary) (level) INBOUND TRACK (three digits) DEGREES RIGHT (or LEFT) HAND PATTERN, OUTBOUND TIME (number) MINUTES (additional instructions, if necessary) e. HOLD ON THE (three digits) RADIAL OF THE (name) VOR/TACAN (call sign and frequency, if necessary) AT (distance) DME (or BETWEEN (distance) AND (distance) DME) (level) INBOUND TRACK (three digits) DEGREES RIGHT (or LEFT) HAND PATTERN (additional instructions, if necessary)
7. To advise ATC of Minimum Fuel status ATC acknowledgment of Minimum Fuel status **Note:** Advice of fuel status must be made to each subsequent ATC sector on frequency transfer and ATC will acknowledge the status.	a.* MINIMUM FUEL b. MINIMUM FUEL ACKNOWLEDGED [NO DELAY EXPECTED or EXPECT (delay information)]
8. Expected Approach Time	a. NO DELAY EXPECTED b. EXPECTED APPROACH TIME (time)

A.5 Vicinity of the Aerodrome

A.5.1 Table 46 lists the phrases used for the visual identification of aircraft.

Table 46: Phraseology for visual identification

Circumstances	Phraseologies
1. Identification of Aircraft	a. SHOW LANDING LIGHT
2. Acknowledgment by Visual Means	a. ACKNOWLEDGE BY MOVING AILERONS (or RUDDER) b. ACKNOWLEDGE BY ROCKING WINGS c. ACKNOWLEDGE BY FLASHING LANDING LIGHTS

A.5.2 Table 47 lists phrases used during start up and the request and issuance of initial clearance.

Table 47: Startup and initial clearance

Circumstances	Phraseologies
1. Starting Procedures to request permission to start engines	a.* [aircraft location] REQUEST START

Circumstances	Phraseologies
ATC response	b.* [aircraft location] REQUEST START INFORMATION (ATIS identification) c. START APPROVED d. START AT (time) e. EXPECT START AT (time) f. EXPECT DEPARTURE (time) START AT OWN DISCRETION
2. When clearance delivery is in operation. if runway other than runway nominated is required.	#a.* (flight number, if any) TO (aerodrome of first intended landing) REQUEST CLEARANCE #b.* REQUIRE RUNWAY (number)

A.5.3 Table 48 lists phrases used during pushbacks.

Table 48: Pushback phraseologies

Circumstances	Phraseologies
1. Pushback Procedures for Aircraft **Note:** Where a pushback does not enter the manoeuvring area, ERSA will specify the frequency on which apron service is provided.	a.* [aircraft location] REQUEST PUSHBACK b. PUSHBACK APPROVED [TAIL (direction e.g. North or Right)] c. PUSHBACK AT OWN DISCRETION [TAIL (direction e.g. Left or West)] EXPECT (number) MINUTES DELAY DUE (reason)
2. Towing Procedures ATC response	a.* REQUEST TOW [company name] (aircraft type) FROM (location) TO (location) b. TOW APPROVED VIA (specific routing to be followed)
3. To Request Aerodrome Data for Departure when no ATIS broadcast is available **Note:** If multiple visibility, RVR or RV observations are available, those that represent the roll-out/stop end zone should be used for take-off.	a.* REQUEST DEPARTURE INFORMATION b. RUNWAY (number), WIND (direction and speed) (units) QNH (number), TEMPERATURE [MINUS] (number), [VISIBILITY (or RUNWAY VISUAL RANGE or RVR or RUNWAY VISIBILITY) (distance) (units))] [TIME (time)].

A.5.4 Table 49 lists phrases used during taxiing.

Table 49: Taxi procedure

Circumstances	Phraseologies
1. Taxi Procedures for departure at a controlled aerodrome	a.* [flight number] [aircraft type] [wake turbulence category if “Super or Heavy”] [POB (number)] [DUAL (or SOLO)] INFORMATION (ATIS identification) [SQUAWK

Circumstances	Phraseologies
	(SSR code)] [aircraft location] [flight rules, if IFR] [TO (aerodrome of destination)] REQUEST TAXI [intentions]
for departure at a non- controlled aerodrome	#b.* (aircraft type) [POB (number)] [IFR (if operating IFR)] TAXIING (location) FOR (destination or intentions) RUNWAY (number)
military pilots on local sorties when ready to taxi (include details of flight if not already notified)	▲c.* (number of aircraft) FOR (area of operation) POB (number) (DANGEROUS CARGO) INFORMATION (ATIS identification) REQUEST TAXI
	d. TAXI TO (HOLDING POINT [identifier] or intermediate point) [RUNWAY (number)] [TIME (minutes)] e.* ([HOLDING POINT] (identifier) or intermediate point), RUNWAY (number)
where detailed taxi instructions are required	f.* [aircraft type] REQUEST DETAILED TAXI INSTRUCTIONS g. TAXI VIA (specific routing to be followed) TO HOLDING POINT (identifier) [RUNWAY (number)] [TIME (minutes)] h.* [HOLDING POINT] (identifier), RUNWAY (number)
where aerodrome information is not available from an alternative source such as ATIS	i. TAXI TO HOLDING POINT (identifier) (followed by aerodrome information as applicable) [TIME (minutes)] j.* [HOLDING POINT] (identifier)
for arrival at a controlled aerodrome	k.* (aircraft call sign) [parking area or bay number] l. TAXI TO [TERMINAL or other location; e.g. GENERAL AVIATION AREA] [STAND (number)]
2. Intersection Departures when a pilot requests an intersection departure	#a.* REQUEST INTERSECTION DEPARTURE FROM (taxiway identifier)
	#b. TAXI TO HOLDING POINT (taxiway identifier) [RUNWAY (number)]
when a pilot is offered an intersection departure	#c. INTERSECTION DEPARTURE AVAILABLE FROM (taxiway identifier) (distance) REMAINING (if this information is not readily available to the pilot)
when a pilot accepts an intersection departure	#d. TAXI TO HOLDING POINT (taxiway identifier) [RUNWAY (number)]
3. Specific Routing	a. TAKE (or TURN) FIRST (or SECOND) LEFT (or RIGHT) b. TAXI VIA (identification of taxiway) c. TAXI VIA RUNWAY (number)
4. Manoeuvring on Aerodrome	a.* REQUEST BACKTRACK

Circumstances	Phraseologies
General **Note:** The pilot must, when requested, report RUNWAY VACATED" when the aircraft is well clear of the runway.	b. BACKTRACK APPROVED c. BACKTRACK RUNWAY (number) d.* (aircraft location) REQUEST TAXI TO (destination on aerodrome) e. TAXI STRAIGHT AHEAD f. TAXI WITH CAUTION (reason) g. GIVE WAY TO (description and position of other aircraft) h.* GIVING WAY TO (traffic) i. TAXI INTO HOLDING BAY j. FOLLOW (description of other aircraft or vehicle) k. VACATE RUNWAY l.* EXPEDITE TAXI [reason] n.* EXPEDITING
5. ATFM Ground Delay Program Calculated Off Block Time (COBT) non- compliance - early request for taxi clearance Calculated Off Block Time (COBT) non-compliance - late request for taxi clearance	a. PUSH BACK (or TAXI) CLEARANCE NOT AVAILABLE DUE FLOW MANAGEMENT. EXPECT CLEARANCE AT TIME (COBT - 5 minutes) b. YOU ARE NON-COMPLIANT WITH FLOW MANAGEMENT. EXPECT AIRBORNE DELAY.

A.5.5 Table 50 lists phrases used during aerodrome movements.

Table 50: Aerodrome movements

Circumstances	Phraseologies
1. Holding **Note:** The procedure words ROGER and WILCO are insufficient acknowledgment of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case, the acknowledgment must be by the phraseology HOLDING or HOLDING SHORT, as appropriate.	a. HOLD (direction) OF (position, runway number, etc) b. HOLD POSITION c. HOLD SHORT OF (position) d.* HOLDING e.* HOLDING SHORT
2. To Cross a Runway **Note:** If the control tower is unable to see the crossing aircraft (e.g. night, low visibility, etc), the instruction should always be accompanied by a request to report when the aircraft has vacated and is clear of the runway.	a.* [AT (or ON) (location)] REQUEST CROSS RUNWAY (number) b. AT (or ON) (location) CROSS RUNWAY (number) [REPORT VACATED] c.* AT (or ON) (location) CROSSING RUNWAY (number) d. EXPEDITE CROSSING RUNWAY (number) TRAFFIC (aircraft type) (distance) MILES FINAL
3. To Enter a Runway (not used in conjunction with clearance to line-up or enter the Operational Readiness Platform).	a.* [AT (or ON) (location)] REQUEST ENTER RUNWAY (number) b. AT (or ON) (location) ENTER RUNWAY (number) [REPORT VACATED]

Circumstances	Phraseologies
Note: If the control tower is unable to see the relevant aircraft (e.g. night, low visibility, etc), the instructions should always be accompanied by a request to report when the aircraft has vacated and is clear of the runway.	c.* AT (or ON) (location) ENTER RUNWAY (number)

A.5.6 Table 51 lists phrases used during runway operations

A.5.7 During multiple runway operations where the possibility of confusion exists, the runway number will be stated. The runway number may be stated if the caller wishes to emphasise the runway to be used. For parallel runway operations on discrete frequencies, at Class D aerodromes, the runway number may be omitted.

Table 51: Runway operations

Circumstances	Phraseologies
1. Preparation for Take-off	a. REPORT WHEN READY [FOR DEPARTURE]
at Class D aerodromes when reporting ready and parallel runway operations are in progress	b.* READY, RUNWAY (runway)
when reporting ready for operations wholly within Class D CTR or departure from Class D CTR not in receipt of airways clearance for operations	c.* READY [intentions] [(circuit operations, tracking details, departure procedures, etc.)]
outside Class D airspace.	d. ARE YOU READY FOR IMMEDIATE DEPARTURE? e.* READY
2. Clearance to Enter Runway and Await Take-off	
when the pilot desires to enter the runway and assume take- off position for checks before departure	#a.* REQUEST LINE-UP [REQUIRE (required number of seconds delay in lined-up position before departure) SECONDS ON RUNWAY] b. LINE UP [RUNWAY (number)] [AND WAIT] [BE READY FOR IMMEDIATE DEPARTURE]
conditional clearances	c. (condition) LINE UP [(RUNWAY (number)] (brief reiteration of condition)
acknowledgment of a conditional clearance	d.* (condition) LINE UP [RUNWAY (number)] [AND WAIT]
when stop bar contingency procedures are in force	#e. AT (holding point), CROSS THE ILLUMINATED STOP BAR, LINE UP (or CLEARED FOR TAKE-OFF or ENTER or CROSS) RUNWAY (number) f.* AT (holding point), CROSS THE ILLUMINATED STOP BAR, LINE UP (or CLEARED FOR TAKE-OFF or ENTER or CROSS) RUNWAY (number)

Circumstances	Phraseologies
3. Take-off Clearance	a. CLEARED FOR TAKE-OFF [REPORT AIRBORNE]
multiple runway operations, other than Class D aerodromes where aircraft are operating on parallel runways using discrete frequencies	b. RUNWAY (number) CLEARED FOR TAKE-OFF
when take-off clearance has not been complied with	c. TAKE-OFF IMMEDIATELY OR VACATE RUNWAY d. TAKE-OFF IMMEDIATELY OR HOLD SHORT OF THE RUNWAY
when LAHSO are in use	#e. (aircraft type) LANDING ON CROSSING RUNWAY WILL HOLD SHORT – RUNWAY (number) CLEARED FOR TAKE-OFF
when a radar SID has been issued	#f. ASSIGNED HEADING [LEFT (or RIGHT)] (three digits) [(altitude restriction)] [RUNWAY (number)] CLEARED FOR TAKE-OFF g.* HEADING (or LEFT or RIGHT) (three digits) [(altitude restriction)] [RUNWAY (number)] CLEARED FOR TAKE-OFF h. TRACK EXTENDED CENTRELINE (three digits) DEGREES [(altitude restriction)] [RUNWAY (number)] CLEARED FOR TAKE-OFF
when an IFR aircraft is cleared for a visual departure to a level at or above the MVA or MSA/ LSALT	#i. (instructions) [RUNWAY (number)] CLEARED FOR TAKE-OFF, [MAKE LEFT (or RIGHT) TURN] #j.* (instructions) [RUNWAY (number)] CLEARED FOR TAKE-OFF, [LEFT (or RIGHT) TURN]
when a VFR aircraft, or an IFR aircraft cleared for a visual departure is issued radar heading instructions	#k. (instructions) MAINTAIN RUNWAY HEADING (or TURN LEFT (or RIGHT) HEADING (three digits)) VISUAL, [(altitude restriction)] [RUNWAY (number)] CLEARED FOR TAKE-OFF #l.* (instructions) RUNWAY HEADING (or LEFT (or RIGHT) HEADING (three digits)) VISUAL, [(altitude restriction)] [RUNWAY (number)] CLEARED FOR TAKE-OFF
when an IFR aircraft cleared for a visual departure is assigned a level below the MVA or MSA/LSALT in the departure instructions.	#m. (instructions) CLIMB TO (level) VISUAL, [RUNWAY (number)] CLEARED FOR TAKE-OFF #n.* (instructions) (level) VISUAL, [RUNWAY (number)] CLEARED FOR TAKE-OFF
when the airways clearance issued to an IFR aircraft includes a visual departure and a level below the MVA or MSA/ LSALT and no turn on departure required	#o. [RUNWAY (number)] CLEARED FOR TAKE-OFF, VISUAL
4. Take-off Clearance Cancellation	a. HOLD POSITION, CANCEL, I SAY AGAIN CANCEL TAKE-OFF (reasons) b.* HOLDING

Circumstances	Phraseologies
to stop a take-off in emergency conditions **Note:** Used only when an aircraft is in imminent danger.	c. STOP IMMEDIATELY (repeat aircraft call sign) STOP IMMEDIATELY (reason) d.* STOPPING RUNWAY (number)

A.5.8 Table 52 lists phrases used during helicopter operations.

Table 52: Helicopter operations

Circumstances	Phraseologies
1. Helicopter Operations air taxi or air transit for departure and arrival	a.* REQUEST AIR TAXI (or AIR TRANSIT or GROUND TAXI) FROM (or VIA) TO (location or routing as appropriate) b. AIR TAXI (or AIR TRANSIT or GROUND TAXI) TO (or VIA) (location, parking position, stand, or routing as appropriate) [CAUTION (dust, loose debris, taxiing light aircraft, personnel, wake turbulence, etc)] c. AIR TAXI (or AIR TRANSIT or GROUND TAXI) VIA (direct, as requested, or specified route) TO (location, heliport, parking position, stand, operating or movement area, or runway) AVOID (aircraft or vehicles or personnel)
2. Departure from a RUNWAY or HLS visible to the tower and located on a manoeuvring area subject to ATC. Departure other than above	a. (instructions as appropriate, position or runway) CLEARED FOR TAKE-OFF b. (instructions as appropriate) [DEPARTURE APPROVED] REPORT AIRBORNE
3. Arrival to a RUNWAY, or HLS visible to the tower and located within a manoeuvring area subject to ATC. Arrival other than above	a. (instructions as appropriate, position or runway) CLEARED TO LAND b. CLEARED VISUAL APPROACH (instructions as appropriate), REPORT ON THE GROUND

A.5.9 Table 53 lists phrases used after take-off. All “level” reports within ATS surveillance system coverage should be to the nearest 100FT.

Table 53: After take-off

Circumstances	Phraseologies
1. Tracking After Take-off when instructing an aircraft to turn 180° or more after take-off	a.* REQUEST RIGHT (or LEFT) TURN [WHEN AIRBORNE] b. LEFT (or RIGHT) TURN APPROVED c. AFTER PASSING (level) (instructions) d. MAKE LEFT (or RIGHT) - I SAY AGAIN - LEFT (or RIGHT) TURN

Circumstances	Phraseologies
heading to be followed	e. CONTINUE ON (magnetic direction of runway) (instructions)
when a specific track is to be followed	f. TRACK (magnetic direction of runway) (instructions) g. CLIMB STRAIGHT AHEAD (instructions)
2. Airborne Report - where an ATS surveillance service is provided unrestricted turn to track (including SID)	#a.* PASSING (level) CLIMBING TO (level)
heading specified by ATC	#b.* TURNING LEFT (or RIGHT) (three digits) PASSING (level) CLIMBING TO (level) or #c.* MAINTAINING RUNWAY HEADING PASSING (level) CLIMBING TO (level)
confirmation of an assigned Radar SID heading when establishing contact with ATC and unable to execute turn immediately due procedural requirements	#d.* ASSIGNED HEADING LEFT (or RIGHT) (three digits) PASSING (level) CLIMBING TO (level)
when assigned heading approximates runway bearing	e.* HEADING (three digits) PASSING (level) CLIMBING TO (level)
3. Departure Report - when notifying departure report to a Class D control tower	#a.* TRACKING (track being flown) (FROM (reference aid used to establish track) or VIA SID identifier) CLIMBING TO (level)
non-controlled aerodromes- surveillance	#b.* DEPARTED (location) (time in minutes) TRACKING [TO INTERCEPT] (track) CLIMBING TO (intended level) ESTIMATING (first reporting point) AT (time)
when notifying departure and identification is expected with the departure report	#c.* (location reference departure aerodrome) PASSING (current level) CLIMBING TO (intended level) ESTIMATING (first reporting point) AT (time)

A.5.10 Table 54 lists phrases used for arrival at an aerodrome.

Table 54: Arrival at aerodrome

Circumstances	Phraseologies
1. Entering an Aerodrome Traffic Circuit when ATIS information is available	a.* [aircraft type] (position) (level) (intentions) b.* [aircraft type] (position) (level) INFORMATION (ATIS identification) (intentions) c. JOIN (instruction) RUNWAY (number) [(level)] [QNH (detail)] [TRAFFIC (detail)] [TRACK (requirements)] d. OVERFLY [(circuit direction) RUNWAY (number) [(level)] [QNH (detail)] [TRAFFIC (detail)] [TRACK (requirements)]

Circumstances	Phraseologies
2. In the Circuit	a.* (position in circuit, e.g. DOWNWIND/ FINAL)
when advising or requesting a non-standard circuit	b.* (position in circuit, e.g. DOWNWIND/FINAL) [GLIDE APPROACH, FLAPLESS APPROACH]) c. [NUMBER (sequence number)] FOLLOW (aircraft type and position) [additional instructions if required] d.* BASE (or CROSSWIND) e.* FINAL (or LONG FINAL)
nearing position at which approach must be aborted if not cleared to land	f.* SHORT FINAL
Abnormal Operations/Doubt Exists – (additional phrases) For a civil aircraft, when doubt exists as to whether the gear is fully extended, or when a general aviation aircraft with retractable undercarriage has experienced abnormal operations	g. CHECK GEAR DOWN [AND LOCKED] h.* GEAR DOWN [AND LOCKED]
Military Pilots – (additional phrases)	
routine circuit reports must be made as and when arranged	▲i.* LEFT (or RIGHT) INITIAL
to sequence for downwind	▲j. PITCH LONG (or SHORT)
base call and wheel check (on reaching the base leg of a circuit, each aircraft, whether in stream landing or single, is to call tower and advise undercarriage down)	▲k.* BASE GEAR GREEN (or THREE GREENS or THREE WHEELS) ▲l. (instruction) CHECK WHEELS ▲m.* (readback) (activate beeper) or ▲n.* (readback) GEAR GREEN (or THREE GREENS or THREE WHEELS)
ATC wheels check will include hook check for all hook cable operations	▲o. APPROACH/DEPARTURE END CABLE UP (instruction) CHECK WHEELS AND HOOK ▲p.* (readback) HOOK DOWN (activate beeper)
3. Arriving at an Aerodrome – Military Formations	
Circuit Area	▲a.* (formation call sign), BASE THREE GREENS (or GEAR GREEN or THREE WHEELS)
Lead aircraft undercarriage status report	▲b. (formation call sign) (instruction) CHECK WHEELS ▲c.* (individual call sign) (activate beeper) or ▲d.* THREE GREENS (or GEAR GREEN or THREE WHEELS) (individual call sign)
Subsequent formation aircraft undercarriage status report	▲e.* (individual call sign), THREE GREENS (or GEAR GREEN or THREE WHEELS) (activate beeper if fitted)

Circumstances	Phraseologies
	▲f. (formation call sign)
Pairs Landing	▲g.* (formation call sign), OUTER MARKER (or FINAL APPROACH FIX) SIX GREENS (or GEAR GREEN or SIX WHEELS) ▲h. (formation call sign) CLEARED TO LAND, CHECK WHEELS ▲i.* LAND (individual call sign) (activate beeper if fitted) ▲j.* (individual call sign) (activate beeper if fitted) ▲k.* (formation call sign)
In-trail Landing	▲l.* (formation call sign) IN TRAIL, OUTER MARKER (or FINAL APPROACH FIX) THREE GREENS (or GEAR GREEN or THREE WHEELS) ▲m.* (formation call sign) IN TRAIL CLEARED TO LAND, CHECK WHEELS ▲n.* LAND (call sign) 1 (activate beeper if fitted) ▲o.* (call sign) 2 OUTER MARKER (or FINAL APPROACH FIX) THREE GREENS (or GEAR GREEN or THREE WHEELS) (activate beeper if fitted) ▲p.* (call sign) 3 OUTER MARKER (or FINAL APPROACH FIX) THREE GREENS (or GEAR GREEN or THREE WHEELS) (activate beeper if fitted) ▲q. CALL SIGN
4. Speed Adjustments – Military Aircraft military ATC instruction	▲a. REDUCE TO CIRCUIT SPEED ▲b. REDUCE TO APPROACH SPEED ▲c. REDUCE TO MINIMUM SAFE SPEED
5. Approach Instructions **Note:** The report “LONG FINAL” is made when aircraft turn on to final approach at a distance greater than 4NM from touchdown or when an aircraft on a straight-in approach is 8NM from touchdown. In both cases, a report “FINAL” is required at 4NM from touchdown.	a. MAKE SHORT APPROACH b. MAKE LONG APPROACH (or EXTEND DOWNWIND) c. REPORT BASE (or FINAL or LONG FINAL) CONTINUE APPROACH
6. Landing	a. CLEARED TO LAND (or TOUCH AND GO) (or STOP AND GO)
multiple runway operations, other than Class D aerodromes where aircraft are operating on parallel runways using discrete frequencies.	b. RUNWAY (number) CLEARED TO LAND (or TOUCH AND GO) (or STOP AND GO)
where the aircraft cannot be sighted by ATC	#c. [RUNWAY (number)] NOT IN SIGHT - CLEARED TO LAND
pilot requesting option for touch and go, full stop, stop and go, or go around	#d.* (position in circuit) REQUEST THE OPTION

Circumstances	Phraseologies
advising the pilot the option to touch and go, full stop, stop and go, or go around	#e. [RUNWAY (number)] CLEARED FOR THE OPTION
where ATC require the aircraft to make a full stop landing during the conduct of circuit operations	f. MAKE FULL STOP (reason) CLEARED TO LAND
when runway is occupied and ATC assessment is that the runway will not become available.	▲g. AT THE MINIMA GO AROUND
7. When Landing Approved and LAHSO Are in Use	a. (aircraft type) DEPARTING (or LANDING) ON CROSSING RUNWAY, HOLD SHORT RUNWAY (number) CLEARED TO LAND RUNWAY (number)
required readback	#b.* HOLD SHORT RUNWAY (number) CLEARED TO LAND RUNWAY (number)
When the full length of the landing runway subsequently becomes available	c. FULL RUNWAY LENGTH NOW AVAILABLE **Note:** The HOLD SHORT lights will remain illuminated even though the full length of the RUNWAY is available.
Where an aircraft operating on a flight number call sign cannot participate in LAHSO	d. * NEGATIVE ACTIVE (or PASSIVE or ACTIVE AND PASSIVE) LAHSO
8. When a Pilot Advises That an “Autoland”, “Coupled” or Similar Approach is Being Made (note not applicable for GLS) and the ILS Critical Area is Not Protected.	#a. ILS CRITICAL AREA NOT PROTECTED
9. Delaying Aircraft	a. ORBIT RIGHT (or LEFT) [FROM PRESENT POSITION]
10. Pilot Request for Low Approach or Pass	
to make an approach along a runway descending to an agreed minimum level	a.* REQUEST LOW APPROACH (reasons) b. CLEARED LOW APPROACH [RUNWAY (number)] [(altitude restriction)] [(go around instructions)]
to fly past the control tower or other observation point for the purpose of visual inspection by persons on the ground	#c.* REQUEST LOW PASS (reasons) #d. CLEARED LOW PASS [RUNWAY (number)] [(altitude restriction)] [(go around instructions)]
11. Missed Approach	
to discontinue an approach	a. GO AROUND [TRACK EXTENDED CENTRE LINE (three digits) DEGREES (or instructions)] b.* GOING AROUND
multiple runway operations	c.* GOING AROUND RUNWAY (number)

A.6 Controller-pilot datalink communications

A.6.1 Table 55 lists phraseologies used in Controller-pilot datalink communications (CPDLC).

Table 55: CPDLC Phraseologies

Circumstances	Phraseologies
1. Operational Status	
failure of CPDLC	a. [ALL STATIONS] CPDLC FAILURE (instructions).
failure of a single CPDLC message	b. CPDLC MESSAGE FAILURE (appropriate clearance, instruction, information or request)
to correct CPDLC clearances, Instructions, information or requests	c. DISREGARD CPDLC (message type) MESSAGE, BREAK (correct clearance, instruction, information or request)
to instruct all stations or a specific flight to avoid sending CPDLC requests for a limited period of time	d. [ALL STATIONS] STOP SENDING CPDLC REQUESTS [UNTIL ADVISED] [(REASON)]
to instruct the flight crew to manually initiate a logon to the subsequent ATSU	e. DISCONNECT CPDLC THEN LOGON TO [facility designation]
to advise the flight crew prior to the commencement of CPDLC shutdown and instruct them to continue on voice	f. CPDLC WILL BE SHUT DOWN DISCONNECT CPDLC. CONTINUE ON VOICE
to resume normal use of CPDLC	g. [ALL STATIONS] RESUME NORMAL CPDLC OPERATIONS

A.7 ATS surveillance service

A.7.1 Table 56 lists general phrases used in the provision of ATS surveillance services

Table 56: General surveillance phraseologies

Circumstances	Phraseologies
1. Identification of Aircraft	a. REPORT HEADING [AND FLIGHT LEVEL (or ALTITUDE)] b. FOR IDENTIFICATION TURN LEFT (or RIGHT) HEADING (three digits) c. IDENTIFIED [position] d. NOT IDENTIFIED [reason], [RESUME (or CONTINUE) OWN NAVIGATION]
2. Termination of ATS Surveillance Service	a. IDENTIFICATION TERMINATED [DUE (reason)] [(instructions)] [FREQUENCY CHANGE APPROVED] b. WILL SHORTLY LOSE IDENTIFICATION (appropriate instructions or information) c. IDENTIFICATION LOST [reasons] (instructions)

Circumstances	Phraseologies
3. ATS Surveillance System To request traffic, position, and/or navigation information to provide position information	 #a.* REQUEST (i) ATS SURVEILLANCE ASSISTANCE (reason) (ii) POSITION [WITH REFERENCE TO (aid or location)] (iii) TRAFFIC (or POSITION or NAVIGATION) ADVISORY [BY SURVEILLANCE] b. POSITION (distance) (direction) OF (significant point) (or OVER or ABEAM (significant point))
4. To request initiation or continuation of an ongoing SIS to terminate an ongoing SIS Where ongoing service is not available	a.* REQUEST [HAND-OFF FOR] FLIGHT FOLLOWING b.* CANCEL FLIGHT FOLLOWING c. SURVEILLANCE SERVICE NOT AVAILABLE
5. ATS surveillance system ground equipment unserviceability	a. SURVEILLANCE SYSTEM OUT OF SERVICE (or DEGRADED) (appropriate information as necessary)
6. To request the aircraft's SSR or ADS-B capability	a. ADVISE TRANSPONDER CAPABILITY b. ADVISE ADS-B CAPABILITY
7. To advise the aircraft's SSR or ADS-B capability	a.* TRANSPONDER (ALPHA, CHARLIE or SIERRA as shown in the Flight Plan) b.* ADS-B TRANSMITTER [TEN NINETY DATALINK] c.* ADS-B RECEIVER [TEN NINETY DATALINK] d.* NEGATIVE TRANSPONDER

A.7.2 Table 57 lists phrases for ATS surveillance services relating to communication and navigation

Table 57: ATS surveillance service communication and navigation

Circumstances	Phraseologies
1. Communications if loss of communication is suspected	a. [IF] RADIO CONTACT LOST (instructions) b. IF NO TRANSMISSIONS RECEIVED FOR (number) MINUTES (or SECONDS) (instructions) c. REPLY NOT RECEIVED (instructions) d. IF YOU READ [manoeuvre instructions or SQUAWK (code or IDENT)] e. (manoeuvre or SQUAWK) OBSERVED, POSITION (position of aircraft), WILL CONTINUE TO PASS INSTRUCTIONS
2. Aircraft Directional Indicator Failure notify pilot of intention to use directional indicator failure procedures	 #a. ATS SURVEILLANCE SERVICE WILL CONTINUE, MAKE ALL TURNS RATE ONE (or RATE HALF or (number) DEGREES PER SECOND),

Circumstances	Phraseologies
	EXECUTE INSTRUCTIONS IMMEDIATELY UPON RECEIPT
when suspected by ATC	#b. CONFIRM HEADING
if heading response appears at variance with the track of the ATS Surveillance symbol	#c. SUSPECT YOUR DIRECTIONAL INDICATOR HAS FAILED
turn instructions	d. TURN LEFT (or RIGHT) NOW e. STOP TURN NOW

A.7.3 Table 58 lists phrases for manoeuvring under ATS surveillance services

Table 58: ATS surveillance system manoeuvres

Circumstances	Phraseologies
1. General Manoeuvres	a. LEAVE (significant point) HEADING (three digits) [INBOUND] [AT (time)] b. CONTINUE HEADING (three digits) c. CONTINUE PRESENT HEADING d. FLY HEADING (three digits) e. TURN LEFT (or RIGHT) (number) DEGREES (or HEADING (three digits)) [reason] f. ORBIT LEFT (or RIGHT) [reason]
when an ACFT is assigned a level below the MVA or MSA/ LSALT	g. CLIMB (or DESCEND) TO (level) VISUAL
when an ACFT is issued a heading instruction below the MVA or MSA/LSALT **Note:** Where both heading and altitude instructions are issued, VISUAL need only be appended to the second part of the instruction.	h. TURN LEFT (or RIGHT) (number) DEGREES (or HEADING (three digits)) [CLIMB (or DESCEND) TO (level)] VISUAL
	i. STOP TURN HEADING (three digits)
when instructing an aircraft to turn 180° or more and in order to emphasize the direction of turn	j. TURN LEFT (or RIGHT) - I SAY AGAIN - LEFT (or RIGHT) HEADING (three digits) [reason]
When it is necessary to specify a reason for a manoeuvre, the following phraseologies should be used: (i) DUE TRAFFIC (ii) FOR SPACING (iii) FOR DELAY (iv) FOR DOWNWIND (or BASE, or FINAL).	

Circumstances	Phraseologies
2. Aircraft Vectoring by ATS Surveillance Service	a.* REQUEST VECTORS [TO (or FROM) (aid, location or reason)] b. DO YOU WANT VECTORS?
3. To transfer responsibility to the pilot for navigation on termination of vectoring	a. RESUME OWN NAVIGATION (position of aircraft) (specific instructions)

A.7.4 Table 59 lists phrases for speed control during the provision of ATS surveillance services.

Table 59: Speed control

Circumstances	Phraseologies
1. Speed **Note:** All speed communications shall relate to INDICATED AIRSPEED unless otherwise stipulated. Where applicable, Mach Number may be nominated as the basis of a speed statement.	a.* SPEED (number) KNOTS (or Mach Number) b. REPORT SPEED or ([CLIMB or CRUISE] MACH NUMBER) c. MAINTAIN (number) KNOTS (or MACH (number)) [OR GREATER (or LESS)] [UNTIL (significant point)] d. MAINTAIN PRESENT SPEED e. INCREASE (or REDUCE) SPEED TO (or BY) (number) KNOTS [OR GREATER (or LESS)] f. REDUCE TO MINIMUM APPROACH SPEED g. CROSS (significant point) [AT (time)] [OR LATER (or OR BEFORE)] [AT (number) KNOTS]
when an aircraft is required to increase to, or maintain, the maximum speed at which it can safely operate given the phase of flight.	h. INCREASE TO (or MAINTAIN) MAXIMUM SPEED [UNTIL (significant point)]
when an aircraft is required to reduce speed to the minimum possible in a clean configuration	#i. REDUCE TO MINIMUM CLEAN SPEED
when an ATC-issued speed restriction no longer applies and the aircraft is on a published procedure for which a published speed currently applies	#j. RESUME PUBLISHED SPEED (or LEVEL RESTRICTIONS or SPEED AND LEVEL RESTRICTIONS)
when ATC-issued speed restriction no longer applies and no published speed currently applies. Comply with airspace speed limitations and all subsequent published speed restrictions. **Note:** Normal speed is the speed the aircraft would be maintaining had it not been issued an ATC speed restriction.	k. RESUME NORMAL SPEED
when aircraft speed is pilot's discretion. ATC speed restrictions are cancelled. Comply with airspace speed limitations.	l. NO ATC SPEED RESTRICTIONS

Circumstances	Phraseologies
Note: Not used with SID or STAR instructions. when aircraft speed is pilot's discretion. All airspace and ATC speed restrictions are cancelled. **Note:** Not used with SID or STAR instructions. **Note:** Airspace speed limitations are described at AIP ENR 1.4 para 4.	m. NO SPEED RESTRICTIONS

A.7.5 Table 60 lists phrases for the provision of traffic information under ATS surveillance services.

Table 60: Traffic information

Circumstances	Phraseologies
1. Traffic Information aircraft type to be passed if known	a. TRAFFIC (number) O'CLOCK (distance) (direction of flight) [any other pertinent information] (i) UNKNOWN (ii) SLOW MOVING (iii) FAST MOVING (iv) CLOSING (v) OPPOSITE (or SAME) DIRECTION (vi) OVERTAKING (vii) CROSSING LEFT TO RIGHT (or RIGHT TO LEFT) (viii) (type) (ix) (level) (x) CLIMBING (or DESCENDING) b. CLEAR OF TRAFFIC [appropriate instructions]

A.7.6 Table 61 lists phrases relating to the use of secondary surveillance radar (SSR) and automatic dependent surveillance – broadcast (ADS-B).

Table 61: Phrases for SSR and ADS-B

Circumstances	Phraseologies
1. To Instruct Setting of Transponder (The word "code" is not used in transmissions.) to request: reselection of the assigned mode and code	a. SQUAWK (code) [AND IDENT if required] b.* [SQUAWK] (code) [AND IDENT if instructed by ATS] c. SQUAWK NORMAL d. RESET [(mode)] (code) e.* RESETTING [(mode)] (code)

Circumstances	Phraseologies
reselection of aircraft identification	f. RE-ENTER MODE S (or ADS-B) AIRCRAFT IDENTIFICATION
confirmation of Mode A Code selection	g. CONFIRM SQUAWK (code) h.* SQUAWKING (code)
operation of the IDENT feature	i. SQUAWK IDENT j. TRANSMIT ADS-B IDENT
temporary suspension of transponder operation **Note:** ADS-B and SSR are linked in many aircraft and terminating one will terminate the other.	k. SQUAWK STANDBY [TRANSMIT ADS-B ONLY]
emergency code selection	l. SQUAWK MAYDAY
termination of SSR transponder or ADS-B	m. STOP SQUAWK [TRANSMIT ADS-B ONLY]
transmitter operation **Note:** ADS-B and SSR are linked in many aircraft and terminating one will terminate the other.	n. STOP ADS-B TRANSMISSION [SQUAWK (code) ONLY]
transmission of pressure altitude	o. SQUAWK CHARLIE p. TRANSMIT ADS-B ALTITUDE
pressure setting check and confirmation of level	q. CHECK ALTIMETER SETTING AND CONFIRM LEVEL
termination of pressure altitude transmission because of faulty operation **Note:** ADS-B and SSR are linked in many aircraft and terminating one will terminate the other.	r. STOP SQUAWK CHARLIE, WRONG INDICATION s. STOP ADS-B ALTITUDE TRANSMISSION [(WRONG INDICATION, or reason)]
altitude check	t. VERIFY LEVEL
confirmation of ADS-B operation	#u. ADS-B TRANSMISSIONS NOT RECEIVED, CONFIRM ADS-B OPERATIONAL
change to secondary transponder	#v. SELECT SECONDARY TRANSPONDER
2. Advice on Traffic Level Where the Pressure Altitude Derived Level Information Has Not Been Verified	#a. UNVERIFIED LEVEL (level)

A.7.7 Table 62 lists phrases relating to the provision of approach surveillance services.

Table 62: Approach surveillance services

Circumstances	Phraseologies
1. Vectoring for Approach	a. VECTORING FOR (type of approach) APPROACH RUNWAY (number) b. VECTORING FOR VISUAL APPROACH RUNWAY (number) REPORT FIELD (or RUNWAY) IN SIGHT c. VECTORING FOR (positioning in the circuit) d. (type of approach) APPROACH [RUNWAY (number)] NOT AVAILABLE DUE (reason) (alternative instructions)
2. Vectoring for ILS and other approach procedures instructions and information	a. POSITION (number) MILES FROM (fix), TURN LEFT (or RIGHT) HEADING (three digits) b. YOU WILL INTERCEPT (FINAL APPROACH COURSE or radio aid) (distance) FROM (significant point or TOUCHDOWN) c.* REQUEST (distance) FINAL d. CLEARED FOR (type of approach) APPROACH [RUNWAY (number)] e. REPORT ESTABLISHED ON LOCALISER (or ON [GLS/RNP] [FINAL] APPROACH [COURSE]) f. CLOSING FROM LEFT (or RIGHT) [REPORT ESTABLISHED] g. TURN LEFT (or RIGHT) HEADING (three digits) [TO INTERCEPT] or [REPORT ESTABLISHED] h. EXPECT VECTOR ACROSS THE (LOCALISER or [GLS/ RNP] FINAL APPROACH COURSE or radio aid) (reason) i. THIS TURN WILL TAKE YOU THROUGH THE (LOCALISER or [GLS/RNP] FINAL APPROACH COURSE or radio aid) [(reason)] j. TAKING YOU THROUGH THE (LOCALISER or [GLS/RNP] FINAL APPROACH COURSE or radio aid) [(reason)] k. MAINTAIN (level) UNTIL GLIDE PATH INTERCEPTION REPORT ESTABLISHED ON GLIDE PATH l. INTERCEPT (LOCALISER or [GLS/RNP] [FINAL] APPROACH [COURSE] or radio aid) [RUNWAY (number)] [REPORT ESTABLISHED]
3. Independent and Dependent Parallel Approaches	a. CLEARED FOR (type of approach) APPROACH RUNWAY (number) LEFT (or RIGHT) b. YOU HAVE CROSSED THE LOCALISER (or GLS/RNP FINAL APPROACH COURSE). TURN LEFT (or RIGHT) IMMEDIATELY AND RETURN TO THE LOCALISER (or GLS/ RNP FINAL APPROACH COURSE) RUNWAY (number) c. TURN LEFT (or RIGHT) HEADING (three digits) JOIN FINAL RUNWAY (number) FROM THAT HEADING CLEARED INDEPENDENT VISUAL APPROACH

Circumstances	Phraseologies
Independent parallel approaches to confirm correct runway selection	#d. [EXPECT] ILS (or GLS) [RUNWAY (number) LEFT (or RIGHT),] IDENT IS (ILS or GLS ident)
When aircraft will operate within 1NM of traffic on the adjacent final approach	e. TRAFFIC (aircraft type) [RUNWAY LEFT (or RIGHT)] BEHIND (or AHEAD or ADJACENT)
Independent Parallel Approaches when an aircraft is observed to be deviating towards the NTZ	f. YOU ARE DEVIATING FROM THE FINAL APPROACH COURSE. TURN LEFT (or RIGHT) IMMEDIATELY AND RETURN TO YOUR CLEARED APPROACH
Break-out instruction issued when an aircraft penetrates, or is likely to penetrate, the NTZ	g. BREAK-OUT ALERT, (call sign) TURN LEFT (or RIGHT) IMMEDIATELY HEADING (three digits) CLIMB (or DESCEND) TO (level)
4. Position	a. (distance) FROM TOUCHDOWN

A.8 Automatic Dependent Surveillance – Contract

A.8.1 Table 63 lists phrases relating to the use of automatic dependent surveillance – contract (ADS-C).

Table 63: General ADS-C phrases

Circumstances	Phraseologies
1. ADS-C degradation	a. ADS-C (or ADS-CONTRACT) OUT OF SERVICE (appropriate information as necessary).

A.9 Emergencies and alerts

A.9.1 Table 64 lists phrases relating to emergencies.

Table 64: Emergency phrases

Circumstances	Phraseologies
1. Distress message	a.* MAYDAY [MAYDAY, MAYDAY] followed as necessary by: (i) (station addressed) (ii) (aircraft identification) (iii) (nature of distress condition e.g. FUEL or EMERGENCY DESCENT) (iv) (intentions) (v) (position, level and heading) (vi) (any other useful information).
2. Acknowledgement of distress message ATC acknowledgement of MAYDAY call	a. ROGER MAYDAY

Circumstances	Phraseologies
ATC acknowledgement of MAYDAY on frequency transfer	b. MAYDAY [(type of emergency)] ACKNOWLEDGED
Imposition of radio silence	c. STOP TRANSMITTING. MAYDAY
ATC broadcast for emergency descent traffic	d. EMERGENCY DESCENT AT (significant point or location) ALL AIRCRAFT BELOW (level) WITHIN (distance) OF (significant point or navigation aid) [LEAVE IMMEDIATELY] [(specific instructions as to direction, heading or track, etc)]
Cancellation of distress condition	e.* CANCEL DISTRESS (information)
Termination of distress and radio silence	f. DISTRESS TRAFFIC ENDED
3. Urgency message	
	a*. PAN PAN [PAN PAN, PAN PAN] followed as necessary by: (i) (station addressed) (ii) (aircraft identification) (iii)(nature of urgency condition e.g. MEDICAL PRIORITY REQUIRED or WEATHER DEVIATION REQUIRED) (iv)(intentions) (v) (position, level and heading) (vi)(any other useful information).
ATC acknowledgement of PAN call	b. ROGER PAN
ATC acknowledgement of PAN on frequency transfer	c. PAN [(type of emergency)] ACKNOWLEDGED

A.9.2 Table 65 lists phrases traffic alert and collision avoidance system (TCAS), safety alerts and avoiding action and wind shear escapes.

Table 65: Traffic Alert and Collision Avoidance System (TCAS), safety alerts and avoiding action and wind shear escape

Circumstances	Phraseologies
1. TCAS events	
a flight crew starts to deviate from any ATC clearance or instruction to comply with an ACAS resolution advisory (RA) (pilot and controller interchange)	a.* TCAS RA b. ROGER
after the response to an ACAS RA is completed and a return to the ATC clearance or instruction is Initiated (pilot and controller interchange)	c.* CLEAR OF CONFLICT RETURNING TO (assigned clearance) d. ROGER (or alternative instructions)

Circumstances	Phraseologies
after the response to an ACAS RA is completed and the assigned ATC clearance or instruction has been resumed (Pilot and Controller interchange)	e.* CLEAR OF CONFLICT (assigned clearance) RESUMED f. ROGER (or alternative instructions)
after an ATC clearance or instruction contradictory to the ACAS RA is received, the flight crew will follow the RA and inform ATC directly (Pilot and Controller interchange)	g.* UNABLE, TCAS RA h. ROGER
2. Safety Alert and Avoiding Action	a. SAFETY ALERT, followed as necessary by:
low altitude warning	(i) LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE IMMEDIATELY, QNH IS (number) [(units)]. [THE MINIMUM SAFE ALTITUDE IS (altitude)].
terrain alert	(ii) TERRAIN, CHECK YOUR ALTITUDE IMMEDIATELY (suggested pilot action if possible)
traffic alert	(iii) TRAFFIC (number) MILES OPPOSITE DIRECTION/ CROSSING LEFT TO RIGHT/ RIGHT TO LEFT (level information).
unauthorised entry into active Restricted Area or Military Operating Area has occurred or is imminent	(iv) RESTRICTED AIRSPACE (or MILITARY OPERATING AREA) ACTIVE. [SUGGEST] TURN LEFT/RIGHT IMMEDIATELY HEADING (three digits)
when unauthorised deviation into Restricted Area or Military Operating Area is unavoidable	(v) RESTRICTED AIRSPACE (or MILITARY OPERATING AREA) ACTIVE. [SUGGEST] CLIMB/ DESCEND IMMEDIATELY TO (level) (vi) UNABLE TO ISSUE CLEARANCE. PROCEED AT YOUR OWN RISK, SQUAWK 7700.
avoiding action **Notes:** 1. Where clock codes are used to provide the relative bearing, the prefix left/right is optional. 2. In high density traffic scenarios it may be impractical for ATC to use the full phraseologies for safety alerts and avoiding action. ATC will provide information that conveys the immediacy of the situation and relevant instructions to allow pilots the best opportunity to avoid a collision. 3. Pilots are required to comply with any TCAS RA manoeuvre irrespective of ATC traffic advisories or instructions.	b. AVOIDING ACTION, followed as necessary by: (i) [SUGGEST] TURN LEFT/ RIGHT IMMEDIATELY HEADING (three digits) TRAFFIC ([LEFT/RIGHT] number) O'CLOCK (distance) MILES OPPOSITE DIRECTION/ CROSSING LEFT TO RIGHT/ RIGHT TO LEFT (level information). (ii) [SUGGEST] CLIMB/ DESCEND IMMEDIATELY TO (level) TRAFFIC [LEFT/ RIGHT] (number) O'CLOCK (distance) MILES OPPOSITE DIRECTION/ CROSSING LEFT TO RIGHT/ RIGHT TO LEFT (level information).
3. Wind Shear Escape Manoeuvre	#a.* WIND SHEAR ESCAPE

Circumstances	Phraseologies
ATC acknowledgement	b. ROGER [SAFETY ALERT] [TRAFFIC (distance) MILES (relevant information)]
Mutual traffic information	c. [SAFETY ALERT] TRAFFIC (distance) MILES (relevant information) EXPERIENCING WIND SHEAR
Wind Shear Escape Manoeuvre complete	d.* CLEAR OF WIND SHEAR RETURNING TO (assigned clearance, instruction and/or procedure etc)
ATC acknowledgement	e. ROGER [alternative instructions]
Wind shear prevents compliance with an ATC clearance or instruction	f.* UNABLE, WIND SHEAR ESCAPE
4. Wind Shear or Microburst Alert	a. RUNWAY (number) ARRIVAL (or DEPARTURE) WIND SHEAR (or MICROBURST) ALERT (windspeed) KNOT GAIN (or LOSS) (location)

A.10 Status of restricted areas and military operating areas

A.10.1 Table 66 lists phrases relating to the status of restricted areas and military operating areas.

Table 66: Restricted areas and military operating areas

Circumstances	Phraseologies
When a Restricted Area and Military Operating Area is active:	a. RESTRICTED AREA (or MILITARY OPERATING AREA) (number) ACTIVE, followed as necessary by: (i) CLEARANCE REQUIRED (ii) AVAILABLE FOR TRANSIT (iii) AVAILABLE UNTIL TIME (time) (iv) CLEARANCE NOT AVAILABLE (v) ... (other qualification as appropriate)
When a Restricted Area and Military Operating Area is released to civil ATC	b. RESTRICTED AREA (or MILITARY OPERATING AREA) (number) RELEASED TO (civil ATS unit), followed as necessary by: (i) CLEARANCE NOT AVAILABLE (ii) (clearance) (iii) APPROVED TO OPERATE IN RESTRICTED AREA (or MILITARY OPERATING AREA) (number) [CLASS (airspace category) PROCEDURES APPLY]

A.11 SARWATCH

A.11.1 Table 67 lists phrases relating to the use of SARTIMEs.

Table 67: SARTIME

Circumstances	Phraseologies
1. SARTIME nomination	a.* SARTIME details b. STANDBY or (call sign) c.* SARTIME FOR DEPARTURE (or ARRIVAL) [location] (time)
2. SARTIME cancellation	a.* SARTIME details b. STANDBY or (call sign) c.* (position/location) CANCEL SARTIME
3. SARTIME amendment	a.* SARTIME details b. STANDBY or (call sign) As required, including specific phrases nominated above if applicable.

A.11.2 Table 68 lists phrases relating to SARWATCH other than for SARTIME purposes.

Table 68: SARWATCH other than SARTIME

Circumstances	Phraseologies
1. Departure Reports	
to initiate a SARWATCH when communication on the ground is not available.	#a.* AIRBORNE (location)
2. Flight & Arrival Reports	#a.* (position) CANCEL SARWATCH [ADVISE (unit) if appropriate]
	#b. SARWATCH CANCELLED [WILCO (unit)]
form of acknowledgement to CANCEL SARWATCH	#c. [location] SARWATCH TERMINATED
when the ATS unit accepting the arrival report is other than the unit addressed	#d. ROGER (identity of unit acknowledging)

A.12 Speechless communications

A.12.1 Table 35 details pilot actions in the event that an aircraft is able to receive but unable to transmit voice communications.

Table 69: Speechless communications

Circumstances	Phraseologies
1. Pilot request for assistance from ATS	a.* Pilot transmits four (4) separate and distinct unmodulated transmissions of one second duration
2. Pilot response to questions from ATS:	
a. Affirm or acknowledgment	(i) one (1) distinct transmission
b. Negative	(ii) two (2) separate and distinct transmissions

Circumstances	Phraseologies
c. Say again	(iii) three (3) separate and distinct transmissions
3. Pilot indication of a further and pertinent unserviceability or an emergency	a.* Five (5) separate and distinct transmissions
4. Pilot indication of abandoning the aircraft	a.* A single continuous transmission as long as practicable
5. Controller requires pilot to indicate when an instruction has been completed	a. WHEN (condition or instruction is completed) MAKE A TWO SECOND TRANSMISSION

A.13 Ground crew/flight crew phraseologies

A.13.1 Table 70 lists communications that take place between ground crews and flight crews.

Table 70: Ground crew/flight crew communications

Circumstances	Phraseologies
1. Starting procedures (ground crew/cockpit) **Notes:** 1. The ground crew should follow this exchange by either a reply on the intercom or a distinct visual signal to indicate that all is clear and that the start-up as indicated may proceed. 2. Unambiguous identification of the parties concerned is essential in any communications between ground crew and pilots.	a. [ARE YOU] READY TO START UP?; *b. STARTING NUMBER (engine number(s)).
2. Pushback procedures (ground crew/cockpit) **Note:** This exchange is followed by a visual signal to the pilot to indicate that disconnect is completed and all is clear for taxiing.	a. ARE YOU READY FOR PUSHBACK?; *b. READY FOR PUSHBACK; c. CONFIRM BRAKES RELEASED; *d. BRAKES RELEASED; e. COMMENCING PUSHBACK; f. PUSHBACK COMPLETED; *g. STOP PUSHBACK; h. CONFIRM BRAKES SET; *i. BRAKES SET; *j. DISCONNECT; k. DISCONNECTING STAND BY FOR VISUAL AT YOUR LEFT (or RIGHT).
3. De/anti-icing operations Prior to de-icing/anti-icing (ground crew (iceman) / flight crew)	a. STANDING BY TO DE-ICE. CONFIRM BRAKES SET AND TREATMENT REQUIRED; *b. [AFFIRM] BRAKES SET, REQUEST (type of de/anti-icing treatment and areas to be treated);

Circumstances	Phraseologies
aircraft configuration confirmation	c. HOLD POSITION AND CONFIRM AIRCRAFT CONFIGURED; *d. [AFFIRM] AIRCRAFT CONFIGURED, READY FOR DE-ICING; e. DE-ICING STARTS NOW.
4. Upon concluding de-icing/anti-icing procedure	
for de-icing operation	a. DE-ICING ON (areas treated) COMPLETE. ADVISE WHEN READY FOR INFORMATION; b. TYPE OF FLUID (Type I or II or III or IV); c. HOLDOVER TIME STARTED AT (time); d. ANTI-ICING CODE (appropriate anti-icing code) Note.— Anti-icing code example:
for a two-step de-icing/anti-icing operation	A de-icing/anti-icing procedure whose last step is the use of a mixture of 75% of a Type II fluid and 25% water, commencing at 13:35 local time, is recorded as follows: TYPE II/75 13:35 (followed by complete name of anti-icing fluid) e. FINAL STEP STARTED AT (time);
De-icing/anti-icing complete	f. POST DE-ICING CHECK COMPLETED; g. PERSONNEL AND EQUIPMENT CLEAR OF AIRCRAFT;
5. Abnormal de-icing operation	
for spray nozzle proximity sensor activation	a. BE ADVISED NOZZLE PROXIMITY ACTIVATION ON (significant point on aircraft) [NO VISUAL DAMAGE or DAMAGE (description of damage) OBSERVED] [SAY INTENTIONS];
for other aircraft having an emergency on the de-icing bay	b. EMERGENCY IN DE-ICING BAY (de-icing bay number) [SHUT DOWN ENGINES or STANDBY FOR FURTHER INSTRUCTIONS].