



# IFR PHRASEOLOGY – CP/ACC

## 1. Introduction

### 1.1. What is phraseology?

The phraseology is the way to communicate between the pilot and air traffic controller (ATC unit) for the purpose of ensuring uniformity in RTF communications.

If standard phrases are adhered to when composing a message, any possible ambiguity will be reduced to a minimum.

As a pilot, you must repeat the air traffic controller clearances you received. That's called the read back procedure.

It's a mandatory procedure except when pilot is in emergency and he has no time to read back or when pilot's radio is broken.

### 1.2. Basic Rules

An ATC must start all messages with the call sign of the addressed aircraft.

A pilot usually ends read-back messages with his call sign.

A pilot usually starts a message with his ATC call sign followed by his call sign when he calls the ATC unit for the first time.

Some abbreviations may be spoken using their constituent letters rather than the spelling alphabet, for example, ILS, QNH, RVR.

The following words may be omitted from transmissions provided that no confusion or ambiguity will result:

- "Surface" in relation to surface wind direction and speed
- "Degrees" in relation to radar headings
- "Visibility", "Clouds" and "Height" in meteorological reports
- "Hecto Pascal" when giving pressure settings

The use of courtesies should be avoided.

The word "IMMEDIATELY" should only be used when immediate action is required for safety reasons.

You shall avoid words "this is", "over", and other similar terms from radio transmissions provided there is no likelihood of misunderstanding.

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### 1.3. Advice for IFR pilots

If any traffic controller is in charge of your airfield, as an IFR pilot, **you must read his ATIS** (Automatic Terminal Information Service) which contains basic elements as:

- Weather information (METAR) including QNH value
- Runway in use
- Transition altitude / transition flight level
- Other information applicable for your flight (if present)
- Information letter

You must check the weather using METAR and TAF information of the airfield or a nearby one, if your airfield has no weather station.

Clearance read-back is mandatory for all pilots.

### 1.4. Information

In this document, we use the following convention:

- IFR Pilot call sign is **SAU1234**.
- ATC unit is located at **Faircity** airfield.
- The sign  $\rightarrow \blacktriangleleft$  before the text means: this is the pilot transmission. ( $\leftarrow$  for VFR,  $\rightarrow$  for IFR)
- The sign  $\uparrow \blacktriangleleft$  before the text means: this is the air traffic controller unit (ATC unit) transmission.

The ATC is the one that may start using the short call sign. Only thereafter the pilot shall use it as well.

## 2. Transmitting technique

The following transmitting techniques will assist in ensuring that transmitted speech is clear and satisfactorily received:

1. **before transmitting, listen out on the frequency** to be used to ensure that there will be no interference with a transmission from another station
2. use a normal conversational tone, and speak clearly and distinctly
3. maintain the speaking volume at a constant level
4. **a slight pause before and after numbers** will assist in making them easier to understand
5. **avoid using hesitation sounds** such as "er"
6. be familiar with the microphone operating techniques, particularly in relation to the maintenance of a constant distance from the microphone
7. **depress the transmit switch fully before speaking and do not release it until the message is completed**

We give you a specific advice for the use IVAO voice server. After switching to a new channel using voice server, be aware that you never hear the current speaking person. Always wait 3/5 second minimum, before transmitting your message.

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### 3. Holding procedure

Normally, a holding procedure should be published. The ATC unit gives only the fix or navigation aid to hold at and the pilot-in-command will follow the holding pattern description published on charts (IAC and/or ARR charts):

ATC ↑	Pilot →
↑ ◀ SAU1234, hold at TBO VOR	
	→ ◀ hold at TBO VOR, SAU1234

Holding procedure can be used by ATC unit in order to descend an arriving aircraft which has too high altitude or to delay an aircraft to create separation for approach.

If the ATC unit wants to give a non-published holding procedure, he must describe its components to the pilot:

ATC ↑	Pilot →
↑ ◀ SAU1234, hold on the 265 radial of DIK VOR between 25 miles and 30 miles DME, FL100, inbound track 085, right hand pattern, expected approach time 1545	
	→ ◀ holding on the 265 radial of DIK VOR between 25 miles and 30 miles DME, FL100, inbound track 085, right hand pattern, expected approach time 1545, SAU1234

The ATC unit shall pass the holding information in the following order:

- 1) FIX
- 2) Level,
- 3) Inbound Track,
- 4) Right or Left hand,
- 5) Time of leg (when necessary)

If there are some parameters missing for this holding instruction and if there is no hold published on this point, the parameters shall be: altitude is the current altitude/level inbound track is the current heading of the aircraft, outbound time is 1 minute, right hand pattern

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ATC unit can give a holding procedure, but an aircraft can ask for a holding procedure in order to descend if the pilot-in-command knows that the aircraft has too high altitude for beginning an approach procedure or if the pilot-in-command needs time to prepare his aircraft for final approach:

ATC ↑	Pilot →
	→ SAU1234, request holding procedure
↑ SAU1234, hold at VIRIE, FL70	
	→ hold at VIRIE, FL70, SAU1234

For regulation purpose, the ATC unit can give level and/or speed instruction with the holding procedure.

However, when the pilot requires a detailed description of the holding procedure based on facility, the following phraseology should be used:

ATC ↑	Pilot →
↑ SAU1234, hold at NCR	
	→ request holding instructions, SAU1234
↑ SAU1234, hold at NCR NDB, inbound track 250 degrees, left hand pattern, outbound time 1 minute.	
	→ Holding at NCR NDB, inbound track 250 degrees, left hand, outbound 1minute, SAU1234

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## 4. ATS surveillance service

This chapter contains general ATS surveillance service phraseology which is commonly used in communication between aircraft and all types of ATC units equipped with radar.

This phraseology is more applicable to approach radar control (APP/DEP) or area radar control (CTR).

### 4.1. Radar identification in controlled areas

When an aircraft enter in a controlled area, ATC unit equipped with radar shall identify each aircraft:

ATC ↑	Pilot →
	→◀ GrandVilla control, SAU1234 heavy
↑◀ SAU1234, identified.	

When an aircraft leave a controlled zone and no ATC unit is present in the next area, ATC unit equipped with radar gives the following message:

ATC ↑	Pilot →
↑◀ SAU1234, radar control terminated.	
	→◀ Roger, SAU1234

In IVAO, you can include UNICOM in your message the universal auto-information frequency:

ATC ↑	Pilot →
↑◀ SAU1234, radar control terminated, monitor UNICOM 122.8	
	→◀ UNICOM 122.8, SAU1234

When an aircraft leave a controlled zone and an ATC unit is present in the next area, the current controller must transfer the aircraft:

ATC ↑	Pilot →
↑◀ SAU1234, contact Munich 118.950	
	→◀ 118.950, SAU1234

ATC Shall advice pilots if identification is lost or established:

ATC ↑	Pilot →
↑◀ SAU1234, identified 20 miles north west of Highvilla	

ATC ↑	Pilot →
↑◀ SAU1234, identification lost due to radar failure, remain this frequency.	
	→◀ Wilco, SAU1234

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## 4.2. Vectoring

Aircraft may be given specific vectors to fly in order to establish separation:

ATC ↑	Pilot →
↑ SAU1234, turn left, heading 050 for separation.	
	→ Heading left 050, SAU1234

ATC ↑	Pilot →
↑ SAU1234, fly heading 050	
	→ Heading 050, SAU1234

Aircraft may be given instruction to maintain its present heading to maintain separation:

ATC ↑	Pilot →
↑ SAU1234, report heading	
	→ heading 090, SAU1234
↑ SAU1234, roger, continue heading 090	
	→ Continue heading 90, SAU1234

When vectoring is completed, pilots shall be instructed to resume their own navigation if necessary:

ATC ↑	Pilot →
↑ SAU1234, resume own navigation.	
	→ Wilco, SAU1234

ATC unit shall give specific instruction in addition of the previous message:

ATC ↑	Pilot →
↑ SAU1234, resume own navigation direct SAU VOR.	
	→ Direct SAU VOR, SAU1234

Occasionally, an aircraft may be instructed to make a complete turn known as 360° turn (orbit for VFR) for delaying purpose:

ATC ↑	Pilot →
↑ SAU1234, make a three sixty turn left for sequencing.	
	→ Three sixty turn left, SAU1234

### 4.3. Traffic information and avoiding action

Whenever practicable, information regarding traffic on a conflicting path should be given in the following form:

- Relative bearing of the conflicting traffic in terms of the 12 hour clock.
- Distance from the conflicting traffic
- Direction of the flight of the conflicting traffic
- Any other pertinent information such as: slow/fast moving, closing, opposite/same direction, overtaking, crossing left/right to right/left, aircraft level and type, climbing/descending.

ATC ↑	Pilot →
↑ ◀ SAU1234, unknown traffic, 1 o'clock 3 miles opposite direction fast moving	
	→ ◀ Looking out, SAU1234
(after some time)	
	→ ◀ SAU1234, Traffic in sight

Example of traffic information with all details:

ATC ↑	Pilot →
↑ ◀ SAU1234, traffic 11 o'clock, 10 miles, southbound, Boeing 737, flight level 230.	

When the ATC unit doesn't know some parameter, you can use the term like "unknown", "unverified".  
Example:

ATC ↑	Pilot →
↑ ◀ SAU1234, traffic 1 o'clock, 5 miles, from left to right, slow moving, type and altitude unknown	

## 4.4. Radar instruction

The following phrases together with their meanings are instruction which may be given by ATC units to pilot regarding the operation of SSR transponders:

ATC ↓	meaning
Squawk 5343	Set the transponder code 5343 as instructed
Confirm squawk	Confirm mode and code set on the transponder
Squawk IDENT	Operate the IDENT feature
Squawk MAYDAY	Select emergency code 7700
Squawk STAND BY	Select the stand by feature
Squawk CHARLIE	Select pressure altitude transmission feature (TX)
Check altimeter settings and confirm level	ATC identify a wrong altitude and he want the pilot to check the altimeter instrument

Example:

ATC ↓	Pilot →
↓ SAU1234, squawk 4112	
	→ Squawk 4112, SAU1234

ATC ↓	Pilot →
↓ SAU1234, check altimeter setting and confirm flight level	
	→ SAU1234, altimeter 1013, flight level 80

## 4.5. Manage aircraft with radio communication failure

There are several methods to identify an aircraft which faces a radio communication failure and is able to receive but not transmit messages:

In IVAO, if a pilot cannot transmit using voice, he has always the possibility to transmit via text mode. The communication via text shall be taken first when voice communication is not possible (before any other solution like radio communication failure procedures).

Identify with heading change:

ATC ↓	Pilot →
↓ SAU1234, reply not received if you read Faircity approach, turn left heading 040	
	(the pilot turns to 040 degrees)
↓ SAU1234, turn observed 5 miles south of WIK VOR, will continue radar control	

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Identify with squawk IDENT feature:

ATC ↑	Pilot →
↑ SAU1234, reply not received if you read Faircity approach, squawk IDENT.	
	(the pilot presses on squawk IDENT button)
↑ SAU1234, squawk observed 5 miles south of WIK VOR, will continue radar control	

#### 4.6. Alerting phraseologies

In the event that a minimum safe altitude is not respected by the pilot, the ATC unit will inform the aircraft and issue appropriate instructions.

ATC ↑	Pilot →
↑ SAU1234, low altitude warning, check your altitude immediately, QNH is 1009, and minimum flight altitude is 6200 feet.	

When the ATC unit considers that an imminent risk of collision will exist if action is not taken immediately, an avoiding action to be taken by the pilot is given.

ATC ↑	Pilot →
↑ SAU1234, turn right immediately heading 110 to avoid traffic 11 o'clock 4 miles.	
	→ Right heading 110, SAU1234 (after a while)
↑ SAU1234, clear of traffic, resume own navigation	
	→ Roger, SAU1234

## 5. Level instructions

Levels instructions may be reported as altitude, height or flight levels according to the phase of flight and the altimeter setting.

### 5.1. Reported flight level requested by ATC

ATC ↓	Pilot →
↓ SAU1234, report passing FL80	
(after a while)	→ SAU1234, Wilco
	→ SAU1234, passing FL80

### 5.2. Level change

ATC ↓	Pilot →
↓ SAU1234, climb to FL230	
	→ climbing to FL230, SAU1234

ATC ↓	Pilot →
↓ SAU1234, descend to FL110	
	→ descending to FL110, SAU1234

Level change using conditional clearance:

ATC ↓	Pilot →
↓ SAU1234, after passing NCS NDB, descend to FL70	
	→ after NCS NDB, descend to FL70, SAU1234

Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot

ATC ↓	Pilot →
↓ SAU1234, continue climb FL330	
	→ climbing to FL330, SAU1234

Occasionally, for traffic reasons, a higher than normal rate of descent (or climb) may be required in order to free flight level left.

ATC ↓	Pilot →
↓ SAU1234, expedite decent to FL80	
	→ expediting descent to FL80, SAU1234

With that following clearance, ATC wants the pilot to reach the new level with highest rate of descent until an intermediate level:

ATC ↑	Pilot →
↑ SAU1234, climb to FL240 expedite until passing FL180	
	→ climbing to FL240 expediting until passing FL180, SAU1234

As a pilot if you are unable to follow the expedite clearance you shall report that to ATC:

ATC ↑	Pilot →
	→ unable to expedite, SAU1234

ATC unit shall transmit the QNH value or Altimeter setting value when he instructs an aircraft to descend and cross the transition level.

ATC ↑	Pilot →
↑ SAU1234, descend to FL110	
	→ descending to FL110, SAU1234 (after a while)
↑ SAU1234, descend to 4000 feet, QNH 1023	
	→ descending to 4000 feet, QNH 1023, SAU1234

Now an example with altimeter setting (inHg) used mainly in north america:

ATC ↑	Pilot →
↑ SAU1234, descend to 4000 feet, altimeter 2998	
	→ descending to 4000 feet, altimeter 2998, SAU1234

### 5.3. Maintaining level or stopping level change

ATC ↑	Pilot →
↑ SAU1234, maintain 5000 feet	
	→ maintaining 5000ft, SAU1234

Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot:

ATC ↑	Pilot →
↑ SAU1234, stop descent at FL150	
	→ stopping descent at FL 150, SAU1234

## 6. Area Control and advanced phraseology

Area control units vary in size from simple one person procedural unit to large sophisticated centres which may contain departure, arrival and terminal control sections equipped with radar. Phraseology given in this document would be suitable for any of the above air traffic services.

Much of the phraseology used in area control is available in chapter 4, 5, 6 and 7. However, many instructions used in area control are related to specific conditions in order to maintain aircraft separation.

The following examples provide a cross-section of phraseology used in area control. They may be varied, or added to, by combining their component parts according to the requirements of the prevailing traffic situation.

### 6.1. Descent and climb management

When reaching top-of-descent point, the pilot shall ask a descent instruction before starting the descent. But ATC unit is responsible of the traffic separation and he can give instruction with altitude restrictions:

ATC ↓	Pilot →
	→ SAU1234, request descent
↓ SAU1234, maintain FL360, expect descent after BULOR	
	→ Maintaining FL360, SAU1234
(after a while)	
↓ SAU1234, descent FL250	
	→ Descending FL250, SAU1234
(after a while)	
↓ SAU1234, maintain FL250 until advised	
	→ Maintaining FL250, SAU1234
↓ SAU1234, descend to FL130 cross DIK VOR FL170 or above	
	→ Leaving FL250, descending to FL130, cross DIK VOR FL170 or above, SAU1234

During long haul flight, flight crew can prepare their flight plan including one or several step climb. Pilot-i-command shall have the instruction from ATC unit to climb:

ATC ↓	Pilot →
	→ SAU1234, request FL370
↓ SAU1234, climb FL370	
	→ Leaving FL350, climbing FL370, SAU1234

ATC unit can give anticipate descent instruction before top of descent by using the term “when ready”:

ATC ↓	Pilot →
↓ SAU1234, when ready, descend to FL180	
	→ Cleared to FL180 will report leaving FL300, SAU1234
(after a while)	
	→ Leaving FL300, SAU1234
↓ SAU1234, roger	

Be aware that ATC unit doesn't know the exact descent point. ATC unit must take that into account for his regulation.

## 6.2. Arrival clearance

Usually, the arrival clearance is given by en-route ATC due to the last en-route point is not located in approach area but in en-route area. En-route ATC shall give the arrival clearance before reaching the last en-route point:

ATC ↓	Pilot →
↓ SAU1234, arrival MANAK1A	
	→ Arrival MANAK1A, SAU1234

The en-route ATC can clear intermediate waypoint in the arrival procedure (this way point can be IAF):

ATC ↓	Pilot →
↓ SAU1234, cleared YVR via SHARK8 Arrival	
	→ Cleared YVR via SHARK8 arrival, SAU1234

## 6.3. En-route regulation

ATC unit can instruct a pilot to cross a fix at specific time for regulation:

ATC ↓	Pilot →
↓ SAU1234, advise if able to cross DIK VOR at 52	
	→ Affirm, SAU1234
↓ SAU1234, cross DIK VOR at 52 or later	
	→ Cross DIK VOR at 52 or later, SAU1234
↓ SAU1234, report revised estimate for DIK VOR	
	→ Estimate DIK VOR 1258, SAU1234

ATC unit can use parallel offset route in order to handle a large amount of traffic:

ATC ↑	Pilot →
↑ SAU1234, advise if able to proceed parallel offset	
	→ Affirm, SAU1234
↑ SAU1234, proceed offset 10 miles right of UN874 until BEBIX intersection	
	→ Proceeding offset 10 miles right of UN874 until BEBIX intersection, SAU1234

ATC unit can reroute the aircraft in order to make regulation, separation or shorter the route (time saving):

ATC ↑	Pilot →
↑ SAU1234, route TATAV, POLIT, KUK	
	→ Route TATAV, POLIT, KUK, SAU1234

Or, ATC unit can give direct to a FIX or navigation aid:

ATC ↑	Pilot →
↑ SAU1234, route direct BODUL	
	→ Route direct BODUL, SAU1234

## 6.4. Position report when no radar information

With using IvAc, as an active ATC unit, you will have always the radar information except when server disconnection occurs.

In that special case and in order to assist in establishing separation, pilots may be instructed to provide additional position report information as well as routine reports:

ATC ↑	Pilot →
↑ SAU1234, Report SANDY intersection	
	→ Wilco, SAU1234
(after a while)	
	→ SAU1234, over SANDY intersection, FL370
↑ SAU1234, roger	

ATC unit can request other position report like:

- Report 25 miles from POI VOR
- Report distance from ARTIX
- Report passing 270 radial DIK VOR
- Report 25 DME radial FAA VOR

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## 6.5. VMC descent

An aircraft may request a clearance to climb or descend maintaining own separation while in VMC, in daylight, below 10000ft in airspace classes D and E. The clearance shall include information on essential traffic:

ATC ↑	Pilot →
	→◀ SAU1234, request VMC descent to FL60
↑◀ SAU1234, Descend to FL60, maintain own separation and VMC from FL90 to FL70, traffic westbound friendship FL80 estimating TAKAP at 07	
	→◀ Leaving FL100 descending to FL60, maintaining VMC FL90 to FL70, traffic at FL80, SAU1234

Be aware that during VMC descent, the aircraft is responsible for its own separation.  
Be aware that in some countries, VMC separation and/or VMC descent is forbidden for IFR.

## 6.6. Flight joining, leaving and crossing airways

An aircraft requiring to join an airway should make their request to the ATC unit. Where no flight plan has been filled with this airway, the request should include the filling of an airborne flight plan.

Example: this case can exist during a flight when the destination changes to alternate airfield that needs a re-routing.

ATC ↑	Pilot →
	→◀ SAU1234, requesting clearance to join A1 at MARLO
↑◀ SAU1234, Cleared to Highvilla, flight planned route FL300. Join A1 at MARLO at FL240	
	→◀ Cleared to Highvilla, flight planned route FL300. Join A1 at MARLO at FL240, SAU1234
↑◀ SAU1234, correct	

Flight leaving controlled airspace and leaving airways will normally be given a specific point at which to leave, together with any other relevant instructions necessary to ensure separation.

ATC ↑	Pilot →
↑ SAU1234, Cleared to leave A1 via MARLO, maintain FL200 minimum while in controlled airspace	
	→ Cleared to leave A1 via MARLO, maintaining FL200 minimum while in controlled airspace, SAU1234

An IFR flight outside any airways (direct at low altitude) requiring crossing an airway should make its request to the ATC unit:

ATC ↑	Pilot →
	→ SAU1234, 30 miles north of KOK VOR, FL80, KOK VOR at 21, Request clearance to cross airway V1 at KOK.
↑ SAU1234, Cleared to cross V1 at KOK VOR at FL80	
	→ Cleared to cross V1 at KOK VOR at FL80, SAU1234
↑ SAU1234, Report at KOK VOR	
	→ Wilco, SAU1234

## 6.7. Flight holding en-route

When an aircraft is required to hold en-route the controller will issue holding instructions and a time at which onward clearance can be expected. Where it is not self-evident, the reason for the delay should also be given.

ATC ↑	Pilot →
↑ SAU1234, hold at ODROK FL340, expect further clearance at 25, landing delay at Faircity	
	→ Holding at ODROK, FL340, SAU1234

If there is no parameter given for this holding instruction and if there is no hold published on a fix, the parameters shall be: inbound track is the current heading of the aircraft and outbound time is 1 minute, right hand pattern.

ATC ↑	Pilot →
↑ SAU1234, hold at ODROK FL340	
	→ Holding at ODROK, FL340, request delay, SAU1234
↑ SAU1234, expected delay 20 minutes.	
	→ SAU1234, Roger

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