ATTACHMENT B to State letter AN 13/45.1-00/74

PROPOSED AMENDMENT OF THE
***PROCEDURES FOR AIR NAVIGATION SERVICES — RULES OF THE AIR AND AIR TRAFFIC SERVICES* (PANS-RAC, Doc 4444)**

PART X. PHRASEOLOGIES

1. Communications procedures

1.1 The communications procedures shall be in accordance with Volume II of Annex 10 — *Aeronautical Telecommunications*, and pilots, ATS personnel and other ground personnel shall be thoroughly familiar with the radiotelephony procedures contained therein.

2. General

2.1 Most phraseologies contained in Section 3 of this Part show the text of a complete message without call signs. They are not intended to be exhaustive, and when circumstances differ, pilots, ATS personnel and other ground personnel will be expected to use appropriate subsidiary phraseologies which should be as clear and concise as possible and designed to avoid possible confusion by those persons using a language other than one of their national languages.

2.2 The phraseologies are grouped according to types of air traffic service for convenience of reference. However, users shall be familiar with, and use as necessary, phraseologies from groups other than those referring specifically to the type of air traffic service being provided. All phraseologies shall be used in conjunction with call signs (aircraft, ground vehicle, ATC or other) as appropriate. In order that the phraseologies listed should be readily discernible in Section 3, call signs have been omitted. Provisions for the compilation of RTF messages, call signs and procedures are contained in Annex 10, Volume II, Chapter 5.

2.3 Section 3 includes phrases for use by pilots, ATS personnel and other ground personnel. Phraseologies for the movement of vehicles, other than tow-tractors, on the manoeuvring area are not listed separately as the phraseology associated with the movement of aircraft is applicable, with the exception of taxi instructions, in which case the word “PROCEED” shall be substituted for the word “TAXI” when communicating with vehicles.

2.4 Conditional phrases, such as “behind landing aircraft” or “after departing aircraft”, shall not be used for movements affecting the active runway(s), except when the aircraft or vehicles concerned are seen by the appropriate controller and pilot. In all cases a conditional clearance shall be given in the following order and consist of:

i) identification;
ii) the condition (specify); and
iii) the clearance,

for example:

“SAS 941, BEHIND DC9 ON SHORT FINAL, LINE UP BEHIND”.

Note.— This implies the need for the aircraft receiving the conditional clearance to identify the aircraft or vehicle causing the conditional clearance.

2.5 ATC route clearances shall always be read back unless otherwise authorized by the appropriate ATS authority, in which case they shall be acknowledged in a positive manner.

2.6 All clearances to enter, land on, take off on, cross and backtrack on the runway-in-use shall be read back.

2.7 Other clearances or instructions, including conditional clearances, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

2.8 Runway-in-use, altimeter settings, SSR Codes, level instructions, heading and speed instructions and, where so required by the appropriate ATS authority, transition levels, shall always be read back, e.g.:

Air traffic services: (aircraft call sign) “SQUAWK THREE FOUR TWO FIVE”;
Aircraft reply: “SQUAWK THREE FOUR TWO FIVE, (aircraft call sign)”.

Note.— If the level of an aircraft is reported in relation to standard pressure 1 013.2 hPa, the words “FLIGHT LEVEL”should precede the level figures. If the level of the aircraft is reported in relation to QNH/QFE, the figure should be followed by the word “METRES” or “FEET” as appropriate.

2.9 The phraseology in Section 3 does not include phrases and regular radiotelephony procedure words contained in Annex 10, Volume II.

2.10 Words in parentheses indicate that specific information, such as a level, a place or a time, etc., must be inserted to complete the phrase, or alternatively that optional phrases may be used. Words in square parentheses indicate optional additional words or information that may be necessary in specific instances.

2.11 Examples of the application of the phraseologies ~~contained in Parts VI and X~~ may be found in the *Manual of Radiotelephony* (Doc 9432).

3. ATC Phraseologies

3.1 *General*

	Circumstances	*Phraseologies*
3.1.1	Description of levels (subsequently referred to as "*(level)*")	a) FLIGHT LEVEL *(number)*; *or* b) *(number)* METRES; *or* c) *(number)* FEET.
3.1.2	Level changes, reports and rates	a) CLIMB (*or* DESCEND); *followed as necessary by:* i) TO *(level)*;
	... instruction that a climb (or descent) to a level within the vertical range defined is to commence	ii) TO AND MAINTAIN BLOCK *(level)* TO *(level)*
		~~ii)~~iii) TO REACH *(level)* AT (*or* BY) *(time or significant point)*;
		~~iii)~~iv) REPORT LEAVING (*or* REACHING, *or* PASSING) *(level)*;
		~~iv) REPORT PASSING ODD (*or* EVEN) LEVELS;~~
		v) AT *(number)* METRES PER SECOND (*or* FEET PER MINUTE) [MINIMUM (*or* MAXIMUM)];
	... for SST aircraft only	vi) REPORT STARTING ACCELERATION (*or* DECELERATION).
		b) STEP CLIMB *(aircraft ~~identification~~ call sign)* ABOVE ~~(or BENEATH)~~ YOU;
		c) STEP DESCEND *(aircraft call sign)* BELOW

Circumstances	*Phraseologies*
	YOU;
	d) MAINTAIN AT LEAST *(number)* METRES (*or* FEET) ABOVE (*or* BELOW) *(aircraft call sign)*.
	~~c)~~e) REQUEST LEVEL (*or* FLIGHT LEVEL *or* ALTITUDE) CHANGE FROM *(name of unit)* [AT *(time or significant point)*] ;
	~~d)~~f) STOP CLIMB (*or* DESCENT) AT *(level)*;
	~~e)~~g) CONTINUE CLIMB (*or* DESCENT) TO *(level)*;
	~~f)~~h) EXPEDITE CLIMB (*or* DESCENT) [UNTIL PASSING *(level)*];
	~~g)~~i) WHEN READY CLIMB (*or* DESCEND) TO *(level)*;
	~~h)~~j) EXPECT ~~DESCENT~~ CLIMB (*or* DESCENT) AT *(time or significant point)*;
	~~*i)~~*k) REQUEST DESCENT AT *(time)*;
... to require action at a specific time or place	~~j)~~l) IMMEDIATELY;
	~~k)~~m) AFTER PASSING *(significant point)*;
	~~l)~~n) AT *(time or significant point)*;
... to require action when convenient	~~m)~~o) WHEN READY *(instruction)*;
... to require an aircraft to climb or descend maintaining own separation and VMC	~~n)~~p) MAINTAIN OWN SEPARATION AND VMC [FROM *(level)*] [TO*(level)*];
	~~o)~~q) MAINTAIN OWN SEPARATION AND VMC ABOVE (*or* BELOW, *or* TO) *(level)*;

Circumstances	*Phraseologies*
... when there is doubt that an aircraft can comply with a clearance or instruction	~~p)~~r) ~~IF NOT POSSIBLE~~ IF UNABLE *(alternative instructions)* AND ADVISE;
... when a pilot is unable to comply with a clearance or instruction	~~*q)~~*s) UNABLE TO COMPLY;
... after modifying vertical speed to comply with an ACAS resolution advisory (Pilot and controller interchange)	~~*r)~~*t) TCAS CLIMB (*or* DESCENT);
	~~s)~~u) (*acknowledgement*);
... after ACAS "Clear of Conflict" is annunciated (Pilot and controller interchange)	~~*t)~~*v) RETURNING TO (*assigned clearance*);
	~~u)~~w) (*acknowledgement*) (*or alternative instructions*);
... after the response to an ACAS resolution advisory is completed (Pilot and controller interchange)	~~*v)~~*x) TCAS CLIMB (*or* DESCENT), RETURNING TO (*assigned clearance*);
	~~w)~~y) (*acknowledgement*) (*or alternative instructions*);
... after returning to clearance after responding to an ACAS resolution advisory (Pilot and controller interchange)	~~*x)~~*z) TCAS CLIMB (*or* DESCENT), COMPLETED (*assigned clearance*) RESUMED;
	~~y)~~aa) (*acknowledgement*) (*or alternative instructions*);
... when unable to comply with a clearance because of an ACAS resolution advisory (Pilot and controller interchange)	~~*z)~~*bb) UNABLE TO COMPLY, TCAS RESOLUTION ADVISORY;
	~~aa)~~cc) (*acknowledgement*).
	* Denotes pilot transmission.

Circumstances	*Phraseologies*
3.1.3 Transfer of control and/or frequency change	a) CONTACT *(unit call sign) (frequency)* [NOW];
	b) AT (*or* OVER) *(time or place)* [PASSING/LEAVING/REACHING] *(level)* CONTACT *(unit call sign) (frequency)*;
	c) IF NO CONTACT *(instructions)*;
Note.— An aircraft may be requested to "STAND BY" on a frequency when it is intended that the ATS unit will initiate communications and to "MONITOR" a frequency when information is being broadcast thereon.	d) STAND BY *(frequency)* FOR *(unit call sign)*;
	*e) REQUEST CHANGE TO *(frequency)*;
	f) FREQUENCY CHANGE APPROVED;
	g) MONITOR *(unit call sign) (frequency)*;
	*h) MONITORING *(frequency)*;
	i) WHEN READY CONTACT *(unit call sign) (frequency)*;
	j) REMAIN THIS FREQUENCY.
	* Denotes pilot transmission.
3.1.4 Change of call sign	
... to instruct an aircraft to change its type of call sign	a) CHANGE YOUR CALL SIGN TO *(new call sign)* [UNTIL FURTHER ADVISED];
... to advise an aircraft to revert to the call sign indicated in the flight plan	b) REVERT TO FLIGHT PLAN CALL SIGN *(call sign)* [AT *(significant point)*].

Circumstances	*Phraseologies*
3.1.5 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)*ESTIMATED (*or* OVER) *(significant point)* AT *(time)*; 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.
3.1.6 Meteorological conditions	a) WIND *(number)* DEGREES *(number) (units)*; b) WIND AT *(height/altitude/flight level) (number)* DEGREES *(number)(units)*; *Note.— Wind is always expressed by giving the mean direction and speed and any significant variations thereof.* c) VISIBILITY *(distance)* [*direction*]; d) RUNWAY VISUAL RANGE (*or* RVR) [RUNWAY *(number)*] *(distance) (unit of measurement)*; e) RUNWAY VISUAL RANGE (*or* RVR) RUNWAY *(number)* NOT AVAILABLE [*(or)* NOT REPORTED];

Circumstances	*Phraseologies*
... for multiple RVR observations	~~e)~~f) RUNWAY VISUAL RANGE *(or* RVR) ~~RVR~~ [RUNWAY *(number)*] (*first position*) (*distance*), (*second position*) (*distance*), (*third position*) (*distance*) *(unit of measurement)*; *Note 1.— Multiple RVR observations are always representative of the touchdown zone, midpoint zone and the roll-out/stop end zone respectively.* *Note 2.— Where reports for three locations are given, the indication of these locations may be omitted, provided that the reports are passed in the order of touchdown zone, followed by the midpoint zone and ending with the roll-out/stop end zone report.*
... in the event that RVR information on any one position is not available this information will be included in the appropriate sequence	~~f)~~g) RVR [RUNWAY *(number)*] *(first position) (distance), (second position)* ~~MISSING~~NOT AVAILABLE, *(third position) (distance)*;
	~~g)~~h) PRESENT WEATHER *(details)*;
	~~h)~~i) CLOUD *(amount,* [*type*] *and height of base)* (*or* SKY CLEAR);
	~~i)~~j) CAVOK; *Note.— CAVOK pronounced CAV-O-KAY.*
	~~j)~~k) TEMPERATURE [MINUS] *(number)* (*and/or* DEW-POINT [MINUS]*(number)*);
	~~k)~~l) QNH ~~*(or QFE)*~~ *(number)* [*units*];
	m) QFE *(number)* [*units*];
	~~l)~~n) ~~MODERATE *(or* SEVERE)~~ *(aircraft type)* REPORTED *(description)* ICING (*or* TURBULENCE) [IN CLOUD]*(area) (time)*;
	m)o) REPORT FLIGHT CONDITIONS.

Circumstances		*Phraseologies*
3.1.7	Position reporting	a) NEXT REPORT AT *(significant point)*;
	... to omit position reports until a specified position	b) OMIT POSITION REPORTS [UNTIL *(specify)*];
		c) RESUME POSITION REPORTING.
3.1.8	Additional reports	a) REPORT PASSING *(significant point)*;
	... to request a report at a specified place or distance	b) REPORT *(distance)* FROM *(name of DME station)* DME;
		c) REPORT PASSING *(three digits)* RADIAL *(name of VOR)* VOR;
	... to request a report of present position	d) REPORT DISTANCE FROM *(significant point)*;
		e) REPORT DISTANCE FROM *(name of DME station)* DME.
3.1.9	Aerodrome information	a) [*(location)*] RUNWAY SURFACE CONDITION RUNWAY *(number) (condition)*;
		b) [*(location)*] RUNWAY SURFACE CONDITION RUNWAY *(number)* NOT CURRENT;
		~~b)~~c) LANDING SURFACE *(condition)*;
		~~c)~~d) CAUTION CONSTRUCTION WORK *(location)*;
		~~d)~~e) CAUTION *(specify reasons)* RIGHT (*or* LEFT), (*or* BOTH SIDES) OF RUNWAY [*number*];
		~~e)~~f) CAUTION WORK IN PROGRESS (*or* OBSTRUCTION) *(position and any necessary advice)*;

Circumstances	*Phraseologies*
	~~f)~~g) RUNWAY REPORT AT *(observation time)* RUNWAY *(number) (type of precipitant)* UP TO *(depth of deposit)* MILLIMETRES. BRAKING ACTION GOOD (*or* MEDIUM TO GOOD, *or* MEDIUM, *or* MEDIUM TO POOR, *or* POOR *or* UNRELIABLE) [*and/or* BRAKING COEFFICIENT *(equipment and number)*]; ~~g)~~h) BRAKING ACTION REPORTED BY *(aircraft type)* AT *(time)* GOOD (*or* MEDIUM *or* POOR); i) BRAKING ACTION [*(location)*] *(measuring equipment used)*, RUNWAY *(number)*, TEMPERATURE [MINUS] *(number)*, WAS *(reading)* AT *(time)*; ~~h)~~j) RUNWAY (*or* TAXIWAY) WET [*or* DAMP, WATER PATCHES, FLOODED *(depth)*, *or* SNOW REMOVED *(length and width as applicable)*, *or* TREATED, *or* COVERED WITH PATCHES OF DRY SNOW *(or* WET SNOW, *or* COMPACTED SNOW, *or* SLUSH, *or* FROZEN SLUSH, *or* ICE, *or* ICE UNDERNEATH, *or* ICE AND SNOW, *or* SNOWDRIFTS, *or* FROZEN RUTS AND RIDGES)]~~.~~; k) TOWER OBSERVES *(weather information)*; l) PILOT REPORTS *(weather information)*.
3.1.10 Operational status of visual and non-visual aids	a) *(specify visual or non-visual aid)* RUNWAY *(number) (description of deficiency)*; b) *(type)* LIGHTING *(unserviceability)*; c) MLS/ILS CATEGORY *(category) (serviceability state)*; d) TAXIWAY LIGHTING *(description of deficiency)*; e) *(type of visual approach slope indicator)* RUNWAY *(number) (description of deficiency)*~~;~~. ~~f) SECONDARY POWER SUPPLY NOT~~

Circumstances	*Phraseologies*
	~~AVAILABLE.~~

3.2 *Area control services*

Circumstances	*Phraseologies*
3.2.1 Issuance of a clearance	a) *(name of unit)* CLEARS *(aircraft ~~identification~~ call sign)*; 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 ~~CONTROL AREA~~ CONTROLLED AIRSPACE (*or* CONTROL ZONE) [VIA *(significant point or route)*] AT *(level)* [AT *(time)*]; f) LEAVE ~~CONTROL AREA~~ CONTROLLED AIRSPACE (*or* CONTROL ZONE) [VIA *(significant point or route)*] AT *(level)* (*or* CLIMBING, *or* DESCENDING); g) JOIN *(specify)* AT *(significant point)* AT *(level)* [AT *(time)*].
3.2.2 Indication of route and clearance limit	a) FROM *(~~place~~ location)* TO *(~~place~~ location)*; b) TO *(~~place~~ location)*, *followed as necessary by:* i) DIRECT; ii) VIA *(route and/or ~~reporting~~ significant points)*;

Circumstances	*Phraseologies*
	iii) VIA FLIGHT PLANNED ROUTE; *Note.— Conditions associated with the use of this phrase are in Part III, 12.2.* iv) VIA *(distance)* DME ARC *(direction)* OF *(name of DME station)* ~~DME~~; ~~v) OUT OF CONTROL AREA (or ZONE) (distance) (direction) OF (place);~~ c) *(~~level or~~ route)* NOT AVAILABLE DUE *(reason)* ALTERNATIVE[S] IS/ARE *(~~levels or~~ routes)* ADVISE.
3.2.3 Maintenance of specified levels	a) MAINTAIN *(level)* [TO *(significant point)*]; b) MAINTAIN *(level)* UNTIL PASSING *(significant point)*; c) MAINTAIN *(level)* UNTIL *(minutes)* AFTER PASSING *(significant point)*; ~~c)~~d) MAINTAIN *(level)* UNTIL *(time)*; ~~d)~~e) MAINTAIN *(level)* UNTIL ADVISED BY *(name of unit)*; ~~e)~~f) MAINTAIN *(level)* UNTIL FURTHER ADVISED; ~~f)~~g) MAINTAIN *(level)* WHILE IN CONTROLLED AIRSPACE; ~~g) MAINTAIN AT LEAST (number) METRES (or FEET) ABOVE (or BELOW) (aircraft identification).~~ h) MAINTAIN BLOCK *(level)* TO *(level)*. *Note.— The term "MAINTAIN" is not to be used in lieu of "DESCEND" or "CLIMB" when instructing*

	Circumstances	*Phraseologies*
		an aircraft to change level.
3.2.4	Specification of cruising levels	a) CROSS *(significant point)* AT (*or* ABOVE, *or* BELOW) *(level)*; b) CROSS *(significant point)* AT *(time)* OR LATER (*or* BEFORE) AT*(level)* ~~[MAINTAINING OWN SEPARATION AND VMC]~~; c) CRUISE CLIMB BETWEEN *(levels)* (*or* ABOVE *(level)*); d) CROSS *(distance)* DME [*(direction)*] OF *(name of DME station)* ~~DME~~ AT (*or* ABOVE *or* BELOW) *(level)*.
3.2.5	Emergency descent	*a) EMERGENCY DESCENT *(intentions)*; b) ~~EMERGENCY DESCENT AT *(significant point or location)* ALLAIRCRAFT BELOW *(level)* WITHIN *(distance)* OF *(significant point or navigation aid)* LEAVE IMMEDIATELY *(followed as necessary by specific instructions as to direction, heading or track, etc.)*.~~ ATTENTION ALL AIRCRAFT IN THE VICINITY OF [*or* AT] *(significant point or location)* EMERGENCY DESCENT IN PROGRESS FROM *(level)* (followed as necessary by specific instructions, clearances, traffic information, etc.). * Denotes pilot transmission.
3.2.6	If clearance cannot be issued immediatelyupon request	EXPECT CLEARANCE AT *(time)*.
~~3.2.7~~	~~En-route absorption of terminal delay~~	~~AT *(time or position)* DESCEND TO *(level)* FOR EN-ROUTE DELAY OF *(number)* MINUTES.~~
~~3.2.8~~ 3.2.7	Separation instructions	a) CROSS *(significant point)* AT *(time)* [OR LATER (*or* OR BEFORE)];

Circumstances	*Phraseologies*
	b) ADVISE IF ABLE TO CROSS *(significant point)* AT *(time or level)*; c) MAINTAIN MACH *(number)* [OR GREATER *(or* OR LESS)] [UNTIL *(significant point)*];~~:~~ d) DO NOT EXCEED MACH *(number)*.
3.2.8 Instructions associated with flying a track (offset), parallel to the cleared route.	a) ADVISE IF ABLE TO PROCEED PARALLEL OFFSET; b) PROCEED OFFSET *(distance)* RIGHT/LEFT OF *(route) (track)* [CENTRE LINE] [AT *(significant point) (or time)*] [UNTIL *(significant point) (or time)*]; c) CANCEL OFFSET (*instructions to rejoin cleared flight route or other information*).

3.3 *Approach control services*

Circumstances	*Phraseologies*
3.3.1 Departure instructions	~~a) AFTER DEPARTURE TURN RIGHT (*or* LEFT) HEADING *(three digits)*;~~ ~~b) TURN RIGHT (*or* LEFT) HEADING *(three digits)*;~~ ~~c) TRACK *(three digits)* DEGREES [MAGNETIC (*or* TRUE)] TO (*or* FROM) *(significant point)* UNTIL (*time, or* REACHING *(fix or significant point or level)*) [BEFORE SETTING HEADING];~~ ~~d) SET HEADING AT (*or* BEFORE, *or* LATER THAN) *(time)*;~~ ~~e) SET HEADING TO (*or* DIRECT) *(significant point)* AT (*or* BEFORE, *or* LATER THAN) *(time)*;~~

Circumstances	*Phraseologies*
	~~f) AFTER REACHING (*or* PASSING) *(level or significant point)* SET HEADING [DIRECT] *(significant point)*;~~ a) DEPART RUNWAY *(number) (and, as applicable)*; i) [AFTER DEPARTURE] TURN RIGHT (*or* LEFT) HEADING *(three digits)* (*or* MAINTAIN RUNWAY HEADING) TO *(level or significant point)* [*other instructions as required*]; ii) AFTER REACHING (*or* PASSING) *(level or significant point) (instructions)*; iii) TURN RIGHT (*or* LEFT) HEADING *(three digits)* TO *(level)* [TO INTERCEPT *(track, route, airway, etc.)*]; iv) (SID *name and number*) [DEPARTURE]; v) TRACK *(three digits)* DEGREES [MAGNETIC (*or* TRUE)] TO (*or* FROM) *(significant point)* UNTIL (*time, or* REACHING *(fix or significant point or level)*) [BEFORE PROCEEDING ON COURSE]; ~~g)~~vi) CLEARED VIA *(designation)*. *Note.— Conditions associated with the use of this phrase are in Part III, 12.2.*
3.3.2 Approach instructions	a) CLEARED VIA *(designation)*; b) CLEARED TO *(clearance limit)* VIA *(designation)*; c) CLEARED VIA *(details of route to be followed)*; d) CLEARED *(type of approach)* APPROACH [RUNWAY *(number)*];

Circumstances	*Phraseologies*
	e) CLEARED *(type of approach)* RUNWAY *(number)* FOLLOWED BY CIRCLING RUNWAY *(number)*;
	~~e)~~f) CLEARED APPROACH [RUNWAY *(number)*];
	~~f)~~g) COMMENCE APPROACH AT *(time)*;
	~~*g)~~*h) REQUEST STRAIGHT-IN APPROACH;
	~~h)~~i) CLEARED STRAIGHT-IN APPROACH [RUNWAY *(number)*];
	j) CLEARED STRAIGHT-IN *(type)* APPROACH;
	~~i)~~k) REPORT VISUAL;
	~~j)~~l) REPORT RUNWAY [LIGHTS] IN SIGHT;
	~~*k)~~*m) REQUEST VISUAL APPROACH;
	~~l)~~n) CLEARED VISUAL APPROACH RUNWAY *(number)*;
	~~m)~~o) REPORT *(significant point)*; [OUTBOUND, *or* INBOUND];
	p) REPORT COMMENCING PROCEDURE TURN;
	~~*n)~~*q) REQUEST VMC DESCENT;
	~~o)~~r) MAINTAIN OWN SEPARATION;
	~~p)~~s) MAINTAIN VMC;
	~~q)~~t) ARE YOU FAMILIAR WITH *(name)* APPROACH PROCEDURE;
	~~r) REPORT MLS CAPABILITY;~~

Circumstances	*Phraseologies*
	~~*s)~~*u) REQUEST *(type of approach)* APPROACH [RUNWAY (*number*)]; ~~*t)~~*v) REQUEST (*MLS/RNAV plain language designator*); ~~u)~~w) CLEARED (*MLS/RNAV plain language designator*). * Denotes pilot transmission.
3.3.3 Holding ~~instructions~~ clearances	
... visual	a) HOLD VISUAL [OVER] *(position)*, (*or* BETWEEN *(two prominent landmarks)*);
... published holding procedure over a facility or fix	b) ~~HOLD AT~~ CLEARED TO *(significant point, name of facility or fix)* [MAINTAIN (*or* CLIMB *or* DESCEND TO) *(level)*] HOLD [*(direction)*] AS PUBLISHED EXPECT APPROACH (*or* FURTHER CLEARANCE) AT *(time)*; *c) REQUEST HOLDING INSTRUCTIONS;
... ~~when pilot requires an oral description of holding procedure based on a facility (VOR or NDB)~~ when a detailed holding clearance is required	d) ~~HOLD AT *(name of facility) (call sign and frequency, if necessary)(level)* INBOUND TRACK *(three digits)* DEGREES RIGHT (*or* LEFT) HAND PATTERN OUTBOUND TIME *(number)* MINUTES *(additional instructions, if necessary);*~~ CLEARED TO *(significant point, name of facility or fix)* [MAINTAIN (*or* CLIMB *or* DESCEND TO) *(level)*] HOLD [*(direction)*] [*(specified)* RADIAL, COURSE, INBOUND TRACK *(three digits)* DEGREES] [RIGHT (*or* LEFT) HAND PATTERN] [OUTBOUND TIME *(number)* MINUTES] EXPECT APPROACH CLEARANCE (*or* FURTHER CLEARANCE) AT *(time) (additional instructions, if necessary)*;

Circumstances	*Phraseologies*
	e) ~~HOLD ON THE *(three digits)* RADIAL OF THE *(name)* VOR *(call sign and frequency, if necessary)* AT *(distance)* DME (*or* BETWEEN *(distance)* AND *(distance)* DME) *(level)* INBOUND TRACK *(three digits)* RIGHT (*or* LEFT) HAND PATTERN *(additional instructions, if necessary).*~~ 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 APPROACH CLEARANCE (*or* FURTHER CLEARANCE) AT *(time) (additional instructions, if necessary)*; 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 CLEARANCE) AT *(time) (additional instructions, if necessary)*; * Denotes pilot transmission.
3.3.4 Expected approach time	a) NO DELAY EXPECTED; b) EXPECTED APPROACH TIME *(time)*; c) REVISED EXPECTED APPROACH TIME *(time)*; d) DELAY NOT DETERMINED *(reasons)*.

3.4 *Phraseologies for use on and in the vicinity of the aerodrome*

	Circumstances	*Phraseologies*
3.4.1	Identification of aircraft	SHOW LANDING ~~LIGHT.~~ LIGHTS.
3.4.2	Acknowledgement by visual means	a) ACKNOWLEDGE BY MOVING AILERONS (*or* RUDDER); b) ACKNOWLEDGE BY ROCKING WINGS; c) ACKNOWLEDGE BY FLASHING LANDING LIGHTS.
3.4.3	Starting procedures	
	... to request permission to start engines	*a) [*aircraft location*] REQUEST START UP; *b) [*aircraft location*] REQUEST START UP, INFORMATION *(ATIS identification)*;
	... ATC replies	c) START UP APPROVED; d) START UP AT *(time)*; e) EXPECT START UP AT *(time)*; f) START UP AT OWN DISCRETION; g) EXPECT DEPARTURE *(time)* START UP AT OWN DISCRETION. * Denotes pilot transmission.
~~3.4.4~~	~~Starting procedures (ground crew/cockpit)~~	~~a) [ARE YOU] READY TO START UP?;~~ ~~*b) STARTING NUMBER *(engine number(s))*.~~ ~~*Note 1.— The ground crew should follow this exchange by either a reply on the intercom or a distinct visual signal to indicate that all is clear and that the start-up as indicated may proceed.*~~

Circumstances	*Phraseologies*
	~~*Note 2.— Unambiguous identification of the parties concerned is essential in any communications between ground crew and pilots.*~~ ~~* Denotes pilot transmission.~~
~~3.4.5~~ 3.4.4 Push-back procedures *Note.— When local procedures so prescribe, authorization for pushback should be obtained from the control tower.*	
... aircraft/ATC	*a) [*aircraft location*] REQUEST PUSHBACK; b) PUSHBACK APPROVED; c) STAND BY; d) PUSHBACK AT OWN DISCRETION; e) EXPECT *(number)* MINUTES DELAY DUE *(reason)*~~;~~. ~~f) ARE YOU READY FOR PUSHBACK;~~ ~~*g) READY FOR PUSHBACK;~~ ~~h) CONFIRM BRAKES RELEASED;~~ ~~*i) BRAKES RELEASED;~~ ~~j) COMMENCING PUSHBACK;~~ ~~k) PUSHBACK COMPLETED;~~ ~~*l) STOP PUSHBACK;~~ ~~m) CONFIRM BRAKES SET;~~ ~~*n) BRAKES SET;~~
~~... (ground crew/cockpit)~~	

Circumstances		*Phraseologies*
		~~*o) DISCONNECT;~~ ~~p) DISCONNECTING STAND BY FOR VISUAL AT YOUR LEFT (*or* RIGHT).~~ ~~*Note.— This exchange is followed by a visual signal to the pilot to indicate that disconnect is completed and all is clear for taxiing.*~~ * Denotes pilot transmission.
~~3.4.6~~ 3.4.5	Towing procedures	†a) REQUEST TOW [*company name*] *(aircraft type)* FROM *(location)* TO *(location)*; b) TOW APPROVED VIA *(specific routing to be followed)*; c) HOLD POSITION; d) STAND BY. † Denotes transmission from aircraft/tow vehicle combination.
	... ATC response	
~~3.4.7~~ 3.4.6	To request time check and/or aerodrome data for departure	*a) REQUEST TIME CHECK; b) TIME ~~*(minutes)*~~ *(time)*; *c) REQUEST DEPARTURE INFORMATION; d) RUNWAY *(number)*, WIND *(direction and speed)*, QNH (detail) TEMPERATURE *(detail)*, [VISIBILITY FOR TAKE-OFF *(detail)* (*or* RVR *(detail)*)] [TIME *(time)*]. * Denotes pilot transmission.
	... when no ATIS broadcast is available	

Circumstances	*Phraseologies*
~~3.4.8~~ 3.4.7 Taxi procedures	
... for departure	*a) [*aircraft type*] [*wake turbulence category if "heavy"*] [*aircraft location*] REQUEST TAXI [*intentions*];
	*b) [*aircraft type*] [*wake turbulence category if "heavy"*] [*aircraft location*] *(flight rules)* TO *(aerodrome of destination)* REQUEST TAXI [*intentions*];
	c) TAXI TO HOLDING ~~POINT~~ POSITION [*number*] [RUNWAY *(number)*] [TIME ~~*(minutes)*~~ *(time)*];
... where detailed taxi instructions are required	*d) [*aircraft type*] [*wake turbulence category if "heavy"*] REQUEST DETAILED TAXI INSTRUCTIONS;
	e) TAXI ~~VIA *(specific routing to be followed)*~~ TO HOLDING ~~POINT~~ POSITION [*number*] [RUNWAY *(number)*] VIA *(specific route to be followed)* [TIME ~~*(minutes)*~~ *(time)*];
... where aerodrome information is not available from an alternative source such as ATIS	f) TAXI TO HOLDING ~~POINT~~ POSITION [*number*] *(followed by aerodrome information as applicable)* [TIME ~~*(minutes)*~~ *(time)*];
	g) TAKE (*or* TURN) FIRST (*or* SECOND) LEFT (*or* RIGHT);
	h) TAXI VIA *(identification of taxiway)*;
	i) TAXI VIA RUNWAY *(number)*;
	j) TAXI TO TERMINAL (*or other location, e.g.* GENERAL AVIATION AREA) [STAND *(number)*];
... for helicopter operations	*k) REQUEST AIR-TAXIING FROM (*or* VIA) TO *(location or routing as appropriate)*;

Circumstances	*Phraseologies*
	l) AIR-TAXI TO (*or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)*];
	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)*;
... after landing	*n) REQUEST BACKTRACK;
	o) BACKTRACK APPROVED;
	p) BACKTRACK RUNWAY *(number)*;
... general	*q) [*aircraft location*] REQUEST TAXI TO *(destination on aerodrome)*;
	r) TAXI STRAIGHT AHEAD;
	s) TAXI WITH CAUTION;
	t) GIVE WAY TO *(description and position of other aircraft)*;
	*u) GIVING WAY TO *(traffic)*;
	*v) TRAFFIC *(or type of aircraft)* IN SIGHT;
	w) TAXI INTO HOLDING BAY;
	x) FOLLOW *(description of other aircraft or vehicle)*;
	y) VACATE RUNWAY;
	*z) RUNWAY VACATED;
	aa) EXPEDITE TAXI [*reason*];

Circumstances	*Phraseologies*
	*bb) EXPEDITING; cc) [CAUTION] TAXI SLOWER [*reason*]; *dd) SLOWING DOWN. * Denotes pilot transmission.
~~3.4.9~~ 3.4.8 Holding ... to hold not closer to a runway than specified in Part V, 10.3.	‡a) HOLD *(direction)* OF *(position, runway number, etc.)*; ‡b) HOLD POSITION; ‡c) HOLD *(distance)* FROM *(position)*; ‡d) HOLD SHORT OF *(position)*; *e) HOLDING; *f) HOLDING SHORT. ‡ Requires specific acknowledgement from the pilot. * Denotes pilot transmission. The procedure words ROGER and WILCO are insufficient acknowledgement of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case the acknowledgement shall be by the phraseology HOLDING or HOLDING SHORT, as appropriate.
~~3.4.10~~ 3.4.9 To cross a runway *Note 1.— Unless otherwise specified by ATC, a taxi instruction which contains a taxi limit beyond a runway includes permission to cross that runway.*	*a) REQUEST CROSS RUNWAY *(number)*; *Note.— If the control tower is unable to see the crossing aircraft (e.g. night, low visibility, etc.), the instruction should always be accompanied by a request to report when the aircraft has vacated and is clear of the runway.* b) CROSS RUNWAY *(number)* [REPORT VACATED];

Circumstances	*Phraseologies*
	c) EXPEDITE CROSSING RUNWAY *(number)* TRAFFIC *(aircraft type) (distance)* KILOMETRES (*or* MILES) FINAL;
Note 2.— The pilot ~~shall~~ will, when requested, report "RUNWAY VACATED"when the aircraft is well clear of the runway.	*d) RUNWAY VACATED.
	* Denotes pilot transmission.
~~3.4.11~~ 3.4.10 Preparation for take-off	a) UNABLE TO ISSUE *(designator)* DEPARTURE *(reasons)*;
	b) REPORT WHEN READY [FOR DEPARTURE];
	c) ARE YOU READY [FOR DEPARTURE]?;
	d) ARE YOU READY FOR IMMEDIATE DEPARTURE?;
	*e) READY;
... if unable to issue take-off clearance	f) WAIT [*reason*];
... clearance to enter runway and await take-off clearance	g) LINE UP; *Note.— May be followed by phraseology f).*
	†h) LINE UP RUNWAY *(number)*;
	i) LINE UP. BE READY FOR IMMEDIATE DEPARTURE;
... conditional clearances	‡j) *(condition)* LINE UP;
... acknowledgement of a conditional clearance	*k) *(condition)* LINING UP;

Circumstances	*Phraseologies*
... confirmation or otherwise of the readback of conditional clearance	l) [THAT IS] CORRECT (*or* I SAY AGAIN ... *(as appropriate)*).
	* Denotes pilot transmission. † When there is the possibility of confusion during multiple runway operations. ‡ Provisions concerning the use of conditional clearances are contained in 2.4.
~~3.4.12~~ Take-off clearance 3.4.11	a) CLEARED FOR TAKE-OFF [REPORT AIRBORNE];
... ~~when there is a possibility of confusion~~ when more than one runway in use	b) CLEARED FOR TAKE-OFF RUNWAY *(number)*;
... when take-off clearance has not been complied with	c) TAKE OFF IMMEDIATELY OR VACATE RUNWAY [*(instructions)*];
	d) TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY;
... to cancel a take-off clearance	e) HOLD POSITION, CANCEL I SAY AGAIN CANCEL TAKE-OFF *(reasons)*;
	*f) HOLDING;
... to stop a take-off ~~in emergency conditions~~ after an aircraft has commenced take-off roll	g) STOP IMMEDIATELY [*(repeat aircraft call sign)* STOP IMMEDIATELY];
	*h) STOPPING;
... for helicopter operations ~~from other than the manoeuvring area~~	i) CLEARED FOR TAKE-OFF [FROM *(location)*]*(present position, taxiway, final approach and take-off area, runway and number)*;
	*j) REQUEST DEPARTURE INSTRUCTIONS;

Circumstances	*Phraseologies*
	k) AFTER DEPARTURE TURN RIGHT (*or* LEFT, *or* CLIMB) *(instructions as appropriate)*. * Denotes pilot transmission. HOLDING and STOPPING are the procedural responses to e) and g) respectively.
~~3.4.13~~ Turn or climb instructions ~~A~~after 3.4.12 take-off	*a) REQUEST RIGHT (*or* LEFT) TURN ~~[WHEN AIRBORNE]~~; b) RIGHT (*or* LEFT) TURN APPROVED; c) WILL ADVISE LATER FOR RIGHT (*or* LEFT) TURN;
... to request or state airborne time	d) REPORT AIRBORNE;
	~~d)~~e) AIRBORNE *(time)*;
	~~e)~~f) AFTER PASSING *(level) (instructions)*;
... heading to be followed	~~f)~~g) CONTINUE ON *(magnetic direction of runway) (instructions)*;
... when a specific track is to be followed	~~g)~~h) TRACK *(magnetic direction of runway) (instructions)*;
	~~h)~~i) CLIMB STRAIGHT AHEAD *(instructions)*. * Denotes pilot transmission.
~~3.4.14~~ Entering an aerodrome traffic circuit 3.4.13	*a) [*aircraft type*] *(position) (level)* FOR LANDING; b) JOIN *(position in circuit) (runway number)* [SURFACE] WIND *(direction and speed)* [TEMPERATURE [MINUS] *(number)* ~~*(degrees Celsius)*~~] QNH (*or* QFE) *(detail)* [HECTOPASCALS] [TRAFFIC *(detail)*];

Circumstances	*Phraseologies*
	c) MAKE STRAIGHT-IN APPROACH, RUNWAY *(number)* [SURFACE] WIND *(direction and speed)* [TEMPERATURE [MINUS] *(number)*] ~~*(degrees Celsius)*~~] QNH (*or* QFE) *(detail)* [HECTOPASCALS] [TRAFFIC *(detail)*];
... when right hand traffic circuit in use	d) JOIN RIGHT HAND *(position in circuit) (runway number)* [SURFACE] WIND *(direction and speed)* [TEMPERATURE [MINUS] *(number)*] ~~*(degrees Celsius)*~~] QNH (*or* QFE) *(detail)* [HECTOPASCALS] [TRAFFIC *(detail)*];
... when ATIS information is available	*e) *(aircraft type) (position) (level)* INFORMATION *(ATIS identification)* FOR LANDING; f) JOIN *(position in circuit)* [RUNWAY *(number)*] QNH (*or* QFE) *(detail)* [HECTOPASCALS] [TRAFFIC *(detail)*]. * Denotes pilot transmission.
~~3.4.15~~ 3.4.14 In the circuit	*a) (*position in circuit, e.g.* DOWNWIND/FINAL); b) NUMBER ... FOLLOW *(aircraft type and position)* [*additional instructions if required*]. * Denotes pilot transmission.
~~3.4.16~~ 3.4.15 Approach instructions *Note.— The report "LONG FINAL" is made when aircraft turn on to final approach at a distance greater than 7km (4 NM) from touchdown or when an aircraft on a straight-in approach is 15km (8 NM) from touchdown. In both cases a report "FINAL" is required at 7 km (4 NM) from touchdown.*	a) MAKE SHORT APPROACH; b) MAKE LONG APPROACH (*or* EXTEND DOWNWIND); c) REPORT BASE (*or* FINAL, *or* LONG FINAL); d) CONTINUE APPROACH [POSSIBLE GO AROUND].

Circumstances	*Phraseologies*
~~3.4.17~~ Landing 3.4.16	a) CLEARED TO LAND;
... multiple runway operations	b) CLEARED TO LAND RUNWAY *(number)*;
... special operations	c) CLEARED TOUCH AND GO;
	d) MAKE FULL STOP;
... 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)*];
... 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)*];
... for helicopter operations	*i) REQUEST STRAIGHT-IN (*or* CIRCLING APPROACH, LEFT (*or* RIGHT) TURN TO *(location)*);
	j) MAKE STRAIGHT-IN (*or* CIRCLING APPROACH, 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 runway centre line, other)*]. [REMAIN *(direction or distance)* FROM *(runway, runway centre line, other helicopter or aircraft)*]. [CAUTION *(power lines, unlighted obstructions, wake turbulence, etc.)*]. CLEARED TO LAND.
	* Denotes pilot transmission.
~~3.4.18~~ Delaying aircraft 3.4.17	a) CIRCLE THE AERODROME;
	b) ORBIT (RIGHT, *or* LEFT) [FROM PRESENT POSITION];

Circumstances	*Phraseologies*
	c) MAKE ANOTHER CIRCUIT.
~~3.4.19~~ Missed approach 3.4.18	a) GO AROUND; *b) GOING AROUND. * Denotes pilot transmission.
~~3.4.20~~ Information to aircraft 3.4.19	
... when pilot requested visual inspection of landing gear	a) LANDING GEAR APPEARS DOWN; b) RIGHT (*or* LEFT, *or* NOSE) WHEEL APPEARS UP (*or* DOWN); c) WHEELS APPEAR UP; d) RIGHT (*or* LEFT, *or* NOSE) WHEEL DOES NOT APPEAR UP (*or* DOWN);
... wake turbulence	e) CAUTION WAKE TURBULENCE [FROM ARRIVING (*or* DEPARTING) *(type of aircraft)*] [*additional information as required*];
... jet blast on apron or taxiway	f) CAUTION JET BLAST;
... propeller-driven aircraft slipstream	g) CAUTION SLIPSTREAM.
~~3.4.21~~ ~~After landing~~ Runway vacating and communications after landing 3.4.20	a) CONTACT GROUND *(frequency)*; b) WHEN VACATED CONTACT GROUND *(frequency)*; c) EXPEDITE VACATING; d) YOUR STAND (*or* GATE) *(designation)*;

Circumstances	*Phraseologies*
	e) TAKE (*or* TURN) FIRST (*or* SECOND, *or* CONVENIENT) LEFT (*or* RIGHT) AND CONTACT GROUND *(frequency)*;
... for helicopter operations	f) AIR-TAXI TO HELICOPTER STAND *(or)* HELICOPTER PARKING POSITION *(area)*;
	g) AIR-TAXI TO (*or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)*];
	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)*.

3.5 *Co-ordination between ATS units*

Circumstances	*Phraseologies*
3.5.1 Estimates and revisions	a) ESTIMATE [*direction of flight*] *(aircraft call sign)* [SQUAWKING*(SSR Code)*] *(type)* ~~ESTIMATING~~ ESTIMATED *(significant point) (time) (level)* (*or* DESCENDING FROM *(level)* TO *(level)*) [SPEED *(filed TAS)*] *(route)* [REMARKS];
... ~~transmitting station~~ sending unit	b) ESTIMATE *(significant point)* ON *(aircraft call sign)*;
...receiving unit reply (if flight plan details are not available)	c) NO DETAILS;
... receiving ~~station~~ unit reply (if flight plan details are available)	*(aircraft type) (destination)*;
... ~~transmitting station~~ sending unit reply	[SQUAWKING *(SSR Code)*] ~~[ESTIMATING]~~ [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 transmitting station shall pass full estimate as in a).

Circumstances		*Phraseologies*
		c) ESTIMATE UNMANNED FREE BALLOON(S) *(identification and classification)* ESTIMATED OVER *(place)* AT *(time)* REPORTED FLIGHT LEVEL(S) *(figure or figures)* [*or* FLIGHT LEVEL UNKNOWN] MOVING *(direction)* ESTIMATED GROUND SPEED *(figure) (other pertinent information, if any)*; d) REVISION *(aircraft call sign) (details as necessary)*.
3.5.2	Transfer of control	a) REQUEST RELEASE OF *(aircraft call sign)*; b) *(aircraft call sign)* RELEASED [AT *(time)*] [*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 RELEASE *(aircraft call sign)* [TRAFFIC IS *(details)*].
3.5.3	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.)* [OF *(aircraft call sign)*] [DUE *(reason)*] *(alternative clearance proposed)*.
3.5.4	Approval request	a) APPROVAL REQUEST *(aircraft call sign)* ESTIMATED DEPARTURE FROM *(significant point)* AT *(time)*; b) *(aircraft call sign)* REQUEST APPROVED [*(restriction if any)*];

Circumstances	*Phraseologies*
	c) *(aircraft call sign)* UNABLE APPROVE *(alternative instructions)*.
3.5.5 Inbound release	a) INBOUND RELEASE *(aircraft call sign)* [SQUAWKING *(SSR Code)*] *(type)* FROM *(departure point)* RELEASED AT *(significant point, or time, or level)* CLEARED TO AND ESTIMATING *(clearance limit) (time)* AT *(level)* [EXPECTED APPROACH TIME *or* NO DELAY EXPECTED] CONTACT AT *(time)*.
3.5.6 Radar handover	a) RADAR HANDOVER *(aircraft call sign)* [SQUAWKING *(SSR Code)*] POSITION *(aircraft position ~~or significant point~~) (level)*.
3.5.7 Expedition of clearance	a) EXPEDITE CLEARANCE *(aircraft call sign)* EXPECTED DEPARTURE FROM *(place)* AT *(time)*; b) EXPEDITE CLEARANCE *(aircraft call sign)* [ESTIMATED] OVER *(place)* AT *(time)* REQUESTS *(level or route, etc.)*.

4. Radar phraseologies

Note.— The following comprise phraseologies specifically applicable when radar 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 radar is used.

4.1 *General radar phraseologies*

Circumstances	*Phraseologies*
4.1.1 Identification of aircraft	a) REPORT HEADING [AND FLIGHT LEVEL (*or* ALTITUDE)]; b) FOR IDENTIFICATION TURN LEFT (*or* RIGHT) HEADING *(three digits)*; c) TRANSMIT FOR IDENTIFICATION AND REPORT HEADING; d) RADAR CONTACT [*position*];

Circumstances		*Phraseologies*
		e) IDENTIFIED [*position*]; f) NOT IDENTIFIED [*reason*], [RESUME (*or* CONTINUE) OWN NAVIGATION].
4.1.2	Position information	POSITION *(distance) (direction)* OF *(significant point)* (*or* OVER *or* ABEAM *(significant point)*).
4.1.3	Vectoring instructions	a) LEAVE *(significant point)* HEADING *(three digits)* ~~[INBOUND] AT *(time)*~~; b) CONTINUE HEADING *(three digits)*; c) CONTINUE PRESENT HEADING; d) FLY HEADING *(three digits)*; e) ~~TURN LEFT (*or* RIGHT) *(number)* DEGREES (*or* HEADING *(three digits))* [*reason*];~~ TURN LEFT (*or* RIGHT) HEADING *(three digits)* [*reason*]; f) TURN LEFT (*or* RIGHT) *(number of degrees)* DEGREES [*reason*]; ~~f)~~g) STOP TURN HEADING *(three digits)*; ~~g)~~h) FLY HEADING *(three digits)*, WHEN ABLE PROCEED DIRECT *(name)* *(~~navaid or way~~-significant point)*; ~~h)~~i) HEADING IS GOOD.
4.1.4	Termination of radar vectoring	a) RESUME OWN NAVIGATION *(position of aircraft) (specific instructions);* b) RESUME OWN NAVIGATION [DIRECT] *(significant point)* [MAGNETIC TRACK *(three digits)* DISTANCE *(number)* KILOMETRES (*or* MILES)].

Circumstances	*Phraseologies*
4.1.5 Manoeuvres	a) MAKE A THREE SIXTY TURN LEFT (*or* RIGHT) [*reason*];
	b) ORBIT LEFT (*or* RIGHT) [*reason*];
... (in case of unreliable directional instruments on board aircraft)	c) MAKE ALL TURNS RATE ONE (*or* RATE HALF, *or (number)* DEGREES PER SECOND) ~~EXECUTE INSTRUCTIONS IMMEDIATELY UPON RECEIPT~~ START AND STOP ALL TURNS ON THE COMMAND "NOW";
Circumstances	*Phraseologies*
Note.— When it is necessary to specify a reason for radar vectoring or for the above manoeuvres, the following phraseologies should be used: *a)DUE TRAFFIC;* *b)FOR SPACING;* *c)FOR DELAY;* *d)FOR DOWNWIND (or BASE, or FINAL).*	d) TURN LEFT (*or* RIGHT) NOW; e) STOP TURN NOW.
4.1.6 Speed control	*a) SPEED *(number)* KILOMETRES PER HOUR (*or* KNOTS); b) REPORT SPEED; c) MAINTAIN *(number)* KILOMETRES PER HOUR (*or* KNOTS) [OR GREATER (*or* [OR LESS) [UNTIL *(~~location~~ significant point)*]; d) DO NOT EXCEED *(number)* KILOMETRES PER HOUR (*or* KNOTS); ~~d)~~e) MAINTAIN PRESENT SPEED; ~~e)~~f) INCREASE (*or* REDUCE) SPEED TO *(number)* KILOMETRES PER HOUR (*or* KNOTS) [OR GREATER (*or* OR LESS)]; ~~f)~~g) INCREASE (*or* REDUCE) SPEED BY *(number)* KILOMETRES PER HOUR (*or* KNOTS); ~~g)~~h) RESUME NORMAL SPEED;

	~~h)~~i) REDUCE TO MINIMUM APPROACH SPEED; ~~i)~~j) REDUCE TO MINIMUM CLEAN SPEED; ~~j)~~k) NO [ATC] SPEED RESTRICTIONS. * Denotes pilot transmission.
4.1.7 Position reporting ... to omit position reports when under radar control	a) OMIT POSITION REPORTS [UNTIL *(specify)*];
Circumstances	*Phraseologies*
	b) NEXT REPORT AT *(significant point)*; c) REPORTS REQUIRED ONLY AT ~~*(location(s))*~~ *(significant points(s))*; d) RESUME POSITION REPORTING.
4.1.8 Traffic information and avoiding action	a) TRAFFIC *(number)* O'CLOCK *(distance) (direction of flight)* [*any other pertinent information*]: 1) UNKNOWN; 2) SLOW MOVING; 3) FAST MOVING; 4) CLOSING; 5) OPPOSITE (*or* SAME) DIRECTION; 6) OVERTAKING; 7) CROSSING LEFT TO RIGHT (*or* RIGHT TO LEFT); ... (if known) 8) TYPE;

	Circumstances	*Phraseologies*
		9) LEVEL;
		10) CLIMBING (*or* DESCENDING);
	... to request avoiding action	*b) REQUEST VECTORS;
		c) DO YOU WANT VECTORS?;
	... when passing unknown traffic	d) CLEAR OF TRAFFIC [*appropriate instructions*];
	... for avoiding action	e) ~~TURN LEFT (*or* RIGHT) IMMEDIATELY [*(number)* DEGREES] *or* [HEADING *(three digits)*] TO AVOID [UNIDENTIFIED] TRAFFIC *(bearing by clock-reference and distance).*~~ TURN LEFT (*or* RIGHT) IMMEDIATELY HEADING *(three digits)* TO AVOID [UNIDENTIFIED] TRAFFIC *(bearing by clock-reference and distance)*;
		f) TURN LEFT (*or* RIGHT) *(number of degrees)* DEGREES TO AVOID [UNIDENTIFIED] TRAFFIC *(bearing by clock-reference and distance).*
		* Denotes pilot transmission.
4.1.9	Communications and loss of communications	a) [IF] RADIO CONTACT LOST *(instructions)*;
		b) IF NO TRANSMISSIONS RECEIVED FOR *(number)* MINUTES (*or* SECONDS) *(instructions)*;
		c) REPLY NOT RECEIVED *(instructions)*;
	... if loss of communications suspected	d) IF YOU READ *[manoeuvre instructions or SQUAWK (code or IDENT)]*;
		e) *(manoeuvre or SQUAWK)* OBSERVED. POSITION *(position of aircraft).* WILL CONTINUE ~~TO PASS INSTRUCTIONS~~ RADAR CONTROL .
4.1.10	Termination of radar service	a) RADAR CONTROL TERMINATED [DUE *(reason)*];

Circumstances	*Phraseologies*
	b) RADAR SERVICE TERMINATED *(instructions);* c) WILL SHORTLY LOSE IDENTIFICATION *(appropriate instructions or information)*; d) IDENTIFICATION LOST [*reason*] *(instructions).*
4.1.11 Radar equipment degradation	a) SECONDARY RADAR OUT OF SERVICE *(appropriate information as necessary)*; b) PRIMARY RADAR OUT OF SERVICE *(appropriate information as necessary).*

4.2 *Radar in approach control service*

Circumstances	*Phraseologies*
4.2.1 ~~Vectoring for approach~~ Essential information	a) VECTORING FOR *(type of pilot-interpreted aid)* APPROACH RUNWAY *(number)*; b) VECTORING FOR VISUAL APPROACH RUNWAY *(number)* REPORT FIELD (*or* RUNWAY) IN SIGHT; c) VECTORING FOR *(positioning in the circuit)*; d) VECTORING FOR SURVEILLANCE RADAR APPROACH RUNWAY *(number)*; e) VECTORING FOR PRECISION APPROACH RUNWAY (*number*); f) *(type)* APPROACH NOT AVAILABLE DUE *(reason) (alternative instructions).*
4.2.2 Vectoring for ILS and other pilot-interpreted aids	a) POSITION *(number)* KILOMETRES (*or* MILES) from *(fix)*. TURN LEFT (*or* RIGHT) HEADING *(three digits)*; b) YOU WILL INTERCEPT *(radio aid or track) (distance)* FROM (*significant point or* TOUCHDOWN);

Circumstances		*Phraseologies*
... when a pilot wishes to be positioned a specific distance from touchdown		*c) REQUEST *(distance)* FINAL;
		d) CLEARED FOR *(type)* APPROACH RUNWAY *(number)*;
... instructions and information		e) REPORT ESTABLISHED [ON MLS APPROACH TRACK] *or* [ON ILS (LOCALIZER) *or* (GLIDE PATH)];
		f) CLOSING FROM LEFT (*or* RIGHT) [REPORT ESTABLISHED];
		g) TURN LEFT (*or* RIGHT) HEADING *(three digits)* [TO INTERCEPT] *or* [REPORT ESTABLISHED];
		h) EXPECT VECTOR ACROSS *(localizer course or radio aid) (reason)*;
		i) THIS TURN WILL TAKE YOU THROUGH *(localizer course or radio aid)* [*reason*];
		j) TAKING YOU THROUGH *(localizer course or radio aid)* [*reason*];
		k) MAINTAIN *(altitude)* UNTIL GLIDE PATH INTERCEPTION;
		l) REPORT ESTABLISHED ON GLIDE PATH;
		m) INTERCEPT *(localizer course or radio aid)* [REPORT ESTABLISHED].
		* Denotes pilot transmission.
4.2.3	Manoeuvre during independent and dependent parallel approaches	a) CLEARED FOR ILS (*or* MLS) APPROACH RUNWAY *(number)*LEFT (*or* RIGHT);

Circumstances	*Phraseologies*
	b) YOU HAVE CROSSED THE LOCALIZER (*or* MLS FINAL APPROACH TRACK). TURN LEFT (*or* RIGHT) IMMEDIATELY AND RETURN TO THE LOCALIZER (*or* MLS FINAL APPROACH TRACK); c) ILS (*or* MLS) RUNWAY *(number)* LEFT (*or* RIGHT) LOCALIZER (*or* MLS) FREQUENCY IS *(frequency)*;
... for avoidance action when an aircraft is observed penetrating the NTZ	d) COLLISION ALERT TURN LEFT (*or* RIGHT) *(number)* DEGREES (*or* HEADING) *(three digits)* IMMEDIATELY TO AVOID TRAFFIC [DEVIATING FROM ADJACENT APPROACH], CLIMB TO *(altitude)*.
4.2.4 Surveillance radar approach	
4.2.4.1 Provision of service	a) THIS WILL BE A SURVEILLANCE RADAR APPROACH RUNWAY *(number)* TERMINATING AT *(distance)* FROM TOUCHDOWN, OBSTACLE CLEARANCE ALTITUDE (*or* HEIGHT) *(number)* METRES (*or* FEET) CHECK YOUR MINIMA [IN CASE OF GO AROUND *(instructions)*]; b) APPROACH INSTRUCTIONS WILL BE TERMINATED AT *(distance)* FROM TOUCHDOWN.
4.2.4.2 Elevation	a) COMMENCE DESCENT NOW [TO MAINTAIN A *(number)* DEGREE GLIDE PATH]; b) *(distance)* FROM TOUCHDOWN ALTITUDE (*or* HEIGHT) SHOULD BE *(numbers and units)*.
4.2.4.3 Position	*(distance)* FROM TOUCHDOWN.
4.2.4.4 Checks	a) CHECK GEAR DOWN; b) OVER THRESHOLD.

Circumstances	*Phraseologies*
4.2.4.5 Completion of approach	a) REPORT VISUAL; b) REPORT RUNWAY [LIGHTS] IN SIGHT; c) APPROACH COMPLETED [CONTACT *(unit)*].
4.2.5 PAR approach	
4.2.5.1 Provision of service	a) THIS WILL BE A PRECISION RADAR APPROACH RUNWAY*(number)*; b) PRECISION APPROACH NOT AVAILABLE DUE *(reason) (alternative instructions)*; c) IN CASE OF GO AROUND *(instructions)*.
4.2.5.2 Communications	a) DO NOT ACKNOWLEDGE FURTHER TRANSMISSIONS; b) REPLY NOT RECEIVED. WILL CONTINUE INSTRUCTIONS.
4.2.5.3 Azimuth	a) CLOSING [SLOWLY (*or* QUICKLY)] [FROM THE LEFT (*or* FROM THE RIGHT)]; b) HEADING IS GOOD; c) ON TRACK; d) SLIGHTLY (*or* WELL, *or* GOING) LEFT (*or* RIGHT) OF TRACK; e) *(number)* METRES LEFT (*or* RIGHT) OF TRACK.
4.2.5.4 Elevation	a) APPROACHING GLIDE PATH; b) COMMENCE DESCENT NOW [AT *(number)* METRES PER SECOND OR *(number)* FEET PER MINUTE (*or* ESTABLISH A *(number)* DEGREE GLIDE PATH)];

Circumstances	*Phraseologies*
	c) RATE OF DESCENT IS GOOD; d) ON GLIDE PATH; e) SLIGHTLY (*or* WELL, *or* GOING) ABOVE (*or* BELOW) GLIDE PATH; f) [STILL] *(number)* METRES (*or* FEET) TOO HIGH (*or* TOO LOW); g) ADJUST RATE OF DESCENT; h) COMING BACK [SLOWLY (*or* QUICKLY)] TO THE GLIDE PATH; i) RESUME NORMAL RATE OF DESCENT; j) ELEVATION ELEMENT UNSERVICEABLE *(to be followed by appropriate instructions)*; k) *(distance)* FROM TOUCHDOWN. ALTITUDE (*or* HEIGHT) SHOULD BE *(numbers and units)*.
4.2.5.5 Position	a) *(distance)* FROM TOUCHDOWN; b) OVER APPROACH LIGHTS; c) OVER THRESHOLD.
4.2.5.6 Checks	a) CHECK GEAR DOWN AND LOCKED; b) CHECK DECISION ALTITUDE (*or* HEIGHT).
4.2.5.7 Completion of approach	a) REPORT VISUAL; b) REPORT RUNWAY [LIGHTS] IN SIGHT; c) APPROACH COMPLETED [CONTACT *(unit)*].

Circumstances	*Phraseologies*
4.2.5.8 Missed approach	a) CONTINUE VISUALLY OR GO AROUND [*missed approach instructions*]; b) GO AROUND IMMEDIATELY [*missed approach instructions*] *(reason)*; c) ARE YOU GOING AROUND?; d) IF GOING AROUND *(appropriate instructions)*; *e) GOING AROUND. * Denotes pilot transmission.

4.3 *Secondary surveillance radar phraseologies*

Circumstances		*Phraseologies*
4.3.1	To request the capability of the SSR equipment	a) ADVISE ~~TYPE~~ MODE [AND/OR CODE] CAPABILITY OF TRANSPONDER; *b) TRANSPONDER *(as shown in the flight plan)*; *c) NEGATIVE TRANSPONDER. * Denotes pilot transmission.
4.3.2	To instruct setting of transponder	a) FOR DEPARTURE SQUAWK *(code)*; b) SQUAWK *(code)*.
4.3.3	To request the pilot to reselect the assigned mode and code	a) ~~RECYCLE *(mode) (code)*~~ RESET TRANSPONDER SQUAWK [*(mode)*] *(code)*; *b) RECYCLING *(mode) (code)*. * Denotes pilot transmission.

Circumstances		*Phraseologies*
4.3.4	To request reselection of aircraft identification	RESET MODE S IDENTIFICATION.
4.3.5	To request the pilot to confirm the ~~Mode A~~ Code selected on the aircraft's transponder	a) CONFIRM SQUAWK *(code)*; *b) SQUAWKING *(code)*. * Denotes pilot transmission.
4.3.6	To request the operation of the IDENT feature	a) SQUAWK [*(code)*] [AND] IDENT; b) SQUAWK LOW; c) SQUAWK NORMAL.
4.3.7	To request temporary suspension of transponder operation	SQUAWK STANDBY.
4.3.8	To request emergency code	SQUAWK MAYDAY [CODE SEVEN-SEVEN-ZERO-ZERO].
4.3.9	To request termination of transponder operation	STOP SQUAWK.
4.3.10	To request transmission of pressure altitude	SQUAWK CHARLIE.
4.3.11	To request pressure setting check and confirmation of level	CHECK ALTIMETER SETTING AND CONFIRM ~~LEVEL~~ *(level)*.
4.3.12	To request termination of pressure altitude transmission because of faulty operation	STOP SQUAWK CHARLIE WRONG INDICATION.
4.3.13	To request ~~altitude~~ level check	~~VERIFY~~ CONFIRM *(level)*.

Note.— Other phraseologies for use in the area control radar service are given in the section containing approach control radar

service phraseologies.

5. Automatic dependent surveillance (ADS) phraseologies

5.1 *General ADS phraseologies*

	Circumstances	*Phraseologies*
5.1.1	ADS degradation	ADS (*or* AUTOMATIC DEPENDENT SURVEILLANCE) OUT OF SERVICE (*appropriate information as necessary*).

6. Alerting phraseologies

6.1 *Alerting phraseologies*

	Circumstances	*Phraseologies*
6.1.1	Low altitude warning	(*aircraft call sign*) LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE IMMEDIATELY, QNH IS (*number*). [THE MINIMUM FLIGHT ALTITUDE IS (*altitude*)].
6.1.2	Terrain alert	(*aircraft call sign*) TERRAIN ALERT, (*suggested pilot action, if possible*).
6.1.3	Collision alert	(*aircraft call sign*) COLLISION ALERT (*appropriate information or instructions as necessary*).

7. Ground crew/flight crew phraseologies

7.1 *Ground crew/flight crew phraseologies*

	Circumstances	*Phraseologies*
7.1.1	Starting procedures (ground crew/cockpit)	a) [ARE YOU] READY TO START UP; *b) STARTING NUMBER *(engine number(s))*. *Note 1.— The ground crew should follow this exchange by either a reply on the intercom or a distinct visual signal*

Circumstances	*Phraseologies*
	to indicate that all is clear and that the start-up as indicated may proceed. *Note 2.— Unambiguous identification of the parties concerned is essential in any communications between ground crew and pilots.* * Denotes pilot transmission.
7.1.2 Pushback procedures ... (ground crew/cockpit)	a) ARE YOU READY FOR PUSHBACK; *b) READY FOR PUSHBACK; c) CONFIRM BRAKES RELEASED; *d) BRAKES RELEASED; e) COMMENCING PUSHBACK; f) PUSHBACK COMPLETED; *g) STOP PUSHBACK; h) CONFIRM BRAKES SET; *i) BRAKES SET; *j) DISCONNECT; k) DISCONNECTING STAND BY FOR VISUAL AT YOUR LEFT (*or* RIGHT). *Note.— This exchange is followed by a visual signal to the pilot to indicate that disconnect is completed and all is clear for taxiing.* * Denotes pilot transmission.

— END —