



VFR COMMUNICATION, HOW TO DO THIS

General

ATC or Air Traffic Control is the contact between you the pilot and the controllers on the ground. It is important that you can safely depart from an airport but also land safely at your point of destination.

What do we need to know before we start this lesson?

Firstly the alphabet used in ATC is in the NATO phonetic format. The letter A is not pronounced A but ALPHA. This is done to differentiate better between letters, for example the letter B sounds very much like the letter D so this can cause confusion.

The best way to learn this alphabet is to practice.

Below is the alphabet and numbers as used by aircrew and air traffic controllers. This is required material before you can start the lesson.

NATO ALPHABET	NUMBERS
ALPHA	ONE
BRAVO	TWO
CHARLIE	TREE (this is easier to differentiate than three)
DELTA	FOUR
ECHO	FIVE
FOXTROT	SIX
GOLF	SEVEN
HOTEL	EIGHT
INDIA	NINER
JULLIET	TEN
KILO	
LIMA	
MIKE	
NOVEMBER	
OSCAR	
PAPA	
QUEBEC	
ROMEO	
SIERRA	
TANGO	
ECHO	
VICTOR	
WHISKEY	
X-RAY	
YANKHEE	
ZULU	

excercise:

Frequency 119.10	Frequency one one niner decimal one zero
Time 30	Time Tree zero
Contact tower 120.90	Contact tower one two zero decimal niner zero
1000 ft	One thousand feet
1500 ft	One thousand five hundred feet
Climb FLO60	Climb flight level six zero (leading zeros are not pronounced!)
QNH 1019	QNH one zero one niner

Also very important to know is when to call out your call sign. Start with your call sign when addressing the ATC for a request and End with your call sign when reading back an instruction. Most of the beginners start off doing this incorrectly.



Phraseology

Let us start off with a bad example of communication.

PILOT : Borg el Arab tower a very good morning this is aaaaah.... the SU-CAI we are a C172 aircraft at parking 03 close to the general aviation. We request uuuuh clearance for a VFR training flight of about 1 hour with circuit touch and go's around Borg el Arab airport. We have uuuh...mmm...let me seeInformation Kilo on board and we would like to request a startup clearance for our engines. SU-CAI

Now let's examine this example

- 1- a very good morning this isit's not wrong to be nice to a controller...but at busy airports you need to reduce your talking time to an absolute minimum.
- 2- We are a C172 aircraftniceI'm sure the controller knows the difference between a car and an aircraft so mentioning you are a C172 is enough
- 3- parking 03 close to the general aviation the controller knows his airport with taxiways and parking's so you don't need to remind him
- 4- VFR training flight of about 1 hour with circuit touch and go's around Borg el Arab.....Where else did you want to fly your circuit? around HongKong?
- 5- "We have Information Kilo on board".....Aaahh..I'm glad you have it on board with you...and you didn't leave it at home. Don't do this.....of course you have it onboard!
- 6- would like to request a startup clearance for our engines....mmm..do I still have to comment on this?

So what do we see from this example?

It is way too much bla bla bla. And too many uuuh's and aaaaah's

If we replace each and every **unnecessary** word with "Mayonaise" it would look like this:

Borg el Arab tower mayonaise mayonaise mayonaise mayonaise mayonaise mayonaise
mayonaise mayonaise SU-CAI mayonaise mayonaise mayonaise C172 mayonaise
mayonaise parking 03 mayonaise mayonaise mayonaise mayonaise mayonaise.
mayonaise mayonaise mayonaise mayonaise mayonaise mayonaise VFR mayonaise
mayonaise mayonaise mayonaise 1 hour mayonaise circuit touch and go's mayonaise
mayonaise mayonaise mayonaise mayonaise. mayonaise mayonaise mayonaise ...
mayonaise ... mayonaise mayonaise mayonaiseInformation Kilo mayonaise mayonaise
mayonaise mayonaise mayonaise mayonaise mayonaise request mayonaise startup
mayonaise mayonaise mayonaise mayonaise

So why use 73 words...when you can say exactly the same in only 20 !!

This is called...leaving out the MAYONAISE.

Too much mayonaise is not good for a pilot or a controller so stick to the following rules:

- 1- Use standard phraseology
- 2- Keep it short
- 3- Don't tell stories
- 4- Wait for your turn to speak

Try to train yourself not to talk FASTER but to talk LESS !



Information and instruction

- 1- A clearance must be read back in FULL
- 2- An instruction must be read back in FULL or some cases with WILCO
- 3- Information can be left out in your read back

example 1

TWR	SU-CAI, the winds are 320 at 12 knots, rwy 32, cleared for takeoff
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information : the winds are 320 at 12 knots
instruction : SU-CAI...rwy 32 cleared for takeoff
so as you see...the ATC provides you with some information first and ends with the actual instruction

there are too many pilots who read back everything or say something like:

incorrect

Pilot	Roger sir...i copied the winds, cleared for takeoff rwy 32, SU-CAI
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DONT do that: "copied the winds"

Like we said before...you do not read back information...only the instruction

the correct way to reply would be

Pilot	cleared for takeoff rwy 32, SU-CAI
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example 2

TWR	SU-CAI, the winds are 320 at 12 knots, rwy 32, cleared to land, vacate via D
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information : the winds are 320 at 12 knots
instruction : SU-CAI...rwy 32, cleared to land, vacate via D

Pilot	Cleared to land rwy 32, vacate via D , SU-CAI
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example 3

TWR	SU-CAI, caution C172 at your 11 o'clock position approximately 3 nm report traffic in sight
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information :caution C172 at your 11 o'clock position approximately 3 nm
instruction : SU-CAI ...report traffic in sight

Pilot	Traffic in sight, SU-CAI
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Well I think you get the point now...so think before you speak **No more:** ...Copied the winds.....with you...we have the information onboardor any other irrelevant stories.

Roger and WILCO

To clarify the miscommunication between ROGER and WILCO.
These terms are often misused on the IVAO network.

- **ROGER** would be used only when you want to indicate that you have understood the **information** received.(For example wind heading and speed).
- **WILCO** is to indicate that you as pilot understood the **instruction** and **will** comply. For instance: " MSR479 report established on the Localizer" The pilot will reply with : "WILCO. It is an instruction that does not require a full read back but the pilot shows that he understood the instruction and will execute.



As a beginning pilot you will first be trained to fly aerodrome traffic circuits. How to start the communication? and request for the clearance? Let's go over an example:

VFR Circuit Flight

There are 2 kinds of clearances possible:

- full clearance at the gates
- Start-up clearance at the Gates followed by an en-route clearance (split clearance)

Big international airports prefer the full clearance at the gate for IFR as well as for VFR traffic.

Smaller regional airports might use the split clearance for VFR as well as for IFR! Regulations may vary so it's always good to have yourself informed about local procedures.

and remember....its ATC's decision to deviate from the local procedure and give you start-up clearance first followed by en-route clearance later if the workload is high.

so whether you are flying IFR or VFR...do not start an argument with the controller that you have not yet received your squawk code or departure route to program your FMC. Follow the instructions.....the controller will not let you take-off before you have received all necessary information!

Step 1: the start-up clearance

Before we start requesting the clearance for our circuit flight. Let's test our radio equipment to see if it's working well enough and check if the controller has time for us.

Pilot	Borg El Arab Tower, SU-CAI, request radio check on 119.10
TWR	SU-CAI, read you 5 by 5

or even shorter

Pilot	Borg El Arab Tower, SU-CAI, radio check on 119.10
TWR	SU-CAI, readability 5, go ahead.

We have the controllers attention so NOW is the moment to ask for the start-up clearance.

As a general rule, the following elements have to be mentioned in the clearance request:

- *Call sign,*
- *Type aircraft*
- *Position*
- *Rules (IFR/VFR)*
- *Destination or intention*
- *ATIS letter*
- *Request*



Pilot	SU-CAI, C172, parking 03 general aviation, VFR, 1 hour circuit touch and go's, Information Kilo, request startup.
TWR	SU-CAI, Information KIL0 correct, rwy 32 in use, QNH 1016, startup approved.
Pilot	Rwy 032, QNH 1016, startup approved, SU-CAI

or.....

Pilot	SU-CAI, C172, parking 3 general aviation, VFR, 1 hour circuit touch and go's, Information Kilo, request startup.
TWR	SU-CAI, start up approved runway 32, QNH 1016, information Kilo correct, time 30
Pilot	Start up approved rwy 32, QNH 1016, time checked, SU-CAI

Note this time the controller uses a time. In this case it is 30 minutes after the current hour so the pilot can synchronize his clock.

in case the ATIS information reported by the pilot is incorrect the controller will say:

TWR	SU-CAI, start up approved, monitor information Lima, runway 32, QNH 1016, time 30
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When the start-up is completed we can request for taxi

Step 2: the taxi clearance

Pilot	SU-CAI, request taxi
TWR	SU-CAI, taxi holding point 32 via taxiways J and A
Pilot	Taxi holding point 32 via J, A, SU-CAI

Since we are flying a small / Light aircraft we might not need the entire runway for departure. The pilot could ask for a shortcut to depart from an **intersection** instead of the beginning of the runway or....the Controller could ask us if we would accept a shortcut because it is more convenient for him due to other traffic.

Pilot	SU-CAI, request taxi
TWR	SU-CAI, do you accept departure from intersection C?
Pilot	affirm
TWR	SU-CAI, taxi intersection C, rwy 32 via taxiways J and A

We got the taxi clearance so we will now start taxiing to the runway while we still were not given our complete clearance.

But....Don't panic ! ... the controller will never let an aircraft depart without the complete clearance. At a certain moment he will give it to us.

Step 3: the enroute clearance

TWR	SU-CAI, clearance (available)
Piloot	ready to copy clearance, SU-CAI (or) ready to copy, SU-CAI (or even better) Go ahead, SU-CAI....(if he wasn't ready he would have said: "standby")
TWR	SU-CAI, cleared for your VFR traffic pattern out of rwy 32, 1000ft , Squawk 7001
Piloot	VFR traffic pattern, rwy 32, 1000ft , Squawk 7001, SU-CAI

note that the controller might tells us again we depart from rwy 32 as a reminder (he already told us during start-up).



Also the height of the traffic pattern is mentioned here to remind us. The pilot already knew that from his VFR chart! but still.....

Be aware that the controller uses heights AGL (above ground level) for his VFR clearance ! (IFR clearances are given in MSL)

You must therefore know the airport elevation !

A simple trick how to do this is as follows:

1. Read the METAR of the airport where you are going to fly your circuit or depart from and look for the QNH
2. Set the QNH in your Altimeter
3. Read the altitude from your Altitude indicator. It is now indicating the airport elevation

ad3: some airports may have different heights for the terminal, parking's and the runways so it's always better to have a chart.

Step 4: the take-off clearance

Just before departure we need to report where we are and that we are ready to go. **DO NOT use the words ready for take-off.** Those words are used by the controller only !

Pilot	Borg El Arab tower , SU-CAI, holding position C, rwy 32, ready for departure
TWR	SU-CAI, winds calm, rwy 32, cleared for takeoff
Pilot	Cleared for takeoff, 32, SU-CAI

Step 5: Circuit reports: touch and go

When flying an aerodrome circuit pattern the pilot **must** report on:

- downwind + intentions
- on final

unless instructed otherwise by ATC

when you are alone in the circuit:

Pilot	SU-CAI, downwind rwy 32 for touch and go
TWR	SU-CAI, roger, number 1
Pilot	number 1 , SU-CAI

in case of a (non-standard) RIGHT-HAND circuit the pilot and ATC MUST mention the circuit as well.

Pilot	SU-CAI, right-hand downwind rwy 32 for touch and go
TWR	SU-CAI, roger, number 1
Pilot	number 1 , SU-CAI

when there are 2 aircrafts in the circuit:

Pilot	SU-CAI, downwind rwy 32 for touch and go
TWR	SU-CAI, roger, number 2, number 1 on final
Pilot	Number 2, number 1 in sight, SU-CAI



When there are more than 2 in the circuit:

Pilot	SU-CAI, downwind rwy 32 for touch and go
TWR	SU-CAI, roger, number 3, number 2 at your 11 o'clock position, maintain visual separation. Or SU-CAI, roger, number 3, C172 at your 11 o'clock position, maintain visual separation.
Pilot	Number 3, number 2 in sight, maintain visual separation, SU-CAI

as you see here...it's getting crowded in the circuit. It is the pilots responsibility to keep enough distance from the aircraft in front of him....at least 3 nm visual separation (3nm horizontal / 1000ft vertical)

Nevertheless, The controller should keep a watchful eye on the traffic in the circuit. We don't want to have any mid-air collisions.

When there is an another aircraft on final (VFR/IFR) and you are about to turn base:

TWR	SU-CAI, extend downwind, B737 at your 11 o'clock position on short final rwy 32
Pilot	Extend downwind, SU-CAI

The controller will tell you when it's safe to make your approach

TWR	SU-CAI, turn base, report final
Pilot	Turn base, wilco report final, SU-CAI

As you see...there are a lot of things that could happen in a circuit. Don't panic. Communicate and Navigate.

once we are on final we report:

Pilot	SU-CAI, final rwy 32
TWR	SU-CAI, surface winds 090 at 7, rwy 32 cleared touch and go
Pilot	rwy 32 , Cleared touch and go,SU-CAI

and for the right hand circuit:

Pilot	SU-CAI, final rwy 32
TWR	SU-CAI, winds calm , rwy 32, right-hand circuit, cleared touch and go
Pilot	rwy 26R, right-hand circuit, Cleared touch and go SU-CAI

Step 5: Circuit reports: full stop landing

Pilot	SU-CAI, downwind rwy 32, for full stop
TWR	SU-CAI, roger, number 1
Pilot	Number 1, SU-CAI

Pilot	SU-CAI, final rwy 32
TWR	SU-CAI, winds calm, rwy 32, cleared to land rwy 32, vacate via D
Pilot	Rgr, cleared to land 32, vacate D, SU-CAI



Step 6: taxi to the gate

In Real life when a pilot vacates the runway he will immediately switch to GND without reporting first to tower. Tower knows that the runway is clear since the pilot switched off his transponder.

On IVAO however this is done differently. The pilot reports vacated to the tower and tower will give the frequency to contact ground. The pilot has to tell again he vacated the runway and his position.

Once switched to Ground we will report our position (and request taxi if you have a special request for parking position).

Since we are flying at Borg el Arab we continue communicating with the Tower because this airport does not have a GND controller.

Pilot	SU-CAI, rwy 32 vacated at D
TWR	SU-CAI, taxi parking 03, general aviation via taxiway A
Pilot	Parking 03 via A, SU-CAI

Pilot	SU-CAI, parking 03
TWR	SU-CAI, Flight plan closed at 15, switch off approved
Pilot	Switch off approved, SU-CAI

the controller tells us that our flight plan is closed at 15min after the current hour.

We so often hear on IVAO...."switch Unicom 122.80"

In real life the use of "switch off approved" and "frequency change approved" is used.

At the end of your flight the controller is letting you go. He cannot order you to a certain frequency. Pilots will switch to their companies frequency! or...Unicom....or switch off. So also on IVAO although 122.80 is likely to be used, the pilot is free to switch to his VA frequency.

