

**NORTH ATLANTIC TREATY ORGANIZATION  
ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD**

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AIR BOARD

16 September 1999

MAS(AIR)1089-AS/3817

See Distribution List Air N° 9

**STANAG 3817 AS (EDITION 5) - STANDARD R/T PHRASEOLOGY TO BE USED  
FOR AIR TRAFFIC CONTROL**

References:

- a. MAS(AIR)294-AS/3817 dated 24 November 1998 (Edition 5) (Ratification Draft 1)
- b. MAS(AIR)552-ATS/3817 dated 19 December 1989 (Edition 4)

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in page iii is promulgated herewith.
2. The references listed above are to be destroyed in accordance with local document destruction procedures.
3. AAP-4 should be amended to reflect the latest status of the STANAG.

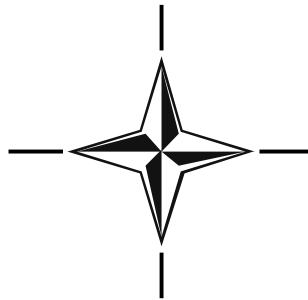
ACTION BY NATIONAL STAFFS

4. National staffs are requested to examine page iii of the STANAG and, if they have not already done so, advise the Air Board, MAS through their national delegation as appropriate of their intention regarding its ratification and implementation.

A. GRØNHEIM  
Major General, NOAF  
Chairman MAS

Enclosure:  
STANAG 3817 (Edition 5)

**NORTH ATLANTIC TREATY ORGANIZATION  
(NATO)**



**MILITARY AGENCY FOR STANDARDIZATION  
(MAS)**

**STANDARDIZATION AGREEMENT  
(STANAG)**

SUBJECT: STANDARD R/T PHRASEOLOGY TO BE USED FOR AIR TRAFFIC CONTROL

Promulgated on 16 September 1999

A. GRØNHEIM  
Major General, NOAF  
Chairman, MAS

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RECORD OF AMENDMENTS

| No. | Reference/date of amendment | Date entered | Signature |
|-----|-----------------------------|--------------|-----------|
|     |                             |              |           |

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Chairman MAS under the authority vested in him by the NATO Military Committee.
2. No departure may be made from the agreement without consultation with the tasking authority. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

DEFINITIONS

4. Ratification is "In NATO Standardization, the fulfilment by which a member nation formally accepts, with or without reservation, the content of a Standardization Agreement" (AAP-6).
5. Implementation is "In NATO Standardization, the fulfilment by a member nation of its obligations as specified in a Standardization Agreement" (AAP-6).
6. Reservation is "In NATO Standardization, the stated qualification by a member nation that describes the part of a Standardization Agreement that it will not implement or will implement only with limitations" (AAP-6).

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

7. Page iii gives the details of ratification and implementation of this agreement. If no details are shown it signifies that the nation has not yet notified the tasking authority of its intentions. Page iv (and subsequent) gives details of reservations and proprietary rights that have been stated.

FEEDBACK

8. Any comments concerning this publication should be directed to NATO/MAS - Bvd Leopold III - 1110 Brussels - BE.

Agreed English/French Texts

STANAG 3817  
(Edition 5)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT  
(STANAG)

STANDARD R/T PHRASEOLOGY TO BE USED FOR AIR TRAFFIC CONTROL

- Annexes:
- A. General Operating Procedures
  - B. Aerodrome Control
  - C. General Radar Phraseology
  - D. Approach Control

Related Documents: ICAO PANS-RAC DOC 4444-RAC/501 Edition 13 1996  
ICAO Annex 10 Vol 2 Edition 5 1995  
ICAO Doc 9432-AN/925 Edition 2 1990

AIM

1. The aim of this agreement is to standardize the R/T phraseology used by nations for Air Traffic Control purposes, where there is a military requirement to deviate from, or to supplement phraseology laid down by the International Civil Aviation Organization (ICAO).

AGREEMENT

2. Participating nations agree to use the phraseology contained at Annex A, to provide uniformity in R/T communications where ICAO procedures do not meet the military requirement.

IMPLEMENTATION OF THE AGREEMENT

3. This STANAG is implemented when a nation has issued the necessary orders/instructions to the forces concerned with putting these procedures into effect.

GENERAL OPERATING PROCEDURES

1. Introduction. Standard R/T phraseology provides the means by which pilots and ATC communicate with each other, with brevity and minimal language difficulties. It is of vital importance in assisting the safe and expeditious operation of aircraft and the misunderstanding which arises from poor or non standard phraseology has been demonstrated to be a major factor in aircraft accidents.

2. Transmission of Words and Phrases

| WORD/PHRASE   | MEANING   |
|---------------|---|
| CONTINUE WITH | Used when it is known that an aircraft has already established contact with another unit. |
| FREE CALL     | Call another unit as designated. Handover to other unit not obtained.                     |
|               |   |

3. Operation of IFF/SSR

- a. During normal peacetime procedures operations the words ALPHA/THREE may be omitted provided there is no ambiguity in the requirement. Whenever possible SSR codes are not to be issued with a transmission of other figures e.g. a frequency change.
- b. SQUAWK MAYDAY or EMERGENCY is specified depending on national procedures. R/T failure and Hijack squawks are to be specified by code e.g. SQUAWK 7600 and SQUAWK 7500 respectively.
- c. The phrase "STOP SQUAWK" is not normally to be used when controlling military traffic as this could result in Air Defence agencies being deprived of Mode 1 and Mode 2 information.

AERODROME CONTROL

1. Concise and unambiguous phraseology used at the correct time is vital to the smooth, safe and expeditious running of an aerodrome. It is not only the means by which controllers carry out their task, but it also assists pilots in maintaining an awareness of other traffic in their vicinity, particularly in poor visibility conditions. Controllers should not transmit to an aircraft during take-off, the last part of final approach or the landing roll, unless it is necessary for safety reasons. It may be distracting to the pilot at a time when the cockpit workload is often at its highest.
2. The weather and aerodrome information is to be passed in following order and format:

| <u>LONG WEATHER</u>  | <u>SHORT WEATHER</u>  |
|--|---|
| Aerodrome/Letter code<br>Time<br>Runway in use<br>Surface wind<br>Colour code (only when authorized)<br>Visibility<br>General weather observations (when applicable e.g. fog, rain)<br>Cloud levels and amounts<br>Temperature<br>Altimeter setting<br>Runway Condition Reading (RCR)/Runway Visual Range (RVR)<br>(if applicable)<br>Unserviceable aids/facilities (as appropriate) | Aerodrome/Letter code<br>Time<br>Runway in use<br>Surface wind<br>Colour code (only when authorized)<br>Altimeter setting<br>Unserviceable aids/facilities (as appropriate) |

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3. Standard R/T Communications for Taxi/Take-off (Fixed wing Aircraft)

| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL                          | REMARKS   |
|--------|---------------|--|--|---|
| a.     | At Dispersal  |  | ... Tower ... (Callsign)<br>Request taxi ... | Position of aircraft may be required by ATC. POB may be required by ATC.  |
|        |               | ... (Callsign) Taxi, Runway ...<br>(Righthand) QFE/QNH ... (mb/in Hg/hPa) (any other information)<br><br>or<br>... (Callsign) Hold | or<br>Hold ... (Callsign)                    | Circuit direction is to be left hand unless otherwise stated. Runway ... Left or Runway ... Right is to be used for parallel runway installation. |
| b.     | Take off      | ... (Callsign) - cleared for take off<br>surface wind ... knots  |  |   |

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4. Standard R/T Communications for Taxi/Take-off (Helicopter)

| SERIAL | POSITION/ITEM    | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|------------------|--|--|--|
| a.     | At Dispersal/Pad | <p>... (Callsign) Runway ... (right hand) QFE/QNH ...<br/>                     mb/in Hg/hPa<br/>                     (any other information)<br/>                     Taxi<br/>                     or<br/>                     Hover taxi<br/>                     or<br/>                     Take-off<br/>                     or<br/>                     Hold</p> | <p>Tower ... (Callsign)<br/>                     Request taxi ...<br/>                     or<br/>                     Hover taxi<br/>                     or<br/>                     Take-off runway ...<br/>                     POB ... (if not already passed)</p> <p>Helicopter repeats clearance followed by callsign</p> | Position of helicopter may be required by ATC. |



5. Standard R/T Communications Approach & Landing VFR - Fixed-Wing Aircraft

a. Overhead Pattern (See page B-7)

| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS  |
|--------|---|--|---|--|
| (1)    | Approaching and when approximately 3 to 5 minutes from aerodrome or initial point | ... (Callsign) Roger approved runway (right hand) - QFE/QNH<br>... mb/in Hg/hPa (any additional ATC information) | ... (Callsign)<br>Position ... FL/Altitude request<br>join, run and break, request instructions (if required)<br><br>Aircraft repeats clearance including pressure setting and callsign | Run and break is defined as a circuit join, above normal speed, which includes a break from some point on the deadside to make a continuous circle onto finals. Pitch out is synonymous with run and break. A run and break/pitch out can only be performed in the overhead pattern. |
| (2)    | At initial point - at least 3nm (5 km)  | ... (Callsign) - Roger (pass circuit traffic information)<br><br>... (Callsign) ...<br>(Traffic information)     | ... (Callsign)<br>Initial<br><br>... (Callsign)<br><br>... (Callsign) On the break to Land/Roll/Overshoot/Touch and go  | "Touch and go" and "Roll" are synonymous.<br>"On the break" is equivalent to the downwind call.  |

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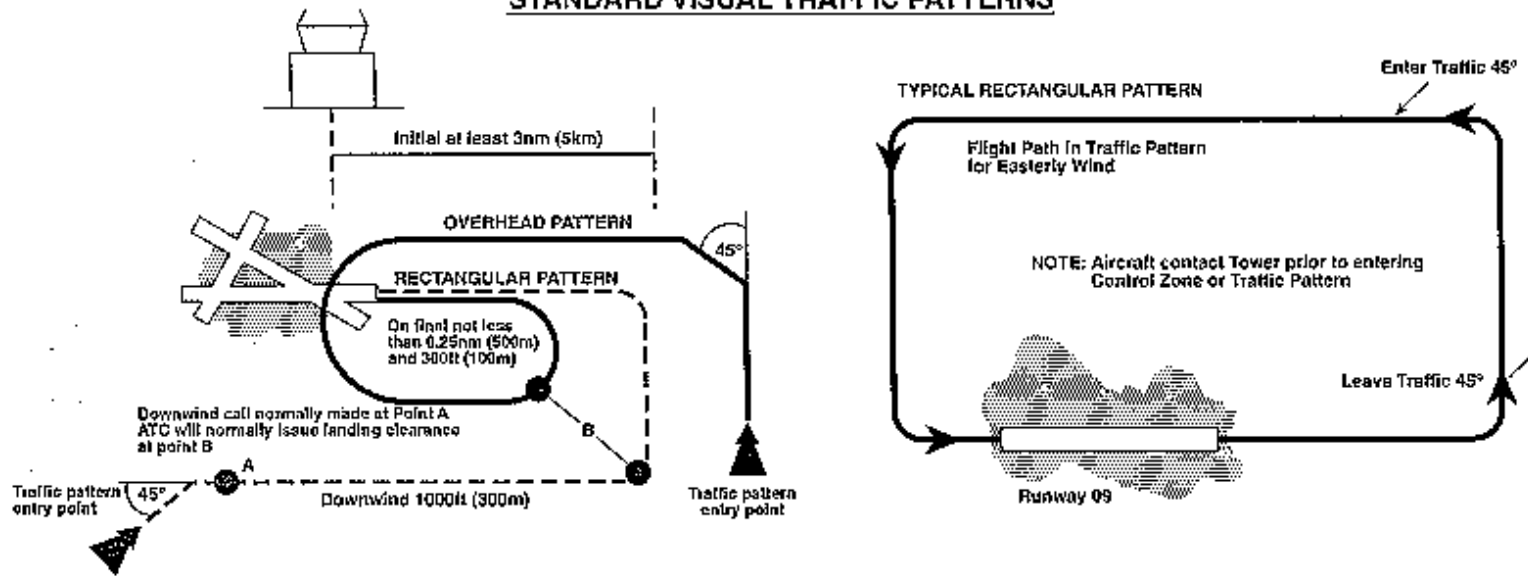
b. Rectangular Pattern (See page B-7)

| SERIAL | POSITION/ITEM  | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL   | REMARKS |
|--------|--|---|---|---------|
| (1)    | (a) Approach and when approximately 3 to 5 minutes from aerodrome or initial point | ... (Callsign) Join runway (right hand) - QFE/QNH ... mb/in Hg/hPa (and additional ATC information)   | ... (Aerodrome) ... (Callsign)<br>Position ... FL/Altitude ...<br>request joining/landing instructions<br><br>or<br>... (Aerodrome) ... (Callsign)<br>... Range/bearing or position<br>request joint for runway ... |         |
|        | (b) If pilot wishes straight in approach after first call                          | ... (Callsign)<br>Roger, approved report ...<br>(position as required by ATC).<br>or<br>... (Callsign) Negative (Plus additional information as required) | ... (Callsign) request straight in approach to Land/Roll/Overshoot/Touch and go<br>Report ... (Position)<br>... (Callsign)<br><br>... (Acknowledge message)   |         |
| (2)    | Downwind Position  | ... (Callsign) ... surface wind ...°<br>... knots<br>or<br>... (Callsign) ... ahead surface wind ...° ... knots<br>or                                     | ... (Callsign) Downwind Land/Roll/Overshoot/Touch and go<br><br>... (Callsign)  |         |

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| SERIAL | POSITION/ITEM        | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|----------------------|--|--|--|
|        |                      | ... (Callsign) ... go around<br>or<br>... (Callsign) - orbit left/right at<br>... ft/m   | Go around (Callsign)<br><br>Orbit left/right at ... ft ...<br>(Callsign)   |  |
| (3)    | At Final Position    | ... (Callsign) cleared to<br>Land/Roll/ Overshoot/for Touch<br>and go<br>or<br>... (Callsign) - continue<br>or<br>... (Callsign) - go around | ... (Callsign) Finals - gear<br>down<br><br>Cleared to Land/Roll/<br>Overshoot/for Touch and go<br>(Callsign)<br>Continue ... (Callsign)<br><br>Go around ... (Callsign) | Surface wind may be passed<br>with final clearance if<br>significant.<br><br>If pilot fails to state position<br>of landing gear ATC is to<br>remind pilot to recheck and<br>confirm "Gear Down".<br><br>Go around means<br>discontinue the approach,<br>climb back to circuit height. |
| (4)    | When Clear of Runway |  | ... (Callsign) Runway vacated  |  |

**STANDARD VISUAL TRAFFIC PATTERNS**



6. Standard Traffic Patterns - Notes

- a. The above patterns are basic standards. Deviations in direction and extent of patterns, heights, entry points, etc., are permitted when required by local conditions, terrain, flight safety, ATC circumstances, noise abatement, or when mission dictates, etc. However, when patterns are established which deviate significantly from the illustrated standards, ATC personnel will give pilots adequate instructions upon initial contact.
- b. Whenever possible air traffic patterns/circuits for helicopters and/or light aircraft should be established in the best location away from normal patterns used by jet or heavy conventional aircraft, and at heights which allow separation between helicopters and light aircraft, with light aircraft operating above helicopters to prevent encountering rotor downwash.
- c. The initial overhead approach will be flown so as to maintain visual contact with the runway in use and with departing aircraft. For standard patterns, rollout on final leg should be not less than 300 ft (or 100 m) above the surface, unless otherwise authorized.
- d. For land bases using QNH, standard pattern heights will be established at the nearest 100 ft (or 30 m) level in relation to the elevation; for example, if aerodrome elevation is 245 ft (or 75 m), the rectangular pattern would be 1,200 ft (or 400 m). For light aircraft and helicopter patterns, the standard height will be established at 700 and 500 ft (or 250 and 150 m) respectively with deviations permitted for reasons stated in Note 1 above.
- e. As a normal standard, pilots approaching for landing will make initial contact with ATC approximately 3 to 5 minutes flying time from the aerodrome and give applicable position report. In any event, except for local flights, initial call will be made prior to entering the aerodrome traffic pattern.

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7. Approach and Landing (Helicopters) (See B-10)

| SERIAL | POSITION/ITEM  | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS |
|--------|--|--|--|---------|
| a.     | (1) Approaching and when approximately 3 to 5 minutes from point of intended landing | ... (Callsign) ...<br>(Aerodrome) Radar/Approach<br>join, runway ... (right hand)<br>QFE/QNH ... (mb/in Hg/hPa)<br>(other information as required) | ... (Aerodrome) ... (Callsign)<br>Position ... FL/Altitude ...<br>request join/landing<br>instructions ...<br><br>Helicopter repeats clearance<br>and callsign |         |
|        | (2) If pilot wishes straight in approach   | ... (Callsign). Roger approved or<br>Negative (plus further<br>instructions) (Aerodrome)<br>(information is passed as<br>required above)           | ... (Callsign). Request straight<br>in approach  |         |
| b.     | At Downwind Position   | ... (Callsign)<br><br>or<br>... (Callsign) ... ahead<br><br>or<br>Other pertinent instructions   | ... (Callsign) Downwind<br>(Plus intentions)<br><br>Helicopter acknowledges as<br>required   |         |

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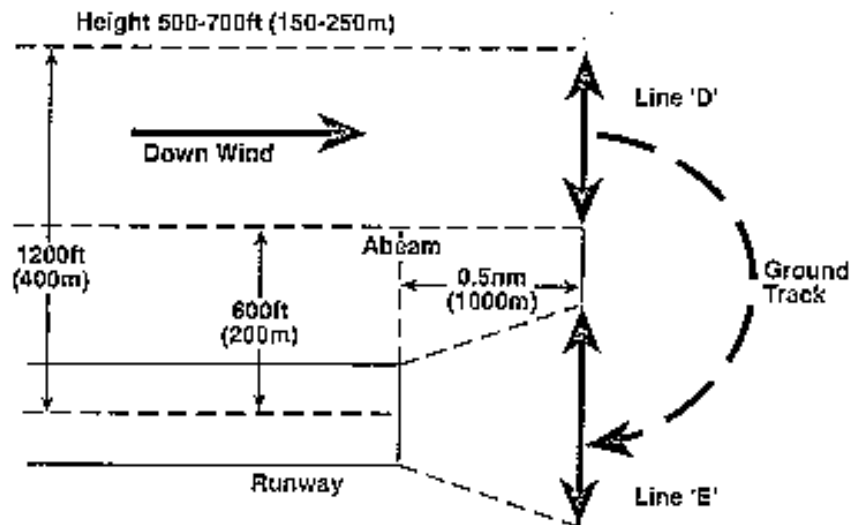
| SERIAL | POSITION/ITEM      | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS |
|--------|--------------------|--|--|---------|
| c.     | At Finals Position | ... (Callsign). Cleared to Land or other pertinent instruction | ... (Callsign). Finals gear down (if appropriate)<br><br>Helicopter repeats clearance and callsign |         |

8. Helicopter Traffic Patterns

a. Airfield Pattern

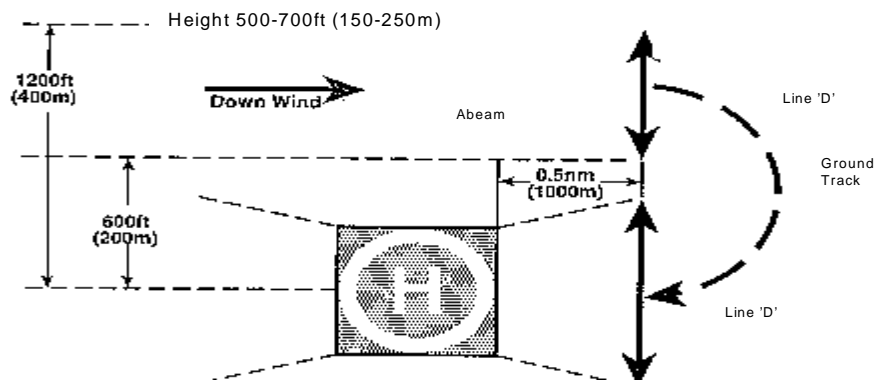
- (1) Pattern Entry. A 45° entry into the pattern's direction of flow will be made unless otherwise approved or authorized. Entry is to be made on the downwind leg unless otherwise instructed or authorized.
- (2) Downwind Leg. The downwind leg is to be flown on the opposite side of the runway centreline from jet and/or conventional patterns. To be flown at least: 500 ft (or 150 m) but not more than 700 ft (or 250 m) above the airfield elevation unless specific conditions require otherwise. Ground track is to be not nearer than 600 ft (or 200 m) nor further than 1,200 ft (or 400 m) from abeam the centreline of the applicable runway unless otherwise instructed or authorized.
- (3) Turn to Base Leg and Final. A turn and Line D not more than 0.5 nm (1,000 m) beyond abeam the approach threshold of the applicable runway, to be completed at Line E normally not lower than 200 ft (60 m) above airfield elevation unless otherwise instructed or authorized.
- (4) Final Approach. As necessary to effect initial hover, touchdown on landing within the first 300 ft (or 100 m) of the appropriate runway unless otherwise instructed or authorized.

**NATO AERODROME -  
HELICOPTER LANDING TRAFFIC PATTERN**



NOTE: The pattern for "straight-in" approach and landing is not shown.

NATO HELIPORT - LANDING TRAFFIC PATTERN



b. Helicopter Pattern

- (1) Pattern Entry. A 45° entry to the pattern direction of flow will be made unless otherwise approved or authorized. Entry is to be made on the downwind leg unless otherwise instructed or authorized.
- (2) Downwind Leg. The downwind leg is to be flown to give a right traffic pattern, 500-700 ft (150-250 m) above the heliport elevation unless specific conditions require otherwise. Ground track is to be not nearer than 600 ft (or 200 m) nor further than 1,200 ft (or 400 m) from abeam the point of intended landing.
- (3) Turn to Base Leg and Final. A turn at Line D not more than 0.5 nm (1,000 m) beyond abeam the point of intended landing to be completed at Line E normally not lower than 200 ft (60 m) above airfield elevation unless otherwise instructed or authorized.
- (4) Final Approach. As necessary to effect initial hover, touchdown or landing within the designated area unless otherwise instructed or authorized.
- (5) Circuit Direction
  - (a) When a helicopter landing area is located on an airfield the helicopter circuit pattern may be variable and the direction will be notified by ATC.
  - (b) Whenever possible the circuit pattern for helicopters and light aircraft will be flown on the opposite side to that for tactical and conventional patterns; ATC will notify pilots as necessary.

NOTE: The pattern for "straight-in" approach and landing is not shown.



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9. Barrier/Cable and Flame-Out

| SERIAL | POSITION/ITEM                               | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|---|--|--|---|
| a.     | At the Holding Position or on Approach      | ... (Callsign) Cleared for take-off<br>or<br>... (Callsign) Cleared to land -<br>Add the appropriate phrase:<br>Barrier - up/down/standby/<br>unserviceable<br>Approach or Overrun Cable-up/<br>down/derigged (available in ...<br>mins/unserviceable ... surface<br>wind) | ... (Callsign) Ready for<br>Departure<br><br>or<br>... (Callsign) Finals gear down | Position of cable in distance<br>from threshold rounded to<br>nearest 100 ft is to be given<br>to aircraft unfamiliar with the<br>aerodrome. When cable is<br>published in FLIPS as<br>derigged it is not necessary<br>to make reference to the<br>cable in the derigged state. |
| b.     | Aircraft on Runway Taking<br>Off or Landing | ... (Callsign) BARRIER(S)/<br>CABLE UP   | ... (Callsign) BARRIER,<br>BARRIER, BARRIER<br><br>or<br>CABLE, CABLE, CABLE       | Pilot required the arresting<br>system. May also indicate<br>aircraft has already engaged<br>barrier or cable.  |
| c.     | On Going Round Again                        | ... (Callsign) BARRIER(S)/<br>CABLE DOWN   | ... (Callsign) BARRIER(S)/<br>CABLE DOWN   | If required.  |
| d.     | Flameout                                    |  | ... (Callsign) FLAMEOUT,<br>Height/altitude ... (ft/m)                             | Aircraft overhead and<br>direction of landing not<br>known. Aircraft is to be<br>informed if any runway is not<br>available.  |

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| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL                           | REMARKS |
|--------|---------------|--|---|---------|
|        |               | ... (Callsign) FLAMEOUT<br>Acknowledged<br>BARRIER(S)/CABLE DOWN<br><br>... (Callsign) BARRIER(S)/<br>CABLE UP, RUNWAY ... | ... (Callsign) FLAMEOUT<br>Landing Runway ... |         |

10. Phraseology Peculiar to Fixed Wing Aircraft V/STOL Operations

| SERIAL N° | PHRASEOLOGY          | DEFINITION   |
|-----------|----------------------|--|
| a.        | Conventional landing | A practice or actual emergency landing, when nozzles are used for braking and the ac will roll for approximately 5,000 feet. In the event of immovable nozzles a conventional landing may require the whole runway and engage the barrier. |
| b.        | Slow landing         | The normal landing (120 knots) at an intermediate nozzle (normally 65°) and involving a considerable ground roll which is arrested by Power Nozzle Braking.  |
| c.        | R.V.L.               | Rolling Vertical Landing. A steeper, slower approach (50 knots) followed by an abbreviated ground roll and, normally, no Power Nozzle Braking.   |
| d.        | Accel                | A rapid throttle opening to ensure engine response correct. Always carried out before take-off but only declared if significant ground roll is required.   |
| e.        | Translate            | A phrase used to cover largely jet borne flight over short distances between different landing areas.  |
| f.        | Press-Up             | Vertical take-off and landing on the same pad without transition to wingborne flight.  |
| g.        | Mini circuit         | In-flight jetborne manoeuvring associated with a Press-Up.   |
| h.        | Lift Off             | Vertical take-off from a pad followed by transition to wingborne flight.   |
| i.        | STO Hop              | A short take-off followed by a rolling vertical landing in the same direction.   |
| j.        | Into wind decel      | A deceleration into wind prior to a vertical landing.  |
| k.        | Pad                  | An area of prepared surface, which can withstand nozzle blasts, for VTOL.  |
| l.        | Mexe                 | An operating site, constructed of prefabricated interlocking aluminium strips in the shape of a circle or square.  |

GENERAL RADAR PHRASEOLOGY

| SERIAL | POSITION/ITEM        | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS   |
|--------|----------------------|--|---|---|
| 1.     | Request for service  |  | a. (Unit) ... (Callsign)<br>b. Type ...<br>c. Position and heading ...<br>d. Altitude/Flight level ...<br>e. Any other information<br>(destination intentions<br>etc.) Request ...<br>(service) | Establish contact with ATS<br>unit before passing serials b.<br>to e.<br>If ac has been handed over<br>from another radar unit then<br>the phrase "On handover" is<br>to be used after serial a.<br>ATS unit will respond with<br>name of unit and control<br>position. |
| 2.     | Identification       |  |   |   |
|        | a. On Identification | ... (Callsign)<br>Identified (position and FL/Ft may<br>be given)                          |   | Position is to be given when<br>doubt has existed about<br>aircraft position.   |
|        | b. Service given     | ... (Callsign)<br>(1) Radar control<br><br>(2) Radar advisory<br><br>(3) Radar information |   |   |

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| SERIAL | POSITION/ITEM                           | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL                    | REMARKS  |
|--------|---|---|--|--|
|        | c. Near permanent echoes, weather, etc. | ... (Callsign)<br>Approaching an area of radar clutter/weather, etc.  |  |  |
|        | d. Added to a., b., c. as required      | Limited/no traffic information from above/below left right/ahead (distance over which limitation applies may be given)  |  |  |
|        | e. Areas of high traffic density        | ... (Callsign)<br>Approaching an area of high traffic density will you accept a re-route?<br><br>Possible late warning of traffic standard separation may not be achieved | Affirmative/Negative<br>... (Callsign) | Vector accordingly.  |
| 3.     | Limitations                             |   |  | If practical pilots are to be advised of the action necessary to remain within full radar cover or be given a frequency to call an alternative radar unit for service. |
|        | a. In areas of doubtful cover           | ... (Callsign)<br>Approaching an area of ...  |  |  |
|        | b. Near the limits of solid cover       | ... (Callsign)<br>Approaching the limits of solid radar cover   |  |  |
| 4.     | Avoiding action                         | ... (Callsign) Avoiding action turn left/right heading... (followed by traffic information)   |  | Pilot is to reply acknowledging turn. The words - immediately/now/expedite may be inserted to indicate extreme urgency.  |
|        | a. Radar control                        |   |  |  |

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| SERIAL | POSITION/ITEM                  | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL                            | REMARKS   |
|--------|--------------------------------|---|--|---|
|        | b. Radar advisory              | (1) ... (Callsign) Traffic information if not sighted turn left/right heading ...<br><br>(2) Avoiding action if not sighted turn left/right heading ... traffic was ... | Turning, looking, maintaining, etc. (Callsign) | Pilot is to reply stating intentions.<br><br>At controllers discretion/late sighting or "pop-up" traffic.   |
|        | c. Radar information           | ... (Callsign) Traffic information  |  | Pilot is to acknowledge but is responsible for own avoiding action. If ac is manoeuvring then traffic information is to be given by reference to cardinal points e.g. Traffic 5 miles north, heading south. |
| 5.     | When collision risk has passed | ... (Callsign)<br>Clear of traffic<br>(1) Turn right/left heading ...<br><br>(2) Resume original heading/ own navigation  |  |   |
| 6.     | Turns                          | ... (Callsign)<br>(1) Turn left/right heading ...<br><br>(2) Stop turn heading ...  |  | Pilot is to reply acknowledging instructions.   |
| 7.     | Delay                          | ... (Callsign)<br>For delay/sequencing turn left/ right heading   |  | Pilot is to reply acknowledging instructions.   |

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| SERIAL | POSITION/ITEM         | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL                            | REMARKS   |
|--------|-----------------------|---|--|---|
| 8.     | Handover not achieved | Free call ... (unit) on ...<br>(frequency)  | Free call ... (unit) on ...<br>(frequency)     | No controller to controller handover achieved. Flight details have not been passed. |
| 9.     | Flight conditions     | ... (Callsign)<br>(1) Request flight conditions<br><br>(2) Confirms VMC/IMC<br><br>(3) Report any change in flight conditions               | Pilot replies as appropriate<br>... (Callsign) | Only when required.   |
| 10.    | Aircraft              | ... (Callsign)<br>Request aircraft type   | ... (Aircraft type)<br>... (Callsign)          |   |
| 11.    | Overload (unit)       | ... (Callsign)<br>Unit/frequency/console working to capacity:<br>a. No service available for ... minutes<br>b. Free call ... on (frequency) | ... (Pilot repeats)<br>... (Callsign)          | Further instructions may be passed as required.                                     |
| 12.    | Altimeter setting     | ... (Callsign)<br>QFE/QNH is ... mb/in Hg/hPa<br><br>Set QFE/QNH ... mb/in Hg/hPa   | ... (Callsign)<br>Request QFE/QNH              | Relevant station name/area should be included.                                      |

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| SERIAL | POSITION/ITEM  | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL   | REMARKS   |
|--------|--|---|---|---|
| 13.    | Altimeter check  | ... (Callsign)<br>Read back QFE/QNH set   | QFE/QNH ... mb/in Hg/hPa set<br>... (Callsign)                    |   |
| 14.    | No compass/gyro procedure                                  | ... (Callsign)<br>Adopt no compass/gyro procedure. Make all turns standard rate. Stop and start turns on the executive word "now".  |   | The procedure is not to be used unless the pilot is conversant with the method. |
| 15.    | Missed Approach and Communication Failure Procedure (MACF) | ... (Callsign)<br>a. In the event of a missed approach (followed by local published procedure)<br><br>b. If radio contact is lost (followed by local published procedure) | Pilot repeats as required<br>... (Callsign)                       | Only to be passed if requested or considered necessary.                         |
| 16.    | Wake Turbulence  | ... (Callsign) Caution wake turbulence. (Plus additional known information.)  | Pilot acknowledge as required<br>... (Callsign)                   |   |
| 17.    | True Bearing   | ... (Callsign) ... (Aerodrome)<br>True Bearing is ...° True I say again ...° True   | True Bearing, True Bearing<br>... (Callsign) Request True Bearing |   |



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| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT                              | AIRCRAFT TO CONTROL                             | REMARKS |
|--------|---------------|--|---|---------|
| 18.    | Steer         | ... (Callsign)<br>Steer ...° for ... (Aerodrome) | ... (Aerodrome) ... (Callsign)<br>Request Steer |         |

APPROACH CONTROL

- NOTE:
1. Approaches to an aerodrome that are not placed under a radar service will be deemed to be procedurally separated from known traffic only. Separation from all other aircraft cannot be guaranteed.
  2. The requirement for ATC to obtain and/or advise details of individual pilots DH/DA or MDH/MDA is to be decided nationally. However, whenever possible ATC is to advise pilots when approaching or passing the procedure minimum.

1. Standard R/T for Flame-out Spiral Descent

| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|---------------|--|--|--|
| a.     | Initial Call  |  | ... (Airfield) ... (Callsign)<br>Position ... FL/Altitude ...<br>Request PFO/SFO POB ... | In real flame-out situation the appropriate emergency message will be passed by the aircraft with a request for a Flame-out recovery. PFO means practise flame-out. SFO means simulated flame-out. POB means persons on board. |
| b.     | Homing        | ... (Callsign) ... (Aerodrome)<br>Radar/Approach<br>Set/Fly heading ...° Report steady. Set QFE/QNH mb/mm Hg/hPa | Turning on to/Steady heading ...° ... (mb/mm Hg/hPa) set ... (Callsign)                  | Approach advises Tower ... (Callsign) Homing to overhead for practice/actual Flame-out and will report as required by local orders.  |

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| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|---------------|---|--|--|
| c.     |               | ... (Callsign) Pass height/altitude with all transmissions  | ... ft<br>... (Callsign)   |  |
| d.     |               | ... (Callsign) Weather (if code letter not passed or incorrect)<br>Runways ... Length ... available (including Barrier states)  | ... ft<br>... (Callsign)   |  |
| e.     |               | ... (Callsign) The Safety Height/altitude is ... ft   | Safety height/altitude ... ft ... (Callsign)   | Visiting aircraft are to be advised of significant high ground within 10 nm of the aerodrome.                    |
| f.     |               | ... (Callsign) This will be a left/right hand spiral from overhead  | ... ft<br>... (Callsign)   | Direction of spiral should be as visual circuit in use.  |
| g.     | Overhead      | ... (Callsign) Transmit for overhead  | ... ft<br>... (Callsign)   |  |
| h.     | Descent       | ... (Callsign) Indicating overhead. Commence spiral left/right, report passing cardinal headings with height/altitude<br><br>... (Callsign) Continue Spiral<br>or<br>Stop Turn (Heading ...°) | Commencing spiral left/right ... ft ... (Callsign)<br><br>... (Callsign) Passing North East, South or west ... ft<br><br>... (Callsign) Steady Heading ...° ... ft | When controller is satisfied aircraft is well into overhead.<br><br>Approach informs tower of aircraft position. |
|        |               | ... (Callsign)  |  |  |

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| SERIAL | POSITION/ITEM     | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|-------------------|--|--|---|
|        |                   | <p>Recommence spiral left/right</p> <p>... (Callsign) Continue Spiral report breaking cloud</p> <p>... (Callsign)<br/>... Approaching Safety Height/altitude (unless contact maintain height/altitude)</p> <p>... (Callsign) QDM ...°<br/>Aerodrome on your left/right, report contact</p> <p>... (Callsign) Remain on this frequency for the local controller or Contact tower on ... (frequency)</p> | <p>Recommencing spiral left/right, ... ft ... (Callsign)<br/>... (Callsign) Passing ... ft</p> <p>... (Callsign) Passing ... ft</p> <p>... (Callsign) Breaking cloud ... ft</p> <p>... (Callsign) Aerodrome in sight</p> | <p>Approach informs tower.</p> <p>Controller continues to provide corrections as necessary.<br/>Approach informs Tower controller who lowers all barriers and switches all traffic lights to red making all R/W's available (or as required by local orders).</p> <p>Tower controller assumes control and raises appropriate barrier.</p> |
| i.     | Visual Procedures |  | ... (Aerodrome ...) (Callsign)   | Heights and position of High  |

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| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL   | REMARKS  |
|--------|---|---|---|--|
|        | <p><u>NOTE:</u> Although strictly part of aerodrome control, these procedures are listed here for the safe of continuity.</p> | <p>... (Callsign),<br/>(Followed by position of other ac)</p> <p>... (Callsign)</p> <p>... (Callsign), (Followed by clearance as appropriate)</p> | <p>High key, (Followed by intentions)</p> <p>... (Callsign), Low key</p> <p>... (Callsign), Finals, Gear Down</p> | <p>and Low key calls are to be as specified in local orders.</p> <p>If aircraft first contact with ATC is at this point in the approach the pilot is to request join. ATC is to pass joining instructions and aerodrome information as required.</p> |

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2. Standard R/T Procedures - Controlled Descent Through Cloud (QGH)

a. High Level QGH

| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS   |
|--------|---------------|--|---|---|
| (1)    | Initial Call  |  | ... (Aerodrome) ... (Callsign)<br>Position ... (If known) FL/<br>altitude ... Request Controlled<br>DF Descent POB ... MDH ... ft<br>for ... (Type of approach<br>required) | Pilot is to be passed<br>procedure minimum if MDH<br>not stated.  |
| (2)    | Homing        | ... (Callsign) ... (Aerodrome)<br>Approach/Radar Set/Fly heading<br>... Maintain FL, descend/climb to<br>and maintain ... FL, report<br>reaching. (Aircraft to be homed<br>at quadrennial or seem-circular<br>flight levels unless local orders<br>say otherwise.) | ... (Callsign) (Acknowledge<br>ATC instructions) ... (Callsign)<br>steady heading ...°<br>Maintaining FL ...  | If weather code not passed,<br>or incorrect, aerodrome<br>information should be passed<br>to pilot. Minimum vertical<br>separation of 1,000 ft (300 m)<br>is to be maintained between<br>homing aircraft.<br><br>If not known, aircraft type is<br>to be requested.<br>QDMs or QTE should be<br>obtained at intervals as<br>required to home aircraft to<br>the overhead. |
| (3)    | Overhead      | ... (Callsign) Transmit for<br>overhead  | ... (Callsign)  |   |

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| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL   | REMARKS  |
|--------|-----------------|---|---|--|
|        |                 | ... (Callsign)<br>Indicating overhead Turn<br>left/right heading ... Report<br>steady   | Turning left/right heading ...°<br>... (Callsign)   | Two or more consecutive "No<br>bearings" are required<br>(CADF) or 2 overhead<br>indications (DRDF).   |
| (4)    | Outbound        | ... (Callsign) Set QFE/QNH<br>... mb/in Hg/hPa<br><br>... (Callsign)<br>descend to and maintain ... ft,<br>report reaching    | ... (Callsign) steady heading<br><br>(mb/in Hg/hPa)<br>set (Callsign)<br><br>Descending will report turning<br>left/right at ... ft ... (Callsign)                        | Descent commences when<br>trace indicates aircraft within<br>60° either side of ideal<br>outbound QDM or QTE.<br>Turning height is normally<br>half the initial approach<br>height plus 2,000 ft (600 m).<br>QDM's or QTE's are checked<br>and corrected as required on<br>outbound leg. |
| (5)    | Turning Inbound | ... (Callsign) Turn left/right<br>heading ...° inbound report<br>steady. Descent to and maintain<br>ft (IAH), report reaching | ... (Callsign) ... ft/m<br>Turning left/right<br><br>... (Repeat clearance)<br>... (Callsign)<br>... (Callsign) Steady heading<br>...° Will report approaching<br>... ft. |  |

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| SERIAL | POSITION/ITEM            | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS  |
|--------|--------------------------|--|---|--|
| (6)    | Inbound (Final Approach) | ... (Callsign) Continue descent to MDH<br>or<br>Maintain ... ft<br>or<br>Descent to ... ft for radar/ILS services<br>Report aerodrome in sight<br>... (Callsign)<br>(instructions as required) | ... (Callsign)<br>Approaching ... ft<br>... (Callsign) Aerodrome in sight | QDM checks are obtained until the aircraft is safely within the final approach area.<br>Aircraft is to be maintained within final approach area. |



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b. Low-Level QGH

| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|---------------|---|--|---|
| (1)    | Initial Call  |   | ... (Aerodrome) ... (Callsign)<br>Position (if known) FL/Altitude<br>... Request QGH MDH/MDA<br>... ft           | Pilot is to be passed procedure minimum if MDH/MDA not stated.<br><br>Vertical separation of 500 ft (150 m) is to be maintained between homing aircraft. If aircraft is below the minimum safe flight level, safety height or altitude, it is not to be homed. (Except in emergency.) Appropriate instructions are to be given to pilot to climb to safe height/altitude. |
| (2)    | Homing        | ... (Callsign) ...<br>(Aerodrome) Approach/Radar Set/ Fly heading ...° Maintain ... FL/ft, descend/climb to maintain FL ..., report reaching. (If below transition level RPS is to be given.) | ... (Callsign)<br>(acknowledge ATC instructions)<br><br>... (Callsign) Steady heading ...° Maintaining ... ft/FL | If not known aircraft type is to be requested. Check calls to be given as required to home aircraft to overhead.  |
| (3)    | Overhead      | ... (Callsign) Transmit for overhead  |  |   |

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| SERIAL | POSITION/ITEM                           | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|---|---|--|--|
|        |   | ... (Callsign) Indicating overhead turn left/right heading ...° Report steady                             | ... (Callsign)<br><br>Turning left/right to heading ...° ... (Callsign)  | Two or more consecutive "No bearings" are required (CADF) or 2 overhead indications (DRDF) to confirm aircraft overhead.                                     |
| (4)    | Outbound                                | ... (Callsign) Set QFE mb/in hg/hPa<br><br>... (Callsign) Descend to and maintain ... ft. Report reaching | QFE/QNH ... mb/in Hg/hPa<br>Set ... (Callsign), (Callsign) Steady ...<br><br>Descending will report at ... ft ... (Callsign) | (If not already passed.)<br>When aircraft is steady outbound the controller is to start timing the outbound run according to aircraft speed and wind effect. |
| (5)    | Inbound Turn/At completion of timed run | ... (Callsign) Turn left/right heading ...°   | Turning left/right ...° ... (Callsign)<br><br>(Callsign) steady  | Turn should normally be level. Exceptionally a turn may be given while in the descent but a minimum of 1,000 ft obstacle clearance is to be maintained.      |
| (6)    | Inbound Final Approach                  | ... (Callsign) Continue descent to your MDH/MDA<br><br>or<br>Maintain ... ft/m report aerodrome in sight  | ... (Callsign) Steady heading ...°   | QDM/QTE checks are obtained until the aircraft is safely within the final approach area.   |

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| SERIAL | POSITION/ITEM | CONTROL TO AIRCRAFT                        | AIRCRAFT TO CONTROL   | REMARKS |
|--------|---------------|--|---|---------|
|        |               | ... (Callsign)<br>Instructions as required | Descending to MDH/MDA<br>Will report aerodrome in<br>sight ... (Callsign)<br><br>... (Callsign) Aerodrome in<br>sight |         |

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3. Standard R/T Procedure TACAN

| SERIAL | POSITION/ITEM  | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS   |
|--------|--|--|---|---|
| a.     | Initial call at least 5 minutes prior to arrival over facility or as directed by ATC | ... (Callsign) ... (Aerodrome)<br>Approach/Radar. Report (Points as required by ATC) (Aerodrome information should be passed)        | ... (Aerodrome) ... (Callsign)<br>Position ... FL/Altitude<br>Request TACAN RW ...<br>MDH/MDA<br><br>Report ...<br>... (Callsign) | Pilot is to be passed procedure minimum if MDH/MDA not stated.<br><br>Descent clearance should be given as required after appropriate altimeter check.                          |
| b.     | TACAN GATE/Final Approach Fix  | ... (Callsign) Report Final Approach Fix with gear down<br><br>... (Callsign)<br>Descend to MDH/MDA report aerodrome in sight        | ... (Callsign)<br><br>... (Callsign) Final Approach Fix with gear down<br><br>... (Pilot repeats clearance) ... (Callsign)        | Landing QFE/QNH is to be confirmed as set if not already checked. If approach is radar monitored controller is to advise pilot approaching the published missed approach point. |
| c.     | Aerodrome in sight or Missed approach  | ... (Callsign) Cleared to Land/Roll/ Overshoot/for touch and go<br>Surface Wind ...° ... knots<br>(further instructions as required) | ... (Callsign) Aerodrome in sight or Carrying out missed approach   | Clearance to land is to be obtained from Tower.   |

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4. Standard R/T Procedure - NDB and VOR

| SERIAL | POSITION/ITEM  | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL   | REMARKS  |
|--------|--|---|---|--|
| a.     | Initial call at least 5 minutes prior to arrival over facility or as directed by ATC | ... (Callsign) ... (Aerodrome)<br>Approach/Radar Report High Cone/Overhead ... (Facility identification) Holding<br>Maintain/Climb/Descend report level at ... ft (as required) | ... (Aerodrome) (Callsign)<br>Position ... FL/Altitude<br>Request NDB or VOR RW ...<br>MDH/MDA ... ft                     | Pilot is to be passed procedure minimum if MDH/MDA not stated.<br><br>If weather code not passed or incorrect aerodrome information should be passed to pilot. |
| b.     | High Cone/Facility   | ... (Callsign) QFE/QNH ... mb/in Hg/hPa. Proceed outbound, descend to and maintain MDH/MDA, report reaching (or level as specified by ATC)                                      | ... (Callsign) Overhead<br>.../High Cone<br><br>Cleared outbound descend to MDH/MDA (or as appropriate)<br>... (Callsign) |  |
| c.     | Procedure/Penetration Turn   | ... (Callsign) Report procedure/penetration turn<br><br>... (Callsign) Report aerodrome in sight with gear down   | ... (Callsign) Procedure/<br>Penetration turn   |  |

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| SERIAL | POSITION/ITEM          | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS  |
|--------|------------------------|---|--|--|
|        |                        |   | ... (Callsign) Aerodrome in sight gear down.<br>Or, carrying out missed approach |  |
| d.     | Inbound Final Approach | ... (Callsign) cleared to land or further instructions, as required | Pilot repeats clearance as required  | Runway clearance to be obtained from Tower Controller. |

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5. Standard R/T Procedure - ILS

| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|---|---|--|---|
| a.     | On initial approach approximately 10 minutes flying time from destination | <p>... (Callsign) ...<br/>                     (Aerodrome) Approach/Radar Report Localizer established (or DME range ...) (Additional radar directing may be required before the aircraft is established on the localizer)<br/>                     ... (Callsign) Set QFE/QNH ... mb/in Hg/hPa</p> | <p>... (Aerodrome) ... (Callsign)<br/>                     Position ... FL/Altitude ...<br/>                     Request ILS RW ... DH/DA ... ft to Land/Roll/Overshoot/<br/>                     Touch and go</p> <p>... mb/in Hg/hPa set ...<br/>                     (Callsign)</p> | <p>Pilot is to be passed procedure minimum if DH/DA not stated.</p> <p>If weather code not passed or incorrect airfield information should be passed to pilot. 2,000 ft wind is to be passed.</p> |
| b.     | Localizer established   | <p>... (Callsign) Report Glide Path descending with gear down</p>   | <p>... (Callsign) Localizer established</p>  |   |
| c.     | Interception of Glide Path  | <p>... (Callsign)<br/>                     Read back QFE/QNH set</p>  | <p>... (Callsign) Glide Path descending - Gear down</p>  | <p>ATC should instigate routine internal coordination by landline as required by local orders.</p>  |



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| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL | REMARKS  |
|--------|-----------------|--|---------------------|--|
| d.     | Final Clearance | ... (Callsign) ...<br>Miles (Range as specified locally)<br>from Touchdown Cleared to<br>Land/ Roll/Overshoot/for Touch<br>and go.<br>Surface Wind ... knots |                     | Runway clearance is to be<br>obtained from Tower<br>Controller. If approach is<br>monitored by a radar<br>controller then the pilot is to<br>be advised when<br>approaching his declared DH<br>or procedure minimum. |

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6. Basic Voice Phraseology for Terminal, Radar (GCA)

Final Approach (PAR, PAR AZ only & SRA)

| SERIAL | POSITION/ITEM   | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|---|---|--|---|
| a.     | On initial approach approximately 10 minutes flying time from destination | <p>... (Callsign) (Aerodrome), Radar. This will be a left/right hand pattern for PAR, PAR ZA only or SRA for RW ...</p> <p>... (Callsign) Approved/Not approved (Reason to be given)</p> <p>... (Callsign) Set QFE/QNH ... mb/in Hg/hPa</p> | <p>... (Aerodrome) ... (Callsign) Position ... FL/Altitude ... Request PAR/SRA RW ... DH/DA ... ft Land/Roll/Overshoot/Touch and go</p> <p>... (Callsign) Track guidance only required on final approach</p> | <p>Pilot is to be passed procedure minimum if DH/DA not stated.</p> <p>If weather code not passed or incorrect aerodrome information should be passed to pilot.</p> <p>To be initiated by pilot if descent to MDH/MDA is required immediately after passing FAF.</p> <p>If required by ATC. Radar directing to position the aircraft at the FAF is to be carried out as required.</p> |

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| SERIAL | POSITION/ITEM                        | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL   | REMARKS   |
|--------|--------------------------------------|--|---|---|
|        |                                      |  | <p>... mb/in Hg/hPa ...<br/>... (Callsign)</p>  | <p>Speed may be specified for separation in the radar pattern. If pressure setting remains constant it is unnecessary to carry out altimeter checks on aircraft in multiple training circuits. Track miles to touch down to be passed at intervals on downwind and base leg. Radar is to coordinate with tower as required by local orders.</p> |
| b.     | Handover to Talkdown (if required)   | <p>... (Callsign) ... (range) Contact talkdown on ... (freq)</p> <p>... (Callsign) identified. (Plus other instructions as required.)<br/>Read back QFE</p>                        | <p>... (freq) ... (Callsign)</p> <p>... (Talkdown) ...<br/>(Callsign) on handover</p> |   |
| c.     | Glide Path and Rate of descent (PAR) | <p>... (Callsign) Approaching descent point/glide path</p> <p>... (Callsign) Begin descent now for a ...° glide path. Do not acknowledge further instructions unless requested</p> |   | <p>Approximately ½ nm before FAF.</p> <p>Angular rate of descent to be specified in degrees.</p>  |

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| SERIAL | POSITION/ITEM                    | CONTROL TO AIRCRAFT  | AIRCRAFT TO CONTROL      | REMARKS   |
|--------|----------------------------------|--|--------------------------|---|
|        |                                  | On glide path. Slightly above/<br>Below glide path. Correcting<br>slowly/rapidly/nicely to glide path.<br>Well above/below glide path<br>acknowledge ... (Callsign)          |                          |   |
| d.     | Descent (PAR AZ only/<br>SRA)    | ... (Callsign) approaching<br>descent point<br><br>... (Callsign) Begin descent now<br>for a ...° glide path. Do not<br>acknowledge further instructions<br>unless requested |                          | Approximately ½ nm before<br>FAF.<br><br>Angular rate of descent to be<br>specified in degrees. |
| e.     | Range                            | ... miles  |                          | To be passed at ½ nm mile<br>intervals to 2 miles then<br>¼ nm intervals.                       |
| f.     | Height/altitude                  | ... ft   |                          | Advisory information to be<br>given at ½ nm intervals.  |
| g.     | Heading                          | Heading is good. Well/right/left<br>of centreline. Correcting rapidly/<br>slowly/nicely to centreline. On<br>centreline  |                          |   |
| h.     | Turns                            | Turn left/right ...°<br>Heading ...  |                          |   |
| i.     | Glide path failure during<br>PAR | Glide path failure. The<br>procedure minimum is ... ft.<br>Acknowledge ... (Callsign)  | ... (Callsign)           | Procedure continues to<br>published Missed Approach<br>Point (MAP) for AZ only<br>approach.     |
| j.     | Undercarriage check              | Check gear-acknowledge   | ... (Callsign) Gear down | Between 3 and 4 miles from  |

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| SERIAL | POSITION/ITEM     | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL  | REMARKS   |
|--------|-------------------|---|--|---|
|        |                   |   |  | touchdown.  |
| k.     | Clearance         | <p>... (Callsign)</p> <p>a. Cleared to Land/Roll/<br/>Overshoot for Touch and<br/>go. Surface wind ...°<br/>... knots</p> <p>b. Final clearance delayed<br/>continue approach</p> <p>c. Break off this approach -<br/>acknowledge (Further<br/>instructions as required.)</p>                 | <p>... (Callsign) Acknowledged<br/>(Repeat any further<br/>instructions.)</p>    | <p>Clearance to be obtained<br/>from Tower Controller.</p> <p>a. Normally at 3 miles but<br/>not less than 2 miles.</p> <p>b. Indicating required<br/>clearance may be<br/>forthcoming.</p> <p>c. Specific instructions to<br/>be passed.</p> |
| l.     | Procedure Minimum | <p>Approaching your DH/MDH or<br/>DA/MDA or Approaching<br/>procedure minimum. Passing<br/>your DH/MDH or DA/MDA - or<br/>Approaching MAP and Passing<br/>MAP (when aircraft has<br/>descended directly to MDH/MDA<br/>after passing Final Approach Fix)<br/>or Passing procedure minimum</p> | <p>Any message as required.<br/>e.g. (Callsign) Starting missed<br/>approach</p> | <p>½ nm before DH/MDH or<br/>DA/MDA.<br/>½ nm before procedure<br/>minimum.</p> <p>Controller is to pause to allow<br/>pilot to pass any required<br/>message.</p> <p>Reference information to</p>  |

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| SERIAL | POSITION/ITEM                       | CONTROL TO AIRCRAFT   | AIRCRAFT TO CONTROL | REMARKS  |
|--------|-------------------------------------|---|---------------------|--|
|        |                                     |   |                     | position of aircraft from centreline is to be given as far as possible to touchdown i.e. On centreline. Slightly/Well/ Left/Right of centreline. Correcting/Not correcting, plus heading changes to make good track. i.e. turn left 3°. Glide path information is to be given down to a level as decided nationally. Information beyond DH, DA/MDH, MDA or MAP is deemed to be advisory. |
| m.     | At touchdown (or earlier if unable) | ... (Callsign) Over touchdown or ... (range) Radar Service terminated |                     | Aircraft to be transferred to Tower Controller when appropriate.   |