

COMMUNICATIONS PPL

The actual CAA paper consists of thirty questions with a multiple choice of four answers A, B, C or D. The candidate should indicate the chosen answer by placing a cross in the appropriate box on the paper provided. Time allowed 40 minutes.

The pass mark is 75% so twenty three questions must be answered correctly to obtain a pass. Marks are not deducted for incorrect answers.

The explanation section follows the questions section and each explanation is prefixed COM (Communications Explanation).

COMMUNICATIONS - QUESTIONS

- Q1 The automated terminal information service providing airfield information together with meteorological data is provided by:
- A - AFIS.
 - B - FIS.
 - C - ATIS.
 - D - AUTIS.
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- Q2 What is the meaning of the word 'ROGER'?
- A - I have received all your last transmission.
 - B - Last transmission understood.
 - C - Your message will be complied with.
 - D - Received and understood.
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- Q3 'Readability 3' means:
- A - readable occasionally.
 - B - unreadable.
 - C - completely unreadable.
 - D - readable but with difficulty.
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- Q4 The call-sign 'AVIA G-BCED' should be abbreviated as:
- A - Avia Golf Echo Delta.
 - B - AVIA Echo Delta.
 - C - Golf Echo Delta.
 - D - Bravo Charlie Echo Delta.
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- Q5 An aircraft commander may only use an abbreviated call-sign:
- A - if the ground station addresses the flight in that manner.
 - B - if the abbreviated call-sign was agreed prior to commencement of the flight.
 - C - if satisfactory two-way communication has been established and no confusion may arise from its use.
 - D - only if the pilot requests the abbreviated call-sign.
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- Q6 What Secondary Surveillance Radar (SSR) code on modes 'A' or 'C' should be used by an aircraft in the event of two-way radio failure?
- A - 7500.
 - B - 7600.
 - C - 7700.
 - D - 7000.
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- Q7 'Readability 4' means:
- A - your message is readable but with difficulty.
 - B - your message is readable but with background interference.
 - C - your message is perfectly readable and understood.
 - D - your message is readable.
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- Q8 'Readability 5' means:
- A - readable occasionally.
 - B - perfectly readable.
 - C - readable with background interference.
 - D - two-way radio communication is perfect.
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- Q9 'OUT' at the end of an RT transmission means:
- A - I am changing to another frequency.
 - B - standby for a response.
 - C - no further response is expected.
 - D - I am turning my radio set off.

- Q10 The instruction 'ORBIT LEFT' means:
- A - turn left to avoid conflicting traffic.
 - B - standard left hand circuit.
 - C - expedite a collision avoidance turn to the left utilising at least 45° angle of bank.
 - D - make a 360° turn to the left.
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- Q11 The altitude 1700ft is transmitted:
- A - one seven zero zero feet.
 - B - one thousand seven hundred feet.
 - C - one seven hundred feet.
 - D - seventeen hundred feet.
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- Q12 An aerodrome located at ASHDOWN having an AIR/ GROUND frequency is identified by the call-sign ?
- A - ASHDOWN TOWER.
 - B - ASHDOWN INFORMATION.
 - C - ASHDOWN AERODROME.
 - D - ASHDOWN RADIO.
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- Q13 The definition of a broadcast is:
- A - a transmission of weather information affecting the safe conduct of the flight addressed to a specific aircraft in IMC that is in receipt of a Flight Information Service.
 - B - a transmission addressed to a specific aircraft in receipt of Flight Information Service relating to navigation information affecting the safe conduct of the flight.
 - C - a transmission of air navigation information not addressed to a specific flight.
 - D - a transmission not addressed to a specific aircraft in receipt of Flight Information Service concerning general information not affecting the safe conduct of the flight.
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- Q14 The emergency frequency that should be used for the first transmission of a MAY DAY is:
- A - the ATCU frequency either civil or military in use at the time maintaining the allocated SSR code.
 - B - the regional emergency frequency.
 - C - 121.50.
 - D - The nearest operational MATZ.
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- Q15 In respect of a transponder, the meaning of the phrase 'Squawk Charlie' transmitted by an ATCU is:
- A - press and release the ident button.
 - B - recycle the mode selector.
 - C - set the mode selector to 'ON'.
 - D - turn the transponder mode selector to 'ALT'
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- Q16 The definition of an aeronautical station is:
- A - a land station in the aeronautical mobile service. In certain instances, an aeronautical station may be placed on board a ship or an earth satellite.
 - B - a VHF communication service existing for the purpose of relaying information between the surface and aircraft and aircraft to the surface.
 - C - a mobile airborne VHF transmitter/ receiver facility or a mobile seaborne transmitter/receiver facility forming part of the aeronautical telecommunications service.
 - D - a fixed land based VHF transmitter/ receiver facility forming part of the aeronautical telecommunications service.
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- Q17 If any person transmitting a message makes an error, that person should:
- A - stop speaking, then transmit 'I say again', followed by the correct message.
 - B - transmit 'correction', followed by the last group or phrase that was correctly transmitted, followed by the corrected version to be transmitted.
 - C - use the phrase 'I say again', repeat the last incorrect word or phrase and then the corrected version of the message.
 - D - use the phrase 'repeat', then repeat the last correct word or phrase and then continue with the corrected message.
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- Q18 The meaning of 'STANDBY' is:
- A - if you change frequency, return to this frequency periodically to monitor my transmissions.
 - B - I am having difficulty reading you, select this frequency on your standby VHF set.
 - C - wait and I will call you.
 - D - standby as I am busy with other tasks.

- Q19 A time of 1030 UTC is transmitted as:
A - 'TEN THIRTY UTC'.
B - 'WUN ZERO THIRTY'.
C - 'WUN ZERO TREE ZERO'.
D - 'TEN TREE ZERO'.
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- Q20 The definition of 'Urgency' is:
A - a serious situation but one where immediate assistance is not required.
B - a condition where the safety of an aircraft or other vehicle, or of some person on board or within sight requires immediate assistance.
C - a serious situation where immediate assistance is required.
D - a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but does not require immediate assistance.
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- Q21 The correct maximum abbreviation for the full call-sign 'SKYLARK GGBBA' is:
A - 'GOLF BRAVO ALPHA'.
B - 'SKYLARK BRAVO ALPHA'.
C - 'GOLF GOLF ALPHA'.
D - 'SKYLARK GOLF ALPHA BRAVO'.
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- Q22 A height of 3700ft is transmitted as:
A - 'THREE THOUSAND SEVEN HUNDRED'.
B - 'THIRTY SEVEN ZERO ZERO'.
C - 'THIRTY SEVEN HUNDRED'.
D - 'TREE SEVEN ZERO ZERO'.
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- Q23 A Pilot hearing the transmission 'ALL STATIONS':
A - should not reply unless subsequently asked to acknowledge receipt.
B - should transmit her/ his call-sign in reply.
C - should acknowledge receipt of the broadcast by transmitting 'ROGER'.
D - should transmit 'ROGER AND OUT' when acknowledging a broadcast.
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- Q24 'SQUAWK 1244' means:
A - select the code 1244 on your SSR transponder.
B - go to Squawk on 124.4 MHz, they have your details.
C - select Com 124.4 MHz and Squawk for ident.
D - select 1244 MHz on your SSR transponder.
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- Q25 Select the information group a pilot is required to read back.
A - The proximity of other aircraft, altimeter settings, meteorological information, taxi instructions.
B - Clearances to enter, land on, take-off on, back track, cross or hold short of active runways. Frequency changes, SSR codes, height, altitude or level instructions, and altimeter settings.
C - Altimeter settings, taxi instructions, take-off clearances, severe meteorological information together with any other information passed by ATC regarding safe conduct of a flight.
D - ATC RT readability, altimeter settings, departure clearance, taxi instructions and severe weather information.
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- Q26 When may the phrase 'TAKE-OFF' be used by a pilot?
A - Never: it is a phrase only ever used by a ground radio station or ATC.
B - Only when requesting an immediate departure.
C - Only when intending to take-off.
D - Only when acknowledging a take-off clearance.
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- Q27 An altitude of 12500ft should be reported as:
A - 'WUN TOO TOUSAND FIFE HUNDRED'.
B - 'WUN TOO FIFE HUNDRED'.
C - 'WUN TOO FIFE ZERO ZERO'.
D - 'TWELVE TOUSAND FIFE HUNDRED'.

- Q28 The elements of a position report transmitted in the correct order are:
- A - call-sign, position, heading, level, time, ETA next position.
 - B - call-sign, position, time, level, the next position and ETA.
 - C - call-sign, position, heading, level, conditions, ETA next position.
 - D - call-sign, position, time, heading, conditions, ETA next position.
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- Q29 The correct transmission and pronunciation of the RTF frequency 125.875MHz would be:
- A - 125.875 spoken as 'WUN HUNDRED AND TWENTY FIVE DAYSEEMAL AIT SEVEN FIFE'.
 - B - 125.875 spoken as 'WUN TOO FIFE DAYSEEMAL AIT SEVEN FIFE'.
 - C - 125.87 spoken as 'WUN HUNDRED AND TWENTY FIVE DAYSEEMAL AIT SEVEN'.
 - D - 125.87 spoken as 'WUN TOO FIFE DAYSEEMAL AIT SEVEN'.
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- Q30 'VACATE LEFT' means:
- A - immediately clear the runway.
 - B - the next runway exit is on the left.
 - C - turn left to vacate the runway.
 - D - expedite an exit at the next available left turn off.
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- Q31 The meaning of the ATC instruction 'GO AROUND' is:
- A - make a 360° standard turn to allow traffic ahead to clear the runway.
 - B - go around the aircraft ahead on the manoeuvring area provided wing tip clearance is adequate.
 - C - do not descend below 50ft agl.
 - D - execute a missed approach.
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- Q32 An aircraft commander wishing to file an airborne flight plan should do so via:
- A - the LARS giving a service at that time.
 - B - the published FIR frequency for the area in which the aircraft is located.
 - C - the nearest ATCU.
 - D - any air/ ground station providing a two-way radio communication service.
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- Q33 Which of the following multi-choice answers is the correct RTF terminology for YES?
- A - 'WILCO'.
 - B - 'ROGER'.
 - C - 'AFFIRM'.
 - D - 'WILLDO'.
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- Q34 The meaning of a 'blind transmission' is:
- A - a transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.
 - B - an aircraft in instrument meteorological conditions transmitting for a QDM to establish on a final approach to make a visual landing.
 - C - a transmission of information relating to the safety of air navigation to any station maintaining a listening watch on that frequency.
 - D - a transmission of information relating to the safety of air navigation by any aircraft in IMC unable to comply with the Visual Flight Rules (VFR).
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- Q35 In relation to SSR transponder, 'SQUAWK IDENT' means:
- A - set the SSR code given on mode 'A' or 'C' as instructed.
 - B - operate the special position identification button on the transponder.
 - C - set the SSR code and transmit your call-sign.
 - D - set the SSR code and transmit your position.
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- Q36 'NO' in RTF terminology is transmitted as:
- A - 'NO'.
 - B - 'DISREGARD'.
 - C - 'UNABLE COMPLY'.
 - D - 'NEGATIVE'.

- Q37 When reading back an ATC instruction, the message should be concluded with:
- A - the call-sign of the ground station that transmitted the instruction.
 - B - the aircraft call-sign.
 - C - the phrase 'WILL COMPLY'.
 - D - the phrase 'OVER'.
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- Q38 What is the meaning of 'VERIFY'?
- A - The message received is readable with difficulty.
 - B - Check and confirm.
 - C - Read back my last message.
 - D - Make sure the content of your last transmission makes sense.
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- Q39 What details should be passed to an Air Traffic Control Unit by an aircraft in flight when requesting a Special VFR clearance?
- A - call-sign, type, position, heading, level, ETA at the entry point.
 - B - call-sign, altitude, heading, ETA at the entry point and final destination.
 - C - call-sign, type, intentions, level, heading and ETA at the entry point.
 - D - call-sign, type, intentions and ETA at the entry point.
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- Q40 Approaching a MATZ, two-way radio communication should be established with the MATZ controller when within a particular distance or time from the zone boundary. The distance and time are:
- A - 15nm or 5 minutes whichever is greater.
 - B - 10nm or 10minutes whichever is greater.
 - C - 5nm or 5minutes whichever is greater.
 - D - 10nm or 5minutes whichever is greater.
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- Q41 An in-flight request to cross the base of an airway should include details of:
- A - identification, TAS, magnetic heading, place and estimated time of crossing and desired crossing level.
 - B - identification, type, place and estimated time of crossing, present position and intended destination.
 - C - call-sign, type, position, heading, level, flight conditions together with the position, level and estimated time of crossing.
 - D - call-sign, type, point of departure, flight conditions, place and estimated time of crossing, and intended destination.
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- Q42 During a straight in approach to an airfield that involves being established on a long final leg, an aircraft commander must report both **long final** and **final** at which of the following distances from the runway threshold?
- | | Long Final | Final |
|-----|------------|-------|
| A - | 2nm | 1nm |
| B - | 4nm | 2nm |
| C - | 6nm | 3nm |
| D - | 8nm | 4nm |
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- Q43 A pilot who receives an ATC instruction which cannot be carried out should transmit:
- A - 'UNABLE COMPLY'.
 - B - 'CANNOT COMPLY'.
 - C - 'WILL NOT COMPLY'.
 - D - 'STAND BY'.
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- Q44 A pilot transmitting for direction finding (DF) should end the transmission with:
- A - 'WILL COMPLY'.
 - B - the aircraft call-sign.
 - C - the call-sign of the DF station.
 - D - QDM, QDM, QDM.
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- Q45 The accuracy of a Class 'B' VDF bearing is:
- A - $\pm 10^\circ$.
 - B - $\pm 2^\circ$.
 - C - $\pm 15^\circ$.
 - D - $\pm 5^\circ$.

- Q46 The accuracy of a Class 'A' VDF bearing is:
- A - $\pm 2^\circ$.
 - B - $\pm 5^\circ$.
 - C - $\pm 10^\circ$.
 - D - $\pm 3^\circ$.
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- Q47 The purpose of a request by ATC to the commander of an aircraft whose transponder is selected to ALT to 'confirm your level' would be:
- A - to verify the aircraft's position.
 - B - verify the altimeter sub-scale setting.
 - C - check the accuracy of the Mode 'C' Flight Level displayed on the controller's radar plot.
 - D - verify the transponder is working.
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- Q48 When is the phrase 'TAKE-OFF' used by a pilot?
- A - To request take-off when the aircraft is at the holding point.
 - B - To request take-off when the aircraft is lined up on the runway.
 - C - Only when the aircraft is cleared to take-off.
 - D - Only after the aircraft has entered the runway.
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- Q49 When a pilot hears a distress message s/ he should:
- A - immediately acknowledge the message and offer to relay messages if required.
 - B - change to another frequency as radio silence will be imposed on that frequency.
 - C - request another frequency from ATC due to the emergency RT traffic on that frequency.
 - D - maintain radio silence but monitor that frequency to ensure assistance is provided.
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- Q50 A call-sign that is prefixed 'TYRO' means:
- A - the pilot in distress lacks experience.
 - B - the following transmission is a practice emergency.
 - C - the aircraft is experiencing difficulty but not in need of immediate assistance.
 - D - the pilot of the aircraft in distress intends to ditch.
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- Q51 The emergency frequency 121.5:
- A - may be used to practise emergency procedures including simulated urgency or distress situations.
 - B - may be used to practise emergency procedures including simulated urgency but not distress situations.
 - C - may not be used to practise emergency procedures.
 - D - may be used to practise distress situations but not urgency procedures.
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- Q52 The abbreviation of an aircraft call-sign by a pilot is only permissible:
- A - after two-way communication with the ground station has been established.
 - B - when it is established that confusion will not occur due to other aircraft having similar call-sign using the same frequency.
 - C - after it has been abbreviated by the aeronautical ground station on the frequency in use.
 - D - after it has been agreed by the pilot and controller in two-way radio communication.
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- Q53 A pilot in two-way communication with an aerodrome whose call-sign suffix is either 'Radio' or 'Information' should respond to a call 'G-BGGA, take-off at your discretion, no known traffic to affect your departure.'
- A - 'Clear for take-off at my discretion, G-BGGA.'
 - B - 'Clear for take-off, G-BGGA.'
 - C - 'G-BGGA.' or 'taking off G-BGGA'
 - D - 'take-off at my discretion, G-BGGA.'
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- Q54 You are instructed to join an airfield overhead at 2000ft and report descending to circuit height. At the point of commencing your descent to circuit height, which of the following messages should be transmitted.
- A - GGA descending dead side.
 - B - GGA descending downwind.
 - C - GGA descending upwind.
 - D - GGA descending live side.

- Q55 A controller requested to provide a Lower Airspace Radar Service (LARS) will require to know:
- A - Call-sign, A/C type, estimated position, airspeed, level, intentions, type of service required.
 - B - Call-sign, A/C type, estimated position, heading, level, intentions, type of service required.
 - C - Call-sign, A/C type, estimated position, destination, airspeed, level, type of service required.
 - D - Call-sign, A/C type, estimated position, track, level, type of service required.
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- Q56 The meaning of the word 'CORRECT' is:
- A - read back my last instruction correctly.
 - B - that is correct.
 - C - the phrase or message following the last correct part of my transmission is correct.
 - D - you will correct your last instruction.
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- Q57 An initial free call to an ATCU should comprise:
- A - call-sign, destination and type of service required.
 - B - call-sign, aircraft type, heading level, destination and ETA next waypoint and type of service required.
 - C - call-sign, and the type of service required.
 - D - call-sign, point of departure and destination.
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- Q58 When all pre-departure checks are complete, and you are ready to advance beyond the holding point and line up on the active runway, you inform ATC by using the RTF call:
- A - 'Ready for take-off'.
 - B - 'Ready for departure'.
 - C - 'Ready at the hold'.
 - D - 'Ready to line up'.
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- Q59 'DISREGARD' means:
- A - disregard the last part of my last message.
 - B - consider that transmission as not sent.
 - C - disregard unverified information.
 - D - the last message was inappropriate and will be replaced.
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- Q60 What are the three main categories provided by the aeronautical communications service?
- A - Tower, Approach and Radar.
 - B - LARS, Information, and Approach.
 - C - ATC, Information, and Approach.
 - D - ATC, AFIS and aerodrome air /ground (A/G) communication service.
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- Q61 The two categories of emergency message are:
- A - PAN and MAYDAY.
 - B - Urgent and Emergency.
 - C - Emergency and Distress.
 - D - Urgency and Distress.
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- Q62 An example of a conditional clearance passed to an aircraft is:
- A - Goldwing 759 after the landing aircraft line-up runway 23.
 - B - GGP take-off at your discretion.
 - C - GGA you are number 3 in traffic, report final.
 - D - GGA exit left after passing the intersection on your right.
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- Q63 A Special VFR (SVFR) clearance is:
- A - passed to a flight experiencing difficulty to enter controlled airspace when IMC prevail.
 - B - passed for flight in controlled airspace only when VMC prevail.
 - C - passed to a flight to either enter or depart controlled airspace when that flight is unable to comply with IFR providing that specified minimum weather provisions are complied with.
 - D - passed for flight in controlled airspace to an aircraft commander who does not hold a valid instrument rating.

- Q64 After initial contact with a MATZ controller, the commander of an aircraft requiring MATZ penetration, when asked to do so should pass:
- A - Call-sign, A/C type, position, ETA Matz boundary, heading, level and intentions.
 - B - Call-sign, A/C type, heading, level, and ETA Matz boundary.
 - C - Call-sign, A/C type, position, heading, altitude and intentions.
 - D - Call-sign, A/C type, heading and ETA Matz boundary.
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- Q65 A controller providing a Radar Information Service (RIS) will pass:
- A - both the bearing and distance of conflicting traffic together with its altitude if known but will not pass avoiding action.
 - B - bearing, range and altitude of conflicting traffic operating under visual flight rules together with avoiding action.
 - C - bearing, range and altitude of conflicting traffic operating under instrument flight rules but will not pass avoiding action.
 - D - bearing, range, altitude and speed of conflicting traffic operating under any flight rules together with avoiding action.
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- Q66 The abbreviation of a ground station call-sign by a pilot is only permissible:
- A - after two-way communication with the ground station has been established.
 - B - when satisfactory communication has been established and providing it will not be confusing, the name of the location or the call-sign suffix may be omitted.
 - C - after it has been abbreviated by the aircraft commander on the frequency in use.
 - D - after it has been agreed by the pilot and controller in two-way radio communication.
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- Q67 En-route, you are instructed to make a procedural position report, for instance at your next waypoint. The correct content and sequence of that report would be:
- A - call-sign, position, time, level, next position and ETA.
 - B - call-sign, position, ATA, and ETA next position.
 - C - call-sign, squawk code, position and ATA, level and ETA next position
 - D - call-sign, squawk code, ATA at the reporting point and level.
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- Q68 A conditional clearance consists of four specific elements. Which of the following represents the correct order in which those elements should be transmitted.
- A - call-sign, identification of the subject of the condition, the instruction, the condition.
 - B - call-sign, the condition, identification of the subject of the condition, the instruction.
 - C - call-sign, the instruction, the condition, identification of the subject of the condition.
 - D - call-sign, the instruction, identification of the subject of the condition, the condition.
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- Q69 Which of the following represents the correct order of priority of messages handled by the aeronautical mobile service.
- A - Meteorological, Flight Regularity, Distress, Direction Finding, Urgency, Flight Safety.
 - B - Flight Regularity, Distress, Direction Finding, Urgency, Flight Safety, Meteorological.
 - C - Distress, Urgency, Direction Finding, Flight Safety, Meteorological, Flight Regularity.
 - D - Distress, Direction Finding, Urgency, Flight Safety, Flight Regularity, Meteorological.
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- Q70 In the context of Search and Rescue, 'Distress phase' means:
- A - a flight requires the assistance of the emergency services.
 - B - a 'Pan Pan' call has been transmitted.
 - C - there is apprehension concerning the safety of an aeroplane and its occupants and possible immediate assistance is required.
 - D - an aircraft and its occupants are threatened by grave and imminent danger and of requiring immediate assistance.
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- Q71 The correct prefix of an emergency transmission is either 'May Day' or 'Pan' which should be transmitted _____ prior to the 'urgency' or 'distress' message.
- A - once.
 - B - twice.
 - C - three times.
 - D - twice when using 'Pan' and three times when using 'May Day'
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- Q72 Following the May Day prefix of a distress message the next transmitted element should be:
- A - the call-sign of the station being addressed if known and circumstances permitting.
 - B - the aircraft call-sign.
 - C - the nature of the emergency.
 - D - number of persons on board.

- Q73 Following the May Day call, the content and correct sequence of a distress message and the call-sign of the station being addressed, the remaining message should be:
- A - nature of emergency, aircraft call-sign, aircraft type, pilot's intentions, present or last known position, level and heading.
 - B - the aircraft call-sign, nature of emergency, aircraft type, pilot's intentions, pilot qualifications, number of souls on board.
 - C - aircraft type, pilot's intentions, present or last known position, level and heading, the nature of the emergency.
 - D - aircraft call-sign, aircraft type, nature of emergency, pilot's intentions, present or last known position, level and heading.
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- Q74 One element of a distress message is that the pilot should transmit the aircraft position in the context of:
- A - a direction finding heading and range to the direction finding station.
 - B - present or last known position, level and heading.
 - C - the last position passed by the secondary surveillance radar operator.
 - D - time and course followed from the last positive position fix.
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- Q75 When flying through a Military Aerodrome Traffic Zone (MATZ), vertical separation between aircraft within the MATZ is achieved by all aircraft using the same altimeter sub-scale setting, which is:
- A - 1013.2hpa so that all traffic may use different flight levels.
 - B - The military aerodrome QNH with vertical position reported as *altitude*.
 - C - The military aerodrome QFE with vertical position reported as *height*.
 - D - The military aerodrome standard pressure setting with vertical position reported as *level*.
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- Q76 An aerodrome located at Blackwood has an Aerodrome Flight Information Service which is identified by the call-sign:
- A - Blackwood Traffic.
 - B - Blackwood Radio.
 - C - Blackwood Information.
 - D - Blackwood ATIS.
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- Q77 The commander of aircraft G-BGGA wishing to obtain a 'true bearing' from a VDF station to be plotted directly on a chart should use the following RT protocol.
- A - _____ QDR, QDR, G-BGGA requests QDR, G-BGGA.
 - B - _____ true bearing, true bearing, G-BGGA requests true bearing, G-BGGA.
 - C - _____ QTE, QTE, G-BGGA requests QTE, G-BGGA.
 - D - _____ QDM, QDM, G-BGGA requests QDM, G-BGGA.
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- Q78 There are Secondary Surveillance Radar (SSR) transponder codes designated for emergency use (and with mode 'C' if available). Which of these codes should be used for (i) emergency and (ii) radio failure?
- | | (i) | and | (ii) |
|-----|------|-----|-------|
| A - | 7700 | | 7600. |
| B - | 7700 | | 7500. |
| C - | 7600 | | 7700. |
| D - | 7600 | | 7500. |
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- Q79 Consider the following ATC message:
G-BGGP after departure, you are cleared to leave the zone via Long Eaton not above 2000ft squawk 3714.
 This may be described as:
- A - a conditional clearance.
 - B - a take-off clearance.
 - C - a zone clearance.
 - D - an ATC route clearance.
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- Q80 In respect of the above question, what is the clearance limit.
- A - 2000ft.
 - B - The zone boundary.
 - C - Long Eaton.
 - D - There is no limit to such a clearance..

- Q81 During a straight in approach to an airfield that involves being established on a long final leg, an aircraft commander must report both long final and final within which of the following ranges from the runway threshold?

	Long Final within	Final within
A -	8nm	4nm
B -	10nm	3nm
C -	6nm	5nm
D -	8nm	5nm

- Q82 Aerodrome Flight Information Service (AFIS) provides:
- A - the equivalent of a Tower and Approach service at small fields.
 - B - information in plain language for the safe efficient conduct of flights in the ATZ, but cannot give instructions or advice.
 - C - weather and traffic density information service for VFR traffic only.
 - D - information in plain language for the safe efficient conduct of flights in the ATZ together with discretionary advice.

- Q83 Within UK airspace, a clearance to descend to a HEIGHT should include:

- A - the regional pressure setting.
- B - the standard pressure setting.
- C - QNH.
- D - QFE.

- Q84 Which of the multi-choice answers represents the correct protocol to be used when the commander of aircraft G-BGGA wishes to obtain a 'magnetic bearing' of her/ his aircraft FROM a VDF station?

- A - Birmingham Approach QTE, QTE, G-BGGA requests QTE, G-BGGA.
- B - Birmingham Approach QDR, QDR, G-BGGA requests QDR, G-BGGA.
- C - Birmingham Approach QUJ, QUJ, G-BGGA requests QUJ, G-BGGA.
- D - Birmingham Approach QDM, QDM, G-BGGA requests QDM, G-BGGA.

- Q85 Which of the multi-choice answers is an abbreviation meaning I understand your message and will comply with it?

- A - 'WILCO'.
- B - 'ROGER'.
- C - 'AFFIRM'.
- D - 'WILLDO'.

- Q86 A clearance to climb or descend should:

- A - include the QFE or QNH followed by either **HEIGHT** or **ALTITUDE** as appropriate.
- B - exclude the word '**TO**' but include either **HEIGHT** or **ALTITUDE** followed by the QFE or QNH as appropriate.
- C - include the word '**TO**' followed by either **HEIGHT** or **ALTITUDE** followed by the QFE or QNH as appropriate.
- D - begin with the altimeter sub-scale setting in hectopascals, the word '**TO**' followed by **HEIGHT** or **ALTITUDE** as appropriate.

- Q87 The commander of aircraft G-BGGA wishing to obtain a 'magnetic bearing' of a VDF station from her/ his aircraft should use which of the following?

- A - Birmingham Approach QTE, QTE, G-BGGA requests QTE, G-BGGA.
- B - Birmingham Approach QDR, QDR, G-BGGA requests QDR, G-BGGA.
- C - Birmingham Approach QUJ, QUJ, G-BGGA requests QUJ, G-BGGA.
- D - Birmingham Approach QDM, QDM, G-BGGA requests QDM, G-BGGA.

- Q88 A controller providing both the bearing and distance of conflicting traffic together with its altitude if known but will not pass avoiding action is providing which service?

- A - RIS
- B - FIS
- C - VDF
- D - RAS

- Q89 Conditional clearances with respect to active runways are only passed when:

- A - the clearance relates to one movement and the aircraft and vehicles concerned are seen by both the controller and pilot.
- B - actual conditions are CAVOK or better and the vehicles and/ or aircraft involved are visible to the controller.
- C - aircraft require to either enter or depart and active runway.
- D - the clearance relates to the in flight movement of aircraft either landing on or departing from that runway.

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**COMMUNICATIONS
PRACTISE ANSWER SHEET**

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
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11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

	A	B	C	D
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35				
36				
37				
38				
39				
40				
41				
42				
43				
44				

	A	B	C	D
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46				
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	A	B	C	D
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87				
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89				

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COMMUNICATIONS ANSWERS

	A	B	C	D
1			X	
2	X			
3				X
4		X		
5	X			
6		X		
7				X
8		X		
9			X	
10				X
11		X		
12				X
13			X	
14	X			
15				X
16	X			
17		X		
18			X	
19			X	
20				X
21		X		
22	X			

	A	B	C	D
23	X			
24	X			
25		X		
26				X
27	X			
28		X		
29				X
30			X	
31				X
32		X		
33			X	
34	X			
35		X		
36				X
37		X		
38		X		
39				X
40	X			
41			X	
42				X
43	X			
44		X		

	A	B	C	D
45				X
46	X			
47			X	
48			X	
49				X
50	X			
51		X		
52			X	
53			X	
54	X			
55		X		
56		X		
57			X	
58		X		
59		X		
60				X
61				X
62	X			
63			X	
64			X	
65	X			
66		X		

	A	B	C	D
67	X			
68		X		
69			X	
70				X
71			X	
72	X			
73				X
74		X		
75			X	
76			X	
77		X		
78	X			
79				X
80			X	
81	X			
82		X		
83				X
84		X		
85	X			
86			X	
87				X
88	X			
89	X			

Intentionally left blank

COMMUNICATIONS EXPLANATIONS

COM1(C)

Automatic Terminal Information Service. (ATIS).

Broadcast on a discrete frequency or via a VOR, each message is identified by consecutive use of the phonetic alphabet.

Each message contains:

- Time of origin of weather report.
- Weather report.
- Runways in use.

Short term information such as serviceability of NAV AIDS and condition of runway surfaces etc.

Any other information useful to pilots working in that area.

COM2(A)

The published interpretation of 'ROGER' is:

'I have received all your last transmission.'

eg: "GGP, the Jetstream has now passed behind you climbing to flight level wun wun zero."

"ROGER GGP."

COM3(D)

Readability 3 means:

Readable but with difficulty.

The readability of any transmission is classified by a number from 1 to 5. See fig C1.

SCALE	MEANING
1	Unreadable
2	Readable now and then
3	Readable but with difficulty
4	Readable
5	Perfectly readable

fig C1

The very first transmission to any station when seeking to establish two-way radio communication is also a test transmission to determine RT quality. When preparing to depart an aerodrome with a ground radio station, the phrase "radio check" should form part of the first transmission and any response with a readability of less than 4 should result in the aeroplane commander attempting to improve RT quality through re-positioning the aeroplane or seeking technical assistance before the flight is commenced. Although the practice of transmitting the readability classification initially takes place when the aircraft is on the ground, a radio check may be requested at any time whether on the ground or airborne if poor two-way radio communication is suspected.

COM4(B)

After satisfactory two-way communication has been established and provided no confusion may occur, the ground station may abbreviate the call-sign. However, a pilot may only abbreviate a call-sign if it has first been abbreviated by the ground station.

Always use the same abbreviation or form of address as the ground station. If a ground station continues to use your full call-sign, it is because the controller is working another aircraft with

a call-sign similar to yours which, if abbreviated, may cause confusion.

eg: "East Midlands Approach, this is AVIA Golf Bravo Charlie Echo Delta."

"AVIA Echo Delta pass your message"

"AVIA Echo Delta is Cessna wun fife two inbound to you from Coventry." etc.

COM5(A)

After satisfactory two-way communication has been established and provided no confusion may occur, the ground station may abbreviate the call-sign. However, a pilot may only abbreviate a call-sign if it has first been abbreviated by the ground station.

Always use the same abbreviation or form of address as the ground station. If a ground station continues to use your full call-sign, it is because the controller is working another aircraft with a call-sign similar to yours which if abbreviated may cause confusion.

eg: "East Midlands Approach, this is Golf Bravo Golf Golf Papa."

"Golf Golf Papa pass your message."

"Golf Golf Papa is Cessna wun fife two inbound to you from Coventry." etc.

COM6(B)

The three emergency transponder codes are:

7500 Unlawful Interference (Hijack)

7600 Radio Failure

7700 Emergency

As an aide memoir, try this:

seventy five taken alive (hijack)

seventy six in a fix (radio failure)

seventy seven could be going to heaven (emergency)

COM7(D)

Readability 4 means: the message received was **Readable**.

See COM3 and fig C1.

COM8(B)

Readability 5 means: the message received was **Perfectly readable**. See COM3 and fig C1.

COM9(C)

Transmitting 'OUT' at the end of a message means 'the exchange of transmissions is ended and no further response is expected.'

eg: "Golf Golf Papa requests frequency change to East Midlands Approach on wun wun niner day-see-mal six fife."

"Golf Golf Papa that is approved. OUT."

COM10(D)

The instruction *Orbit Left* means: make a 360° turn to the left.

Such an instruction may be passed by a controller to an aircraft within a zone to allow other traffic to complete an approach to land on or departure from the active runway.

eg: "Golf Golf Papa, there is a seven tree seven on a tree mile final to runway Too Seven, ORBIT left at Ratcliffe."

"Orbit left at Ratcliffe, Wilco Golf Golf Papa."

COM11(B)

In respect of altitude, whole thousands without any following hundreds or tens are transmitted by pronouncing each digit of the number of thousands followed by the word thousand pronounced as 'tousand'.

For example, 3000ft would be correctly transmitted as 'three thousand feet'.

If the thousand or thousands are followed by hundreds then each numeric digit is pronounced individually including the word 'thousand' and 'hundred'.

An altitude of 1700ft should be transmitted as: 'one thousand seven hundred feet'.

COM12(D)

An air/ ground station call-sign is suffixed RADIO hence the correct identification would be ASHDOWN RADIO.

COM13(C)

A 'Broadcast' in aviation is the transmission of air navigation information that is not addressed to a specific station or stations. An example would be an Automatic Terminal Information Service (ATIS). See COM1.

COM14(A)

If a pilot is already in RTF communication with either a civil or military ATCU prior to an emergency arising, then assistance should be requested from the controller on the frequency in use. Any SSR code that has been assigned should be retained providing it is not the 7000 conspicuity code.

COM15(D)

The secondary surveillance radar transponder has two modes that are in current use, namely modes 'Alpha' and 'Charlie' that may be selected by the function switch. See fig C2.

Mode 'Alpha' or **ON** when selected, displays on the radar con-

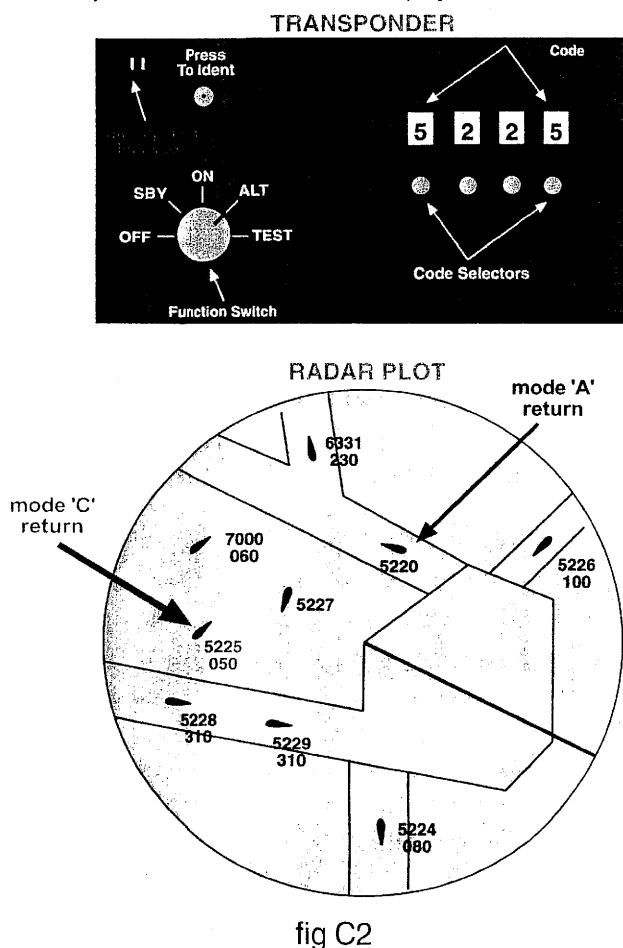


fig C2

troller's plot the four digit squawk code entered into the aircraft transponder.

Mode 'Charlie', or the '**ALT**' (altitude) mode when selected provides the controller with a readout of the aeroplane's altitude based upon a pressure datum of 1013hpa irrespective of what the pilot has selected on the altimeter sub-scale. The aeroplane's pressure altimeter is connected to an altitude digitiser which determines which of the 4096 codes produced by the transponder is used, irrespective of the code selected in the transponder window.

The aeroplane's mode 'C' transponder pulse train is transmitted omni-directionally at set intervals and when interrogated by the SSR ground radar head, the radar computer decodes the pulse train and paints the appropriate flight level next to the target on the radar plot together with the four digit mode 'A' squawk code which the pilot was instructed to set in the transponder window.

When asked to 'squawk **Charlie**', turn the transponder mode switch to '**ALT**'.

COM16(A)

An Aeronautical Station is a land station in the 'Aeronautical Mobile Service'. In certain instances an Aeronautical Station may be situated on board a ship or Earth satellite.

The term 'Aeronautical Mobile Service' may lead to some confusion as this term encompasses communications between Aeronautical Stations and aircraft both of which are elements of the Aeronautical Mobile Service.

COM17(B)

If an error is made in a transmission, the operator should stop transmitting, pause, then transmit '**CORRECTION**' followed by the last correct word or phrase before the error, then continue with the remainder of the message. By transmitting '**Correction**', the recipient would expect the corrected version to follow. Commencing with the last correct word or phrase allows continuity and ease of understanding.

eg: "GGP join overhead **altitude**"

"Correction, join overhead height not below wun tousand fife hundred feet on the QFE niner niner tree."

COM18(C)

'Standby' means: wait and I will call you.

It may be used at any time during RT communication if an operator is occupied with another task which would inhibit RT procedure or the receiving operator may be requested to supply information which is not immediately at hand during a time of heavy work load.

eg: "London Information this GBGGP."

"GGP pass your message."

"GGP Cessna wun fife two, fife miles east Brize Norton routing Southampton unable receive VOLMET SOUTH on 128.6, request the Southampton Metar."

"GGP Standby."

The London Information Controller would not have such information immediately at hand and would therefore require time to access it.

COM19(C)

Transmitted as "one zero three zero." to explain the word order but pronounced as: '**Wun zero tree zero**' to explain the phonetic.

All twenty four hour time codes are transmitted as individual digits and unless specified, the time is UTC.

In aviation, only the minutes are normally transmitted during a time check but the full four digit time must be transmitted in the

case of an ETA or ETD if either are to occur more than 59 minutes later.

eg: "Golf Golf Papa Daventry at too seven, Flight Level fower zero, estimating Southampton at wun zero tree zero."

The pilot is reporting that transit of the Daventry VOR occurred at 27 minutes past the present hour UTC and is estimating arrival at Southampton at 1030 UTC.

COM20(D)

The definition of 'URGENCY' is:

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

An urgency does not mean that a serious accident is imminent or has occurred. Either would constitute a Distress May Day message. The urgency may be a person on board being taken seriously ill or a system failure that made continuing the flight hazardous, or it could be an incident such as a fire on the ground seen from the air. Another example is a pilot inexperienced for the situation s/ he has encountered which has resulted in disorientation.

An URGENCY message should be transmitted on the Distress and Diversion (D & D) Cell frequency 121.5 MHz prefixing the call with 'Pan Pan, Pan Pan, Pan Pan'.

If a pilot is already in RT communication with a civil or military ATCU, the PAN call should be made on that frequency as this will prompt a faster response from locally based ground emergency services. Any assigned SSR code except 7000 should be retained.

COM21(B)

When a five letter registration (such as those that make up any UK registration) forms the full call-sign, it may be fully abbreviated to the first letter and last two letters. In the case of a company name or aircraft operating agency preceding the registration, the name must be used followed by at least the last two letters of the registration. Remember, the extent of the abbreviation is always the prerogative of the controller.

SKYLARK G-GBBA would be abbreviated to SKYLARK Bravo Alpha.

eg: "East Midlands Approach this is SKYLARK Golf Golf Bravo Bravo Alpha."

"SKYLARK Bravo Alpha pass your message."

"SKYLARK Bravo Alpha PA38, Trowel, altitude too thousand feet request joining instructions." etc.

COM22(A)

In respect of height, whole thousands without any following hundreds or tens are transmitted by pronouncing each numerical digit of the number of thousands followed by the word thousand pronounced as 'tousand'.

For example, 3000ft would be correctly transmitted as 'three thousand feet' but pronounced *tree tousand feet*

If the thousand or thousands are followed by hundreds, then each digit is pronounced individually including the words 'tousand' and 'hundred'.

A height or altitude of 3700ft should be transmitted as: 'three tousand seven hundred feet' but pronounced as *tree tousand seven hundred feet*.

COM23(A)

A message prefixed 'All Stations' is a **Broadcast** not addressed to any specific station, normally used by a ground station to address all aircraft listening out on that frequency. Any pilot

hearing such an address should not respond unless requested to acknowledge receipt of the broadcast.

eg: "All stations standby for the following SIGMET."

COM24(A)

The word 'SQUAWK' is an ATCU instruction to a pilot to select a four digit code on the aircraft transponder. When selected, the code will appear next to the aircraft target on the controller's radar screen to provide positive identification. In this instance, the code 1244 would be selected. See fig C3.

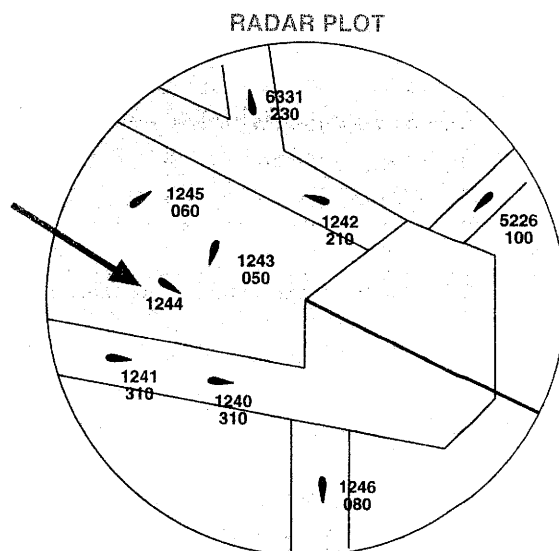
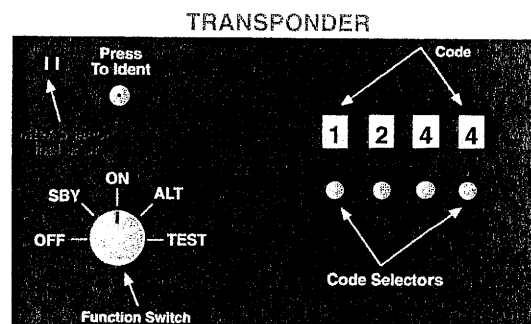


fig C3

As SQUAWK is an instruction, always write down the code then read it back. When the controller sees the code next to your radar target s/ he will inform you that you are identified.

eg: "GGP SQUAWK 1244."

"SQUAWK 1244 GGP."

"GGP you are identified."

"ROGER GGP."

COM25(B)

Any ATCU instructions or information relating to instrument settings, RT frequencies and transponder codes must be read back, but aeronautical information such as weather, airfield status or the position of other aircraft is not required to be read back.

In this instance, clearances, SSR codes mode 'A' or 'C' together with operating instructions such as altitude or flight level to operate at, headings to fly and altimeter settings must all be read back. As a general rule, anything passed by a controller that affects communication, identification, or position of the aircraft in the sky or on the ground must be read back.

A comprehensive list is as follows:

- **Level Instructions.**
- **Heading Instructions.**
- **Speed Instructions.**
- **Airways or Route Clearances.**

- **Runway in use.**
- **Clearance to Enter, Land On, Take-off from, Backtrack or Cross an Active Runway.**
- **SSR Operating Instructions.**
- **Altimeter Settings.**
- **VDF Information.**
- **Frequency Changes.**
- **Type of radar service.**

COM26(D)

The phrase '**TAKE-OFF**' may only ever be used by a pilot to acknowledge a take-off clearance. At all other times a pilot must use the word '**Departure**'.

Accidents have occurred in poor visibility when a pilot at a holding point has transmitted '*Ready for take-off*' which another pilot already lined up on the active runway has heard as a clearance to '**TAKE OFF**'. This has resulted in a collision between the departing aircraft and another still manoeuvring on the active runway.

A typical procedure for an aircraft (GGP) at the 'Hold' having completed the pre-departure checks might be:

eg: "*Golf Golf Papa ready for departure.*"

"*Golf Golf Papa line up runway too seven and wait.*"

"*Line up runway too seven and wait Golf Golf Papa.*"

"*Golf Golf Papa you are cleared for TAKE-OFF.*" etc.

"*Cleared for TAKE-OFF runway too seven Golf Golf Papa.*"

COM27(A)

In respect of height, whole thousands without any following hundreds or tens are transmitted by pronouncing each digit of the number of thousands followed by the word thousand pronounced as 'tousand'.

For example, 13000ft would be correctly transmitted as 'wun tree tousand feet'.

If the thousand or thousands are followed by hundreds, then each digit is pronounced individually, including the word 'tousand' and 'hundred'.

An altitude of 12500ft should be reported as:

"*wun too tousand fife hundred feet.*"

COM28(B)

Call-sign, position, time, level, next position and ETA.

A controller requires to know who you are, the position of your last positive fix and the time at which you were there. Your present altitude, where you are going to and the ETA. This provides a controller with information relating to who you are, the airspace you are occupying and the period of time you expect to be occupying it, enabling the controller to advise other traffic of your proximity as well as you of the proximity of other traffic.

The timing of a position fix is important as RT traffic may prevent you from transmitting your position fix for several minutes, by which time you will be some distance down track to your next waypoint.

eg: "*GGP, Daventry at one fife, tree tousand feet on the regional QNH, Estimating Gamston at fower ait.*"

COM29(D)

If a VHF frequency is published to 3 decimal places, only 2 are ever transmitted. Therefore 125.875 would be transmitted as 125.87 and spoken phonetically as "*wun too fife dayseemal ait seven*".

COM30(C)

"**VACATE LEFT**" is an instruction to exit the runway by turning left. It does not imply the next exit on the left as the aircraft may not have slowed to taxiing speed at the time the instruction is passed. However, controllers will always attempt to avoid giving taxi instructions until the landing roll is complete.

For example: "*GGP Vacate Left.*"

"*Vacate Left GGP.*"

COM31(D)

"**GO AROUND**" is an instruction to an aircraft commander to immediately execute a missed approach at which time take-off power should be applied and flaps retracted in stages whilst maintaining a safe flying speed.

The instruction to go around may be passed if the runway is not clear, or another aircraft has declared an emergency.

eg: "*GGP Go Around.*"

"*Going Around GGP.*"

COM32(B)

An airborne flight plan should be filed with the Flight Information Region in which the aircraft is situated on its published frequency to avoid use of busy ATCU frequencies.

COM33(C)

The word "**AFFIRM**" in RTF terminology means 'YES' and may be used as a response to a question.

eg: "*GGP are you routing Daventry?*"

"*Affirm GGP.*"

COM34(A)

A blind transmission is:

A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.

Such a situation could arise if a fault occurred with the aircraft VHF receiver whilst the transmitter remained fully serviceable. At the planning stage of the flight, the pilot having correctly obtained the published frequency from the AERODROME Section of the UK AIP, together with the published times of being on watch, subsequently fails to establish two way radio communication as no response was received.

Believing the transmission was heard, the pilot could then proceed with a blind transmission:

eg: "*Coventry Approach this G-BGGP.*"

No Response.

"*Coventry Approach this G-BGGP.*"

No Response.

"*Coventry Approach this G-BGGP transmitting blind on 119.25 due to receiver failure. Draycott Water, positioning to join overhead at wun tousand fife hundred feet.*"

COM35(B)

SQUAWK IDENT means:

Operate the special position identification button on the transponder. See fig C4'.

Depending upon the radar system the controller is operating, when the special ident button on the aircraft transponder is pressed, an additional pulse will be transmitted to the radar head for a 20-second period that will either produce a ring around the primary radar target and its associated transponder code or the transponder code on the radar screen will flash. This is a particu-

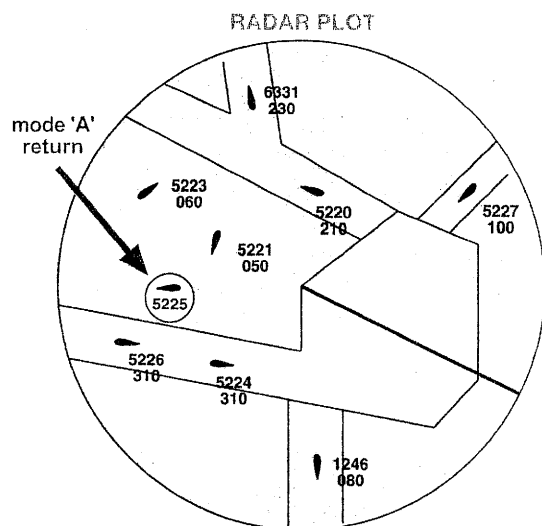
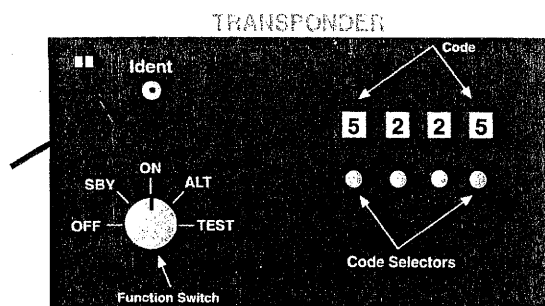


fig C4

larly useful feature that enables the controller to locate an aircraft when there are many targets with SSR codes painted on the screen.

The code 5225 is selected with the function switch set to ON which is mode ALPHA. With the IDENT button depressed, a ring appears around both the radar target and its SSR squawk code.

COM36(D)

The word 'NEGATIVE' in RTF terminology means 'No' and may be used as a response to a question.

eg: "GGP are you routing Daventry?"

"Negative GGP."

COM37(B)

Once two-way RTF communication has been established, there are occasions when a message must commence with the aircraft call-sign.

eg: "GGP requests Barnsley Regional Pressure Setting."

"GGP the Barnsley niner niner ait."

"Niner niner ait GGP."

The read back of any ATC Instruction or information affecting navigation is mandatory as the controller needs to know if the instruction or information has been correctly received and understood. The read back should conclude with the aircraft call-sign.

eg: "GGP turn left heading 145."

"Left heading 145 GGP."

COM38(B)

There may be occasion to question the information received via RTF communication in which case the correct terminology would be VERIFY.

eg: "GGP descend to height wun tousand feet on QFE wun zero zero tree and report when level."

"Descend wun tousand feet on wun zero wun tree GGP."

"GGP say again QFE."

"QFE wun zero wun tree GGP."

"GGP Verify. QFE wun zero zero tree."

"QFE, wun zero zero tree GGP."

COM39(D)

The controller being requested requires to know some brief details of who you are, what you are, where you intend going, together with ETA at the point of entry into controlled airspace. However, a SVFR clearance may also be requested to leave controlled airspace.

Identifying Call-sign: **Who you are.**

Aircraft type: **What you are.**

Pilot's intention: **Where and when you estimate entering controlled airspace.**

COM40(A)

Contact the MATZ controller within 15 nm or 5 minutes of the MATZ boundary whichever is the sooner.

COM41(C)

The controller being requested requires to know who you are, what you are, where you are and where you are going (heading). Your level or altitude, flight conditions (VMC or IMC), where and at what level you intend crossing the airway and at what time.

COM42(D)

See fig C5.

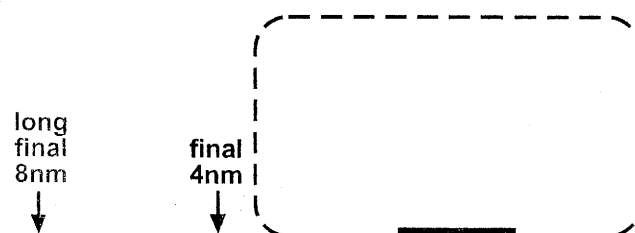


fig C5

During a straight in approach, an RT call to report established on a long final should be made when within 8nm and 4nm of the approach end of the runway threshold. See fig C5.

an RT call to report established on final approach should be made when within 4nm of the approach end of the runway threshold.

In both instances, the pilot should report the runway designation.

eg: "GGP Finals Runway 30"

COM43(A)

"WILCO" is an abbreviation used to inform a controller that the pilot will comply with the instruction received.

A pilot unable to comply with an instruction must respond with "UNABLE COMPLY".

eg: "GGP climb to altitude fife tousand feet on QNH wun zero zero niner."

"GGP unable comply, must maintain VMC."

COM44(B)

The transmission should conclude with the aircraft call-sign.

Direction Finding (DF) is a service obtained from a VHF Direction Finding (VDF) facility, normally an ATCU that is suitably equipped. When transmitting for direction finding (DF), the pilot should use the frequency published for (VDF) for the station being called.

Note: Not all stations have a VDF facility. Refer to your visual navigation chart and to the chart legend.

VDF may be used to obtain a track to a station when unsure of position or it may also be used to plot the aircraft position using bearings from two different VDF stations where the bearings *cross as close as possible to 90°*.

The transmission should commence with the call-sign of the station followed by a Q code that specifies the type of bearing required, of which there are four. Two Q codes specify Magnetic Bearings and two specify True Bearings.

QDM is the magnetic bearing of the station from the aircraft.

QDR is the magnetic bearing of the aircraft from the station which is the reciprocal of QDM.

QTE is the TRUE bearing of an aircraft from a station used primarily for position fixing using bearings from two stations that cross as close as possible to 90° which can be plotted directly on a chart.

The most commonly used is QDM which, in still air, would give the pilot a magnetic heading to steer to the station being called. The transmission should commence with the call-sign of the VDF facility, followed by the Q code of the type of bearing required, ending with the aircraft call-sign. If a QTE is required, the phrase *true bearing, true bearing* is used instead of a Q code.

Transmitting the Q code or *true bearing* alerts the controller that a pilot requires a DF bearing and it is advisable to speak slowly to give the controller time to read the necessary information from her/his display.

There are three classes of VDF bearing: 'A', 'B' or 'C', each of which specifies the bearing accuracy. However, Class C bearings are usually no longer passed.

Class 'A' = +/- 2°

Class 'B' = +/- 5°

Class 'C' = +/- 10°

The class of bearing is particularly important when using VDF to fix a position because at a range of 30nm from either station, the aircraft could be 2nm or more from the position plotted using two Class 'B' bearings.

eg: *'East Midlands Approach Golf Bravo Golf Golf Papa requests QDM QDM, Golf Bravo Golf Golf Papa.'*

'Golf Bravo Golf Golf Papa East Midlands Approach, QDM wun seven six class bravo.'

'Wun seven six class bravo, Golf Bravo Golf Golf Papa.'

or: *'East Midlands Approach Golf Bravo Golf Golf Papa requests true bearing, true bearing, Golf Bravo Golf Golf Papa.'*

'Golf Bravo Golf Golf Papa East Midlands Approach, true bearing, wun seven tree degrees true, I say again, wun seven tree degrees true class bravo.'

'Wun seven tree degrees true class bravo Golf Bravo Golf Golf Papa.'

COM45(D)

There are three classes of VDF bearing 'A', 'B' or 'C', each of which specifies the bearing accuracy.

Class 'A' = +/- 2°

Class 'B' = +/- 5°

Class 'C' = +/- 10°

eg: a Class 'B' bearing of 176° means your bearing lies between 171° and 181°. Class 'C' bearings are no longer passed.

COM46(A)

There are three classes of VDF bearing 'A', 'B' or 'C', each of which specifies the bearing accuracy.

Class 'A' = +/- 2°

Class 'B' = +/- 5°

Class 'C' = +/- 10°

eg: a Class 'A' bearing of 176° means your bearing lies between 174° and 178°.

COM47(C)

The secondary surveillance radar transponder has two modes in common use, namely modes 'Alpha' and 'Charlie'.

Mode 'Alpha' or **ON** when selected displays on the radar controller's plot, the four digit squawk code entered into the aircraft transponder.

Mode 'Charlie', or the '**ALT**' (altitude) mode when selected provides the controller with a readout of the aeroplane's altitude based upon a pressure datum of 1013hpa irrespective of what the pilot has selected on the altimeter sub-scale. The aeroplane's pressure altimeter is connected to an altitude digitiser which determines which of the 4096 codes produced by the transponder is used, irrespective of the code selected in the transponder window.

The aeroplane's mode 'C' transponder pulse train is transmitted omni-directionally at set intervals and when interrogated by the SSR ground radar head, the radar computer decodes the pulse train and paints the appropriate flight level next to the target on the radar plot together with the four digit mode 'A' squawk code which the pilot was instructed to set in the transponder window.

All pilots are prone to mis-setting their altimeter sub-scale and mis-reading their altimeter whether operating at an altitude or flight level with 1013hpa set on the altimeter sub-scale. Asking the pilot to verify her/his level should initiate a pilot check of both the altimeter sub-scale setting and the indicated flight level or altitude. Such a request usually occurs when there is a considerable difference in what level the pilot believes s/he is at and the SSR mode 'C' readout on the controller's plot.

COM48(C)

The phrase '**TAKE OFF**' may only ever be used by a pilot to acknowledge a take-off clearance. At all other times a pilot must use the word '**Departure**'.

Accidents have occurred in poor visibility when a pilot at a holding point has transmitted '*Ready for take-off*' which another pilot already lined up on the active runway has heard as an instruction to TAKE OFF. This has resulted in a collision between the departing aircraft and another still manoeuvring on the active runway.

A typical procedure for an aircraft (GGP) at the 'Hold', having completed the pre departure checks, might be:

'Golf Golf Papa ready for departure.'

'Golf Golf Papa line up runway too seven and wait.'

'Line up runway too seven and wait Golf Golf Papa.'

'Golf Golf Papa you are cleared for TAKE-OFF.' etc.

'Cleared for TAKE-OFF runway too seven Golf Golf Papa.'

COM49(D)

When a distress message is heard, a pilot should immediately maintain radio silence but monitor that frequency to ensure the aircraft in distress receives a response to the distress message. It is always possible, particularly if the aircraft in distress is low, that the distress message would not be heard by a ground station. In that case, a pilot hearing the distress message should relay to the ground station the message of the aircraft in distress. If however the distress message is immediately responded to, all other stations operating on that frequency must maintain radio silence.

COM50(A)

'TYRO' is a term that may be included with an **URGENCY** message. Time permitting, any urgency message should include:

- **Aircraft call-sign.**
- **Aircraft type.**
- **Nature of emergency**
- **Intention of person in command.**
- **Pilot qualification and associated ratings or 'TYRO'.**

A pilot of limited experience may use the term 'TYRO' when in communication with a military controller or the Distress and Diversion (D & D) section of an ATCU which may be on the frequency in use at the time or 121.5MHz. This will indicate to a controller that the pilot is of limited experience preventing instructions being passed to the pilot that may be difficult to follow.

COM51(B)

An emergency transmitted on 121.5MHz has two categories.

- 1 'Distress': declared by an aircraft in distress is always prefixed 'MAY DAY, MAY DAY, MAY DAY'.
- 2 'Urgency' is a condition concerning the safety of an aircraft or other vehicle or of some person on board or within sight, but which does not require immediate assistance. The initial call is always prefixed 'PAN PAN, PAN PAN, PAN PAN'.

Pilots are encouraged to simulate 'Urgency' procedures on 121.5MHz, but not a 'Distress'.

Any simulation must be addressed to the D & D unit whose area the aircraft is in: Scottish Centre or London Centre, prefixing the brief initial 'Pan' call with 'Practice'.

eg: 'PRACTICE PAN, PRACTICE PAN, PRACTICE PAN, London Centre this is Golf Bravo Golf Golf Papa.'

COM52(C)

After satisfactory two-way communication has been established and provided no confusion may occur, the ground station may abbreviate the call-sign. However, a pilot may only abbreviate a call-sign if it has first been abbreviated by the ground station. Always use the same abbreviation or form of address as the ground station. If a ground station continues to use your full call-sign, it is because the controller is working another aircraft with a call-sign similar to yours which if abbreviated may cause confusion.

eg: 'East Midlands Approach this is Golf Bravo Golf Golf Papa.'

'Golf Golf Papa pass your message.'

'Golf Golf Papa Cessna wun fife two, Trowel, altitude too thousand feet request joining instructions.'

or.

'East Midlands Approach this is Golf Bravo Golf Golf Papa.'

'Golf Bravo Golf Golf Papa pass your message.'

'Golf Bravo Golf Golf Papa is Cessna wun fife two, Trowel, altitude too thousand feet request joining instructions.' etc.

COM53(C)

If an aerodrome call-sign is suffixed 'Radio' or 'Information', the facility in question can only pass information relating to runway status and surface wind etc, together with any known information relating to collision avoidance.

Such facilities cannot pass a clearance and as such, the correct response to:

'G-BGGA, take off at your discretion, no know traffic to affect your departure.'

should be: 'G-BGGA.'

COM54(A)

When instructed by ATC to complete a 'standard overhead join', the pilot should over fly at 2000ft above the aerodrome elevation and descend on the dead side to circuit height before joining the circuit by crossing the upwind end of the runway. See fig C6.

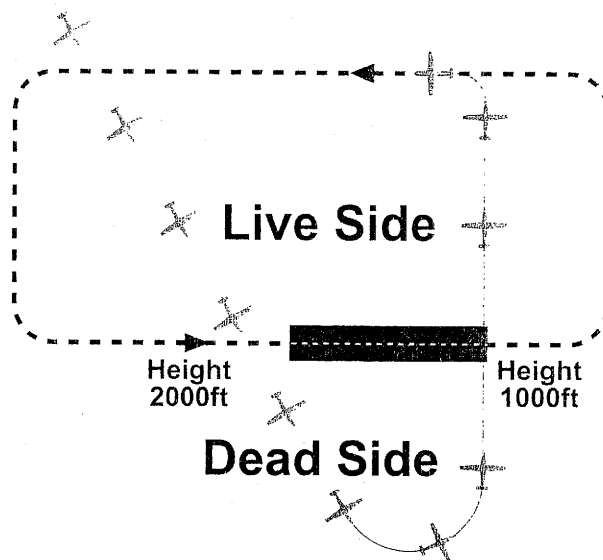


fig C6

COM55(B)

LARS is provided up to and including FL95 normally within 30nm of the radar head. The service is provided at the controller's discretion subject to her/ his work load and is intended for pilots operating outside of controlled airspace.

Once two-way communication has been established with a LARS controller, the pilot should pass the following details.

- (a) **Call-sign and aircraft type.**
- (b) **Estimated position.**
- (c) **Heading.**
- (d) **Level.**
- (e) **Intentions to include the next waypoint.**
- (f) **Type of service required (RIS) or (RAS).**

COM56(B)

That is correct. The word 'CORRECT' is generally used by a controller after a pilot has correctly read back a clearance. An example of which is a VFR clearance or a Special VFR clearance.

eg: 'GGP ready for departure.'

'GGP you are clear to leave the Zone not above 2000ft via the Long Eaton lane Special VFR remaining west of the motorway.'

'Not above 2000ft via the Long Eaton Lane Special VFR remaining west of the motorway GGP.'

'GGP that is CORRECT.'

'GGP line up runway zero niner and wait.'

'Line up runway zero niner and wait GGP.'

COM57(C)

The first call should be to establish two-way communication and inform the controller of the nature, rather than the detail of the service required.

When asked by the controller to 'pass your message', the appropriate response should be in the following order:

- (a) **Call-sign.**
- (b) **Aircraft type.**
- (c) **Estimated position.**
- (d) **Heading.**
- (e) **Level.**
- (f) **Your intentions, next waypoint or destination.**
- (g) **Type of service required.**

COM58(B)

'Ready for departure.'

The phrase **'TAKE-OFF'** may only ever be used by a pilot to acknowledge a take-off clearance. At all other times a pilot must use the word 'Departure'.

Accidents have occurred in poor visibility when a pilot at a holding point has transmitted 'Ready for take-off' which another pilot already lined up on the active runway has heard as an instruction to TAKE OFF. This has resulted in a collision between the departing aircraft and another still manoeuvring on the active runway.

A typical procedure for an aircraft (GGP) at the 'Hold' having completed the pre departure checks might be:

eg: *'Golf Golf Papa ready for departure.'*

'Golf Golf Papa line up runway zero niner and wait.'

'Line up runway zero niner and wait Golf Golf Papa.'

'Golf Golf Papa you are cleared for TAKE-OFF.' etc.

'Cleared for TAKE-OFF runway zero niner Golf Golf Papa.'

COM59(B)

The published interpretation of '*Disregard*' is:

Consider that transmission as not sent.

eg: *'GGP Descent Flight Level fower zero.' 'GGP Disregard.'*

COM60(D)

Air traffic control service (ATC) can only be provided by licensed air traffic controllers who are closely regulated by the CAA.

Aerodrome flight information service (AFIS) is provided by licensed aerodrome flight information service officers (AFISOs) who are normally self regulating.

Aerodrome air/ ground communications service (A/G) may be provided by radio operators who are not licensed but have obtained a certificate of competency from the CAA to operate radio equipment on aviation frequencies. These operations come under the jurisdiction of the radio licence holder, but are not regulated in any other way.

COM61(D)

The two categories or states of emergency are:

Urgency. The condition concerning the safety of an aircraft or of some person on board or within sight, but does not require immediate assistance.

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

COM62(A)

Conditional clearances involve sight of other aircraft or vehicles which would impede the safe manoeuvring of an aircraft being passed a conditional clearance.

In the case of arriving and departing aircraft using the same runway, It is the responsibility of the controller to establish that the pilot of the departing aircraft being passed a conditional clearance has clearly identified the arriving aircraft.

eg: *'Goldwing 759 after the landing aircraft line-up and wait.'*

'After the landing aircraft line up and wait Goldwing 759.'

COM63(C)

A SVFR clearance is normally requested by a pilot when unable to comply with IFR in controlled airspace. A pilot so cleared to either enter or depart controlled airspace must comply with the Specified Weather Minima Provisions (SMWP), keeping clear of cloud and able to navigate at all times with reference to the ground whilst maintaining adequate obstacle and terrain clearance.

COM64(C)

An aircraft commander requiring a MATZ penetration service must establish two-way communication with the MATZ controller at least 15nm or 5min whichever is sooner before reaching the MATZ zone boundary.

The aircraft commander should pass:

- (a) **Call-sign.**
- (b) **Aircraft type.**
- (c) **Estimated position.**
- (d) **Heading.**
- (e) **Altitude.**
- (f) **Intentions, next waypoint or destination.**

COM65(A)

Radar Information Service (RIS) is an Air Traffic Control Service, during which the controller will inform the pilot of the bearing, distance, and if known, the level or altitude of conflicting traffic.

RIS may be requested under any flight rules or meteorological conditions.

The controller will only update details of conflicting traffic after the initial warning at the pilot's request or if the controller considers the conflicting traffic remains a definite hazard.

It is not the responsibility of the controller to offer avoiding action.

The pilot or pilots of any traffic in conflict are at all times wholly responsible for maintaining separation from other traffic, whether or not the controller has passed traffic information.

When RIS or RAS are provided by a Lower Airspace Radar Service (LARS), such service is normally only available to aircraft within 30nm of the radar head.

COM66(B)

when satisfactory communication has been established and providing it will not be confusing, the name of the location or the call-sign suffix may be omitted.

COM67(A)

Position reports shall contain the following elements of information:

aircraft identification (call-sign), position, time at that position, level, next position and ETA.

COM68(B)

An example of a conditional clearance is given in question 62 which is used below to explain the four elements of such a clearance.

Call-sign.....*Goldwing 759*

The condition.....*after*

Identification of the subject of the condition.....*the landing aircraft*

The instruction.....*line-up runway 23*

COM69(C)

The categories of messages handled by the aeronautical mobile service are in the following order of priority.

- 1 - Distress
- 2 - Urgency
- 3 - Direction Finding
- 4 - Flight Safety
- 5 - Meteorological
- 6 - Flight Regularity.

COM70(D)

The definition of DISTRESS is:

An aircraft and its occupants are threatened by grave and imminent danger and of requiring immediate assistance.

COM71(C)

When PAN is used to prefix an URGENCY message or MAY DAY used to prefix a DISTRESS message, both should be transmitted three times.

eg: Distress - 'MAY DAY' 'MAY DAY' 'MAY DAY'.

Urgency - 'PAN PAN' 'PAN PAN' 'PAN PAN'

COM72(A)

After the initial 'MAY DAY' or 'PAN' call the content and order of a distress or Urgency message should be:

- 1 - Name or call-sign of the station being addressed (when appropriate and time and circumstances permitting).
- 2 - Call-sign
- 3 - Type of aircraft
- 4 - Nature of emergency
- 5 - Intention of person-in-command
- 6 - Present or last known position, flight level/ altitude and heading
- 7 - Pilot qualifications
- 8 - Any other useful information eg endurance remaining, number of persons on board etc.

COM73(D)

See COM 72

COM74(B)

See COM 72

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

COM75(C)

Te MATZ QFE with vertical position reported as height.

To ensure safe vertical separation, all aircraft will be given an altimeter setting to use within the zone, Normally this will be the aerodrome QFE. Exceptionally, within the Oldham MATZ the transit pressure setting will be the London QNH, within the Warton MATZ the setting will be the Warton QNH and within the Lakenheath/ Mildenhall MATZ the setting will be the Lakenheath QNH.

COM76(C)

Blackwood Information.

The following is a list of air traffic services together with their appropriate call-sign suffix:

SERVICE

Area Control Service
Radar (in general)
Approach Control
Aerodrome Control
Approach Control Radar
Arrivals/ Departures

Ground Movement Control
Precision Approach Radar

Flight Information Service
Aerodrome Air/Ground
Ground Movement Planning
CAP 413

SUFFIX

CONTROL
RADAR
APPROACH
TOWER
DIRECTOR/ DEPARTURE
(RADAR –when tasks are combined) ARRIVALS –
(when approved)
GROUND
TALKDOWN (Military)
FINAL CONTROLLER
INFORMATION
RADIO
DELIVERY

COM77(B)

'Approach, true bearing, true bearing, G-BGGA requests true bearing, G-BGGA'.

COM78(A)

7700 and 7600

The three emergency transponder codes are:

7500 Unlawful Interference (Hijack)
7600 Radio Failure
7700 Emergency

As an aide memoir try this:

seventy five *taken alive* (hijack)
seventy six *in a fix* (radio failure)
seventy seven *could be going to heaven.* (emergency)

AIP ENR 1-6-2-1 para 2

COM79(D)

An ATC route clearance.

Provisions governing clearances are contained in PANS-RAC (ICAO Doc 4444). A clearance may vary in content from a detailed description of a route clearance and levels to be flown to a brief standard instrument departure (SID) according to local procedures.

An ATC route clearance is not an instruction to either take-off or enter an active runway.

Whenever possible, a route clearance should be passed to an aircraft before start up and the aircraft full call-sign should be used. As the clearance specifies a geographical location at which to depart the zone, it is an ATC Route Clearance. Had the clearance been given to leave the zone to the north, south east or west it would constitute a zone clearance.

COM80(C)

A clearance limit is the point to which an aircraft is granted an air traffic control clearance.

In this instance - Long Eaton.

COM81(A)

See COM42 fig C5

Pilots flying a final approach greater than 4nm are to report 'LONG FINAL'.

'FINAL' is reported when within 4nm or less of the approach threshold of the runway.

Aircraft flying a straight in approach are to report 'LONG FINAL' at 8nm from the approach threshold of the runway and 'FINAL' when 4nm is reached.

COM82(B)

The AFIS service is provided by an Aerodrome Flight Information Service Officer (AFISO) for aircraft in the vicinity of an aerodrome and is comprised of information, including traffic information, relevant to the safe and efficient conduct of flights. It is pre-recorded with the prefix INFORMATION and includes local weather, active runway, barometric pressure etc.

Clearances, advice or instructions are not allowed to be given.

UK. AIP ENR 3-9-1-1

COM83(D)

Height: The vertical distance of a level, a point or an object considered as a point, measured from a specific datum.

A pressure altimeter when calibrated in accordance with the Standard Atmosphere and when set to a QFE altimeter setting, will indicate **height** above the QFE reference datum. (airfield datum)

'GGP descend height wun tousand feet QFE niner niner niner hectopascals'.

ICAO Annex 11 Definitions page 5.

COM84(B)

See COM 44

'Birmingham Approach QDR, QDR, G-BGGA requests QDR, G-BGGA.'

QDR - magnetic bearing of an aircraft from a VDF station.

COM85(A)

WILCO is an abbreviation for will comply.

I understand your message and will comply with it.

COM86(C)

include the word **'TO'** followed by either **HEIGHT** or **ALTITUDE** followed by the QFE or QNH as appropriate.

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

Levels may be reported as *height*, *altitude* or *flight level* according to the phase of the flight and altimeter setting in use. Hence, when passing level messages the following conventions apply.

- (a) All messages relating to an aircraft's climb or descent to a HEIGHT or ALTITUDE must employ the word **'TO'** followed immediately by the word **'HEIGHT'** or **'ALTITUDE'**. Furthermore, the initial message in any such RT exchange will also include the appropriate QFE or QNH.
- (b) The word **'TO'** must be omitted from messages relating to FLIGHT LEVELS.

CAP 413

COM87(D)

See COM 44

Birmingham Approach QDM, QDM, G-BGGA requests QDM, G-BGGA.

QDM - magnetic bearing of the VDF station from the aircraft.

COM88(A)

Radar Information Service (RIS) is an Air Traffic Control Service, during which the controller will inform the pilot of the bearing, distance, and if known, the level or altitude of conflicting traffic.

RIS may be requested under any flight rules or meteorological conditions.

The controller will only update details of conflicting traffic after the initial warning at the pilot's request, or if the controller considers that the conflicting traffic continues to constitute a definite hazard.

It is not the responsibility of the controller to offer avoiding action.

The pilot or pilots of any traffic in conflict are at all times wholly responsible for maintaining separation from other traffic, whether or not the controller has passed traffic information.

When RIS or RAS are provided by a Lower Airspace Radar Service (LARS), such service is normally only available to aircraft within 30nm of the radar head. When provided by an Approach Radar, the service is available out to a range of 40nm from the radar head.

COM89(A)

Conditional phrases will not be used for movements affecting active runway(s), except when the aircraft or vehicles concerned are seen by the controller and pilot. Conditional clearances are to relate to one movement only and in the case of landing traffic, this must be the first aircraft on approach. A conditional instruction shall be given as follows:

- (a) call-sign.
- (b) the condition.
- (c) identification of the subject of the condition.
- (d) the instruction.