ATS instruction 14 Communication

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1. In general

1.1 Scope of the instructions

1.1.1 The instructions include 2 different forms
and methods of exercising communication: 'SPEECH-COMMUNICATION' and 'CONTROLLER-PILOT DATA LINK COMMUNICATION (CPDLC)'

1.1.2 'Voice communication', described in chapter 2 and in
Appendix A, includes cf. regulation (EU)
923/2012 (SERA) and BL 7-14, procedures that are used in the exercise of radio communication between ATS units and aircraft, including driving with aircraft, and for coordination

between ATS units.

1.1.3 'CONTROLLER-PILOT DATA LINK COMMU-NIKATION (CPDLC)', described in chapter 3 as well as in Appendix B, includes procedures that are used when performing data link communication

between air traffic controller and pilot.

2. Speech communication

*Note: Where the term "frequency/channel" is used in subsequent
procedures, the term "frequency" indicates the entire aviation
frequency range,
while the term "channel" indicates channel designation
in the VHF communication band, cf. 2.10.5 and
pt. 2.10.6.*

2.1 In general

2.1.1 Points 2.3.1, 2.5.1, 2.12, 2.14, 2.15,
2.18 and 2.19 as well as Appendix A, chapter 6. are used
while exercising coordination between ATS units.

2.2 Time system

2.2.1 Coordinated Universal Time (UTC) must be used by all
stations in the aviation mobile service. Midnight 2400 UTC shall
mark completion
of a day, and midnight 0000 must denote the start of
a day.

2.2.2 A date-time group must consist of 6 numbers,
of which the first two numbers indicate the date, and the last four
numbers indicate the hours and minutes respectively in UTC.

2.3 Language

2.3.1 For voice communication must be used
English or Danish.

2.3.2 An air traffic services unit shall respond
a call from an aircraft in the same language as the aircraft uses,
cf. section 2.3.1.

2.3.2.1 In connection with the performance of air traffic services
for IFR flights, standard English phraseology must be used
whenever possible.

*Note: This appears from Aeronautical Information
Publication (AIP), which aviation stations that only
uses English or Danish.*

2.4 Transmission in general

2.4.1 If it is necessary for an aircraft to
had to send out signals for testing and adjustment
of equipment, and if this can be expected to disrupt the work of a
nearby aviation station, permission from the aviation station must
be obtained beforehand
such signals are emitted.

2.4.2 If it is necessary for a station to
send test before call, it must not exceed
10 seconds. Such tests must consist of spoken numbers (One,
two, three, / One, two, three, etc.), ending with
the station's call sign.

2.4.3 The following transmission technique must follow
given:

- the frequency/channel must be tuned in before the transmission
    begins in order not to
    disrupt ongoing correspondence,

- normal speaking speed must be used,
    and must speak clearly and concisely,

- standard phraseology should be used where appropriate
    possible.

2.4.4 If an aviation station is simultaneously called by
several aircraft, the aeronautical station determines it
order in which the aircraft must deliver theirs
messages.

2.4.5 If retransmission is established, this must be activated when
working on several frequencies/channels simultaneously. The
retransmission can
however, it is interrupted if this is necessary for the appropriate
processing of the radio communication.

2.5 Use of aviation phraseology

2.5.1 In voice communication, must be used
standard words, numbers and standard expressions as listed
in sections 2.8, 2.9, 2.10 and 2.11.

2.5.2 In spoken communication, the phraseologies must
listed in Appendix A to these instructions are used in the
situations for which they are specified, cf. however section
2.5.3.

2.5.3 If in a given situation either not
standard phraseology exists for use, or there
if comprehension problems arise in correspondence with an
aircraft, other appropriate phraseology must be used. This
should be it
as clear and concise as possible and designed in such a way
that there is no risk of misunderstandings.

2.5.4 The phraseology examples listed in Appendix A generally
have a background in ICAO DOC 4444,
ch. 12, 'Phraseologies', and phrases listed in other ATS
instructions have been added. The phrasing examples
supplement those in section 2.5.1 listed standard words and
expressions and are used in connection therewith.
The phraseology examples cannot cover everyone
possible situation, so where the conditions differ, it is expected
that pilots and ATS personnel use
clear language which must be as unambiguous as
possible, and which meets the set requirements for language
skills for the individual certificate holder, with
in order to also avoid misunderstandings between
the people who use a language other than
their mother tongue.

2.5.4.1 For reasons of clarity, the phraseologies in Appendix
A are grouped according to the
types of air traffic service where they commonly
is used. However, ATS personnel must know -
and in relevant situations also use - phraseologies from the
other groups.

2.5.5 Phraseologies relating to movement of
vehicles in the maneuvering area, other than tow tractors, are
not grouped separately,
since the phraseologies applied to aircraft, too
can be used for vehicles, except for 'taxi instructions', where
the term 'DRIVE' must be used
instead of the term 'TAXI' when communicating with vehicles.

*Note: The separately grouped phraseology for
towing tractors appears in Appendix A, section 2.4,
Towing procedures.*

2.5.6 Approved abbreviations, initials (e.g
VOR) and code phrases (e.g. DETRESFA) must

is used in stages when it can shorten and remedy
the communication.

*Note: ICAO DOC 8400 "Abbreviations" lists the abbreviations,
initials and code phrases that are
approved for use in voice communication.*

2.6 Clearances and air traffic control instructions

2.6.1 The standard expression 'CLEARED'/'TIL-LADT' and its
derivations may only be used in connection with:

- take-off and landing clearances

- approach clearances; and

- clearances regarding flight path.

2.6.2 In all cases other than those that are
described in section 2.6.1, must be used directly
expressed air traffic control instructions, eg:

Flight Control Instructions:
TAXI.....TAXI
AIR TAXI.....AIR TAXI
CLIMB.....RISE
DESCEND.....GO DOWN
CROSS.....CROSS
TURN.....TURN
CONTACT.....CONTACT
REPORT.....REPORTS
HOLD.....WAIT
GO AROUND.....EXCESS
LINE-UP.....TAXI INTO THE TRACK

2.6.3 To avoid confusion when issuing
of clearances and air traffic control instructions and reading
them back must both ATC personnel and
pilots always add the call sign of the aircraft or vehicle to which
the clearance or air traffic control instruction is sent, cf.
however section 2.16.4.

2.6.4 Clearances or air traffic control instructions in the form of
conditional expressions, e.g. "after landing aircraft" or "after
departing aircraft",
must not be sent in connection with driving there
relates to a runway used for take-off or landing, unless the
involved aircraft or
vehicles can be seen by the control tower and concerned
aircraft. The aircraft or vehicle which is the cause
to the condition in the clearance, must be the first aircraft/
vehicle to pass in front of the person in question
aircraft. A conditional clearance must be sent in the following
order and contain:

a) call sign

b) condition

c) clearance, and

d) short repetition of the condition.

Example:
"SAS 941, BEHIND BOEING 737 ON SHORT
FINAL, LINE UP BEHIND".

*Note: This implies the necessity to
the aircraft receiving the conditional clearance
can identify the aircraft or vehicle in question which is the
reason for the conditional clearance.*

2.7 Read back (read back)

2.7.1 All safety-related parts of clear-
calls and air traffic control instructions must be repeated
by the receiver. The following must always be repeated:

a) route clearances;

b) clearances and air traffic control instructions for aircraft to
approach, land on, take off on,
keep clear of, cross or drive back along one
lane (backtrack), whether the lane is "lane
in use" or not;

c) information for aircraft about runway in use, altimeter setting,
SSR codes, newly assigned communication channels,
altitude instructions, course and speed instructions and
for arriving
IFR flights, whether notified by the air traffic service or
contained in an ATIS broadcast,
review level.

2.7.2 Other clearances or air traffic control instructions, including
conditional clearances and
driving instructions, must be repeated by the recipient
or confirmed in a manner that clearly shows that the clearance
and air traffic control instruction has been understood
and will be followed.

2.7.3 The air traffic service operator must listen to the readback
to ensure that clearances and air traffic control instructions are
correct
confirmed and must immediately correct any
discrepancy that the readback has
revealed.

2.7.4 If the sender of a message that
read back, identify errors or misunderstandings,
must be answered
NEGATIVE, I SAY AGAIN/NEGATIVE, I
REPEAT

after which the correct version is repeated.

2.7.5 Any readback must be completed
with its own call sign.

2.7.6 Air traffic service units must cooperate
to ensure that the provisions under section 2.7 are complied
with.

2.8 The spelling alphabet

2.8.1 The spelling alphabet is indicated below
must be used when sending call signals
or words whose spelling may be in doubt,
or which is not immediately perceived by the receiving
clean.

A	Alpha	AL FAH
B	Well done	BRAH WOH
C	Charlie	CHAR LEE or
		SHAR LEE
D	Participate	DELL TAH
E	Echo	ECK OH
F	Foxtrot	FOX TROT
G	Golf	GOLF
H	Hotel	HOH TELL
I	India	IN DEE AH
J	Juliette	JEW LEE ONE
K	Kilo	KEY LOH
L	Lima	LEE MAH
M	Mike	MIKE
N	November	NO WHO NEEDS
O	Oscar	US CAH
P	Papa	PAH PAH
Q	Quebec	KEH BECK
R	Romeo	ROW ME OH
p	Sierra	SEE AIR RAH
T	Tango	TONGUE GO
U	Uniform	YOU NEE FORM or
		OO NO FORM
V	Victor	WAKE TAH
W	Whiskey	WISS KEY
X	X-ray	EKCS RAY
Y	Yankee	YANG KEY
Z	Zulu	ZOO LOO
Æ	Ægir	ÆGIR
Ø	Øresund	ØRESUND
Å	Åse	ÅSE

Note: Emphasis is placed on underlined syllables.

2.9 Pronunciation of numbers

2.9.1 Numbers should be pronounced as follows:

speak up	English	Danish
0	ZERO	ZERO
	WUN	ONE/ONE
1	TOO	THAW
2	TREE	THREE
3	FOWs	FOUR
4	FIFE	FIVE
5	SIX	SIX
6	The SEV	SEVEN
7	AIT	EIGHT
8	NINs	NI el. NO-ner
9 10	WUN ZERO	TEN
,	DAY-SEE-MAL	Comma
100	One HUN-dred	One hundred
1000 One TOU sand		One thousand

when the number 9 stands alone or at the end of a group, it must always be pronounced NEJ-ner....NIN-er.

Note: The stress must be placed on the syllables that are written in capital letters

2.10 Delivery of numbers and groups of numbers

2.10.1 In Danish, numbers and groups of numbers are sent to the same way as these are said in ordinary speech.

Numbers in the thousands group under ten thousand can be divided into 2 times 2 groups of numbers, e.g. the number 3764 must be pronounced as either:

THREE THOUSAND SEVEN HUNDRED FOUR AND SIXTY,
or
THIRTY SEVEN SIXTY FOUR.

Altimeter setting (QNH/QFE), however, must always sent as in ordinary speech, e.g. 1014 as:
ONE THOUSAND AND FOURTEEN.

Bearings and courses must always consist of three digits, eg. Course 020 is expressed as: Course ZERO TWENTY.

Examples:

speak up	Danish
10	Ten
25	Twenty five
50	Fifty
100	One hundred
583	Five hundred and eighty three
600	Six hundred
1000	One thousand
2182	Two thousand one hundred and eighty two
(or)	Twenty one eighty two
2500	Two thousand five hundred
(or)	Twenty-five hundred
5000	Five thousand
7600	Seven thousand six hundred
11000	Eleven thousand
18900	Eighteen thousand nine hundred
38143	Thirty-eight thousand one hundred and forty-three

2.10.2 In English, all numbers are sent by pronounce each digit individually, except as prescribed in section 2.10.3 or 2.10.3.2.

Examples:

Danish phraseology is indicated below in *italics.*

Aircraft call *signs*

CCA 238	Air China TWO THREE EIGHT
	(two hundred and thirty-eight)
OAL 242	Olympic TWO FOUR TWO
	(two hundred and forty-two)

Flight levels

FL 180	flight level ONE EIGHT ZERO
	(flight level *one hundred and eighty)*
FL 200	See example in section 2.10.3.2

Headings *(courses)*

100 degrees	heading ONE ZERO ZERO
	(course one hundred)
080 degrees	heading ZERO EIGHT ZERO
	(course eighty)

Wind direction and speed *velocity)*

200 degrees 79 knots	wind TWO ZERO ZERO degrees SEVEN NIN knots
	(wind two hundred degrees NO-seventy knots)
160 degrees 18 knots	wind ONE SIX ZERO degrees ONE EIGHT knots
	(wind one hundred and sixty degrees eighteen knots)

Transponder codes

2000	See example in section 2.10.3.2.
2400	See example in section 2.10.3.2.
4213	squawk FOUR TWO ONE THREE
	(squawk forty two thirteen or four thousand two hundred thirteen)

Runway

27	runway TWO *SEVEN*

08R	runway ZERO EIGHT *RIGHT*

Altimeter setting *(altimeter setting)*

1010	QNH ONE ZERO ONE ZERO
	(QNH one thousand and ten)
1000	See example in section 2.10.3.

2.10.3 When sending figures regarding height
above sea level, altimeter setting, cloud height, visibility and runway visual range (RVR) containing
whole hundreds and whole thousands, each digit is pronounced
in the number of hundreds or in the number of thousands
followed by the word HUNDRED or THOUSAND.
For combinations of thousands and whole hundreds
pronounced each digit in the number of thousands followed
of each digit in the number of hundreds added to the words
HUNDRED and THOUSAND respectively.

Examples:

Altitude *(height above sea level)*

800 ft	EIGHT HUNDRED FEET
	(eight hundred feet)
3400 ft	THREE THOUSAND FOUR A HUNDRED FEET
	(three thousand four hundred feet or thirty-four hundred feet)
12000 ft	ONE TWO THOUSAND FEET
	(twelve thousand feet)

Altimeter setting *(altimeter setting)*

1000	QNH ONE THOUSAND
	(QNH one thousand)

Cloud *height*

2200 ft	TWO THOUSAND TWO A HUNDRED FEET
	(two thousand two hundred feet or twenty two hundred feet)
4300 ft	FOUR THOUSAND THREE A HUNDRED FEET
	(four thousand three hundred feet or forty three hundred feet)

Visibility

1000 m	visibility ONE THOUSAND METERS
	(visibility one thousand meters)
700 m	visibility SEVEN HUNDRED METERS
	(visibility seven hundred meters)

Runway Visual *Range*

600 m	RVR SIX HUNDRED METERS
	(RVR six hundred meters)
1700	RVR ONE THOUSAND SEVEN HUNDRED
	(RVR one thousand seven hundred meters or seventeen hundred meters)

2.10.3.1 If clarification of the figure is required
shipped as whole hundreds and/or wholes
thousands, the number must be sent by mentioning each digit individually.

2.10.3.2 For sending numbers and groups of numbers, which indicating flight levels and transponder codes must

a) flight levels are sent by pronouncing each digit separately, except for flight levels in whole
hundred, which must be transmitted by saying each digit
of hundred followed by the word
HUNDRED, and

b) transponder codes are sent by speaking
each digit separately, except for transponder codes in the whole thousand, which must be transmitted
by pronouncing each thousands digit followed by the word THOUSAND

Flight *levels*

FL 200	Flight level TWO HUNDRED
	(flight level two hundred)

***Transponder* codes**

2000	squawk TWO THOUSAND *squawk two thousand)*
2400	squawk TWO FOUR ZERO ZERO
	(squawk twenty four zero zero or two thousand four hundred)

2.10.4 Numbers containing commas must be expressed as stated in section 2.10.1 and 2.10.2 with the comma mentioned where it appears in the number.

Note 1: The following chart shows examples of this procedure:

speak up	*English*	*Danish*
100.32	*One zero zero decimal three two*	*One hundred point thirty-two or one hundred point three two*

38143.9 Three eight one four three deci-mal nines	*Thirty-eight thousand one hundred and forty-three comma nines*	

2.10.5 When specifying channels for VHF frequencies, all 6 digits must be specified, unless 5.
and 6th digit are both zero. In that case, indicate alone the first 4 digits.

Note 1: There is no requirement for 8.33 equipment in aircraft in the ICAO NAT Region.

Note 2: The following table shows examples of this procedure:

Channel	English	Danish
118,000	*One one eight decimal zero*	*One hundred eighteen point zero*
118.005	*One one eight decimal zero zero five*	*One hundred eighteen point zero zero five*
118,010	*One one eight decimal zero one zero*	*One hundred eighteen point zero ten or one hundred eighteen point zero one zero*
118,025	*One one eight decimal zero two five*	*One hundred eighteen point zero twenty five or one hundred eighteen point zero two five*
118,050	*One one eight decimal zero five zero*	*One hundred eighteen point zero fifty or one hundred eighteen point zero five zero*
118,100	*One one eight decimal one*	*One hundred eighteen point one*

2.10.6 When designating traffic etc. according to the clock face method, normal pronunciation of numerals from 1 is used to 12:

speak up	English Danish	
at 9 position	At your NIN is the O'CLOCK position	
	(in your o'clock NO-ner position)	
at 10-position	At your TEN O'CLOCK position	
	(in your TEN o'clock position)	
at 11-position	At your ELEVEN O'CLOCK position	
	(in your ELEVEN o'clock position)	

at 11-position At your TWELVE O'CLOCK position

(in your TWELVE o'clock position)

2.10.7 The time is only sent with an indication of the number of minutes. If there is any doubt,
however, the hourly rate is also sent. Upon request information about current time, must control towers as well AFIS units indicate the time rounded to the nearest half a minute. The following phraseology is used:

Examples:

at	English	Danish
0620	Two zero, el. Zero six two zero	Thieves, etc. Zero six twenty
1643	Four three, or One six four three	Forty-three, or Sixteen forty-three
1800	On the hour, or One eight zero zero	On the hour, or Eighteen zero zero
0620:30	Two zero and a half or. zero six two zero and a half	twenty and a half electricity. zero six twenty and a half
O'clock whole (whole hours) and 30 seconds	On the hour and a half or zero zero and a half	*(in an hour and* a half *or* zero zero and *a half)*

2.11 Standard words and expressions

2.11.1 Subsequent standard words and expressions shall be used and have the following meaning:

ACKNOW-LEDGE CONFIRM MEL-THING	Let me know that my message has been received and understood
AFFIRM YES	Yes
APPROVED APPROVED	Request approved
BREAK BREAK	I hereby indicate separation between parts of my message
BREAK BREAK BREAK BREAK	I hereby indicate separation between messages to different aircraft

CANCEL CANCEL	Cancel	READ BACK READ BACK	Repeat the whole, or specified part of the message I just sent
CHECK CHECK el. CHECK	Check (systems or procedures)	RECLEARED CHANGED TO- CHARGING	Clearance changed to ..... (this new clearance or part thereof replaces the one previously sent)
CLEARED ALLOWED	Allowed to perform	REPORT REPORTS REQUEST REQUESTING	Send the following information... I would like to know, or I request ....
CONFIRM CONFIRM	Have I received the message? correctly, or have you received my message correctly	ROGER UNDERSTOOD or RECEIVED	I have understood the message (must not be used as a receipt for messages that require reading back)
CONTACT CONTACT el. SWITCH TO	Establish radio contact with		
CORRECT CORRECT	It is correct	SAY AGAIN REPEAT	Repeat the whole or specified part of your message
CORRECTION CORRECTION	I have said a mistake, the correct version is	SPEAK SLOWER SPEAK SLOW- MORE	Reduce the speaking rate
DISREGARD IGNORE MEL- THING	Consider the message in question as not sent		
HOW DO YOU READ HOW ARE YOU READING ME?	What is the readability (quality) of my broadcast	STANDBY WAIT CALLER BACK	Wait, I'm calling you
		UNABLE NOT ABLE TO	I cannot comply with your request, instruction or clearance (usually followed by a reason)
I SAY AGAIN I REPEAT- GER	I repeat (for emphasis)		
MAINTAIN STAY	Proceed in accordance with the stated conditions, or in the literal sense of the word, e.g. "Maintain VFR"	VERIFY INVESTIGATE	Check and confirm the correctness (with the issuer)
		WILCO WILCO	I understand your message and will comply with it (WILCO is a contraction of "will comply")
MONITOR eavesdrop	Listen on (frequency)	WORDS TWICE SEND EACH WORD TWO AWAYS	a) as a request: communication is difficult, so send every word, or groups of words twice
NEGATIVE NEGATIVE	No, or permission not granted, or That is not correct		
OVER SHIFTING	My message has been completed and I expect a reply (not normally used for communication on VHF)		b) as information: since communication is difficult, every word or groups of words being sent twice (not normally used on VHF)
OUT END	Exchange of messages completed (not normally used for communication on VHF)		

2.12 Prioritization of messages

2.12.1 Sending and processing of messages
must be done in the following order of priority:

1) distress messages ("MAYDAY"),
    cf. section 2.22,

2) emergency messages (urgency messages "PAN PAN"),
    cf. section 2.22,

3) messages regarding bearings (direction find-
    ing),

4) messages regarding the safety of a flight
    (flight safety messages),

5) meteorological messages (meteorological messages),

6) messages regarding the regularity of aircraft,
    provided the irregularity occurred during the flight time
    (Flight regularity messages).

2.12.2 Messages regarding the regularity of aircraft may not
be sent over control frequencies/-

channels if other aviation frequencies/channels are
available.

2.13 Composition of messages

2.13.1 Aviation messages, which are only exchanged between
aircraft and aviation stations, consist of
of:

a) calls that indicate the recipient's call sign followed by the
    sender's call sign, cf.
    section 2.14 and section 2.15,

b) the text of the notification, cf. 2.13.4.

2.13.2 Messages from aircraft that must be forwarded by the
aviation station to others must be composed as follows:

a) calls, cf. 2.13.1 a), followed by the word;
    FOR .....TO, or MESSAGE FOR.....MESSAGE
    TO

b) the name and/or address to which the notification
    must be passed on, and

c) the text of the notification, cf. 2.13.4.

2.13.3 Messages to aircraft issued by others
than aeronautical services, shall be dispatched as follows:

a) calls, cf. 2.13.1 a), followed by the word;
    FROM .....FROM, or MESSAGE FROM.... MESSAGE
    FROM

b) the name and address of the issuer
    the message

c) the text of the notification, cf. 2.13.4.

2.13.4 The text must be as concise as
possible for passing on the necessary information.

2.14 Call signs for aircraft

2.14.1 An aircraft's call sign must be one of
the following three types:

type a) registration designation of the aircraft
            (the name of either the aircraft make or type
            model may be used as a "pre-fix" for the
            registration designation),

type b) the carrier's telephone designation
            (ICAO DOC 8585) followed by the last ones
            four characters of the aircraft's registration
            designation,

type c) the carrier's telephone designation
            followed by the route number.

Note: To increase awareness of
the ground station or other aircraft that the transmitting aircraft
is of a category that has special maneuvering characteristics,
the following aircraft types must
also use own aircraft type as prefix
in the call sign:

a) Glider: "Glider" or "Glider".

b) Helicopters: "Helicopter" or "Helicopter".

c) Ultralight aircraft: "Ultralight" or "Ultralight".

d) Hang gliders: "Hang glider" or "Kite".

2.14.2 When satisfactory communication is

has been established, and it cannot cause confusion, the
aircraft must use the abbreviated form
as shown below provided that the aeronautical station
has called the aircraft in one of the abbreviated forms
as follows:

type a) the first and at least the last two characters of the
            registration (the name of either
            the make or model of the aircraft may
            is used instead of the first character of
            the registration designation)

type b) the carrier's telephone designation followed by at least
            the last two characters
            of the registration,

type c) must never be shortened.

Example:

Full call sign	Abbreviated call sign
type a) OYABC	OBC, etc. O-ABC
CESSNA OYABC	CESSNA BC, el. CESSNA ABC
CITATION OYABC	CITATION BC, or CITATION ABC
HELICOPTERS OYHAF	ELECTRIC HELICOPTER HELICOPTERS HAF
SLIDE/SWEAT-VEFLY OYXPM	GLIDER/SWO-VEHICLE PM or Glider/Swimplane XPM
type b) AIRLINE YABC	AIRLINE BC, or AIRLINE ABC
type c) AIRLINE 401	(no abbreviated form)

2.14.3 An aircraft may not change its callsign during a flight. However, if that can occur
possibility of confusing call signs, one can
air traffic control unit instruct the aircraft to temporarily use a different call sign.

2.14.4 An aircraft of Wake Turbulence category SUPER or HEAVY shall, on the first call to an air traffic service unit, add respectively
"SUPER" or "HEAVY" for its call sign.

2.15 Call signs for aviation status oner

2.15.1 An aviation station's call sign must consist of:

a) a geographical place name, and

b) a "suffix" indicating the service provided.

The service unit must be identified in accordance with the table below, but either can
geographic place name or "suffix" is omitted, provided secure communication is established.

Examples of call signs:

Unit/service	"Suffix" for call sign
Area control center	CONTROL
Approach control	APPROACH
Approach control radar arrival waltz	ARRIVAL
Approach control radar departures	DEPARTURE
Aerodrome control	TOWER
Surface movement control GROUND	
Radar (in general)	RADAR
Precision approach radar	PRECISION
Direction-finding station	HOMER
Flight information service	INFORMATION
Clearance delivery	DELIVERY
Apron service	APRON
Company dispatch	DISPATCH
Aeronautical station	RADIO
Aerodrome Flight Information Service:	
- Denmark:	INFORMATION
- Faroe Islands and Greenland:	AFIS

Examples:
AALBORG TOWER
APPRECIATION APPROACH
COPENHAGEN CONTROL
ESBJERG INFORMATION
SONDRESTROM TOWER
VAGAR OFFICE
NUUK AFIS
NUUK INFORMATION

2.16 Establishment of communication

2.16.1 When establishing a communication connection, full call signals must always be used by both the calling and the responding station. The use of the calling station's callsign followed by the answering station's callsign is considered an invitation to the caller

station to begin the message.

Ex.:

Call: KASTRUP TOWER - OYABC

Answer: OYABC - KASTRUP TOWER.

2.16.1.1 When transferring communications within the same ATS unit, the ATS unit's call sign is omitted.

2.16.2 Immediately following the first established communication link on an air traffic control frequency/channel, state aircraft that not equipped with RNAV, after the call signal use the term 'NEGATIVE RNAV'.

2.16.3 Any test calls are sent as follows:

Recipient's callsign, followed by sender's callsign and the expression:

RADIO CHECK (and the frequency/channel used)

2.16.3.1 Answers to test calls are sent as follows:

The caller's callsign, followed by own callsign, and as an expression of legibility is used the following graduations:

1. UNREADABLE.....UNREADABLE

2. READABLE NOW AND THEN.....READABLE OCCASIONALLY

3. READABLE BUT WITH DIFFICULTY.....READABLE BUT WITH DIFFICULTY

4. READABLE.....READABLE

5. PERFECTLY READABLE..... PERFECTLY READABLE

2.16.4 When 2-way connection is established can sequences of communication are exchanged between same stations without further use of call signs until the connection is terminated, below condition of another call/call sign not is broken into during the exchange.

2.16.5 Communication must begin with call and answer, unless it is certain that it called station will receive the message. Establishment of first contact, however, must always be in accordance with section 2.16.1.

2.16.6 Calls to aircraft that are in the take-off phase, during the last part of the final approach and during the landing run, may only take place if for safety reasons is required.

2.16.7 If an aeronautical station wishes to transmit general information for all aircraft, the message must begin with:

ALL STATIONS.....FOR ALL STATIONS.

Apart from emergency and fire announcements, no announcements are expected reply to such messages, unless specifically requested.

2.16.8 When a station is called but identification of the caller is uncertain, the called station replies:

STATION CALLING SAY AGAIN
YOUR CALLSIGN.....WHO'S CALLING (callsign-nal)
REPEAT YOUR CALLSIGN.

2.16.9 Direct communication between aircraft may not take place over air traffic service frequencies, unless separate permission has been obtained from the relevant air traffic service unit.

2.16.9.1 In the case of direct communication between aircraft, the word must be used on the first call "INTERPILOT" immediately after dispatch of aircraft call signs.

Ex.:

AIRLINE 123 - OYABC, INTERPILOT, DO YOU READ.....AIRLINE 123 - OYABC, INTERPILOT, DO YOU HEAR ME?

2.16.9.2 If aircraft of an air station have granted permission to communicate directly with each other, the receiving aircraft must check the communication and immediately cause it to be terminated if it finds that the aviation station have wanted in.

2.16.10 All stations must answer calls directed to them and must exchange communications on request.

2.16.11 Aircraft must under normal conditions communicate on the frequencies/channels that are available listed for the individual aviation stations in AIP.

2.16.12 Aviation stations must instruct aircraft to switch to another specified frequency/channel, when the aircraft must leave a frequency/channel, for which there is a demand for the establishment of two-way radio communication.

Note: In the parts of Faroese and Greenlandic airspace where two-way radio communication is not required, aircraft must announce when the frequency/channel is left.

2.17 Receipt of receipt

2.17.1 An aircraft's receipt for receipt of
a report must be made by pronouncing the aircraft's call
sign.

2.17.2 An aviation station's receipt of a message must be
done by:

a) for aircraft:

    to pronounce the aircraft call sign followed by om
    required by the aviation station's own call sign,

(b) to another aeronautical station:

    to pronounce own aviation station's call sign.

Only particularly difficult messages or parts of messages
must be read back by an aviation station and
ends with the call sign of the aviation station.

2.18 Correction and Repetition

2.18.1 In the event of an error in a transmission, the word is pronounced:

CORRECTION.....CORRECTION,

after which the last correct group or expression is repeated
and the transmission is continued.

2.18.2 If a correction can best be carried out
by repeating the entire message is expressed:

CORRECTION, I SAY AGAIN.....CORRECTION,
I REPEAT,

after which the message is transmitted from the beginning.

2.18.3 If a recipient wants an entire message repeated,
this must be indicated by expressing:

SAY AGAIN .....REPEAT.

Desired parts of a message are expressed repeatedly
respectively:

SAY AGAIN ALL BEFORE .....REPEAT EVERYTHING
BEFORE, etc. SAY AGAIN ALL AFTER..... REPEAT
EVERYTHING AFTER, etc. SAY AGAIN ALL BETWEEN.....
REPEAT EVERYTHING IN BETWEEN.

If a certain subject is desired to be expressed repeatedly
eg.:

SAY AGAIN RUNWAY IN USE.....REPEAT RUNWAY
IN USE.

2.18.4 If the sender of a message that
read back, identify errors or misunderstandings,
must be answered:

NEGATIVE, I SAY AGAIN.....NO, I REPEAT

after which the correct version is repeated.

2.19 Cancellation

2.19.1 If a clearance or air traffic control instruction is to be
cancelled, the aeronautical station shall
express:

CANCEL.....CANCEL.

2.19.2 If a message/transmission etc. must be cancelled,
the sender must express:

DISREGARD.....IGNORE MESSAGE.

2.20 Termination of Communication

2.20.1 A correspondence must be concluded by
the receiving station sends its own call signal.

2.21 Listening guard

2.21.1 Aircraft that must maintain a listening watch
on specified frequencies/channels, must not cease
herewith without the permission of the aviation station in
question, unless there are safety reasons for this.

2.21.2 Aircraft flying over the North Sea and
Skagerrak within the Copenhagen FIR, and aircraft flying
within the Nuuk FIR must keep an uninterrupted listening
watch on the VHF emergency channel 121,500 MHz,
except during such periods when the aircraft
performs communication on other VHF communication
channels, or the work in the driver's cabin does not
allows simultaneous listening of two VHF communication
channels.

2.21.3 Aircraft that on the VHF emergency channel
121.500 MHz hears an ELT signal that is judged
to be other than a short trial, must immediately
inform the nearest aviation station with an indication of the
aircraft's position, flight altitude, route and
time when the ELT signal was first heard
as well as the volume of the signal. During the flight
information is also given about the volume of the signal to or
decreases.

If the ELT signal ceases, you will be notified accordingly
way about the aircraft's position, flight altitude, route and
time when the signal was last heard.

2.21.4 Aviation stations must, within the service hours, maintain a constant listening watch on their working frequencies/channels as well as on the emergency frequencies/channels that the aviation stations are equipped with with.

2.21.5 Aviation stations that do not have H-24 services, which are or are expected to be involved in emergency traffic, air traffic and traffic related to illegal action, must extend their normal duty hours to provide the communications support that it the situation in question requires.

2.22 Emergency and fire notifications

2.22.1 Emergency and air traffic must be maintained on it frequency/channel where the first call was made, unless it is estimated that a better service can be provided assistance on another frequency/channel.

Emergency messages

2.22.2 Emergency calls are initiated with the signal "MAYDAY", if possible said three times. Then in order as many of the following as possible points:

a) call sign of the station the message is intended for, possibly ALL STATIONS.....FOR ALL STATI-ONS,

b) own call sign,

c) description of the emergency,

d) the commander's intentions,

e) the position, altitude and course of the aircraft,

f) other relevant information for use for any search.

Note: An aircraft equipped with an SSR transponder is expected to transmit SSR code 7700 to show that it is in an emergency.

2.22.3 The called aviation station, or first station responding to the emergency call must:

a) immediately acknowledge the aircraft's call sign, followed by own call sign and,

ROGER MAYDAY.....MAYDAY RECEIVED

b) take control of the communication, or depending on the circumstances, transfer it to a other mod at the same time to inform the aircraft about this

c) notify all appropriate persons according to alarm plans.

2.22.4 The aircraft in distress, or the aviation station, who has taken over control of the emergency traffic, can impose on others that interfere with the exchange of emergency traffic, radio silence by broadcasting:

STOP TRANSMITTING, MAYDAY.....STOP TRANSMITTING, MAYDAY

2.22.5 When the aircraft that issued the MAY-DAY is no longer in an emergency situation, it must issue a cancellation thereof to the controlling aviation station:

the call sign of the aviation station - the call sign of the aircraft,

CANCEL DISTRESS.....CANCEL EMERGENCY THING

2.22.6 The controlling aeronautical station shall, when emergency traffic has ceased and radio silence has not longer is necessary, broadcast:

ALL STATIONS - (the call sign of the aviation station), DISTRESS TRAFFIC ENDED......EMERGENCY TRAFFIC FINISHED

Odor messages

2.22.7 Fire reporting begins with the signal "PAN PAN", preferably pronounced three times, then as many as possible from the following points:

a) the callsign of the station for which the message is intended, possibly "ALL STATIONS",

b) own call sign,

c) description of the situation,

d) the commander's intentions,

e) the position, altitude and course of the aircraft,

f) other relevant information.

2.22.8 The called aeronautical station, or first arriving station that responds to the alert, must:

a) acknowledge the report

b) notify everyone according to alerting plans.

2.22.9 When the flight includes medical transport, the signal PAN PAN MEDI-CAL must be started as a warning message, if possible said three times. The message content must include:

a) the aircraft's call sign or other recognizable identification of the medical transport,

b) the position of the aircraft,

c) number and type of medical transport,

d) place of departure and place of destination,

e) intended route and expected flight time and

f) any other information about the flight, such as
flight altitude, intercepted radio frequencies, used
language and SSR mode and code.

2.22.10 The procedure mentioned in section
2.22.8, must be used by the receiving station
a PAN PAN MEDICAL message.

2.22.11 After calls where the distress and emergency signals
is broadcast, the distress and emergency signals can be used
every time subsequent communication is exchanged.

2.23 Communication regarding
illegal act

2.23.1 The station that is called by an aircraft that is
subject to an illegal act or the first station to respond to
it must notify in accordance with alerting plans and
provide all possible
assistance, cf. also the provision in section 2.21.5.

*Note: An aircraft equipped with an SSR transponder is
expected to transmit SSR code 7500
to show that it is hijacked.*

2.24 Communication regarding
RVSM

2.24.1 When flying in, including climb or
descent through, RVSM airspace with aircraft
which is not approved for RVSM flight, the pilot must
report the status of the approval in accordance with
Appendix A, section 1.1.13, c),
RVSM phraseology, as follows:

a) on initial calls on any frequency i
RVSM air space,

b) upon any request for a change of height,
and

c) at any reading back of height clearance-
gives.

2.24.2 Flight controllers must expressly acknowledge
receiving messages from aircraft about non-approved
RVSM status.

2.25 Failing radio connection

2.25.1 If it is not possible for an aircraft to
establish connection with an aeronautical station on
the frequency/channel that the station normally uses,
the aircraft must:

a) try to establish connection on it beforehand
used frequency/channel and, if not
gives result, on another expedient
frequency/channel, or

b) if this fails, the aircraft shall attempt to
establish a connection with the relevant air traffic
station, other aviation stations or others
aircraft using any available means, with information
that the connection on the originally assigned
frequency/channel could not be established, or

c) if this is also not successful on the normally used
frequency/channel, start the broadcast
with the expression:

TRANSMITTING BLIND ..... TRANSMITTING
BLIND,

and then send the message 2 times, as well
if the aircraft is equipped with SSR transponder,
broadcast SSR code 7600.

2.25.2 If the reason for the aircraft being out of
able to establish a radio connection is due to a fault in
the receiving system, the aircraft must send its
messages to a normal extent and on the normally used frequency/
channel. It begins with the expression:

TRANSMITTING BLIND DUE TO RECEIVER
FAILURE.....TRANSMITTING BLIND ON GROUND
OF RECEIVER ERROR.

The message must be repeated and then terminated
with the time of the next expected call.

3. Controller-Pilot Data Link Communication (CPDLC)

3.1 In general

3.1.1 The use of CPDLC constitutes a method of communication
between air traffic controllers and pilots
use of data link for ATC communication.

*General note: The total CPDLC concept consists
of the following services:*

* *ATC Communications Management Service
(ACM)*

* *Clearances and Information Communications
Service (CIC)*

* *Downstream Clearances Service (DSC)*

* *Departure Clearance Service (DCL).*

The ACM service provides automated assistance to aircraft and the two handover ATC units in performing the necessary communications in connection with the handover; both the speech channel and
the new data communication channel is used.

The CIC service includes message exchange and operational procedures between air traffic controller/pilot by air-ground data communication within the EUR region regarding:

• Air traffic controllers issuing clearances, flight control instructions and messages/instructions,

• Pilots' reports and requests for clearances,

• Assistance and system messages.

Combination of voice and data link communication included in the description of the CIC service.

The DSC service passes on, at the request of a aircraft, 'downstream' clearance from a subsequent ATC unit that is not the current controlling ATC unit for the concerned

aircraft, e.g. where earth-earth connections are not available or are insufficient.

*The DCL service provides automated assistance in connection with the request for and submission of ATC clearance before departure (pre-departure clearance). **Only performance of DCL is described so far in these instructions,** as the other services mentioned above depend on, among other things the establishment of it advanced ground-based data networks (Aeronautical Telecommunication Network (ATN) - which must convey the CPDLC data to the various transmitters/ receive stations that the aircraft successively hook on.*

3.1.2   Applying CPDLC includes a set of message elements (clearance/air traffic control instruction/ information/request) that correspond to the phraseology used in connection with a radiotelephony scenario.

Note 1: See Appendix B regarding the CPDLC message set, where the respective message elements are set out in list form with corresponding explanation on their purpose and use.

Note 2: However, it is the CPDLC mentioned in note 1 message set in Appendix B so far limited to only include the message elements that relate to the request for/issuance of 'pre-departure clearance' via data link, as it is only this

*sub-function of the total CPDLC concept, which is expected to be implemented for the time being, cf. above general notes. **As a consequence of this, subsequent clause 3.1.3 and 3.1.4 for the time being only in use, for what is relevant the 'pre-departure clearance' function.***

3.1.3 The air traffic controller must be equipped with possibility of: issuing heights, crossing restrictions, lateral deviations, route clearances and changes thereto, speed assignments, frequency/channel assignments, and requests about information.

3.1.4 The pilot must be equipped with the ability to: answer messages, request clearances and information, report, and

could declare or cancel an emergency.

3.1.5 The pilot and the air traffic controller must be equipped with the possibility to exchange 'free text' messages that do not match with the defined formats.

3.1.6 Sending a message using CPDLC must consist of/occur upon selection of recipient(s), selection of relevant message as well as a 'send' function.

3.1.7 When time indication is used using CPDLC, it must be accurate to within 1 second relative to UTC.

3.1.8 Where practicable, the digital data link communication procedures for providing CPDLC shall be in accordance

with Annex 10, Volume III, Part I, Chapter 3. The message elements include purpose, text content and associated procedures are generally in accordance with Appendix A 'Phraseology'. It is recognized, however, that the CPDLC message set and the associated procedures differ somewhat from the ditto used speech equivalent due to the difference between the two media, as the exchange of data can displayed on screen or in printed form.

3.2   Communication procedures

3.2.1 The air traffic controller or pilot must initiate data messages either by using the message set defined in Appendix B, a 'free text' message or a combination of both.

3.2.2 Both the ground-based and the airborne systems must take into account that the messages:

• can be presented in an appropriate way,

• can be printed out when desired and stored in a form that enables timely and convenient access to the stored data.

When presentation of text is desired, as a minimum the text must be in English.

Message attributes (Message attributes)

3.2.3 The message properties require certain requirements for message processing by the CPDLC user, who receives a message. Each CPDLC message has three properties: **'Urgency-', 'Alert-' and 'Response attributes'.**

3.2.3.1 The Urgency (URG) attribute depicts **the system queuing requirements** for the received messages which is presented to the end user. Urgent types shown in the following chart:

Urgency Attribute (Uplink and Downlink)

Type	Description	Precedence
D	Distress	1
U	Urgent	2
N	Normal	3
L	Low	4

3.2.4 The Alert (ALRT) property depicts **the nature of attention/speed** required by

receipt of the message. Alert types are shown in the following table:

Alert Attribute (Uplink and Downlink)

Type	Description	Precedence
H	High	1
M	Medium	2
L	Low	3
N	No alerting required	4

3.2.5 The Response (RESP) property determines **the response requirements for a given message element.** Response types are shown in subsequent tables for respectively for uplink messages and for downlink messages:

Response Attribute (Up-Link)

Type	Response Required	Valid Responses	Precedence
W/U	Yes	WILCO, UNABLE, STANDBY permitted, LOGICAL ACKNOWLEDGEMENT (only if required), ERROR (if necessary)	1
A/N	Yes	AFFIRM, NEGATIVE, STANDBY permitted, LOGICAL ACKNOWLEDGEMENT (only if required) ERROR (if necessary)	2
R	Yes	ROGER, UNABLE, STANDBY permitted, LOGICAL ACKNOWLEDGEMENT (only if required) ERROR (if necessary)	3
Y	Yes	Any CPDLC downlink message, LOGICAL ACKNOWLEDGEMENT (only if required)	4
N	No, unless logical acknowledgment required	LOGICAL ACKNOWLEDGEMENT (only if required)	5

Response Attribute (Down-Link)

Type	Response Required	Valid Responses	Precedence
Y	Yes	Any CPDLC uplink message, LOGICAL ACKNOWLEDGEMENT (only if required)	1

N	No, unless logical acknowledgment required	LOGICAL ACKNOWLEDGEMENT (only if required), ERROR (if necessary, only when logical acknowledgment is required)	2

Appendix A

Phraseology (Speech Communication)

Contents

0. In general

0.1 Rules for the use of subsequent
phraseology examples are listed in ATS instruction 14,
section 2.5 'Use of aviation phraseology' and
the communication procedures must be in accordance with as
stated in ATS instruction 14,
chapter 2. 'Voice communication'.

0.2 The phraseology examples have not been translated
to Danish, as they will mainly be used in connection with
handling IFR traffic.

Danish phraseology examples appear from BL 7-14,
latest edition.

0.3 The phraseology examples include only
full text, i.e. without various call signs etc
The relevant expressions/names/numbers etc. belonging to them
index words enclosed in parentheses ( )
(e.g. level, time, place, frequency, significant point)
must be added to the phraseology in question, whereas it
to the **index words enclosed in squares
brackets [ ] can** optionally be added.

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1. Phraseologies

1.1 General

Circumstances	*Phraseology*	*Used by*	
		ATC	*FIS*
1.1.1 Description of levels (subsequently referred to as "(level)")			
	a) FLIGHT LEVEL *(number); or*	ÿ	ÿ
	b) [HEIGHT] *(number)* FEET/METRES;	ÿ	ÿ
	c) [ALTITUDE] *(number)* FEET/METRES;	ÿ	ÿ
Note: In circumstances where clarification is required, the word "ALTITUDE" or "HEIGHT" may be included, eg 'DESCEND TO ALTITUDE TWO THOUSAND FEET'.			
…when passing level information in form of vertical distance from the other traffic	d) *(number)* FEET/METERS ABOVE *(or* BE-LOW).	ÿ	ÿ
1.1.2 Level changes, reports and rates			
	a) CLIMB *(or* DESCEND);	ÿ	ÿ
	followed as necessary by:		
	1) TWO *(level);*	ÿ	ÿ
...instruction that a climb (or descent) to a level within the vertical range defined is two commence	2) TWO AND MAINTAIN BLOCK *(level)* TWO *(level);*	ÿ	ÿ
	3) TO REACH *(level)* AT *(or* BY) *(time or significant point);*	ÿ	ÿ
	4) REPORT LEAVING *(or* REACHING, *or* PASSING) *(level);*	ÿ	ÿ
	5) AT *(number)* FEET PER MINUTE *(or* METERS PER SECOND) [OR GREATER *(or* OR LESS);	ÿ	ÿ

...for SST (Supersonic Transport) aircraft only	6) REPORT STARTING ACCELERA-TION (or DECELERATION;	ÿ ÿ	
	b) MAINTAIN AT LEAST (number) FEET (or METRES) ABOVE (or BELOW) (aircraft call sign)	ÿ ÿ	
	c) REQUEST LEVEL (or FLIGHT LEVEL or ALTITUDE) CHANGE FROM (name of unit) [AT (time or significant point)];	ÿ ÿ	
	d) STOP CLIMB (or DESCENT) AT (level);	ÿ ÿ	
	e) CONTINUE CLIMB (or DESCENT) TO (live-electricity);	ÿ ÿ	
	f) EXPEDITE CLIMB (or DESCENT) [UNTIL PASSING (level)];	ÿ ÿ	
	g) WHEN READY CLIMB (or DESCEND) TO (level);	ÿ ÿ	
	h) EXPECT CLIMB (or DESCENT) AT (time or significant point);	ÿ ÿ	
	i)* REQUEST DESCENT AT (hour);	*	
...to require action at a specific time or place	j) IMMEDIATELY;	ÿ ÿ	
	k) AFTER PASSING (significant point);	ÿ ÿ	
	l) AT (time or significant point);	ÿ ÿ	
...to require action when convenient	m) WHEN READY (instruction);	ÿ ÿ	
...to require an aircraft to climb or descend maintaining own separation and VMC	n) MAINTAIN OWN SEPARATION AND VMC [FROM (level)] [TO (level)];	ÿ ÿ	
	o) MAINTAIN OWN SEPARATION AND VMC ABOVE (or BELOW, or TO) (level);	ÿ ÿ	
...when there is doubt that an aircraft can comply with a clearance or instruction	p) IF UNABLE (alternative instructions) AND ADVISE;	ÿ ÿ	
...when a pilot is unable to com-ply with a clearance or instruction	q)* UNABLE;	*	
… after a flight crew starts to deviate from any ATC clearance or instruction to comply with an ACAS resolution advisory (RA) (Pilot and controller interchange)	r)* TCAS RA;	*	
	s) ROGER;	ÿ ÿ	

... after the response to an ACAS RA is completed and a return to the ATC clearance or instruction is initiated (Pilot and controller interchange)	t)* CLEAR OF CONFLICT, RETURNING TO *(assigned clearance);* u) ROGER *(or alternative instructions);*	* ÿ ÿ	
... after the response to an ACAS RA is completed and the assigned ATC clearance or instruction has been resumed (Pilot and controller interchange)	v)* CLEAR OF CONFLICT *(assigned clear-ance)* RESUMED; w) ROGER *(or alternative instructions);*	* ÿ ÿ	
... 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 exchange)	x)* UNABLE, TCAS RA; y) ROGER;	* ÿ ÿ	
...clearance to cancel level restriction(s) of the vertical profile of a SID during climb	z) CLIMB TO *(level)* [LEVEL RESTRIC-TION(S) *(SID designator)* CANCELLED *(or)* LEVEL RESTRICTION(S) *(SID designator)* AT *(point)* CANCELLED];	ÿ ÿ	
...clearance to cancel level restriction(s) of the vertical profile of a STAR during descent	aa) DESCEND TO *(level)* [LEVEL RESTRIC-TION(S) *(STAR designator)* CANCELLED *(or)* LEVEL RESTRICTION(S) *(STAR des-ignator)* AT *(point)* CANCELLED]. '*' *Denotes pilot transmission*	ÿ ÿ	
1.1.3 Minimum fuel			
...indication of minimum fuel *Note: A flight information service (FIS) unit will not provide information on delay.*	a)* MINIMUM FUEL; b) ROGER; [NO DELAY EXPECTED or expected *(delay information)]* '*' *Denotes pilot transmission*	* ÿ ÿ	
1.1.4 Transfer of control and/or frequency change			
	a) CONTACT *(unit call sign) (frequency)* [NOW];	ÿ ÿ	
	b) AT *(or* OVER) *(time or place) [or* WHEN] [PASSING/LEAVING/REACHING *(level)]* CONTACT *(unit call sign) (frequency);*	ÿ ÿ	
	c) IF NO CONTACT *(instructions);*	ÿ ÿ	

Note: An aircraft may be reque-sted to "STAND BY" on a frequency when it is intended that the ATS unit will initiate commu-nications soon.	d) STAND BY FOR *(unit call sign) (frequen-cy)*;	ÿ ÿ
	e)* REQUEST CHANGE TO *(frequency)*;	*
	f) FREQUENCY CHANGE APPROVED;	ÿ ÿ
Note: An aircraft may be reque-sted to 'MONITOR' a frequency when information is being broad-cast thereon.	g) MONITOR *(unit call sign) (frequency)*;	ÿ ÿ
	h)* MONITORING *(frequency)*;	*
	i) WHEN READY CONTACT *(unit call sign) (frequency)*;	ÿ ÿ
	j) REMAIN THIS FREQUENCY. '*' *Denotes pilot transmission*	ÿ ÿ

1.1.5   8.33 kHz channel spacing

Note 1: Mandatory carriage of 8.33 equipment not required in the ICAO NAT-Region.

Note 2: In this paragraph, the term "point" is used only in the context of naming the 8.33 kHz channel spacing concept and does not constitute any change to existing ICAO provisions or phraseology regarding the use of the term "de-cimal ".

...to request confirmation of 8.33 kHz capability	a) CONFIRM EIGHT POINT THREE THREE;	ÿ ÿ
...to indicate 8.33 kHz capability	b)* AFFIRM EIGHT POINT THREE THREE;	*
...to indicate lack of 8.33 kHz capability	c)* NEGATIVE EIGHT POINT THREE THREE;	*
...to request UHF capability	d) CONFIRM UHF;	ÿ ÿ
...to indicate UHF capability	e)* AFFIRM UHF;	*
...to indicate lack of UHF capa-bility	f)* NEGATIVE UHF;	*
…to request the status in respect of exemption	g) CONFIRM EIGHT POINT THREE THREE EXEMPT;	ÿ ÿ
...to indicate 8.33 kHz exemption status	h)* AFFIRM EIGHT POINT THREE THREE EXEMPT;	*
...to indicate 8.33 kHz exemption status	i)* NEGATIVE EIGHT POINT THREE THREE EXEMPT;	*

...to indicate that a certain clea-rance is given because otherwise a non-equipped and/or non-exempt aircraft would enter airspace of mandatory car-riage * *Denotes pilot transmission*	j) DUE EIGHT POINT THREE THREE RE-QUIREMENT.	ÿ ÿ	
1.1.6 Change of call sign …to instruct an aircraft to change its type of call sign ... to advise an aircraft to revert to the call sign indicated in the flight plan	a) CHANGE YOUR CALL SIGN TO *(new call sign)* [UNTIL FURTHER ADVISED]; b) REVERT TO FLIGHT PLAN CALL SIGN *(call sign)* [AT *(significant point)]*.	ÿ ÿ ÿ ÿ	
1.1.7 Traffic information ... to pass traffic information ... to acknowledge traffic information	a) TRAFFIC *(information);* b) NO REPORTED TRAFFIC; c)* LOOKING OUT; d)* TRAFFIC IN SIGHT; e)* NEGATIVE CONTACT *[reasons];* f) [ADDITIONAL] TRAFFIC *(direction)* BOUND *(type of aircraft) (level)* ESTIMATE-ED *(or* OVER) *(significant point)* AT *(hour);* g) TRAFFIC IS *(classification)* UNMANNED FREE BALLOON(S) WAS *[or* ESTIMATED] OVER *(place)* AT *(time)* REPORTED *(level(s)) [or* LEVEL UNKNOWN] MOVING *(direction) (other pertinent information, if any).* '*' *Denotes pilot transmission*	ÿ ÿ ÿ ÿ * * * ÿ ÿ ÿ ÿ	
1.1.8 Meteorological con-ditions	a) [SURFACE] WIND *(number)* DEGREES *(speed) (units);* b) WIND AT *(level) (number)* DEGREES *(number)* KNOTS *(or* KILOMETERS PER HOUR);	ÿ ÿ ÿ ÿ	

	Note: Wind is always expressed by giving the mean direction and speed and any significant variations thereof.	ÿ ÿ
	c) VISIBILITY *(distance) (units) [direction];*	ÿ ÿ
	d) RUNWAY VISUAL RANGE *(or* RVR) [RUNWAY *(number)] (distance) (units);*	ÿ ÿ
	e) RUNWAY VISUAL RANGE *(or* RVR) RUN-WAY *(number)* NOT AVAILABLE *(or* NOT REPORTED);*	ÿ ÿ
…for multiple RVR observations	f) RUNWAY VISUAL RANGE *(or* RVR) [RUNWAY *(number)] (first position) (dis-tance) (units), (second position) (distance) (units), (third position) (distance) (units);*	ÿ ÿ
	Note 1: Multiple RVR observations are always representative of the touchdown zone, midpoint zone and the roll-out/ stop end zone respectively-ly.	
	Note 2: Where report 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 the roll-out/ stop end zone report.	
... in the event that RVR informs mation on any one position is not available this information will be included in the appropriate sequence	g) RUNWAY VISUAL RANGE *(or* RVR) [RUNWAY *(number)] (first position) (dis-tance) (units), (second position)* NOT AVAILABLE, *(third position) (distance) (units);*	ÿ ÿ
	h) PRESENT WEATHER *(details);*	ÿ ÿ
	i) CLOUD *(amount, [(type)] and height of base) (units) (or* SKY CLEAR);	ÿ ÿ
	j) CAVOK; *Note: Pronounced CAV-O-KAY.*	ÿ ÿ
	k) TEMPERATURE [MINUS] *(number) (and/ or* DEWPOINT [MINUS] *(number));*	ÿ ÿ
	l) QNH *(number) [units];*	ÿ ÿ
	m) QFE *(number) [(units)];*	ÿ ÿ
	n) *(aircraft type)* REPORTED *(description)* IC-ING *(or* TURBULENCE) [IN CLOUD] *(ar-ea) (hour);*	ÿ ÿ
	o) REPORT FLIGHT CONDITIONS;	ÿ ÿ

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...information to a pilot changing from IFR flight to VFR flight where it is probably that flight in VMC cannot be maintained	p) INSTRUMENT METEOROLOGICAL CONDITIONS REPORTED *(or* FORECAST) IN THE VICINITY OF *(location).*	ÿ ÿ	

1.1.9   Position reporting

	a) NEXT REPORT AT *(significant point);*	ÿ ÿ	
... to omit position reports until a specified position	b) OMIT POSITION REPORTS [UNTIL *(specify)];*	ÿ ÿ	
	c) RESUME POSITION REPORTING.	ÿ ÿ	

1.1.10 Additional reports

	a) REPORT PASSING *(significant point);*	ÿ ÿ	
... to request a report at a specified place or distance	b) REPORT *(distance)* MILES (GNSS *or* DME) FROM *(name of DME station) (or significant point);*	ÿ ÿ	
... to report at a specified place or distance	c)* *(distance)* MILES (GNSS *or* DME) FROM *(name of DME station) (or significant point);*	*	
	d) REPORT PASSING *(three digits)* RADIAL *(name of VOR)* VOR;	ÿ ÿ	
... to request a report of present position	e) REPORT (GNSS *or* DME) DISTANCE FROM *(significant point) or (name of DME station);*	ÿ ÿ	
...to report present position	f)* *(distance)* MILES (GNSS *or* DME FROM *(name of DME station) (or significant point).*	*	
	'*' *Denotes pilot transmission*		

1.1.11 Aerodrome information

Note: This information is provided for runway thirds or the full runway, as applicable.			
	a) *[(location)]* RUNWAY *(number)* SURFACE CONDITION [CODE *(three-digit number)];*	ÿ ÿ	
	followed as necessary by:		
	1) ISSUED AT *(date and time UTC);*		

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Note: Not applicable in Denmark.

2) DRY, *or* WET ICE, *or* WATER ON TOP OF COMPACTED SNOW, *or* DRY SNOW, *or* DRY SNOW ON TOP OF ICE, *or* WET SNOW ON TOP OF ICE, *or* ICE, or SLUSH, *or* STANDING WA-TER, *or* COMPACTED SNOW, *or* WET SNOW, *or* DRY SNOW ON TOP OF COMPACTED SNOW, *or* WET SNOW ON TOP OF COMPACTED SNOW, *or* WET *or* SLIPPERY WET *or* SPECIALLY PREPARED WINTER RUNWAY *or* FROST;

3) DEPTH *((depth of deposit)* MILLIMET-RES *or* NOT REPORTED);

4) COVERAGE *((number)* PER CENT *or* NOT REPORTED);

5) ESTIMATED SURFACE FRICTION (GOOD, *or* GOOD TO MEDIUM, *or* MEDIUM, *or* MEDIUM TO POOR, *or* POOR, *or* LESS THAN POOR);

6) AVAILABLE WIDTH *(number)* MET-RES;

7) LENGTH REDUCED TO *(number)* ME-SIXTY;

8) DRIFTING SNOW;

9) LOOSE SAND;

10) CHEMICALLY TREATED;

11) SNOWBANK *(number)* METRES [LEFT, *or* RIGHT, *or* LEFT AND RIGHT] [OF *or* FROM] CENTER LINE;

12) TAXIWAY *(identification of taxiway)* SNOWBANK *(number)* METRES [LEFT, *or* RIGHT, *or* LEFT AND RIGHT] [OF *or* FROM] CENTER LINE;

13) ADJACENT SNOWBANKS;

14) TAXIWAY *(identification of taxiway)* POOR;

15) APRON *(identification of apron)* PO-OR;

16) Plain-language remarks;

	b) *[(location)]* RUNWAY SURFACE CONDITION RUNWAY *(number)* NOT CURCLEAN;	ÿ ÿ	
	c) LANDING SURFACE *(condition);*	ÿ ÿ	
	d) CAUTION CONSTRUCTION WORK *(location);*	ÿ ÿ	
	e) CAUTION *(specify reasons)* RIGHT *(or* LEFT), *(or* BOTH SIDES) OF RUNWAY *[(number)];*	ÿ ÿ	
	f) CAUTION WORK IN PROGRESS *(or* OBSTRUCTION) *(position and any necessary advice);*	ÿ ÿ	
	g) BRAKING ACTION REPORTED BY *(aircraft type)* AT *(hour)* GOOD *(or* GOOD TO MEDIUM, *or* MEDIUM, *or* MEDIUM TWO POOR, *or* POOR);	ÿ ÿ	
	h) TAXIWAY *(identification of taxiway)* WET *[or* STANDING WATER, *or* SNOW REMOVED *(length and width as applicable), or* CHEMICALLY TREATED, *or* COVERED WITH PATCHES OF DRY SNOW *(or* WET SNOW, *or* COMPACTED SNOW, *or* SLUSH, *or* FROZEN SLUSH, *or* ICE, *or* WET ICE, *or* ICE UNDERNEATH, *or* ICE AND SNOW, *or* SNOWDRIFTS, *or* FROZEN RUTS AND RIDGES *or* LOOSE TRUE)];	ÿ ÿ	
	i) *(ATS unit call sign)* OBSERVES *(weather information);*	ÿ ÿ	
	j) PILOT REPORTS *(weather information).*	ÿ ÿ	
1.1.12 Operational status of visual and non-visual aids			
	a) *(specify visual or non-visual aid)* RUNWAY *(number) (description of deficiency);*	ÿ ÿ	
	b) *(type)* LIGHTING *(unserviceability);*	ÿ ÿ	
	c) GBAS/SBAS/MLS/ILS CATEGORY *(category) (serviceability state);*	ÿ ÿ	
	d) TAXIWAY LIGHTING *(description of deficiency);*	ÿ ÿ	
	e) *(type of visual approach slope indicator)* RUNWAY *(number) (description of deficiency).*	ÿ ÿ	

1.1.13 Reduced vertical separation minimum (RVSM) operations			
... to ascertain the RVSM approval status of an aircraft	a) CONFIRM RVSM APPROVED;	ÿ ÿ	
...to report RVSM approved status	b)* AFFIRM RVSM;	*	
... to report RVSM non-approval status followed by supplementary information	c) NEGATIVE RVSM *[(supplementary information, eg State aircraft)]*;	*	
… to deny ATC clearance into RVSM airspace	d) UNABLE ISSUE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN *[or* DESCEND TO, *or* CLIMB TO] *(level)*;	ÿ ÿ	
… to report when severe turbulence affects the capability of an aircraft to maintain the 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;	ÿ ÿ	
… 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;	ÿ ÿ	
...to report ability to resume RVSM operations after an equipment or weather-related contingency	i)* READY TO RESUME RVSM.	*	
	'*' *Denotes pilot transmission.*		
1.1.14 GNSS service status			
	a)* GNSS REPORTED UNRELIABLE *(or* GNSS MAY NOT BE AVAILABLE [DUE TO INTERFERENCE]);	ÿ ÿ	

	1) IN THE VICINITY OF *(location) (radius)* [BETWEEN *(levels)]*; *or* 2) IN THE AREA OF *(description) (or* IN *(name)* FIR) [BETWEEN *(levels)]*;		
	b) BASIC GNSS *(or* SBAS, *or* GBAS) UNA-AVAILABLE FOR *(specify operation)* [FROM *(hour)* TO *(hour) (or* UNTIL FUR-THER NOTICE)];	ÿ ÿ	
	c)* BASIC GNSS UNAVAILABLE [DUE TO *(reason eg* LOSS OF RAIM *or* RAIM ALERT)];	*	
	d)* GBAS *(or* SBAS) UNAVAILABLE;	*	
	e) CONFIRM GNSS NAVIGATION; spirit	ÿ ÿ	
	f)* AFFIRM GNSS NAVIGATION. '*' *Denotes pilot transmission.*	*	
1.1.15 RNAV …RNAV arrival or departure procedure cannot be accepted by the pilot	a*) UNABLE *(designator)* DEPARTURE *[or* ARRIVAL] DUE RNAV TYPE;	*	
...pilot is unable to comply with an assigned terminal area procedure	b)* UNABLE *(designator)* DEPARTURE *[or* ARRIVAL] *(reasons);*	*	
…ATC unable to assign an RNAV arrival or departure procedure requested by the pilot due to the type of on-board RNAV equipment	c) UNABLE TO ISSUE *(designator)* DEPAR-TOURS *[or* ARRIVAL] DUE RNAV TYPE;	ÿ ÿ	
…ATC unable to assign an arrival or departure procedure requested by the pilot	d) UNABLE TO ISSUE *(designator)* DEPAR-TOURS *[or* ARRIVAL] *(reasons);*	ÿ ÿ	
…confirmation whether a specific RNAV arrival or departure procedure can be accepted	e) ADVISE IF ABLE *(designator)* DEPAR-TOURS *[or* ARRIVAL];	ÿ ÿ	
…informing ATC of RNAV degradation or failure	f)* *(aircraft call sign)* UNABLE RNAV DUE EQUIPMENT;	*	
…informing ATC of no RNAV capability	g)* *(aircraft call sign)* NEGATIVE RNAV; '*' *Denotes pilot transmission.*	*	

1.1.16 Degradation of aircraft navigation performance	 * UNABLE RNP *(specify type) (or* RNAV) [DUE TO *(reason eg* LOSS OF RAIM *or* RAIM ALERT)]. '*' *Denotes pilot transmission.*	*	
1.2 En-route air traffic services			
1.2.1 Issuance of a clear rance	 a) *(name of unit)* CLEARS *(aircraft call sign);* ÿ ÿ b) *(aircraft call sign)* CLEARED TO; c) RECLEARED *(amended clearance details)* [REST OF CLEARANCE UNCHANGED]; d) RECLEARED *(amended route portion)* TO *(significant point of original route)* [REST OF CLEARANCE UNCHANGED]; e) ENTER CONTROLLED AIRSPACE *(or* CONTROL ZONE) [VIA *(significant point or route)]* AT *(level)* [AT *(time)];* f) LEAVE CONTROLLED AIRSPACE *(or* CONTROL ZONE) [VIA *(significant point or route)]* AT *(level) (or* CLIMBING TO *(level), or* DESCENDING TO *(level));* g) JOIN *(specify)* AT *(significant point)* AT *(level)* [AT *(time)].*	 ÿ ÿ ÿ ÿ ÿ ÿ ÿ ÿ ÿ ÿ ÿ ÿ	

1.2.2 Indication of route and clearance limit	
	a) FROM *(location)* TO *(location);*
	
	b) TWO *(location),*
	
	    followed as necessary by:
	
	    1) DIRECT;
	
	    2) VIA *(route and/ or significant points);*
	
	    3) VIA FLIGHT PLANNED ROUTE;
	
	    4) VIA *(distance)* DME ARC *(direction)* OF *(name of DME station);*
		
		ÿ ÿ
		
		ÿ ÿ
		
		ÿ ÿ
		
		ÿ ÿ
		
		ÿ ÿ
		
		ÿ ÿ	

	c) *(route)* NOT AVAILABLE DUE *(reason)* ALTERNATIVE[S] IS/ARE *(routes)* ADVISE.	ÿ ÿ	
1.2.3 Maintenance of specified levels	*Note: The term "MAINTAIN" is not to be used in lieu of "DESCEND" or "CLIMB" when instructing an aircraft to change level.*		
	a) MAINTAIN *(level)* [TO *(significant point)*];	ÿ ÿ	
	b) MAINTAIN *(level)* UNTIL PASSING *(significant point* or);	ÿ ÿ	
	c) MAINTAIN *(level)* UNTIL *(minutes)* AFTER PASSING *(significant point);*	ÿ ÿ	
	d) MAINTAIN *(level)* UNTIL *(hour);*	ÿ ÿ	
	e) MAINTAIN *(level)* UNTIL ADVISED BY *(name of unit);*	ÿ ÿ	
	f) MAINTAIN *(level)* UNTIL FURTHER AD-SHOWN;	ÿ ÿ	
	g) MAINTAIN *(level)* WHILE IN CON-TROLLED AIRSPACE;	ÿ ÿ	
	h) MAINTAIN BLOCK *(level)* TWO *(level).*	ÿ ÿ	
1.2.4 Specification of cruising levels			
	a) CROSS *(significant point)* AT *(or* ABOVE, *or* BELOW) *(level);*	ÿ ÿ	
	b) CROSS *(significant point)* AT *(hour)* OR LATER *(or* BEFORE) AT *(level);*	ÿ ÿ	
	c) CRUISE CLIMB BETWEEN *(levels) (or* ABOVE *(level));*	ÿ ÿ	
	d) CROSS *(distance)* MILES, (GNSS *or* DME) *[(direction)]* OF *(name of DME station)* DME AT *(or* ABOVE, *or* BELOW) *(level).*	ÿ ÿ	
1.2.5 Emergency descent			
	a) EMERGENCY DESCENT *(intentions);*	*	
Note: FIC and AFIS units are entitled only to provide information, and to relay clearances and instructions on behalf of ATC units.	b) ATTENTION ALL AIRCRAFT IN THE VI-CINITY OF *[or* AT] *(significant point or location)* EMERGENCY DESCENT IN PRO-GRESS FROM *(level) (followed as necessary by specific instructions, clearances, traffic information, etc.).*	ÿ ÿ	
	''* *Denotes pilot transmission.*		

1.2.6 If clearance cannot be issued immediately upon request			
	EXPECT CLEARANCE *(or type of clearance)* AT *(hour).*	ÿ ÿ	
1.2.7 When clearance for deviation cannot be issued			
	. UNABLE, TRAFFIC *(direction)* BOUND *(type of aircraft) (level)* ESTIMATED *(or* OVER)(significant *point)* AT *(time)* CALL SIGN *(call sign)* ADVISE INTENTIONS.	ÿ ÿ	
1.2.8 Separation instructi-Wed			
	a) CROSS *(significant point)* AT *(hour)* [OR LATER *(or* OR BEFORE)];	ÿ ÿ	
	b) ADVISE IF ABLE TO CROSS *(significant point)* AT *(level or time);*	ÿ ÿ	
	c) MAINTAIN MACH *(number)* [OR GREAT-IS *(or* OR LESS)] [UNTIL *(significant point)];*	ÿ ÿ	
	d) DO NOT EXCEED MACH *(number);*	ÿ ÿ	
	e) CONFIRM ESTABLISHED ON THE TRACK BETWEEN *(significant point)* AND *(significant point)* [WITH ZERO OFFSET];	ÿ ÿ	
	f)* ESTABLISHED ON THE TRACK BE-TWEEN *(significant point)* AND *(significant point)* [WITH ZERO OFFSET];	*	
	g) MAINTAIN TRACK BETWEEN *(significant point)* AND *(significant point).* REPORT ESTABLISHED ON THE TRACK;	ÿ ÿ	
	h)* ESTABLISHED ON THE TRACK;	*	
Note: When used to apply a lateral VOR/GNSS separation confirmation of zero offset is required.	i) CONFIRM ZERO OFFSET;	ÿ ÿ	
	j)* AFFIRM ZERO OFFSET.	*	
	'*' *Denotes pilot transmission.*		
1.2.9 Instructions associa-ted with flying a track (offset), parallel to the cleared route			
	a) ADVISE IF ABLE TO PROCEED PARALL-LEL OFFSET;	ÿ ÿ	

	b) PROCEED OFFSET *(distance)* RIGHT/ LEFT OF *(route) (track)* [CENTER LINE] [AT *(significant point or time)]* [UNTIL *(significant point or time)]*;	ÿ ÿ	
	c) CANCEL OFFSET *(instructions to rejoin cleared flight route or other information).*	ÿ ÿ	
1.2.10 Relaying clearances, instructions and information			
	a) *(ATC unit)* CLEARS *(or* INSTRUCTS) *(or* INFORMS) *(details of the clearance, instructions or information);*	ÿ ÿ	
…confirmation or otherwise of the readback of clearance or instructions	b) [THAT IS] CORRECT *(or* NEGATIVE) [I SAY AGAIN *(ATC unit)* CLEARS *(or* IN-STRUCTS) *(details of the clearance or the instruction)].*	ÿ ÿ	

1.3   Arrival and departure air traffic services

1.3.1 **Departure instruction** **Wed**			
	a) [AFTER DEPARTURE] TURN RIGHT *(or* LEFT) HEADING *(three digits) (or* CONTI- CURRENT RUNWAY HEADING) *(or* TRACK EXTENDED CENTER LINE) TO *(level or significant point) [(other instructions as re- quired)];*	ÿ ÿ	
	b) AFTER REACHING *(or* PASSING) *(level or significant point) (instructions);*	ÿ ÿ	
	c) TURN RIGHT *(or* LEFT) HEADING *(three digits)* TO *(level)* [TO INTERCEPT *(track, route, airway, etc.)];*	ÿ ÿ	
	d) *(standard departure name and number)* DEPARTURE;	ÿ ÿ	
	e) TRACK *(three digits)* DEGREES [MAG- NETIC *(or* TRUE)] TO *(or* FROM) *(significant point)* (UNTIL *(time), or* REACHING *(fix or significant point or level))* [BEFORE PROCEEDING ON COURSE];	ÿ ÿ	
	f) CLEARED VIA *(designation);*	ÿ ÿ	

1.3.2 Approach instructions Wed		
	a) CLEARED *(or* PROCEED) VIA *(designati-* *on);*	ÿ ÿ
	b) CLEARED TO *(clearance limit)* VIA *(designation);*	ÿ ÿ
	c) CLEARED *(or* PROCEED) VIA *(details of* *route to be followed);*	ÿ ÿ
	d) CLEARED *(type of approach)* APPROACH [RUNWAY *(number)];*	ÿ ÿ
Note: The instrument approach *procedure identification in the* *aeronautical chart is used to specify the* *type of approach. Where* *the identification uses a parenthetical* *suffix to include exceptional conditions,* *eg* *"(LNAV/ VNAV only)" or "(AR)"* *etc., the text in the parentheses* *does not form part of the ATC* *clearance.*	e) CLEARED *(type of approach)* RUNWAY *(number)* FOLLOWED BY CIRCLING TO RUNWAY *(number);*	ÿ ÿ
	f) CLEARED APPROACH [RUNWAY *(num-* *ber)];*	ÿ ÿ
	g) COMMENCE APPROACH AT *(hour);*	ÿ ÿ
	h)* REQUEST STRAIGHT-IN *[(type of ap-proach)]* APPROACH [RUNWAY *(num-ber)];*	*
	i) CLEARED STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY(number)];	ÿ ÿ
	j) REPORT VISUAL;	ÿ ÿ
	k) REPORT RUNWAY [LIGHTS] IN SIGHT; ÿ ÿ	
... when a pilot requests a visual approach	l)* REQUEST VISUAL APPROACH;	*
	m) CLEARED VISUAL APPROACH RUNWAY *(number);*	ÿ ÿ
... to request if a pilot is able to accept a visual approach	n) ADVISE ABLE TO ACCEPT VISUAL AP- APPROACH RUNWAY *(number);*	ÿ ÿ
… in case of successive visual approaches when the pilot of a succeeding aircraft has reported the preceding aircraft in sight	o) CLEARED VISUAL APPROACH RUNWAY *(number),* MAINTAIN OWN SEPARATION FROM PRECEDING *(aircraft type and wake* *turbulence category as appropriate)* [CAUTION WAKE TURBULENCE];	ÿ ÿ
	p) REPORT *(significant point)* [OUTBOUND, *or* INBOUND];	ÿ ÿ
	q) REPORT COMMENCING PROCEDURE TURN;	ÿ ÿ

	r)* REQUEST VMC DESCENT;	*	
	s) MAINTAIN OWN SEPARATION;	ÿ ÿ	
	t) MAINTAIN VMC;	ÿ ÿ	
	u) ARE YOU FAMILIAR WITH *(name)* AP-PROACH PROCEDURE;	ÿ ÿ	
	v*) REQUEST *(type of approach)* APPROACH [RUNWAY *(number)]*;	*	
	'*' *Denotes pilot transmission.*		
1.3.3 **Holding clearances**			
…visual	a) HOLD VISUAL [OVER] *(position), (or* BET-WEEN *(two prominent landmarks))*;	ÿ ÿ	
...published holding procedure over a facility or a fix	b) CLEARED *(or* PROCEED) TO *(significant point, name of facility or fix)* [MAINTAIN *(or* CLIMB *or* DESCEND TO)] *(level)* [HOLD *[(direction)]* AS PUBLISHED] EXPECT AP-PROACH CLEARANCE *(or* FURTHER CLEARANCE) AT *(hour)*;	ÿ ÿ	
	c)* REQUEST HOLDING INSTRUCTIONS;	*	
…when a detailed holding clearance is required	d) CLEARED *(or* PROCEED) TO *(significant point, name of facility or fix)* [MAINTAIN *(or* CLIMB *or* DESCEND TO)] *(level)* HOLD *[(direction)] [(specified)* RADIAL, COURSE, INBOUND TRACK *(three digits)* DE-GREES] [RIGHT *(or* LEFT) HAND PAT-TERN] [OUTBOUND TIME *(number)* MIN-UTES] EXPECT APPROACH CLEAR-ANCE *(or* FURTHER CLEARANCE) AT *(time) (additional instructions, if neces-sary)*;	ÿ ÿ	
	e) CLEARED TO THE *(three digits)* RADIAL OF THE *(name)* VOR AT *(distance)* DME FIX [MAINTAIN *(or* CLIMB *or* DESCEND TO)] *(level)* HOLD *(direction)* [RIGHT *(or* LEFT) HAND PATTERN] [OUTBOUND TIME *(number)* MINUTES] EXPECT AP-PROACH CLEARANCE *(or* FURTHER CLEARANCE) AT *(time) (additional instructions, if necessary)*;	ÿ ÿ	

	f) CLEARED TO THE *(three digits)* RADIAL OF THE *(name)* VOR AT *(distance)* DME FIX [MAINTAIN *(or* CLIMB *or* DESCEND TO)] *(level)* HOLD BETWEEN *(distance)* AND *(distance)* DME [RIGHT *(or* LEFT) HAND PATTERN] EXPECT APPROACH CLEARANCE *(or* FURTHER CLEAR- ANCE) AT *(time) (additional instructions, if necessary).* '*' *Denotes pilot transmission.*	ÿ ÿ	
1.3.4 Expected approach hour			
	a) NO DELAY EXPECTED;	ÿ ÿ	
	b) EXPECTED APPROACH TIME *(hour);*	ÿ ÿ	
	c) REVISED EXPECTED APPROACH TIME *(hour);*	ÿ ÿ	
	d) DELAY NOT DETERMINED *(reasons).*	ÿ ÿ	

1.4   Phraseologies for use on and in the vicinity of the aerodrome

1.4.1 Identification of air- craft			
	SHOW LANDING LIGHTS.	ÿ ÿ	
1.4.2 Acknowledgment by visual means			
	a) ACKNOWLEDGE BY MOVING AILERONS *(or* RUDDER);	ÿ ÿ	
	b) ACKNOWLEDGE BY ROCKING WINGS; ÿ ÿ		
	c) ACKNOWLEDGE BY FLASHING LANDING LIGHTS.	ÿ ÿ	
1.4.3 Starting procedures			
... to request permission two starting engines	a)* *[aircraft location]* REQUEST START UP;	*	
	b)* *[aircraft location]* REQUEST START UP, INFORMATION *(ATIS identification);*	*	
...ATC response	c) START UP APPROVED;	ÿ ÿ	
	d) START UP AT *(hour);*	ÿ ÿ	

	e) EXPECT START UP AT *(hour);*	ÿ ÿ	
	f) START UP AT OWN DISCRETION;	ÿ ÿ	
	g) EXPECT DEPARTURE *(hour)* START UP AT OWN DISCRETION.	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
1.4.4 Pushback procedure res			
...aircraft request	a*) *[aircraft location]* REQUEST PUSH BACK;	*	
…ATC response	b) PUSHBACK APPROVED;	ÿ ÿ	
	c) STAND BY;	ÿ ÿ	
	d) PUSHBACK AT OWN DISCRETION;	ÿ ÿ	
	e) EXPECT *(number)* MINUTES DELAY DUE *(reason).*	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
1.4.5 Towing procedures			
	a)† REQUEST TOW *[company name] (aircraft type)* FROM *(location)* TO *(location);*	†	†
…ATC response	b) TOW APPROVED VIA *(specific routing to be followed);*	ÿ ÿ	
	c) HOLD POSITION;	ÿ ÿ	
	d) STAND BY.	ÿ ÿ	
	'†' *Denotes transmission from aircraft/ tow vehicle combi-nation.*		
1.4.6 To request time check and/or aerodrome data for departure			
	a)* REQUEST TIME CHECK;	*	
	b) HOUR *(hour);*	ÿ ÿ	
…when no ATIS broadcast is available	c*) REQUEST DEPARTURE INFORMATION;	*	

Note: If multiple visibility and RVR observations are available, those that represent the roll-out/ stop end zone should be used for take-off.	d) RUNWAY *(number),* WIND *(direction and speed) (units)* QNH *(or* QFE) *(number) [(units)]* TEMPERATURE [MINUS] *(num-ber),* [VISIBILITY *(distance) (units) (or* RUNWAY VISUAL RANGE *(or* RVR *(dis-tance (units))* [TIME *(hour)].* '*' *Denotes pilot transmission.*	ÿ ÿ

1.4.7 Taxi procedures

... for departures	a)* *[aircraft type] [wake turbulence category if "super" or "heavy"] [aircraft location]* RE-QUEST TAXI *[intentions];*	*
	b)* *[aircraft type] [wake turbulence category if "super" or "heavy"] [aircraft location] (flight rules)* TO *(aerodrome of destination)* RE-QUEST TAXI *[intentions];*	*
	c) TAXI TO HOLDING POINT *[number]* RUN-WAY *(number)* [HOLD SHORT OF RUN-WAY *(number) (or* CROSS RUNWAY *(number)]* [TIME *(hour)];*	ÿ ÿ
...where detailed taxi instructions are required	d)* *[aircraft type] [wake turbulence category if "super" or "heavy"] (aircraft location)* RE-QUEST DETAILED TAXI INSTRUCTIONS;	*
	e) TAXI TO HOLDING POINT *[number]* [RUNWAY *(number)]* VIA *(specific route to be followed)* [TIME *(time)];* [KEEP SHORT OF RUNWAY *(number) (or* CROSS RUN-WAY *(number))];*	ÿ ÿ
…where aerodrome information is not available from an alternative source such as ATIS	f) TAXI TO HOLDING POINT *[number] (followed by aerodrome information as appli-cable)* [TIME *(time)];*	ÿ ÿ
	g) TAKE *(or* TURN) FIRST *(or* SECOND) LEFT *(or* RIGHT);	ÿ ÿ
	h) TAXI VIA *(identification of taxiway);*	ÿ ÿ
	i) TAXI VIA RUNWAY *(number);*	ÿ ÿ
	j) TAXI TO TERMINAL *(or other location eg GENERAL AVIATION AREA)* [STAND *(number)];*	ÿ ÿ
... for helicopter operations	k)* REQUEST AIR-TAXIING FROM *(or* VIA) TO *(location or routing as appropriate);*	*

		l) AIR-TAXI TO *(or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)]*;	ÿ ÿ	
		m) AIR TAXI VIA *(direct, as requested, or specified route)* TO *(location, heliport, operating or movement area, active or inactive runway)* AVOID *(aircraft or vehicles or personnel)*;	ÿ ÿ	
	...after landing	n*) REQUEST BACKTRACK	*	
		o) BACKTRACK APPROVED;	ÿ ÿ	
		p) BACKTRACK RUNWAY *(number)*;	ÿ ÿ	
	…general	q) *[aircraft location]* REQUEST TAXI TO *(dectination on aerodrome)*;	*	
		r) TAXI STRAIGHT AHEAD;	ÿ ÿ	
		s) TAXI WITH CAUTION;	ÿ ÿ	
		t) GIVE WAY TO *(description and position of other aircraft)*;	ÿ ÿ	
		u)* GIVING WAY TO *(traffic)*;	*	
		v)* TRAFFIC *(or type of aircraft)* IN SIGHT;	*	
		w) TAXI INTO HOLDING BAY;	ÿ ÿ	
		x) FOLLOW *(description of other aircraft or vehicle)*;	ÿ ÿ	
		y) VACATE RUNWAY;	ÿ ÿ	
		z)* RUNWAY VACATED;	*	
		aa) EXPEDITE TAXI *[(reason)]*;	ÿ ÿ	
		bb)*EXPEDITING;	*	
		cc) [CAUTION] TAXI SLOWER *[reason]*;	ÿ ÿ	
		dd)*SLOWING DOWN.	*	

'*'
Denotes pilot transmission.

1.4.8	**Holding (on ground)**			
		a) HOLD *(direction)* OF *(position, runway number, etc.)* **1)**;	ÿ ÿ	
		b) HOLD POSITION1);	ÿ ÿ	

	c) HOLD *(distance)* FROM *(position)1);*	ÿ ÿ	
... to hold not closer to a runway than specified	d) HOLD SHORT OF *(position)1);*	ÿ ÿ	
	e)* HOLDING;	*	
	f)* HOLDING SHORT.	*	
	1) Requires specific acknowledgment from the pilot.		
	'' Denotes pilot transmission. The procedure words RO-GER and WILCO are insufficient acknowledgment of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case the acknowledgment shall be the phraseology HOLDING or HOLDING SHORT, as ap-propriate.*		
1.4.9 To cross a runway	a)* REQUEST CROSS RUNWAY *(number);*	*	
	Note: If the control tower is unable to see the crossing aircraft (eg night, low visibility, etc.), the instruction should always be accompanied by a request to report when the aircraft has cleared the runway.		
	b) CROSS RUNWAY *(number)* [REPORT VACATED];	ÿ ÿ	
	c) EXPEDITE CROSSING RUNWAY *(num-ber)* TRAFFIC *(aircraft type) (distance)* MILES *(or* KILOMETERS) FINAL;	ÿ ÿ	
	d) TAXI TO HOLDING POINT [number] [RUNWAY *(number)]* VIA *(specific route to be followed),* [HOLD SHORT OF RUNWAY (number)] *or* [CROSS RUNWAY *(number)];*	ÿ ÿ	
	e) REPORT RUNWAY *(number)* VACATED; ÿ ÿ		
Note: The pilot will, when reque-sted, report "RUNWAY VACA-TED" when the entire aircraft is beyond the relevant runway-holding position.	f)* RUNWAY VACATED.	*	
	'' Denotes pilot transmission*		
1.4.10 Preparation for take-off	a) UNABLE TO ISSUE *(designator)* DEPAR-TOURS *(reasons);*	ÿ ÿ	
	b) REPORT WHEN READY [FOR DEPAR-TOURS];	ÿ ÿ	

	c) ARE YOU READY [FOR DEPARTURE]?;	ÿ ÿ	
	d) ARE YOU READY FOR IMMEDIATE DE-PARTURE?;	ÿ ÿ	
	e)* READY;	*	
... clearance to enter runway and await take-off clearance	f) LINE UP [AND WAIT];	ÿ ÿ	
	g) LINE UP RUNWAY *(number) 1);*	ÿ ÿ	
	h) LINE UP. BE READY FOR IMMEDIATE DEPARTURE;	ÿ ÿ	
... conditional clearance	i) *(condition)* LINE UP *(brief reiteration of the condition);*	ÿ ÿ	
... acknowledgment of a conditional clearance	j)* *(condition)* LINING UP *(brief reiteration of the condition);*	*	
...confirmation or otherwise of the readback of a conditional clearance	k) [THAT IS] CORRECT *(or* NEGATIVE [I SAY AGAIN] *(as appropriate)).*	ÿ ÿ	
...request for departure from an intersection take-off position	l*) REQUEST DEPARTURE FROM RUN-WAY *(number),* INTERSECTION *(designation or name of intersection);*	*	
…approval of requested departure from an intersection take-off position	m) APPROVED, TAXI TO HOLDING POINT RUNWAY *(number),* INTERSECTION *(designation or name of intersection);*	ÿ ÿ	
…denial of requested departure from an intersection take-off position	n) NEGATIVE, TAXI TO HOLDING POINT RUNWAY *(number),* INTERSECTION *(designation or name of intersection);*	ÿ ÿ	
…ATC-initiated intersection take-off	o) ADVISE ABLE TO DEPART FROM RUN-WAY *(number),* INTERSECTION *(designation or name of intersection);*	ÿ ÿ	
...advising take-off run available from an intersection take-off position	p) TORA RUNWAY *(number),* FROM INTER-SECTION *(designation or name of inter-section), (distance)* METRES; *Note: 'TORA' is pronounced 'TOR-AH'.*	ÿ ÿ	
…issuing multiple line-up instructions	q)* LINE UP AND WAIT RUNWAY *(number),* INTERSECTION *(name of intersection), (essential local traffic information);*	ÿ ÿ	
…request for a visual departure	r)* REQUEST VISUAL DEPARTURE [DI-RECT] TO/UNTIL *(navaid, waypoint, alti-tude);*	see the note	
Note: Procedure not applied in Denmark, Faroe Islands and Greenland.			

…ATS-initiated visual departure *Note: Procedure not applied in Denmark, Faroe Islands and Greenland.*	s) ADVISE ABLE TO ACCEPT VISUAL DE-PARTURE [DIRECT] TO/UNTIL *(navaid, waypoint/ altitude);*	see the note	
…clearance for visual departure *Note: Procedure not applied in Denmark, Faroe Islands and Greenland*	t) VISUAL DEPARTURE RUNWAY *(number)* APPROVED, TURN LEFT/RIGHT [DI-RECT] TO *(navaid, heading, waypoint)* [MAINTAIN VISUAL REFERENCE UNTIL *(altitude)];*	see the note	
…read-back of visual departure clearance *Note: Procedure not applied in Denmark, Faroe Islands and Greenland.*	u)* VISUAL DEPARTURE TO/UNTIL *(navaid, waypoint/ altitude).* '*' *Denotes pilot transmission* *1) When there is the possibility of confusion during multiple runway operations.*	see the note	
1.4.11 Take-off clearance			
	a) RUNWAY *(number)* CLEARED FOR TAKE-OFF [REPORT AIRBORNE];	ÿ ÿ	
…when reduced runway separation is used	b) *(traffic information)* RUNWAY *(number)* CLEARED FOR TAKE-OFF;	ÿ ÿ	
... when take-off clearance has not been complied with	c) TAKE OFF IMMEDIATELY OR VACATE RUNWAY *[(instructions)];*	ÿ ÿ	
	d) TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY;	ÿ ÿ	
... to cancel a take-off clearance	e) HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF *(reasons);*	ÿ ÿ	
	f)* HOLDING;	*	
...to stop a take-off after an air-craft has commenced take-off role	g) STOP IMMEDIATELY *[(repeat aircraft call sign)* STOP IMMEDIATELY];	ÿ ÿ	
	h)* STOPPING;	*	
...for helicopter operations	i) CLEARED FOR TAKE-OFF [FROM *(loca-tion)] (present position, taxiway, final approach and take-off area, runway and number);*	ÿ ÿ	

	j)* REQUEST DEPARTURE INSTRUCT-TIONS;	*	
	k) AFTER DEPARTURE TURN RIGHT *(or LEFT, or* CLIMB) *(instructions as appropriate).*	ÿ ÿ	
	'*' *Denotes pilot transmission. HOLDING and STOPPING are the procedural responses to e) and g) respectively.*		
1.4.12 Turn or climb instructions after take-off			
	a)* REQUEST RIGHT *(or* LEFT) TURN;	*	
	b) RIGHT *(or* LEFT) TURN APPROVED;	ÿ ÿ	
	c) WILL ADVISE LATER FOR RIGHT *(or* LEFT) TURN;	ÿ ÿ	
…to request airborne time	d) REPORT AIRBORNE;	ÿ ÿ	
	e) AIRBORNE *(hour);*	ÿ ÿ	
	f) AFTER PASSING *(level) (instructions);*	ÿ ÿ	
...heading to be followed	g) CONTINUE RUNWAY HEADING *(instruc-tions);*	ÿ ÿ	
... when a specific track is to be followed	h) TRACK EXTENDED CENTER LINE *(instructions);*	ÿ ÿ	
	i) CLIMB STRAIGHT AHEAD *(instructions).* ÿ ÿ		
	'*' *Denotes pilot transmission.*		
1.4.13 Entering an aerodrome traffic circuit			
	a)* *[aircraft type] (position) (level)* FOR LAN-THING;	*	
	b) JOIN *[(direction of circuit)] (position in circuit)* RUNWAY *(number)* [SURFACE] WIND *(direction and speed) (units)* [TEM-PERATURE [MINUS] *(number)]* QNH *(or* QFE) *(number) [(units)]* [TRAFFIC *(retail)];*	ÿ ÿ	
	c) *[(direction of circuit)]* RUNWAY *(number)* [SURFACE] WIND *(direction and speed) (units)* [TEMPERATURE [MINUS] *(num-ber)]* QNH *(or* QFE) *(number)* [units] [TRAFFIC *(retail)];*	ÿ	ÿ

...when ATIS information is available	d) MAKE STRAIGHT-IN APPROACH, RUN-WAY *(number)* [SURFACE] WIND *(direc-tion and speed) (units)* [TEMPERATURE [MINUS] *(number)]* QNH *(or* QFE) *(num-ber) [(units)]* [TRAFFIC *(detail)]*;	ÿ ÿ	
	e)* *(aircraft type) (position) (level)* INFORMA-TION *(ATIS identification)* FOR LANDING;	*	
	f) JOIN *(position in circuit)* RUNWAY *(num-ber)* QNH *(or* QFE) *(number) [(units)]* [TRAFFIC *(retail)]*;	ÿ ÿ	
	g) *(direction of circuit)* [RUNWAY *(number)]* QNH (or QFE) *(number) [(units)]* [TRAFFIC *(detail)]*.	ÿ	ÿ
	'*' *Denotes pilot transmission.*		
1.4.14 In the circuit	a)* *(position in circuit, eg* DOWNWIND *or* FI-NEEDLE);	*	
	b) NUMBER ... FOLLOW *(aircraft type and position) [additional instructions if required]*;	ÿ ÿ	
	c) TRAFFIC *(detail) [additional information if required]*;	ÿ ÿ	
	d) REPORT *(position in the circuit).*	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
1.4.15 Approach instructions **Wed**			
Note: The report "LONG FINAL" is made when an aircraft turns on to final approach	a) MAKE SHORT APPROACH;	ÿ ÿ	
at a distance greater than 4 NM from touchdown or when an aircraft	b) MAKE LONG APPROACH *(or* EXTEND DOWNWIND);	ÿ ÿ	
on a straight-in approach is 8 NM from touchdown. In both cases a report "FINAL"	c) REPORT BASE *(or* FINAL, *or* LONG FI-NEEDLE);	ÿ ÿ	
is required at 4 NM from touchdown.	d) CONTINUE APPROACH [PREPARE FOR POSSIBLE GO AROUND].	ÿ ÿ	
1.4.16 Landing clearance			
	a) RUNWAY *(number)* CLEARED TO LAND; ÿ ÿ		
...when reduced runway separation is used	b) *(traffic information)* RUNWAY *(number)* CLEARED TO COUNTRY;	ÿ ÿ	
...special operations	c) CLEARED TOUCH AND GO;	ÿ ÿ	
	d) MAKE FULL STOP;	ÿ ÿ	

... to make an approach along, or parallel to a runway, descending to an agreed minimum level	e)* REQUEST LOW APPROACH *(reasons);*	*	
	f) CLEARED LOW APPROACH [RUNWAY *(number)] [(altitude restriction if required) (go around instructions)];*	ÿ ÿ	
...to fly past the control tower or other observation point for the purpose of visual inspection by persons on the ground	g)* REQUEST LOW PASS *(reasons);*	*	
	h) CLEARED LOW PASS *[as in* f)];	ÿ ÿ	
...for helicopter operations	i*) REQUEST STRAIGHT-IN *(or* CIRCLING APPROACH, LEFT *(or* RIGHT) TURN TO *(location));*	*	
	j) MAKE STRAIGHT-IN *(or* CIRCLING AP-PROACH, LEFT *(or* RIGHT) TURN TO *(location, runway, taxiway, final approach and take off area))* [ARRIVAL *(or* ARRIVAL ROUTE) *(number, name or code)].* [HOLD SHORT OF *(active runway, extended run-way center line, other)].* [REMAIN *(direction or distance)* FROM *(runway, runway center line, other helicopter or aircraft)].* [CAU-TION *(power lines, unlighted obstructions, wake turbulence, etc.)].* CLEARED TO COUNTRY.	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
1.4.17 Delaying aircraft			
	a) CIRCLE THE AERODROME;	ÿ ÿ	
	b) ORBIT (RIGHT, *or* LEFT) [FROM PRES-ENT POSITION];	ÿ ÿ	
	c) MAKE ANOTHER CIRCUIT.	ÿ ÿ	
1.4.18 Missed Approach			
	a) GO AROUND;	ÿ ÿ	
	b)* GOING AROUND.	*	
	'*' *Denotes pilot transmission.*		
1.4.19 Information to aircraft			
…when pilot requested visual inspection of landing gear	a) LANDING GEAR APPEARS DOWN;	ÿ ÿ	
	b) RIGHT *(or* LEFT, *or* NOSE) WHEEL AP-PEARS UP *(or* DOWN);	ÿ ÿ	

	c) WHEELS APPEAR UP;	ÿ ÿ	
	d) RIGHT *(or* LEFT, *or* NOSE) WHEEL DOES NOT APPEAR UP *(or* DOWN);	ÿ ÿ	
…wake turbulence	e) CAUTION WAKE TURBULENCE [FROM ARRIVING *(or* DEPARTING) *(type of air-craft)]* *[additional information as required];*	ÿ ÿ	
...jet blast on apron or taxiway	f) CAUTION JET BLAST;	ÿ ÿ	
...propeller-driven aircraft slipstream	g) CAUTION SLIPSTREAM;	ÿ ÿ	
…other traffic	h) TRAFFIC *(details);*	ÿ ÿ	
...information on the actual use of the runway	i) NO REPORTED TRAFFIC RUNWAY *(number);*	ÿ	ÿ
Note: Information on the actual use of the runway in points i) and j) may be provided to aircraft at any phase of the flight, in particular in the circuit and during the preparation for departure.	j) RUNWAY *(number)* OCCUPIED *[or* BLOCKED BY] *(details)* [REPORT INTEN-TIONS].	ÿ ÿ	
1.4.20 Runway vacating and communications after landing			
	a) CONTACT GROUND *(frequency);*	ÿ ÿ	
	b) WHEN VACATED CONTACT GROUND *(frequency);*	ÿ ÿ	
	c) EXPEDITE VACATING;	ÿ ÿ	
	d) YOUR STAND *(or* GATE) *(designation);*	ÿ ÿ	
	e) TAKE *(or* TURN) FIRST *(or* SECOND, *or* CONVENIENT) LEFT *(or* RIGHT) AND CONTACT GROUND *(frequency);*	ÿ ÿ	
... for helicopter operations	f) AIR-TAXI TO HELICOPTER STAND *(or* HELICOPTER PARKING POSITION *(area));*	ÿ ÿ	
	g) AIR-TAXI TO *(or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)];*	ÿ ÿ	
	h) AIR-TAXI *VIA (direct, as requested, or specified route)* TO *(location, heliport, operating or movement area, active or inactive runway).* AVOID *(aircraft or vehicles or personnel).*	ÿ ÿ	

1.5 Phraseologies to be used related to controller–pilot data link communications (CPDLC)

1.5.1	Operational status			
		a) [ALL STATIONS] CPDLC FAILURE *(instructions);*	ÿ ÿ	
	…failure of a single CPDLC messages	b) CPDLC MESSAGE FAILURE *(appropriate clearance, instruction, information or request);*	ÿ ÿ	
	…to correct CPDLC clearances, instructions, information or requests	c) DISREGARD CPDLC *(message type)* MESSAGE, BREAK *(correct clearance, instruction, information or request);*	ÿ ÿ	
	...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)];*	ÿ ÿ	
	…to resume normal use of CPDLC	e) [ALL STATIONS] RESUME NORMAL CPDLC OPERATIONS.	ÿ ÿ	

2. ATS Surveillance service phraseologies

Note: The following comprise phraseologies specifically applicable when an ATS surveillance system is used in the provision of air traffic services. The phraseologies detailed in the sections above for use in the provision of air traffic services are also applicable, as appropriate, when an ATS surveillance system is used.

2.1 General ATS surveillance service phraseologies

2.1.1	Identification of aircraft			
		a) REPORT HEADING [AND FLIGHT LEVEL *(or* ALTITUDE)];	ÿ ÿ	
		b) FOR IDENTIFICATION TURN LEFT *(or* RIGHT) HEADING *(three digits);*	ÿ ÿ	
		c) TRANSMIT FOR IDENTIFICATION AND REPORT HEADING;	ÿ ÿ	
		d) RADAR CONTACT *[position];*	ÿ ÿ	
		e) IDENTIFIED *[position];*	ÿ ÿ	
		f) NOT IDENTIFIED *[reason],* [RESUME *(or* CONTINUE) OWN NAVIGATION];	ÿ ÿ	

	g) NOT IDENTIFIED *[reason].*	ÿ ÿ	
2.1.2 Position information			
	POSITION *(distance) (direction)* OF *(significant point) (or* OVER *or* ABEAM *(significant point)).*	ÿ ÿ	
2.1.3 Vectoring instruction Wed			
	a) LEAVE *(significant point)* HEADING *(three digits);*	ÿ ÿ	
	b) CONTINUE HEADING *(three digits);*	ÿ ÿ	
	c) CONTINUOUS PRESENT HEADING;	ÿ ÿ	
	d) FLIGHT HEADING *(three digits);*	ÿ ÿ	
	e) TURN LEFT *(or* RIGHT) HEADING *(three digits) [reason];*	ÿ ÿ	
	f) TURN LEFT *(or* RIGHT) *(number of de-grees)* DEGREES *[reason];*	ÿ ÿ	
	g) STOP TURN HEADING *(three digits);*	ÿ ÿ	
	h) FLIGHT HEADING *(three digits),* WHEN ABLE PROCEED DIRECT *(name) (significant point);*	ÿ ÿ	
	i) HEADING IS GOOD.	ÿ ÿ	
2.1.4 Termination of vectoring			
	a) RESUME OWN NAVIGATION *(position of aircraft) (specific instructions);*	ÿ ÿ	
	b) RESUME OWN NAVIGATION [DIRECT] *(significant point)* [MAGNETIC] TRACK *(three digits)* DISTANCE *(number)* MILES *(or* KILOMETERS).	ÿ ÿ	
2.1.5 Maneuvers			
	a) MAKE A THREE SIXTY TURN LEFT *(or* RIGHT) *[reason];*	ÿ ÿ	
	b) ORBIT LEFT *(or* RIGHT) *[reason];*	ÿ ÿ	
...(in case of unreliable directional instruments on board air- crafts)	c) MAKE ALL TURNS RATE ONE *(or* RATE HALF, *or (number)* DEGREES PER SEC-OND) START AND STOP ALL TURNS ON THE COMMAND "NOW";	ÿ ÿ	

Note: When it is necessary to specify a reason for vectoring, or for the above mentioned manoeuvres, the *following phraseologies should be used:* *i) DUE TRAFFIC;* *ii) FOR SPACING;* *iii) FOR DELAY;* *iv) FOR DOWNWIND (or BA-SE, or FINAL).*	d) TURN LEFT *(or* RIGHT) NOW; e) STOP TURN NOW.	ÿ ÿ ÿ ÿ
2.1.6 Speed control		
	a) REPORT SPEED;	ÿ ÿ
	b)* SPEED *(number)* KNOTS *(or* KILO-METERS PER HOUR);	*
	c) MAINTAIN *(number)* KNOTS *(or* KILO-METRES PER HOUR) [OR GREATER *(or* OR LESS)] [UNTIL *(significant point)]*;	ÿ ÿ
	d) DO NOT EXCEED *(number)* KNOTS *(or* KILOMETERS PER HOUR);	ÿ ÿ
	e) MAINTAIN PRESENT SPEED;	ÿ ÿ
	f) INCREASE *(or* REDUCE) SPEED TO *(number)* KNOTS *(or* KILOMETERS PER HOUR) [OR GREATER *(or* OR LESS)];	ÿ ÿ
	g) INCREASE *(or* REDUCE) SPEED BY *(number)* KNOTS *(or* KILOMETERS PER HOUR);	ÿ ÿ
	h) RESUME NORMAL SPEED;	ÿ ÿ
	i) REDUCE TO MINIMUM APPROACH SPEED;	ÿ ÿ
	j) REDUCE TO MINIMUM CLEAN SPEED; ÿ ÿ	
	k) NO [ATC] SPEED RESTRICTIONS.	ÿ ÿ
	Note: An arriving aircraft may be instructed to maintain its 'maximum speed', 'minimum clean speed', 'minimum speed', or a specified speed. 'Minimum clean speed' signifies the minimum speed at which an aircraft can be flown in a clean configuration, ie without deployment of lift-augmentation devices, speed brakes or landing gear. *'*' Denotes pilot transmission.*	

2.1.7 **Position reporting**			
2.1.8			
...two omitted position reports	a) OMIT POSITION REPORT [UNTIL *(specify)]*;	ÿ ÿ	
	b) NEXT REPORT AT *(significant point);*	ÿ ÿ	
	c) REPORTS REQUIRED ONLY AT *(significant point);*	ÿ ÿ	
	d) RESUME POSITION REPORTING.	ÿ ÿ	
2.1.9 **Traffic information and avoiding action**			
	a) TRAFFIC *(number)* O'CLOCK *(distance) (direction of flight) [any other pertinent in-formation]:*	ÿ ÿ	
	1) UNKNOWN;	ÿ ÿ	
	2) SLOW MOVING;	ÿ ÿ	
	3) FAST MOVING;	ÿ ÿ	
	4) CLOSING;	ÿ ÿ	
	5) OPPOSITE *(or* SAME) DIRECTION; ÿ ÿ		
	6) TAKEOVER;	ÿ ÿ	
	7) CROSSING LEFT TO RIGHT *(or* RIGHT TO LEFT);	ÿ ÿ	
...(if known)	8) *(aircraft type);*	ÿ ÿ	
	9) *(level);*	ÿ ÿ	
…when passing level informa-tion on to aircraft climbing or descending, in the form of vertical distance from other traffic.	10) [YOUR CLEARED LEVEL];	ÿ ÿ	
	11) CLIMBING *(or* DESCENTING);	ÿ ÿ	
...to request avoiding action	b)* REQUEST VECTORS;	*	
	c) DO YOU WANT VECTORS?;	ÿ ÿ	
…when passing unknown traffic	d) CLEAR OF TRAFFIC *[appropriate instruc-tions];*	ÿ ÿ	

...for avoiding action	e) TURN LEFT *(or* RIGHT) IMMEDIATELY HEADING *(three digits)* TO AVOID [UNIDENTIFIED] TRAFFIC *(bearing by clock-reference and distance);*	ÿ ÿ	
	f) TURN LEFT *(or* RIGHT) *(number of de-grees)* DEGREES IMMEDIATELY TO AVOID [UNIDENTIFIED] TRAFFIC AT *(bearing by clock-reference and distance).*	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
2.1.10 Communications and loss of communications			
	a) [IF] RADIO CONTACT LOST *(instructions);* ÿ ÿ		
	b) IF NO TRANSMISSION RECEIVED FOR *(number)* MINUTES *(or* SECONDS) *(instructions);*	ÿ ÿ	
	c) REPLY NOT RECEIVED *(instructions);*	ÿ ÿ	
	d) IF YOU READ *(maneuver instructions);*	ÿ ÿ	
...if loss of communications sus-pected	e) IF YOU READ (SQUAWK *(code) or* IDENT);	ÿ ÿ	
	f) *(maneuver,* SQUAWK *or* IDENT) OB-SERVED. POSITION *(position of aircraft).* *[(instructions)].*	ÿ ÿ	
2.1.11 Termination of radar and/or ADS-B service			
	a) RADAR SERVICE *(or* IDENTIFICATION) TERMINATED [DUE *(reason)] (instructi-ons);*	ÿ ÿ	
	b) WILL SHORTLY LOSE IDENTIFICATION *(appropriate instructions or information);*	ÿ ÿ	
	c) IDENTIFICATION LOST *[reasons] (instruc-tions).*	ÿ ÿ	
2.1.12 Radar and/or ADS-B equipment degradation			
	a) SECONDARY RADAR OUT OF SERVICE *(appropriate information as necessary);*	ÿ ÿ	
	b) PRIMARY RADAR OUT OF SERVICE *(appropriate information as necessary);*	ÿ ÿ	
	c) ADS-B OUT OF SERVICE *(appropriate information as necessary).*	ÿ ÿ	

2.2 **Radar in approach control service**		
2.2.1 **Vectoring for appro-ouch**		
	a) VECTORING FOR *(type of approach)* AP-APPROACH RUNWAY *(number);*	ÿ ÿ
	b) VECTORING FOR VISUAL APPROACH RUNWAY *(number)* REPORT FIELD *(or* RUNWAY) IN SIGHT;	ÿ ÿ
	c) VECTORING FOR *(positioning in the cir-cuit);*	ÿ ÿ
	d) VECTORING FOR SURVEILLANCE RA-DAR APPROACH RUNWAY *(number);*	ÿ ÿ
Note: PAR approach not applied in Denmark, Faroe Islands and Greenland.	e) VECTORING FOR PRECISION AP-APPROACH RUNWAY *(number);*	ÿ ÿ
	f) *(type)* APPROACH NOT AVAILABLE DUE *(reason)* *(alternative instructions).*	ÿ ÿ
2.2.2 Vectoring for ILS and other approach procedures		
	a) POSITION *(number)* MILES *(or* KILOMETER-RES) FROM *(fix)* TURN LEFT *(or* RIGHT) HEADING *(three digits);*	ÿ ÿ
	b) YOU WILL INTERCEPT (FINAL AP-PROACH COURSE *or radio aid) (distance)* FROM *(significant point or* TOUCHDOWN);	ÿ ÿ
... when a pilot wishes to be positioned a specific distance from touchdown	c)* REQUEST *(distance)* FINAL;	*
	d) CLEARED FOR *(type)* APPROACH RUN-WAY *(number);*	ÿ ÿ
... instructions and information	e) REPORT ESTABLISHED ON LOCALIZER *(or* ON [GLS/RNP/MLS] [FINAL] AP-PROACH [COURSE]);	ÿ ÿ
	f) CLOSING FROM LEFT *(or* RIGHT) [RE-PORT ESTABLISHMENT];	ÿ ÿ
	g) TURN LEFT *(or* RIGHT) HEADING *(three digits)* [TO INTERCEPT] *or* [REPORT ES-TABLISHED];	ÿ ÿ

	h) EXPECT VECTOR ACROSS THE (LO-CALIZER *or* [GLS/RNP/MLS] FINAL AP-PROACH COURSE *or radio aid) (reason);*	ÿ ÿ	
	i) THIS TURN WILL TAKE YOU THROUGH THE (LOCALIZER *or* [GLS/RNP/MLS] FI-NAL APPROACH COURSE *or radio aid) [(reason)];*	ÿ ÿ	
	j) TAKING YOU THROUGH THE (LOCALIZ-ER *or* [GLS/RNP/MLS] FINAL APPROACH COURSE *or radio aid) [(reason)];*	ÿ ÿ	
	k) MAINTAIN *(altitude)* UNTIL GLIDE PATH INTERCEPTION;	ÿ ÿ	
	l) REPORT ESTABLISHED ON GLIDE PATH;	ÿ ÿ	
	m) INTERCEPT (LOCALIZER *or* [GLS/RNP/ MLS] [FINAL] APPROACH [COURSE] *or radio aid)* [RUNWAY *(number)]* [REPORT ESTABLISHED].	ÿ ÿ	
	'*' *Denotes pilot transmission.*		
2.2.3 Maneuver during independent and dependent parallel approaches			
	a) CLEARED FOR *(type of approach)* AP-PROACH RUNWAY *(number)* LEFT *(or* RIGHT);	ÿ ÿ	
	b) YOU HAVE CROSSED THE LOCALIZER *(or* GLS/RNP/ MLS FINAL APPROACH COURSE). TURN LEFT *(or* RIGHT) IMME-DIATELY AND RETURN TO THE LOCAL-IZER *(or* GLS/RNP/MLS FINAL AP-PROACH COURSE) [RUNWAY *(number)];*	ÿ ÿ	
	c) ILS *(or* MLS) RUNWAY *(number)* LEFT *(or* RIGHT). LOCALIZER *(or* MLS) FREQUENCY IS *(frequency);*	ÿ ÿ	
... for avoidance action when an aircraft is observed penetrating the NTZ	d) TURN LEFT *(or* RIGHT) *(number)* DE-GREES *(or* HEADING) *(three digits)* IMME-DIATELY TO AVOID TRAFFIC [DEVIAT-ING FROM ADJACENT APPROACH], CLIMB TWO *(altitude);*	ÿ ÿ	
…for avoidance action below 400 ft (120 m) above the runway threshold elevation where parallel approach obstacle assessment surfaces (PAOAS) criteria are being applied	e) CLIMB TO *(altitude)* IMMEDIATELY TO AVOID TRAFFIC [DEVIATING FROM AD-JACENT APPROACH] *(further instructions).*	ÿ ÿ	

2.2.4 Surveillance radar approach			
...Commission of service	a) THIS WILL BE A SURVEILLANCE RADAR APPROACH RUNWAY *(number)* TERMINATING AT *(distance)* FROM TOUCHDOWN, OBSTACLE CLEARANCE ALTITUDE *(or* HEIGHT) *(number)* FEET *(or* METRES) CHECK YOUR MINIMA [IN CASE OF GO AROUND *(instructions)]*;	ÿ ÿ	
	b) APPROACH INSTRUCTIONS WILL BE TERMINATED AT *(distance)* FROM TOUCHDOWN;	ÿ ÿ	
…Elevation	c) COMMENCE DESCENT NOW [TO MAINTAIN A *(number)* DEGREE GLIDE PATH];	ÿ ÿ	
	d) *(distance)* FROM TOUCHDOWN ALTITUDE *(or* HEIGHT) SHOULD BE *(numbers and units)*;	ÿ ÿ	
…Position	e) *(distance)* FROM TOUCHDOWN;	ÿ ÿ	
…Checks	f) CHECK GEAR DOWN [AND LOCKED];	ÿ ÿ	
	g) CHECK OVER THRESHOLD;	ÿ ÿ	
…Completion of approach	h) REPORT VISUAL;	ÿ ÿ	
	i) REPORT RUNWAY [LIGHTS] IN SIGHT; ÿ ÿ		
	j) APPROACH COMPLETED [CONTACT *(unit)]*.	ÿ ÿ	

2.3   Secondary surveillance radar (SSR) and ADS-B phraseologies

2.3.1 To request the capability of the SSR equipment			
	a) ADVISE TRANSPONDER CAPABILITY;	ÿ ÿ	
	b)* TRANSPONDER *(as shown in the flight level)*;	*	
	c)* NEGATIVE TRANSPONDER. '*' *Denotes pilot transmission.*	*	
2.3.2 To request the capability of the ADS-B equipment			
	a) ADVISE ADS-B CAPABILITY;	ÿ ÿ	
	b)* ADS-B TRANSMITTER *(data link)*;	*	

	c)* ADS-B RECEIVER *(data link);*	*	
	d)* NEGATIVE ADS-B.	*	
	'*' *Denotes pilot transmission.*		
2.3.3 To instruct setting of transponder	a) FOR DEPARTURE SQUAWK *(code);*	ÿ ÿ	
	b) SQUAWK *(code).*	ÿ ÿ	
2.3.4 To request the pilot to reselect the assigned mode and code	a) RESET SQUAWK *[(mode)] (code);*	ÿ ÿ	
	b)* RESETTING *[(mode)] (code).*	*	
2.3.5 To request reselection of aircraft identification	REENTER [ADS-B *or* MODE S] AIRCRAFT IDENTIFICATION.	ÿ ÿ	
2.3.6 To request the pilot to confirm the code selected on the aircraft's transponder	a) CONFIRM SQUAWK *(code);*	ÿ ÿ	
	b)* SQUAWKING *(code).*	*	
	'*' *Denotes pilot transmission.*		
2.3.7 To request the operation of the IDENT feature	a) SQUAWK *[(code)]* [AND] IDENT;	ÿ ÿ	
	b) SQUAWK LOW;	ÿ ÿ	
	c) SQUAWK NORMAL;	ÿ ÿ	
	d) TRANSMIT ADS-B IDENT.	ÿ ÿ	
2.3.8 To request temporary suspension of transponder operation	SQUAWK STANDBY.	ÿ ÿ	

2.3.9 To request emergency code			
	SQUAWK MAYDAY [CODE SEVEN-SEVEN-ZERO-ZERO].	ÿ ÿ	
2.3.10 To request termination of transponder and/or ADS-B transmitter operation *Note: Independent operations of Mode S transponder and ADS-B may not be possible in all aircraft (eg where ADS-B is solely pro-vided by 1090 MHz extended squitter emitted from the trans-ponder). In such cases, aircraft may not be able to comply with ATC instructions related to ADS-B operation.*	a) STOP SQUAWK. [TRANSMIT ADS-B ON- _{SHELTER];} b) STOP ADS-B TRANSMISSION [SQUAWK *(code)* ONLY].	ÿ ÿ ÿ ÿ	
2.3.11 To request transmission of pressure-altitude	a) SQUAWK CHARLIE; b) TRANSMIT ADS-B ALTITUDE.	ÿ ÿ ÿ ÿ	
2.3.12 To request pressure setting check and confirma-tion of level	CHECK ALTIMETER SETTING AND CON-FIRM *(level)*.	ÿ ÿ	
2.3.13 To request termination of pressure altitude trans-mission because of faulty operation	a) STOP SQUAWK CHARLIE WRONG INDI- CATION; b) STOP ADS-B ALTITUDE TRANSMISSION [(WRONG INDICATION, *or reason)]*.	ÿ ÿ ÿ ÿ	
2.3.14 Two request levels check	CONFIRM *(level)*.	ÿ ÿ	

2.3.15 Controller queries a discrepancy between the dis- played 'Selected Level' and the cleared level *Note: The controller will not state on radiotelephony the value of the 'Selected Level' observed on the situation display.*			
	a) CHECK SELECTED LEVEL. CLEARED LEVEL IS *(level);*	ÿ ÿ	
	b) CHECK SELECTED LEVEL. CONFIRM CLIMBING *(or* DESCENDING) TO *(or* MAINTAINING) *(level);*	ÿ ÿ	
	c)* CLIMBING *(or* DESCENDING) TO *(or* MAINTAINING) *(level) (appropriate information on selected level).* '*' *Denotes pilot transmission.*	*	

3. Automatic dependent surveillance – contract (ADS-C) phraseologies

3.1 General ADS-C phraseologies

3.1.1 ADS-C degradation			
	ADS-C *(or* ADS-CONTRACT) OUT OF SER-VICE *(appropriate information as necessary).*	ÿ ÿ	

4. Alerting phraseologies

4.1 Alerting phraseologies

4.1.1 Low altitude warning	*(aircraft call sign)* LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE	ÿ ÿ	
4.1.2 **Terrain alert**	*(aircraft call sign)* TERRAIN ALERT, *(suction site pilot action, if possible).*	ÿ ÿ	

5. Air Traffic Flow Management

Note: ATFM procedures not applied in the ICAO NAT Region.

5.1 ATFM phraseologies

...Calculated take-off time (CTOT) delivery resulting from a slot allocation message (SAM)	a) CASTLE *(hour);*	ÿ ÿ
...Change to CTOT resulting from a slot revision message (SRM).	b) REVISED SLOT *(hour);*	ÿ ÿ
...CTOT cancellation resulting from a slot cancellation mes-saga (SLC)	c) SLOT CANCELED, REPORT READY;	ÿ ÿ
...Flight suspension until further notice (resulting from flight suspension message (FLS))	d) FLIGHT SUSPENDED UNTIL FURTHER NOTICE, DUE *(reason);*	ÿ ÿ
...Flight de-suspension resulting from a de-suspension message (DES)	e) SUSPENSION CANCELED, REPORT READY;	ÿ ÿ
...Denial of start-up when requested too late to comply with the given CTOT	f) UNABLE TO APPROVE START-UP CLEARANCE DUE SLOT EXPIRED, RE-QUEST A NEW CASTLE;	ÿ ÿ
...Denial of start-up when reque-sted too early to comply with the given CTOT	g) UNABLE TO APPROVE START-UP CLEAR-ANCE DUE SLOT *(hour),* REQUEST START-UP AT *(hour).*	ÿ ÿ
	h) UNABLE TO APPROVE *(desired route, level, etc.)* [FOR *(aircraft call sign)*] [DUE *(reason)*] *(alternative clearance proposed).*	

5.1.1 Approval request

	a) APPROVAL REQUEST *(aircraft call sign)* ESTIMATED DEPARTURE FROM *(significant point)* AT *(hour);*	
	b) *(aircraft call sign)* REQUEST APPROVED [*(restriction if any)*];	
	c) *(aircraft call sign)* UNABLE *(alternative instructions).*	

5.1.2 Inbound release	[INBOUND RELEASE] *(aircraft call sign)* SQUAWKING *(SSR code)]* FROM *(depar-ture point)* RELEASED AT *(significant point, or time, or level)* CLEARED TO AND ESTIMATING *(clearance limit) (time)* AT *(level)* [EXPECTED APPROACH TIME *(time), or* NO DELAY EXPECTED] CON-TACT AT *(hour).*		
5.1.3 Handover	HANDOVER *(aircraft call sign)* [SQUAWK-ING *(SSR code)]* POSITION *(aircraft posi-tion) (level).*		
5.1.4 Expedition of clea-rance	a) EXPEDITE CLEARANCE *(aircraft call sign)* EXPECTED DEPARTURE FROM *(place)* AT *(hour);* b) EXPEDITE CLEARANCE *(aircraft call sign)* [ESTIMATED] OVER *(place)* AT *(time)* RE-QUESTS *(level or route, etc.).*		
5.1.5 RVSM Operations … to verbally supplement estimate messages of aircraft non-approved for RVSM or to verbally supplement an automated estimate message exchange that does not automatically transfer information from Item 18 of the flight plan followed by supplementary information, as appropriate ... to communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe meteorological conditions phenomena or equipment failure, as applicable	a) NEGATIVE RVSM *[(supplementary information, eg State aircraft)];* b) UNABLE RVSM DUE TURBULENCE *(or* EQUIPMENT, *as applicable).*		

6. Coordination between ATS units

6.1 Coordination between ATS units

6.1.1 **Wed**	**Estimates and revisions**	a) ESTIMATE *[direction of flight] (aircraft call sign)* [SQUAWKING *(SSR code)] (type)* ESTIMATED *(significant point) (time) (le-vel) (or* DESCENDING/CLIMBING FROM *(level)* TO *(level))* [SPEED *(filed TAS)] (route)* [REMARKS];
...sending unit		b) ESTIMATE *(significant point)* ON *(aircraft call sign);*
...receiving unit reply (if flight plan details are not available)		c) NO DETAILS;
...receiving unit reply (if flight plan details are available)		*(aircraft type) (destination);*
...sending unit reply		d) [SQUAWKING *(SSR code)]* [ESTIMATED] *(significant point) (time)* AT *(level);*

Note: In the event that flight plan details are not available the receiving station shall reply to b) NO DETAILS and sending unit shall pass full estimate as in a).

e) ESTIMATE UNMANNED FREE BAL-LOON(S) *(identification and classification)* ESTIMATED OVER *(place)* AT *(time)* RE-PORTED FLIGHT LEVEL(S) *(figure or figures)* [or FLIGHT LEVEL UNKNOWN] MOVING *(direction)* ESTIMATED GROUND SPEED *(figure) (other pertinent information, if any);*

f) AUDIT *(aircraft call sign) (details as necessary).* |
| **6.1.2** | **Transfer of control** | a) REQUEST RELEASE OF *(aircraft call sign);*

b) *(aircraft call sign)* RELEASED [AT *(hour)]* [conditions/ restrictions];

c) IS *(aircraft call sign)* RELEASED [FOR CLIMB *(or* DESCENT)];

d) *(aircraft call sign)* NOT RELEASED [UNTIL *(time or significant point)];* |

	e) UNABLE *(aircraft call sign)* [TRAFFIC IS *(details)]*.
6.1.3 Change of clearance	a) MAY WE CHANGE CLEARANCE OF *(aircraft call sign)* TO *(details of alteration proposed);* b) AGREED TO *(alteration of clearance)* OF *(aircraft call sign);* c) UNABLE TO APPROVE CHANGE TO CLEARANCE OF *(aircraft call sign);* d) UNABLE TO APPROVE *(desired route, level, etc.)* [FOR *(aircraft call sign)]* [DUE *(reason)]* *(alternative clearance proposed).*
6.1.4 Approval request	a) APPROVAL REQUEST *(aircraft call sign)* ESTIMATED DEPARTURE FROM *(significant point)* AT *(hour);* b) *(aircraft call sign)* REQUEST APPROVED *[(restriction if any)];* c) *(aircraft call sign)* UNABLE *(alternative instructions).*
6.1.5 Inbound release	[INBOUND RELEASE] *(aircraft call sign)* SQUAWKING *(SSR code)]* FROM *(depar-ture point)* RELEASED AT *(significant point, or time, or level)* CLEARED TO AND ESTIMATING *(clearance limit) (time)* AT *(level)* [EXPECTED APPROACH TIME *(time), or* NO DELAY EXPECTED] CON-TACT AT *(hour).*
6.1.6 Handover	HANDOVER *(aircraft call sign)* [SQUAWK-ING *(SSR code)]* POSITION *(aircraft posi-tion) (level).*
6.1.7 Expedition of clea-rance	a) EXPEDITE CLEARANCE *(aircraft call sign)* EXPECTED DEPARTURE FROM *(place)* AT *(hour);* b) EXPEDITE CLEARANCE *(aircraft call sign)* [ESTIMATED] OVER *(place)* AT *(time)* RE-QUESTS *(level or route, etc.).*

6.1.8 RVSM Operations			
… to verbally supplement estimate messages of aircraft non-approved for RVSM or to verbally supplement an automated estimate message exchange that does not automatically transfer information from Item 18 of the flight plan followed by supplementary information, as appropriate	a) NEGATIVE RVSM *[(supplementary information, eg State aircraft)]*;		
... to communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe meteorological phenomena or equipment failure, as applicable	b) UNABLE RVSM DUE TURBULENCE *(or* EQUIPMENT, *as applicable).*		

Appendix B

CPDLC Data Link Message Set

Contents

Note: As stated in Note. 1 and Note 2 to chapter 3. pt. 3.1.2 The message elements below cover only a limited part of the total ICAO CPDLC message set, in that only the message elements that relate to the request for/ handover

see 'departure clearance' via data link for the time being is selected included.
In the nature of the matter, the CPDLC message elements only appear written in the English language.

1. Uplink messages

1.1   CPDLC uplink messages for issuing departure clearances are presented in this section 1.

Table A-1: Responses/Acknowledgements (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
0	Indicates that ATC cannot comply with the request	UNABLE	N	M	N	
1	Indicates that ATC has received the message and will respond	STANDBY	N	L	N	

Table A-5: Route Modifications (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
73	Notification to the aircraft of the instructions to be followed from departure until the specified clear-ance limit	*(departure clearance)*	N	M	W/U	

Table A-11: System Management Messages (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
159	A system generated message notifying that the ground system has detected an error	ERROR	U	M	N	
161	Notification to the avionics that the datalink connection with the current data authority is being terminated	END SERVICE	L	N	N	
227	Confirmation to the aircraft system that the ground system has received the message to which the logical acknowledgment refers and found it acceptable for display to the responsible person	LOGICAL ACKNOWLEDGMENT	N	M	N	

Table A-12: Additional Messages (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
208		*(free text)*	L	L	N	

Note: Free text ('Free text') message elements are inherently not associated with any message intent. The ability to send a free text message using any of

the property combinations (attributes) that appear in the message set have been anticipated/ approved in the technical requirements for ATN (Annex 10, Volume III, Part I, Chapter 3).

2. Downlink Messages

2.1 CPDLC downlink messages for requesting departure clearances are presented in this section 2.

Table A-13: Responses (downlink)

		Message Intent/Use	Message Element	URG	ALRT	RESP	
0		The instruction is understood and will be complied with	WILCO	N	M	N	
1		The instruction cannot be com-plied with	UNABLE	N	M	N	
2		Wait for a reply	STANDBY	N	M	N	

Table A-18: Route Modification Requests (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
25	Request for clearance	REQUEST *(clearance type)* CLEARANCE	N	L	Y	

Table A-19: Reports (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
79	The code of the latest ATIS received is as specified	ATIS *(atis code)*	N	L	N	

Table A-22: System Management Messages (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
62	A system generated message that the avionics has detected an error	ERROR *(error information)*	U	L	N	
100	Confirmation to the ground system that the aircraft system has received the message to which the logical acknowledgment refers and found it acceptable for display to the responsible person	LOGICAL ACKNOWLEDGMENT	N	M	N	

Table A-23: Additional Messages (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP	
98		*(free text)*	L	L	N	

Note: Free text ('Free text') message elements are inherently not associated with any message intent. The ability to send a free text message using any of the property combinations (attributes) that appear in the message set have been predicted/approved in the technical requirements for ATN (Annex 10, Volume III, Part I, Chapter 3).

3. Preliminary examples

Note: The examples below and some of the message elements have not yet been approved ICAO standard, but derived from Eurocontrol DOC 'Operational requirements for Air Traffic Ma-nagement A/G Data Communications Services, edition 1.0, 15 January 1998, which are, however, to be regarded as indicative operational requirements for the EUR region. Therefore, subsequent examples are not

*detailed, but included only to outline
a logical connection with the listed ICAO message elements.*

3.1 Establishment and completion of CPDLC takes place in the following steps:

1) THE AIRCRAFT'S 'LOGON' *(aircraft data link
    logon sends e.g. the aircraft's data link
    address (an alphanumeric code of six hexa-decimal
    characters) and accompanying FPL data; field 7
    IDENT, field 13 ADEP EOBT and field 16 ADES, there
    is correlated with the FPL data left
    stored in the ATC system database. Hereafter is
    the aircraft's 'avionic' and the controlling ATC system in
    question are uniquely linked together until downlink
    takes place (step 4).*

2) CPDLC LINK ESTABLISHMENT *(Two types of data link
    can be connected:*

   i) **The current ATC link.** *This CPDLC
       link is established between the aircraft and
       the ATC unit that currently is currently responsible
       for the control of the aircraft,*

   ii) **Downstream ATC link.** *This CPDLC
       link can be at the request of the aircraft
       established via the DSC service, which passes on
       a clearance issued by a subsequent ATC unit that
       does not currently is it*

*controlling ATC unit, e.g. an oceanic
clearance)*

3) PERFORMANCE OF CPDLC MESSAGE EXCHANGE
    *(Depending on the established service
    the corresponding ICAO standard message elements
    can now be exchanged.),*

4) CPDLC LINK TERMINATION/DISCONNECTION *(Aircraft
    shall request termination and disconnection
    of the current ATC data link connection. The
    controlling ATC unit may refuse disengagement if it has
    or anticipates having to issue
    additional clearances, air traffic control instructions
    or information. When the controlling
    ATC unit accepts downlink, must both
    concerned pilot and executive air traffic controller
    receive indication that additional CPDLC
    communication can no longer take place.*

3.2 A CPDLC downlink request for
'departure clearance' (message type designation
'RCD'), is composed of the following message elements:

*Note 1: In the table below means:
M Mandatory,
I/A If applicable
O Optional
N2 Not ICAO standard in an RCD message*

Element type	Message no.	Message Element	URG	ALRT	RESP
M	25	REQUEST [clearance type] CLEARANCE	N	L	Y
I A	79	ATIS [code letter]	N	L	N
M	N2	GATE [gate ident]	N	L	L
M	N2	AIRCRAFT TYPEWAKE [aircraft type] [wake turbulence category]	N	L	L
ISLAND	98	[free text]	N	N	N

*Note 2: The RCD notification does not contain the information
listed in section 3.1 step 1), but is
already submitted in connection with the aircraft's data link
'logon' process.*

Example of an RCD message:

RCD 080
SAS123-EGKK-GATE A34-KJFK
ATIS H
-TYPE/B747/H
-RMK/REQ 23L