

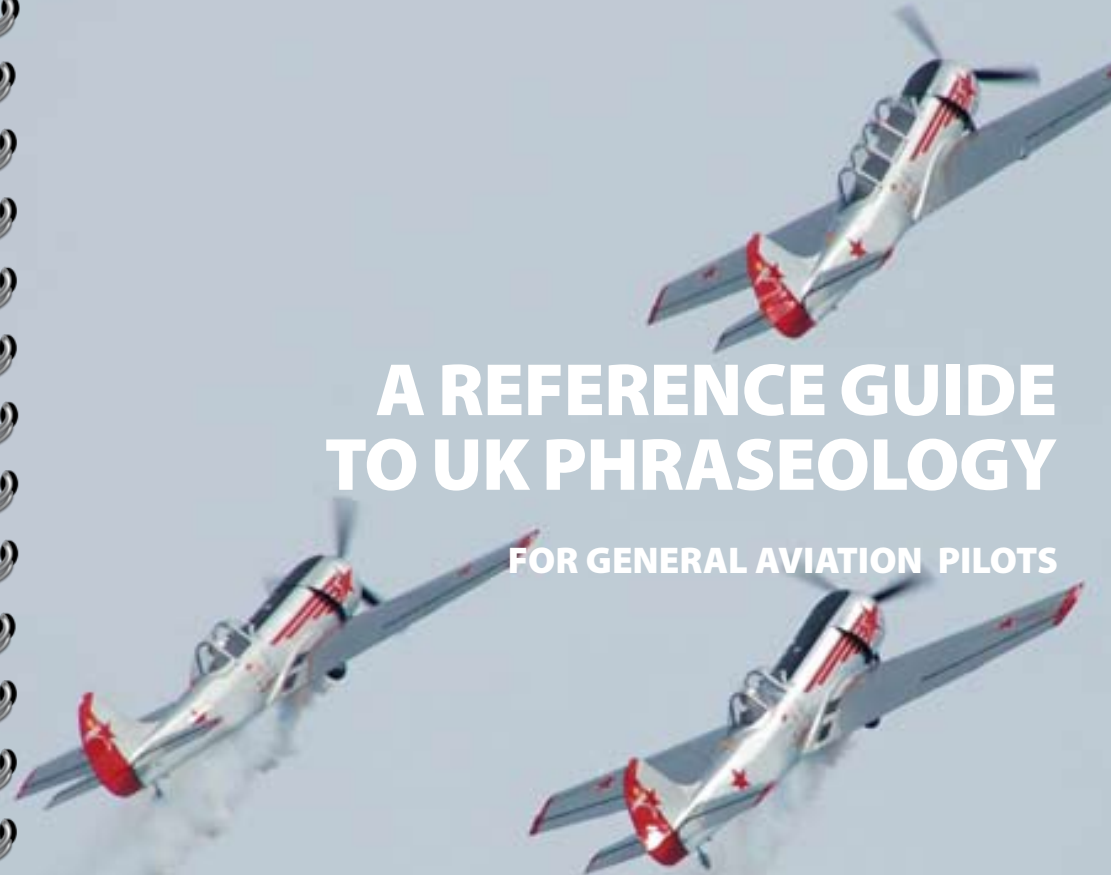
**Supplement to CAP 413
RADIOTELEPHONY MANUAL**

Exit



**A REFERENCE GUIDE
TO UK PHRASEOLOGY**

FOR GENERAL AVIATION PILOTS



UK AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS)

See pages 21 – 24 for examples of relevant phraseology

Basic Service

A Basic Service is intended to offer the pilot maximum autonomy and the avoidance of other traffic is solely the pilot's responsibility. The controller/Flight Information Service Officer (FISO) will pass information pertinent to the safe and efficient conduct of flight. This can include weather, changes of serviceability of facilities, conditions at aerodromes and general activity information within the unit's area of responsibility.

Traffic Service

In addition to the information available in a Basic Service, a Traffic Service provides the pilot with surveillance derived traffic information on conflicting aircraft. No deconfliction advice is passed and the pilot is responsible for collision avoidance. In certain circumstances, headings and/or levels may also be issued for positioning and/or sequencing.

Deconfliction Service

In addition to the information available in a Basic Service, a Deconfliction Service provides the pilot with traffic information and deconfliction advice on conflicting aircraft. Controllers will aim to assist the pilot with his responsibility for the safety of the aircraft by passing traffic information and deconfliction advice, however the avoidance of other aircraft is ultimately the pilot's responsibility. Headings and/or levels will also be issued for positioning, sequencing and/or deconfliction advice.

Procedural Service

A Procedural Service is a non-surveillance service in which deconfliction advice is provided against other aircraft in receipt of a Procedural Service from the same controller. The avoidance of other aircraft is the pilot's responsibility.

A Reference Guide to UK Phraseology For General Aviation Pilots

A Supplement to CAP 413 Radiotelephony Manual

Introduction

Pilots will be aware that safe flying involves prioritising in the order 'Aviate, Navigate, then Communicate'. Whilst this is as true now as it ever was, radiotelephony (RTF) makes a very important contribution to the safe and efficient operation of aircraft in UK airspace. Communication errors and inappropriate use of phraseology continue to feature as contributory factors in safety-related incidents involving General Aviation (GA) aircraft, such as AIRPROXES and runway incursions. GA pilots come from many walks of life and, for some, the use of RTF and associated phraseology is not easily learnt or remembered. This document aims to provide GA pilots with a reference guide to the most common phraseology used during GA flights in the UK. It also explains some of the rationale behind the use of certain words and phrases. **The goal is to improve safety by raising RTF standards.**

Phraseology has evolved over time and has been carefully developed to provide maximum clarity and brevity in communications. However, while standard phraseology is available to cover most routine situations, not everything can be catered for or remembered. Therefore, GA pilots should be prepared to use plain language when necessary, keeping phrases as clear and concise as possible.





Long winded radio calls waste time and may endanger others.

This guide incorporates a range of material from CAA Safety Sense Leaflet 22. The correct RTF phraseology to be used in the UK is detailed in CAP413 Radiotelephony Manual which may be downloaded from the CAA website www.caa.co.uk/cap413. Changes to RTF phraseology will be advised through amendments to CAP 413.


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Symbols used in RTF examples

	Phraseology used by a pilot
	Phraseology used by an Air Traffic Controller
	Phraseology used by a Flight Information Service Officer at an aerodrome
	Phraseology used by an Air/Ground Communication Service Operator

Audio

 **Select this icon to listen to an audio of the RTF**

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1 Good RTF Practice



► Before you transmit

Make sure that the volume and squelch controls on the radio are correctly set.

Ensure that the intercom, if fitted, does not drown out radio calls. Make sure that any headset volume controls are also correctly set and that the microphone boom stays in its set position.

Before embarking on a flight ensure the radio receivers and transmitters are working. You should also check that the radio changes frequency and that the frequency selected is the correct one.

Many frequencies are very busy so after changing frequency wait and listen before transmitting. Do not interrupt other transmissions and allow time for any necessary reply from someone else.

Think about what you are going to say before you transmit. If you are in a position to do so, it may help to write it down in advance.

Press the transmit switch before you start to talk. This avoids 'clipping' transmissions and the possible loss of important information.

► When you transmit

Use a normal conversation tone. Do not talk too fast – speak clearly and at a steady pace. Keep the rhythm, speed, volume and pitch normal.

Keep the microphone close to your lips but not touching them and don't turn your head away from the microphone while talking. Don't hold the boom of a combined headset/microphone system, as this can distort speech.

Many transmissions contain numbers; a slight pause before and after numbers helps to make them easier to understand.

Avoid hesitation sounds such as 'umm' and 'er'. Release the transmit button if you need time to think – a controller will normally ask for anything you miss.

Use standard phraseology and avoid unnecessary RTF.

► After you transmit

Do not release the transmit button until after you have finished speaking.

Ensure the transmit button is released after each transmission. Make sure that a handheld radio or microphone is never left in a position where the transmit button is pressed in, as this will jam the frequency and no one else will be heard if they transmit. A jammed frequency is not just irritating; it is potentially dangerous.

After making a transmission, allow a period of at least 10 seconds to elapse before attempting a second call. This will allow the other person time to reply to your first call.

Always readback any instructions you are given in the same order that they are transmitted. It may help to write them down (for more detail see the list of messages to be read back on page 8 of this guide). Include your callsign after the information.

If you do not understand the instructions you are given, ask for clarification. **Never** guess what it is you are being told to do.

► Listening

Although you should be prepared for the likely reply to your transmission, it is easy to hear what you expect, rather than what is actually said. Listen carefully to make sure you understand what is said to you.

At all times, listen for your callsign and any new instructions or information. As the traffic situation changes, you may be given different instructions or new information.

Transmissions from other pilots also contain valuable information about their intentions that can help you maintain awareness of the other traffic around you. Listening out is a useful addition to look-out, particularly in the aerodrome circuit.

Check your radio, especially the transmit button, if there is a prolonged break in activity on the frequency.



2 General Phraseology

► Aircraft Callsigns

Pilots either use their aircraft registration, e.g. 'G-ABCD', or, for many commercial aircraft, a company callsign followed by a number, letters or both, e.g. 'Blue Skies 347'. Aircraft registered in some countries may use a registration consisting of letters and numbers.

► Aircraft Callsign Prefixes

Where no confusion is likely to occur and the additional information may help the controller or other pilots, the name of the aircraft manufacturer, the aircraft model, or the aircraft category, e.g. 'Helicopter', may be used as a prefix to the registration, e.g. 'Harvard G-ABCD'.

The callsign prefix 'Student' is used on the initial call to an air traffic service unit (ATSU) by student pilots who are flying solo. Although intended primarily for use by students, the prefix may also be used by the holder of a valid licence who is returning to flying after a significant absence and is undergoing renewal training involving solo flight under the supervision of a flight instructor.

Certain types of ex-military aircraft operating in accordance with an exemption, which allows flight at speeds in excess of 250 kts below FL100, use the callsign prefix 'Fastjet' or 'Fastprop', depending on the propulsion type, e.g. 'Fastjet G-ABCD'.



► Ground Station Callsigns

An aerodrome with a ground radio station is identified by the name of the location followed by a suffix indicating whether the service is being provided by an Air Traffic Controller, a Flight Information Service Officer (FISO) or an Air/Ground Communication Service (AGCS) Operator. You must be familiar with the differences between the various services that may be offered and the resulting implications for your own actions. Examples of ground station callsigns used on and in the vicinity of an aerodrome are shown below.

Service	Callsign Suffix	Instructions or Information
Air Traffic Control (ATC) is provided by a controller	'GROUND' 'TOWER' 'APPROACH' 'RADAR' 'DIRECTOR' or 'DELIVERY'	Busy aerodromes often employ separate controllers using different callsigns for different tasks. Only a licensed controller may provide an ATC service.
Aerodrome Flight Information Service (AFIS) is provided by a FISO at an aerodrome. Outside the aerodrome environment, the FISO may provide Basic Service.	'INFORMATION' <i>Note: Flight Information Service Officers (FISOs) at Area Control Centres also provide a Basic Service and use the callsign 'Information'</i>	A FISO at an aerodrome is qualified to issue instructions to aircraft on the manoeuvring area up to the holding point and in the case of landing aircraft, after the landing roll is completed. A FISO also provides information for the safe conduct of aerodrome traffic on the runway and within an Aerodrome Traffic Zone (ATZ). FISOs may relay air traffic clearances issued by a controller. A 'message from the Aerodrome Authority', which is relayed by a FISO, should be treated as an instruction from the Aerodrome Authority.
AGCS is provided by an AGCS Operator and is often known simply as 'Air/Ground'	'RADIO'	An AGCS Operator provides aerodrome and traffic information but must not give air traffic instructions or clearances. However, he may relay instructions and clearances given by a controller, e.g. an airways clearance to departing traffic. A 'message from the Aerodrome Authority', which is relayed by an AGCS Operator, should be treated as an instruction from the Aerodrome Authority.

► Readback

Reading back a clearance and any safety critical information helps both the pilot and the controller (or the FISO in the case of instructions on the ground) understand what the aircraft has been instructed to do.

It may help to note down the clearance prior to readback and ask any other pilots in the aircraft to listen to all clearances, including taxi clearance. If in any doubt you should request clarification.

► Items to be Read back

Messages containing the following must be read back:

- Taxi instructions
- Level instructions
- Heading instructions
- Speed instructions
- Airways/route clearances
- Approach clearances
- Runway in use
- Any clearance (land, take-off, cross etc) involving a runway
- SSR operating instructions
- Altimeter settings
- VDF information
- Type of ATS service being provided
- Frequency changes
- Transition levels

When a readback is required you must ensure it is complete and in the order given, as this makes it easier to check the accuracy and identify any missing items.

► Use of 'Wilco'

'Wilco' means 'I understand your message and will comply'. It should not be used in place of a full readback of the items above, but may be used where repetition of an instruction or part of an instruction might cause confusion.

► Use of 'Roger'

'Roger' means 'I have received all your last transmission'. If a transmission contains information that does not need to be read back, you should acknowledge by transmitting your callsign or the word 'roger' followed by your callsign.



► Conditional Clearances


A conditional clearance allows a pilot to carry out an action only **after** another action has taken place. Conditional clearances speed up traffic flow, but you need to follow the instructions carefully. Where there might be ambiguity as to the subject of the condition, the controller will give additional details such as aircraft type, livery, or position in order to aid identification. The structure and order of conditional clearances is essential to their safe execution, but if in doubt, you should hold position and ask for clarification.


Conditional clearances always consist of:


- Aircraft callsign
- Condition
- Identity of the subject of the condition
- Instruction

Correct and full readback of a conditional clearance is vital. The condition must be the first item read back so that the controller is aware that you have heard the condition on which the clearance is based.

RTF Conditional Clearance

 G-CD, after the landing PA 28, line up runway 23

 After the landing PA 28, line up runway 23, G-CD

 Play

► Changing Frequency

You will normally be advised by the appropriate ground station to change from one radio frequency to another in accordance with agreed procedures. In the absence of such advice, you must notify the ground station before changing frequency, using the expression 'changing to' followed by the name of the next air traffic services unit. However, pilots flying in controlled airspace must obtain permission from the controlling authority before changing frequency.

► VHF Frequencies - Use of Six Digits

You should use 6 digits except where the final two digits of the frequency are both zero, in which case only the first four digits need to be transmitted, e.g. 'One two three decimal six'.

► Regional Pressure Settings (RPS)

Regional pressure settings, e.g. Wessex, Chatham, Barnsley, are limited to the region name and the pressure, e.g. 'Chatham 1006'.

► Height, Altitude or Flight Level

An aircraft's vertical position may be reported as altitude, height or flight level (FL), depending on the phase of flight and the altimeter setting. To reduce the possibility of misunderstanding, the word 'to' is omitted from messages relating to flight levels, e.g. 'climb FL 70'. However, all messages relating to an aircraft's climb or descent to a height or altitude use the word 'to' followed immediately by the word 'height' or 'altitude' and the appropriate figure, e.g. 'G-CD, descend to altitude 2000 feet'. Additionally the initial message in any such exchange will also include the appropriate QFE or QNH for height or altitude respectively.

► Pressure Settings

'Millibars' is appended to pressure values of less than 1000 millibars to help ensure that pilots who routinely use inches do not confuse a millibar setting with a setting in inches, e.g. 29.92 inches (which equates to 1013 millibars) instead of 992 millibars. 'Millibars' may be omitted for values greater than 999 millibars.

3 Departure RTF

► Aerodrome with ATC

This section provides examples of the RTF typically used by a pilot departing from an aerodrome with a controller on duty.

► Establishing Communication

To reduce the possibility of confusion, you should use the full callsigns of both stations in your initial call, first saying **whom** you are calling and then **who** you are.

► Test Transmissions

When testing a radio you should follow the format shown in the example below. The format is designed to identify the frequency used and allow the receiving station time to assess the transmission quality. 'Readability 5' means perfectly readable. At the other end of the scale, 'Readability 1' means unreadable.






► Automatic Terminal Information System (ATIS)


At aerodromes where departure information is broadcast on an ATIS, the request for departure information is omitted. When requested to do so on the ATIS broadcast, you should acknowledge receipt of the ATIS information by including the ATIS identifying letter and QNH in your request for taxi.

► Reading Back Instructions and Information

You should always acknowledge the instructions or information as received, so that the controller can be sure that the correct instructions/information have been received. You must readback in full those items listed on page 8.

RTF Start Up

-  Borton Tower, G-ABCD, radio check 118.725
-  G-ABCD, Borton Tower, readability 5
-  G-ABCD, request departure information
-  G-CD, runway 24 surface wind 220 degrees 6 knots, QNH 990 millibars temperature +6 dewpoint +3
-  Runway 24, QNH 990 millibars, G-CD



▶ Continuing Communication

Once satisfactory communication has been established, the **ground station** may abbreviate callsigns, e.g. 'G-CD' or 'Helicopter CH'. To reduce the possibility of confusion with other aircraft on frequency, do not shorten the callsign of your aircraft until after the ground station has shortened it.

▶ Placing of Callsigns

Once satisfactory communication has been established, when the pilot or controller initiates an exchange, the message is normally prefixed with the aircraft callsign. However, when you need to readback an instruction or important information, the instruction or information is repeated first followed by the aircraft callsign. This makes it easier for the controller to check that you have received the instruction or information in full and correctly.


▶ Taxi Clearance Limit


All taxi clearances contain a clearance limit, which is the point at which you must stop unless further permission to proceed is given. A taxi clearance is **not** a clearance to enter the runway or take-off. Sometimes the controller may use the additional phrase 'hold short' to emphasise a clearance limit or where no defined point, e.g. a holding point, exists. Omission of the phrase 'hold short' does **not** mean you have clearance to enter the runway.


▶ Noting Down Taxi Clearances

To aid compliance and help prevent runway incursions, you should note down taxi clearances whenever possible.

RTF Taxi (Assumes communication already established)

 G-CD, by the south side hangars, request taxi for VFR flight to Walden, 2 POB *

 G-CD, taxi holding point G1 via taxiway Charlie. Hold short of runway 24. QNH 990 millibars

 Taxi holding point G1 via taxiway Charlie. Hold short of runway 24. QNH 990 millibars, G-CD.

**POB (total persons on board) may be included, e.g. where a flight plan is not required and has not been filed.*



▶ Clearance for Take-off or Landing

In relation to runway movements, the controller will only use the word 'cleared' in connection with a clearance to take-off or land. For any other RTF exchanges, words such as 'cross', 'departure' and 'approved' will be used. To aid clarity, a controller will always issue a take-off clearance as a separate transmission.

▶ Runway Designator

The runway to which the take-off clearance applies is identified by its designator when it is not the declared runway in use, e.g. 'runway 04 cleared for take-off'. The designator may also be added where it may help in avoiding confusion, e.g. when multiple runways are in use.

▶ After Departure

If the controller uses the phrase 'after departure' this is not a clearance to take-off. The expression 'after departure' is used when issuing or reading back airways or route clearances.


▶ Hold Position


If there is conflicting traffic, the controller may instruct you to 'hold position' as shown below. This means that you must not proceed until the controller calls back with permission. Revised clearances and post-departure instructions will be prefixed with an instruction from the controller to 'hold position'.


▶ Degrees


The word 'degrees' is added to any heading ending in zero, to prevent headings being confused with flight levels.

RTF Take-off

 G-CD, ready for departure, request right turnout heading 330 degrees

 G-CD, hold position. After departure right turn approved, climb not above altitude 1500 feet until zone boundary

 Holding. After departure right turn approved, not above altitude 1500 feet until zone boundary, G-CD

 G-CD, cleared for take-off, wind 220 4

 Cleared for take-off, G-CD














► **Clarification of Instructions**

If you do not fully understand the instructions, or they are inconsistent with your request, you **must** request that they are repeated or clarified.

► **Unsure of Position**

If you are unsure of the position of your aircraft on the aerodrome, you should stop the aircraft and advise the controller, who will provide instructions.

RTF **Climb Out**

-  G-CD, contact Borton Approach 118.750
-  Borton Approach 118.750, G-CD
-  Borton Approach, G-ABCD, airborne turning right heading 330 degrees climbing not above altitude 1500 feet QNH 990 millibars, en-route Walden
-  G-CD, Borton Approach, roger. Report at the zone boundary
-  Wilco, G-CD
-  G-CD, zone boundary
-  G-CD, roger, Wessex 988 millibars
-  Wessex 988 millibars, G-CD
-  G-CD, request change to Wrayton Information
-  G-CD, contact Wrayton Information 125.750
-  Wrayton Information 125.750, G-CD



► **Aerodrome with FISO on Duty**

This section provides examples of the RTF typically used by a pilot departing an aerodrome with a FISO on duty. A FISO issues instructions to aircraft on the ground and provides information for the safe conduct of aerodrome traffic on the runway and within an Aerodrome Traffic Zone (ATZ). Additionally, he may relay instructions and clearances given by a controller, e.g. an airways clearance for departing traffic. A 'message from the Aerodrome Authority' may also be relayed by a FISO and should be treated as an instruction from the Aerodrome Authority.

► **Position Reports**

A FISO may request pilots to make position reports, e.g. report downwind, final etc. These requests do not have the status of instructions, although it is expected that most pilots will comply in order to help improve the situational awareness of the FISO and pilots of other aircraft.






► **Circuit Direction**

The visual circuit direction is normally left hand and a left hand pattern need not be specified. However it is essential to do so where a variable circuit pattern is published for a particular runway. Where the traffic circuit is a right hand pattern, this is to be specified, as in the example below.

► **Parallel Runways**

The phrase 'Runway 06 right hand', which describes the circuit direction for the runway, should not be abbreviated to 'runway 06 right', which identifies that the aerodrome has a parallel runway with an identical numerical designator, e.g. runway 06 left.

RTF **Start Up and Taxi**





-  Walden Information, G-ABCD, radio check 119.725
-  G-ABCD, Walden Information, readability 5
-  Walden Information, G-ABCD, at the pumps request taxi for VFR flight to Seaton, 3 POB
-  G-CD, taxi holding point C2 via taxiway Charlie, runway 06 right hand, surface wind 060 10 knots, QNH 1002
-  Taxi holding point C2 via taxiway Charlie, runway 06 right hand, QNH 1002, G-CD



► Take-Off

'Take-off at your discretion' is **not** a clearance to take-off. You must comply with the Rules of the Air and exercise your own judgement when deciding whether to hold position or enter the runway and take-off, as shown in the example below. You must respond indicating your intentions by transmitting 'taking-off' (or 'lining up', or 'backtracking' or 'holding position').

RTF Take-off and Climb out

-  G-CD, C2 ready for departure
-  G-CD, traffic is a Cessna 172 base leg, take-off at your discretion, wind 270 15
-  Taking off, G-CD
-  G-CD, overhead Westfield, altitude 2500 feet QNH 1002, changing to Borton Approach 122.5
-  G-CD, roger, Wessex 988 millibars
-  Wessex 988 millibars, G-CD






▶ Play



► Aerodrome with Air/Ground Communication Service (AGCS)

This section provides examples of the RTF typically used by a pilot departing an aerodrome with an AGCS Operator on duty. An AGCS Operator may only provide information. However, in addition to aerodrome and traffic information, an AGCS Operator may relay instructions or clearances given by a controller, e.g. an airways clearance to departing traffic. A 'message from the Aerodrome Authority', which is relayed by an AGCS Operator, should be treated as an instruction from the Aerodrome Authority.

RTF Start up and Taxi

-  Seaton Radio, G-ABCD, radio check 119.550
-  G-ABCD, Seaton Radio, readability 5
-  G-ABCD, by the hangars, request taxi information, VFR to Walden, 2 POB
-  G-CD, runway 20, wind 250 6, QNH 1009
-  G-CD, taxiing for runway 20, QNH 1009

▶ Play


► **Use of Information**


You may use the information provided by an AGCS Operator regarding other traffic to assist in making decisions; however the safe conduct of the flight remains your responsibility.


► **Take-off**

AGCS Operators only provide information, and may not issue clearances. You must comply with the Rules of the Air and exercise your own judgement when deciding whether to hold position or enter the runway and take-off. For the same reason the transmission you should make when entering the runway is 'taking-off' **not** 'cleared to take-off'.

RTF Take-off and Climb out

 G-CD, ready for departure


 G-CD, traffic is a Cessna 152 reported final, wind 240 degrees 10 knots

 Roger, holding position, G-CD

 G-CD, no reported traffic, surface wind 260 degrees 8 knots

 Taking off, G-CD

 G-CD, roger

 G-CD, overhead Westfield altitude 2500 feet QNH 1009, changing to Eastbury Approach 124.150

 G-CD, roger

▶ Play

4 Aerodrome RTF (Helicopters)

► **Aerodrome RTF for Helicopters**

Subject to the appropriate permission, helicopters may be able to land on or take-off from areas of the aerodrome other than the runway. Therefore, it is important that you make clear in your transmissions which area of the aerodrome you intend to use.

► **Take-off and Landing**

At aerodromes with ATC, when helicopters land or take-off on the manoeuvring area and within sight of the controller, the terms 'cleared to land' and 'cleared for take-off' are used. At aerodromes with ATC, when helicopters land or take-off from locations not on the manoeuvring area, or not in sight of the controller, the terms 'land at your discretion' and 'take-off at your discretion' are used.

At aerodromes with a FISO on duty the FISO will also use the terms 'land at your discretion' and 'take-off at your discretion'. At aerodromes with AGCS the AGCS Operator may only provide aerodrome and traffic information.

► **Operating at Aerodromes with ATC**

The remainder of this section shows examples of phraseology for use by helicopter pilots at an aerodrome with ATC.



► Instruction to Taxi

An instruction to taxi allows the pilot to choose the most appropriate method, either ground or air taxi. You should use the term 'air taxi' or 'ground taxi' when you need to differentiate between air taxiing and ground taxiing.

► Instruction to Hold


When a helicopter air taxiing is instructed to 'hold', the pilot may hold in the hover or may touch down and hold on the ground at the pilot's discretion. If a touchdown is not authorised the pilot will be instructed to 'hold in the hover'.


When a helicopter ground taxiing is instructed to 'hold', the pilot shall hold on the ground, unless a hover manoeuvre is specifically authorised or requested.


► Take-off from the Runway

You should use the phraseology in the example below when you intend to take-off from the runway. Where take-off is from a designated Helicopter Landing Area on the manoeuvring area, you should transmit for example 'G-CH, Area Whiskey ready for departure' and the controller will preface the take-off clearance with the words 'Area Whiskey'.


RTF Helicopter Taxi and Take-off from the Runway

 Borton Tower, G-ABCH, by the south side hangar request air taxi for departure runway 06

 G-CH, Borton Tower, air taxi holding point H1 runway 06 via taxiway Golf

 Air taxi holding point H1 runway 06 via taxiway Golf, G-CH

 G-CH, ready for departure

 G-CH, runway 06, cleared for take-off

 Cleared for take-off, G-CH



► Landing

When you intend to land on the runway, you should include the runway designator and use the phraseology 'G-CH, final runway 06'. When you intend to land on a designated Helicopter Landing Area, you should include the name of the area, e.g. 'G-CH, at the Power Station, to land Area Whiskey'.

5 Cross Country Flight RTF

► Air Traffic Services Outside Controlled Airspace (ATSOCAS)

The phraseology examples in this booklet include ATSOCAS available in the UK. A summary of the available ATSOCAS is on the front inside cover of this booklet and they are described in more detail in CAP 774 (UK Flight Information Services) and at www.airspacesafety.com.

► Initial Call


Normally your initial call should only include the minimum information needed to establish the service that you require or the clearance/information that you need when arriving at or departing from an aerodrome. The controller's response will normally include the phrase 'pass your message'.


► Reply to 'Pass your message'


When en-route and instructed to 'pass your message' you should reply with the necessary information in the order shown below;

- Aircraft callsign and type
- Departure point and destination
- Present position
- Altitude or flight level
- Additional details, e.g. flight rules, next route point

RTF Establishing contact

 Eastbury Approach, G-ABCD, request Traffic Service

 G-ABCD, Eastbury Approach, pass your message

 G-ABCD, Cessna 172, from Seaton to Borton, 15 miles south of Eastbury, altitude 2500 feet Wessex 1007, VFR tracking to Wells










▶ Requesting Service

The phraseology to be used when requesting and subsequently receiving ATSOCAS is shown below. You should always include the service required in your initial call, e.g. 'request Traffic Service'.

▶ Squawk

If you have a transponder, you should select and transmit the conspicuity code 7000 with Mode C (altitude reporting) unless another code is appropriate or ATC instruct you otherwise, as shown in the example below.

RTF Requesting Service





-  Borton Approach, G-ABCD, request Traffic Service
-  G-ABCD, Borton Approach, pass your message
-  G-ABCD, Cessna 172, Seaton to Colinton, 2 miles north of Wicken, altitude 2500 feet QNH 1009, request Traffic Service and Chatham
-  G-CD, squawk 2433
-  Squawk 2433, G-CD
-  G-CD, identified 8 miles south east of Borton, Traffic Service. Chatham 1007. Report passing abeam Borton
-  Traffic Service, Chatham 1007, wilco, G-CD



▶ Traffic Service

Traffic Service provides a pilot with surveillance derived information on conflicting aircraft. The examples below show the controller providing surveillance derived traffic information on another aircraft and later generic traffic information to assist with the pilot's situational awareness. The controller will update the traffic information if it remains a hazard or you request it.

RTF Traffic Service

-  G-CD, traffic 10 o'clock, 6 miles, crossing left to right, 2000 feet above
-  Roger, G-CD
-  G-CD, gliding activity over Smallville
-  Roger, G-CD





▶ Deconfliction Service

Deconfliction advice, which is aimed at achieving notified deconfliction minima from other traffic, is provided as part of a Deconfliction Service.

▶ Traffic Information followed by Heading/Level

Deconfliction advice may consist of traffic information on conflicting aircraft, followed by a heading or level. If you elect not to take the action, you must inform the controller, e.g. 'visual, continuing, G-CD' and you are responsible for avoiding the conflicting aircraft.

RTF Traffic Information followed by Heading/Level


-  G-CD, traffic 11 o'clock, 8 miles crossing left to right, indicating 1000 feet above, if not sighted turn left heading 210 degrees
-  Left heading 210 degrees, G-CD





► Avoiding Action


When the controller considers that an imminent risk of collision will exist if action is not taken immediately, deconfliction advice may be given as avoiding action, followed by traffic information. The phraseology for lateral and vertical avoiding action is shown below.

RTF Avoiding Action

 G-CD, avoiding action, turn right immediately heading 340 degrees. Traffic 12 o'clock 7 miles opposite direction no height information

 Right heading 340 degrees, G-CD

 G-CD, avoiding action, descend immediately FL50. Traffic right 2 o'clock 5 miles crossing right to left indicating FL80

 Descend immediately FL50, G-CD

▶ Play



► Activating Flight Plans


As the aircraft pilot you are responsible for filing, activating and closing a flight plan in the following circumstances:


- Departure is from an aerodrome with an Air Traffic Service Unit (ATSU) but the flight is outside their normal hours of operation
- Departure is from an aerodrome without an ATSU
- Departure is from a private strip

Having filed the flight plan on-line, by fax or telephone, you need to activate it once airborne. This can be done by a responsible person telephoning the Flight Briefing Unit at the appropriate parent ATSU as soon as you are airborne and passing a departure time.

Alternatively you may ask an ATSU by radio to activate the flight plan as shown below.

RTF Activating a Flight Plan (Assumes communication already established)

 G-CD, departed Seaton at 38, request activate flight plan

 G-CD, departure time 38, will activate flight plan

▶ Play

For a full explanation of VFR flight plans see CAA Safety Sense Leaflet 20 (VFR Flight Plans).



► Direction Finding (DF) – True Bearing

The example below shows the RTF for requesting the true bearing of the aircraft from the ground station. This is also known as QTE. The phraseology is designed to allow sufficient time for the ground station to register the request from the aircraft. Each aircraft transmission should end with the aircraft callsign.

► Accuracy of Bearings

The accuracy of the bearing is classified as follows:

Class A – Accurate within plus or minus 2 degrees


Class B – Accurate within plus or minus 5 degrees


Class C – Accurate within plus or minus 10 degrees


Class D – Accuracy less than Class C

Class B, as shown above, is normally the most accurate information available.

RTF Requesting True Bearing

 True bearing, true bearing, Eastbury Approach, G-ABCD request true bearing, G-ABCD

 G-ABCD, Eastbury Approach, true bearing 276 degrees true, I say again, 276 degrees true class Bravo

 True bearing 276 degrees class Bravo. Changing to Borton Approach 130.225, G-ABCD





► Direction Finding (DF) - QDM

You may also request the magnetic heading to steer (assuming no wind) to reach the DF station, known as a QDM. This is the normal display available to the controller, so requires a shorter transmission.

RTF Requesting QDM

 Eastbury Approach, G-ABCD, request QDM, G-ABCD

 G-ABCD, Eastbury Approach, QDM 090 degrees class Bravo

 QDM 090 degrees class Bravo, G-ABCD



► Military Aerodrome Traffic Zone (MATZ)

While it is not mandatory for civilian pilots to establish radio contact with the appropriate military unit when entering a MATZ, if your planned track passes through or near one, it is **strongly** recommended that you call on the published VHF zone frequency at least 15 miles or 5 minutes flying time before the MATZ boundary, whichever is sooner. You should request MATZ and, if you intend to route through it, ATZ penetration. When crossing a MATZ or Combined MATZ (CMATZ) it is the responsibility of the pilot to ensure that permission is obtained to transit each individual ATZ embedded within it. You may ask the controller to obtain these clearances on your behalf.

► Use of QFE

Military units use QFE in the circuit area, instrument pattern and, except for a small number of units, for MATZ penetration.
















► Meaning of 'Freecall'

'Freecall' is used by military controllers to mean that the aircraft should call the named unit, but the details have not been passed on.

► MATZ Penetration

The following example shows phraseology typically used during a MATZ penetration by a pilot and a military controller.

RTF MATZ Penetration

-  Westbury Approach, G-ABCD, request Traffic Service, MATZ and ATZ penetration
-  G-ABCD, Westbury Approach, pass your message
-  G-ABCD, Cessna 172, from Seaton to Borton, 15 miles south of Westbury, altitude 2000 feet Wessex 1007, VFR, tracking to Wells, squawking 7000, request Traffic Service, MATZ and ATZ penetration
-  G-CD, squawk 6512
-  Squawk 6512, G-CD
-  G-CD, identified 15 miles south of Westbury, Traffic Service
-  Traffic Service, G-CD
-  G-CD, descend to height 1500 feet for MATZ penetration. Westbury QFE 1001
-  Descend to height 1500 feet, Westbury QFE 1001, G-CD
-  G-CD, reaching height 1500 feet
-  G-CD, maintain height 1500 feet, MATZ and ATZ penetration approved
-  Maintain height 1500 feet, MATZ and ATZ penetration approved, G-CD
-  G-CD, leaving Westbury MATZ, Wessex 1007
-  Roger, G-CD, Wessex 1007, request change to Kennington Approach 133.5
-  G-CD, radar service terminated, squawk 7000, freecall Kennington Approach

▶ Play

▶ Play



▶ Position Reports

Position reports provide valuable situational awareness information for the controller and other pilots. In order to help the controller and other pilots on the frequency you should provide the following elements in the standard order:

- Aircraft callsign
- Position
- Time
- Level
- Next position and ETA

Examples of position reports are shown below.

RTF Position Reports

-  G-CD, Littletown 37, altitude 2500 feet, Greendale 50
-  G-CD, mid-channel 25, altitude 3500 feet, Whitecliff 40

▶ Play



6 Arrival RTF

► Aerodromes with ATC

This section provides examples of the RTF typically used by a pilot arriving at an aerodrome with a controller on duty.

► Arrival and Radio Failure Procedures

You should make yourself familiar with published procedures when planning a flight to an aerodrome, and expect to follow them unless ATC instruct otherwise. Not all aerodromes have the same radio failure procedures, so before setting off, you should make sure you know the procedures for your destination aerodrome in the event of radio failure. Current details of individual licensed aerodromes and heliports can be found in the Aerodrome section of the UK Aeronautical Information Publication (AIP), available on the AIS website.

► Receipt of Automatic Terminal Information Service (ATIS) Broadcast









If an ATIS is provided, you should listen early, write down the details and acknowledge receipt of the broadcast in the initial call.




► Timing of Initial Call

Requests should be made in sufficient time to allow a planned entry into the circuit, and where applicable Aerodrome Traffic Zone (ATZ), taking other traffic into account. For aerodromes within controlled airspace, you must ensure you call the controlling authority early enough to obtain the necessary clearance to enter.

RTF Inbound for Overhead Join

-  Borton Approach, G-ABCD, request join
-  G-ABCD, Borton Approach, pass your message
-  G-ABCD, T67 inbound from Seaton, 10 miles south, altitude 2500 feet Wessex 1008, information Delta, request overhead join
-  G-CD, join overhead runway 20, height 2000 feet QFE 997 millibars, report aerodrome in sight.
-  Join overhead runway 20, height 2000 feet QFE 997 millibars, wilco, G-CD
-  G-CD, aerodrome in sight
-  G-CD, contact Borton Tower 124.0
-  Borton Tower 124.0, G-CD



► Joining Overhead

It is particularly important that RTF calls when joining and flying in the visual circuit are made in the correct positions. A diagram showing the standard overhead join procedure (which is the preferred method of joining unless another procedure is published or the controller approves otherwise), and the positions at which the pilot makes the associated RTF calls is included on the back inside cover of this leaflet. Aerodromes where specific procedures apply will notify such differences in the UK AIP.

► Reporting Downwind

If you are planning to make a 'touch and go' or low approach and go-around, it is useful to advise the controller as part of the downwind call, e.g. 'G-CD, downwind touch and go'. If you do not state your intentions, the controller will assume that you intend to land, as shown in the next example.

► Continue Approach

'Continue approach' is not a clearance to land. If the runway is obstructed when you report 'final', but it is expected to be available in good time for you to make a safe landing, the controller will delay landing clearance by issuing an instruction to 'continue approach'.

► 'Land After' Clearance

At aerodromes **with ATC**, but not AFIS or AGCS, a controller may issue a 'land after' clearance allowing a landing aircraft to touch-down before the preceding landing aircraft has vacated the runway provided that:




















- The runway is long enough to allow safe separation between the two aircraft and there is no evidence to indicate that braking may be adversely affected;
- It is during daylight hours;
- The preceding landing aircraft is not required to backtrack in order to vacate the runway;
- The controller is satisfied that the pilot of the landing aircraft will be able to see the preceding aircraft which has landed, clearly and continuously, until it has vacated the runway; and
- The pilot of the following aircraft is warned.

You must not land on an occupied runway, unless the controller issues such a clearance. In all circumstances you as the pilot remain responsible for maintaining a safe separation from the aircraft ahead.

► Vacating the Runway

To avoid potential confusion with clearances to land or take-off, you should use the expression 'vacating' or 'vacated' as appropriate when taxiing off the runway.

RTF Overhead Join and Landing


-  Borton Tower, G-ABCD, overhead, joining for runway 20
-  G-ABCD, Borton Tower, report deadside descending, runway 20 QFE 997 millibars
-  Runway 20 QFE 997 millibars, wilco, G-ABCD
-  G-ABCD, deadside descending
-  G-CD, roger, report downwind
-  Wilco, G-CD
-  G-CD, downwind
-  G-CD, number 2, follow the Cherokee on base
-  Number 2, wilco, Cherokee in sight, G-CD
-  G-CD, final
-  G-CD, continue approach, vehicle crossing
-  Continue approach, G-CD
-  G-CD, runway 20 cleared to land, wind 265 7
-  Runway 20 cleared to land, G-CD
-  G-CD, taxi to the end, report runway vacated
-  Taxi to the end, wilco, G-CD
-  G-CD, runway vacated
-  G-CD, taxi to the flying club via taxiway Kilo
-  Taxi to the flying club via taxiway Kilo, G-CD




► Go Around Initiated by ATC

In order to avert an unsafe situation a controller may instruct you to carry out a 'go around' using the phraseology shown below. If operating under VFR, you should continue into the normal traffic circuit, unless instructed otherwise.

RTF Go Around initiated by ATC

 G-CD, go around, I say again, go around, acknowledge


 Going around, G-CD



► Go Around Initiated by the Pilot

In the event that you need to initiate a go around, you should use the phrase 'going around' as shown below.

RTF Go Around initiated by the Pilot

 G-CD, going around

 G-CD, roger





► Aerodrome with FISO on Duty

This section provides examples of the RTF typically used by a pilot arriving at an aerodrome with a FISO on duty. A FISO issues instructions to aircraft on the ground and provides information for the safe conduct of aerodrome traffic on the runway and within an Aerodrome Traffic Zone (ATZ).


► Joining Information


FISOs provide joining information, not instructions, and you should position your aircraft accordingly.

► Landing

'Land at your discretion' is not a clearance to land. Your response should be 'landing' or 'going around'.

RTF Left Base Join and Landing


 Walden Information, G-ABCD, request join

 G-ABCD, Walden Information, pass your message

 G-ABCD, T67 inbound from Seaton, 6 miles south east, descending to height 1000 feet for landing

 G-CD, runway 27, QFE 986 millibars, 1 aircraft in circuit


 Runway 27, QFE 986 millibars, G-CD


 G-CD, joining left base


 G-CD, roger

 G-CD, final

 G-CD, land at your discretion, surface wind 270 10 knots

 G-CD, roger, landing

 G-CD, after the Cessna 172 taxiing right to left, taxi to the aero club via taxiway Charlie

 After the Cessna 172, taxi to the aero club via taxiway Charlie, G-CD



► Aerodrome with Air/Ground Communication Service (AGCS)

This section provides examples of the RTF typically used by a pilot arriving at an aerodrome with an AGCS Operator on duty. An AGCS Operator may only provide information. However, in addition to aerodrome and traffic information, an AGCS Operator may relay instructions or clearances given by a controller, or relay a 'message from the Aerodrome Authority'.

► Taxiing and Parking

At an aerodrome with an AGCS taxiing and parking is the responsibility of the pilot. The AGCS Operator may not give taxi instructions, but may suggest a suitable parking location if you request it as shown below.



RTF Crosswind Join and Landing

-  Seaton Radio, G-ABCD, 6 miles west of Seaton, request join
-  G-ABCD, Seaton runway 05 right hand, QFE 986 millibars. Traffic is a Cessna 152 reported final
-  Roger, runway 05 right hand, QFE 986 millibars, G-ABCD
-  G-ABCD, joining crosswind
-  G-CD, roger, no reported traffic
-  G-CD, downwind
-  G-CD, roger, no reported traffic
-  G-CD, final
-  G-CD, surface wind 060 15. Traffic is a PA 28 reported lined up to depart
-  Roger, G-CD
-  G-CD, vacating left and taxiing to the flying club
-  G-CD, roger
-  G-CD, is there a convenient parking space?
-  G-CD, parking space available next to the blue Cessna 152

▶ Play

7 Unattended Aerodromes

► Operations outside the hours of ATS

At some UK aerodromes, operations may take place outside the promulgated hours of watch of the air traffic service. To improve safety, you should broadcast information on your intentions to other aircraft that may be operating on, or in the vicinity of the aerodrome, using the aerodrome's allocated frequency and the suffix 'Traffic'.

SAFETYCOM


At aerodromes where no other frequency is allocated, a common frequency known as 'SAFETYCOM' is made available to enable you to broadcast your intentions to other aircraft that may be operating on or in the vicinity of the aerodrome.

► Use of SAFETYCOM


SAFETYCOM is not an air traffic service and there is **no** associated aeronautical ground station. SAFETYCOM is a single common frequency and you should be aware of the possibility of congestion and breakthrough. You should always include the name of the aerodrome in your transmissions.

You should only make SAFETYCOM transmissions when you are not more than 2000 feet above aerodrome level, or not more than 1000 feet above the promulgated circuit height, if applicable, and within 10 nm of the aerodrome of intended landing.

RTF Taxiing and departure

 Easton Traffic, G-ABCD, taxiing for runway 09


Note: this transmission is optional and may be advisable at aerodromes where the view from an aircraft either in the air or on the ground may be restricted.

 Easton Traffic, G-ABCD, lining up for departure runway 09


▶ Play

RTF Arrival


 Easton Traffic, G-ABCD, 10 miles southwest joining overhead


 Easton Traffic, G-ABCD, overhead, joining for runway 09

Note: this transmission is optional and may be advisable depending on other traffic in the vicinity.


 Easton Traffic, G-ABCD, deadside descending runway 09

Note: this transmission is optional and may be advisable depending on other traffic in the vicinity.

 Easton Traffic, G-ABCD, downwind runway 09

 Easton Traffic, G-ABCD, base leg runway 09

Note: this transmission is optional and may be advisable depending on other traffic in the vicinity.

 Easton Traffic, G-ABCD, final runway 09

▶ Play



8 Instrument Approach Phraseology

This section provides examples of the RTF for various non-precision instrument approach procedures. Phraseology for ILS procedures can be found in CAP 413 and the associated Quick Reference Guide to UK Phraseology for Commercial Air Transport Pilots, available on the CAA website.

The following diagrams show where pilots should make RTF calls during a non-precision approach. Pages 42 and 43 show the RTF typically used during a NDB(L) or NDB/DME Approach.

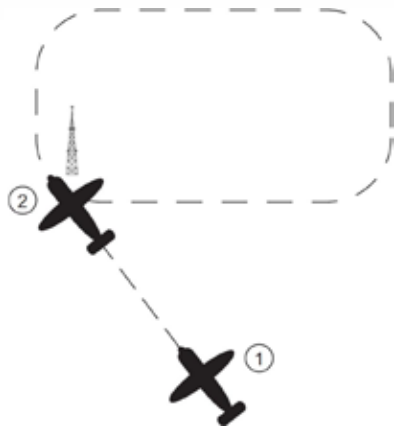


Figure 1: Join and Hold

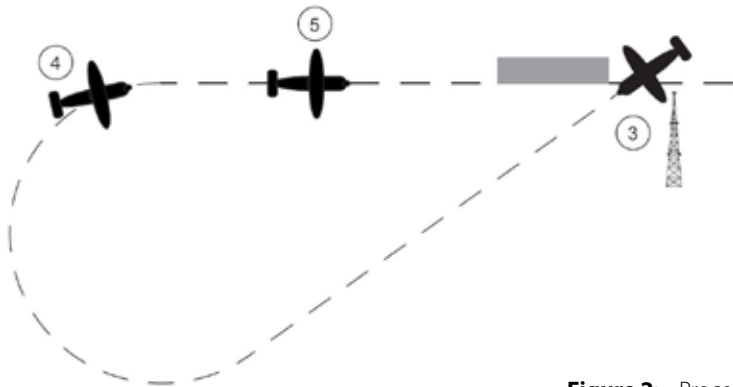


Figure 2: Procedure

► RTF for a Non-precision Approach

Position 1: Pilot transmits callsign, aircraft type, position, flight level, flight conditions, estimate for the beacon and requests type of approach required.

Position 2: When overhead the beacon, pilot reports '*Callsign, entering the hold, maintaining (altitude/flight level)*'.

Position 3: Pilot reports '*Callsign, beacon outbound*' (in Figure 2 when overhead the beacon).

Position 4: Pilot reports '*Callsign, base turn complete*'.

Position 5: Pilot reports '*Callsign, 4 DME*' (or other position as required).

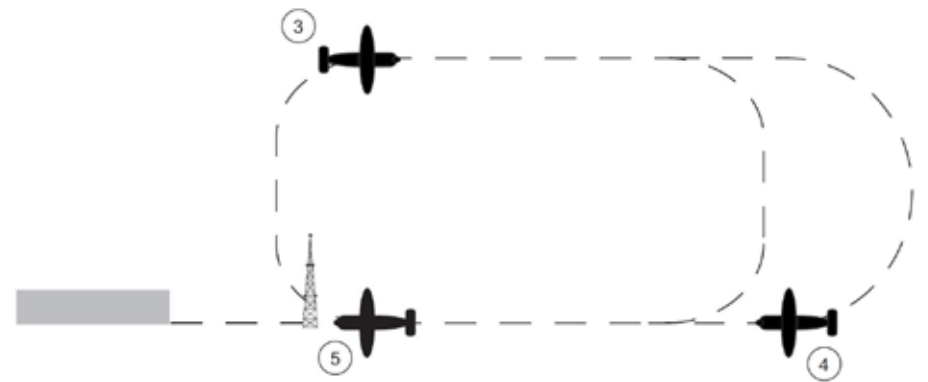




Figure 3: Alternative Procedure


► NDB(L) or NDB/DME Approach


This section shows the RTF typically used during a NDB(L) or NDB/DME approach. Similar RTF phraseology may be used during VOR approach procedures.

RTF NDB/DME Approach


 Borton Approach, G-ABCD, inbound Borton, information Echo


 G-ABCD, Borton Approach, pass your message

 G-ABCD, PA34, 20 miles south of Borton, FL80 IFR estimating BTN 47, request one hold and NDB/DME approach


 G-CD, cleared to BTN FL80 to hold, expect NDB/DME approach runway 34

 Cleared to BTN FL80 to hold, wilco, G-CD

 G-CD, descend to altitude 3000 feet Borton QNH 1015, report entering the hold


 Descend to altitude 3000 feet Borton QNH 1015, wilco, G-CD


Note: these procedures are normally flown using QNH. If you wish to fly on QFE, you should request it.

 G-CD, entering the hold, maintaining altitude 3000 feet


 G-CD, roger report ready to commence the approach


 Wilco, G-CD


 Ready to commence the approach, G-CD

 G-CD, cleared NDB/DME approach runway 34, report beacon outbound

Note: unless instructed to the contrary or carrying out a direct entry, clearance for a procedure means that the pilot should continue round the holding pattern to the beacon (holding point for most VOR/DME approaches) then descend in accordance with the published altitudes of the instrument approach procedure.


 Cleared for NDB/DME approach runway 34, wilco, G-CD

 G-CD beacon outbound

 G-CD, report base turn complete


 Wilco, G-CD

 G-CD, base turn complete

 G-CD, report at 4 DME

 Wilco, G-CD

 G-CD, 4 DME

 G-CD, roger, contact Borton Tower 118.7

 Borton Tower 118.7, G-CD



► Training


When you are flying the procedure for training purposes, keeping the controller informed about future intentions helps with forward planning. When requesting the type of approach, you should indicate that you are training and whether you intend to go-around or land.


For example, you would transmit: "G-ABCD, PA34, 20 miles west of Borton, FL80, IFR, estimating BTN 47, request join the hold for training and NDB/DME approach to go around".


It also helps the controller to plan ahead if, immediately after commencing the final training pattern, you advise the controller of your intentions by transmitting 'Ready to commence the approach'.

At a suitable moment the controller will ask what your intentions are, allowing you to provide more information, as shown in the example below. If you intend to depart IFR, you should include your planned level, as the controller will need to know this.

RTF Training

 G-CD, request your intentions?

 G-CD, request low approach and go-around, departing direct Colinton FL50








► RNAV GNSS Approach Procedures


Pilot-interpreted RNAV GNSS instrument approach procedures are available for use by suitably equipped aircraft at certain UK aerodromes. This section shows examples of the RTF for a GNSS approach.


RTF RNAV GNSS Approach


 Borton Approach, G-ABCD, inbound Borton, information Mike


 G-ABCD, Borton Approach, pass your message


 G-ABCD, PA34, 20 miles south of Borton, FL50 IFR, request RNAV approach via BEMBO, runway 27


 G-CD, cleared RNAV approach runway 27, report at BEMBO, QNH 1011


 Cleared RNAV approach runway 27, QNH 1011, wilco, G-CD


 G-CD, overhead BEMBO


 G-CD, roger, report established on final approach track

 Wilco, G-CD

 G-CD, established on final approach track

 G-CD, roger, contact Borton Tower 118.5

 Borton Tower 118.5, G-CD







▶ Reporting GNSS Problems

Should you receive a Receiver Autonomous Integrity Monitoring (RAIM) alert, you should inform the controller of the alert and state your intentions. If controllers are aware of problems with the GNSS system, they will notify you, adding any further information when known.

RTF Reporting GNSS Problems

 G-CD, unable RNAV, loss of RAIM, request NDB approach

or

 G-CD, RAIM alert, going around

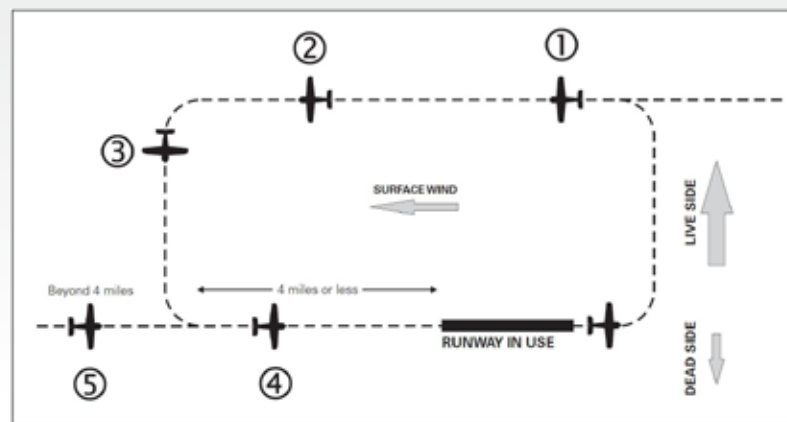


Figure 1: Designated positions in the traffic circuit

▶ RTF for Typical Left-Hand Circuit

Position 1: Pilot reports on *'Downwind'* leg with intentions if not planning to land from the approach.

Position 2: Pilot reports *'Late downwind'* if he is on the downwind leg, has been unable to report *'Downwind'* and has passed the downwind end of the runway.

Position 3: Pilot reports *'Base'* leg (if required).

Position 4: Pilot reports *'Final'*. Clearance to land issued here.

Position 5: Pilot reports *'Long final'* (between 4 and 8 miles) when aircraft is on a straight in approach.

Note: For light aircraft operations, circuit dimensions may be adjusted but the relative RTF reporting points are maintained.



Emergency Messages

To assist controllers in providing maximum assistance, the emergency message should contain as much of the following information as possible, ideally in the order given:

- a) 'MAYDAY/MAYDAY/MAYDAY' (or 'PAN PAN/PAN PAN/PAN PAN');
- b) Name of the station addressed (when appropriate and time and circumstances permitting);
- c) Callsign;
- d) Type of aircraft;
- e) Nature of the emergency;
- f) Intention of the person-in-command;
- g) Present or last known position, flight level/altitude and heading;
- h) Pilot qualifications (to be included whenever possible) Student pilot/No Instrument Qualification/IMC Rating/Instrument Rating.
- i) Any other useful information, e.g. endurance remaining, number of people on board (POB) etc.

Enquiries regarding the content of this publication should be addressed to:

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Safety Regulation Group
Civil Aviation Authority
Aviation House
Gatwick Airport South
West Sussex RH6 0YR
ats.enquiries@caa.co.uk

An interactive version of this document is available as CAP 413 Supplement 3 in electronic format at www.caa.co.uk

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