



A Guide to Basic RadioTelephony Procedures

THE BASIC PRINCIPLE

It is usual for larger “regional” airports to have two Air Traffic Controllers operating at the same time. Each has their own operational area and their own discreet radio frequency to allow them to speak exclusively to aircraft in their own area.

They are known as the **Approach** or **Radar Controller** and the **Tower Controller**. The Tower Controller looks after all movements on the ground (aircraft, vehicles and pedestrians) and in the area of the Aerodrome Traffic Zone (ATZ) of his or her aerodrome, i.e. the area immediately adjacent to the airfield up to a radius of about 2 miles from the centre of his airfield.

The Approach Controller looks after the wider area around the airfield, up to about 25 miles radius from his or her airfield.

At an airfield equipped with Radar, the Approach Controller is often known as Radar. Normally, when departing from an airfield you will initially talk to Tower and after leaving the ATZ you will switch to Approach or Radar.

When approaching your destination airport you will be speaking to the Approach or Radar Controller initially, and when you are close to the airport you will be asked to call the Tower Controller to be told how he or she wants you to join the circuit pattern for landing.

The Tower Controller gives you your [Departure Instructions](#) and your [Joining Instructions](#).

The Approach Controller gives you a minimum of a [Basic Service](#).

This is not the full story. Another radio procedure is used at smaller airfields, and is called “Air to Ground”, where only airfield information is given and no actual control takes place. Major Airports with Radar can offer [Traffic](#) and [Deconfliction services](#) as well as [Basic Services](#).

Radio procedures will vary a little between airports, so it is important that the general concept is understood. This of course will take time and practice.

At larger airports like Newquay and Exeter, there is an additional frequency called **ATIS** (Automatic Terminal Information Service) which contains recorded information regarding the runway in use, the weather conditions etc. and which you will need to listen to before making your first call to the Tower Controller

The following are examples of typical RT exchanges to help you get started.

Departure From Newquay

Select ATIS frequency and monitor recorded information, taking note of the runway in use, the pressure setting (QNH) and the identification letter. Then select the Tower frequency and call for engine start clearance as follows.

‘Newquay Tower, GBSTO, at the GA Park, information Yankee, QNH 1013, request engine start’.

‘[GBSTO, Newquay Tower, start approved](#)’.

‘Start approved, GBSTO’.

After engine started and after-start checks complete.

Newquay Tower, GBSTO, at the GA Park, request taxi'.
'GBSTO, Newquay Tower, taxi to holding point C1, runway three zero'.

'Taxi holding point C1, runway three zero, GBSTO'.

Whilst taxiing you may be given further information or a departure clearance i.e.

'GBSTO, after departure left turn, not above 3000 feet, squawk 1752'.

'After departure, left turn, not above 3000 feet, squawk 1752, GBSTO'.

'GBSTO readback correct'.

When power checks and vital actions are complete.

'GBSTO, at holding point C1, ready for departure'.

'GBSTO, line up runway three zero'.

'Line up runway three zero, GBSTO'.

'GBSTO, cleared takeoff, surface wind 270/10 kts'.

"Cleared takeoff, GBSTO".

(no need to read back the wind, this is for information only).

Your initial call to ATC can usually be summed up as:

Who you are

Where you are

What you want

Some items must be read back to the controller such as the taxiway or holding point, the runway in use and the altimeter setting. As often the holding point is at an intermediate point along the runway length you may be given the option to 'backtrack if required'. A decision then needs to be made as to whether you require a greater runway length for your takeoff roll; you could choose to backtrack a short distance down the runway before turning round to line up or you could opt for the whole length (fairly unlikely at Newquay as the runway is very long!)

After Departure

'GBSTO, contact Newquay Radar on 133.40'.

'Newquay Radar 133.40, GBSTO'.

Change frequency and call Newquay Radar;

'Newquay Radar, GBSTO departing to the west, climbing to 2000 feet request Basic Service'.

'GBSTO, Basic Service'.

'Basic Service, GBSTO'.

While flying "dual" with an instructor, you will always use your instructor's callsign i.e. Tamar Three.

When flying "solo" as part of your training, or as a private pilot when you have gained your licence, you will use the aircraft callsign i.e. GBSTO (Golf Bravo Sierra Tango Oscar etc.)

You may only abbreviate your callsign ie. to GTO (Golf Tango Oscar) after the controller abbreviates it.

On first contact to a new ATC unit, you must use your full callsign, and continue to use it in full until the Air Traffic Controller abbreviates it .This applies even if you are changing between Tower and Approach on the same airfield. Also, you must start your transmission on first contact with the ATC callsign ie. Newquay Tower. Once you have established contact you will start subsequent transmissions with your own callsign unless you are replying to the controller in which case you will conclude with your callsign.

When you are established with the Radar or Approach Controller he may advise you of any traffic which will affect you. He may also tell any other aircraft in the area about you. This is the essence of a Basic Service, but you are still responsible for avoiding other aircraft, therefore you must maintain a constant lookout for other aircraft.

It is usual at major airports for Tower to control aircraft on the ground, in the circuit and the immediate vicinity. Approach will then control traffic in the surrounding area. After departure you will need to change from Tower to Approach. This can be instigated either by the pilot (you) or the Controller. On arriving at an airfield, you would initially be speaking to Approach and then expect to change to Tower before entering the circuit, usually when you have "the field in sight"

Arrival at Newquay after local flight

After a local flight you will need to request joining instructions from the controller so that he/she can give you instructions to join the airfield circuit pattern from the direction you are approaching from. This again fits into 'who you are, where you are, what you want' and will sound something like this.

'GBSTO, overhead Wadebridge, 3000 feet, request joining instructions'

'GBSTO, join right base, runway three zero, QNH 1014'

'Join right base, runway three zero, QNH 1014'.

'GBSTO, contact Newquay Tower on 134.375'

'Contact Newquay Tower, 134.375'

Sometimes there will be a gap between receiving joining instructions and being told to contact the Tower Controller, for example you may be asked to 'report airfield in sight' and only transferred to Tower when you have become visual with the field.

Select the Tower frequency and wait for a few seconds to ensure that you do not transmit whilst others are speaking. Note that as this is a change to a different controller you will need to start the transmission with their callsign again.

'Newquay Tower, GBSTO, positioning for right base, runway three zero'.

'GBSTO, Newquay Tower, join right base, runway three zero, QNH 1014'.

'Join right base, runway three zero, QNH 1014'.

Upon reaching right base.

'GBSTO, right base, runway three zero, to land' (or touch and go).

'GBSTO, report final'.

'Report final, GBSTO'.

When established on final approach.

'GBSTO, final'.

'GBSTO, runway three zero, cleared to land, surface wind 290/8 kts'.

'Cleared to land, GBSTO'.

After landing the controller may give you instructions to vacate and directions to parking or you may have to request these yourself as follows.

‘GBSTO, request taxi to the GA park’.

‘GBSTO, vacate right and taxi via Charlie and Alpha to parking’.

‘Vacate right and taxi to parking via Charlie and Alpha, GBSTO’.

This covers the rejoin RT at it's most basic – there may be other information given to you such as the vicinity of other traffic or you may be asked to hold off whilst other aircraft depart or arrive or given a place in traffic i.e. ‘number two, to the Airbus on short final’.

You do not necessarily need to read back everything. For example, wind velocity and wake turbulence separation are for your information only and never need to be read back; traffic information can be acknowledged with ‘Copy traffic’ or ‘GBSTO roger’ and sometimes ‘Wilco’ (will comply) will suffice.

En route Radio

After departure, and when you are established with the Approach/Radar Controller it may be appropriate to stay on the that frequency or if you are moving into the area covered by another ATSU (Air Traffic Service Unit) or landing away you will need to change frequency. For example, on a local flight from Newquay which involves flying into Culdrose's area you will be told by the Newquay Controller when he requires you to speak to the Culdrose Controller. If you are told to ‘contact’ a new ATSU it implies that your details have already been passed on but if you are told to ‘freecall’ you will not be expected on the new frequency and will have to pass more information.

A typical exchange would be along these lines.

‘GBSTO, squawk 7000 and freecall Culdrose Approach on 134.05’

‘Squawk 7000, freecall Culdrose Approach 134.05’

When you have reset your transponder and selected the Culdrose frequency

‘Culdrose Approach, GBSTO, request basic service’.

‘GBSTO, Culdrose Approach, pass your details’.

‘GBSTO is a Cessna 152,
Newquay to Newquay via St.Ives, Falmouth,
presently 5 miles north of Truro,
3000 ft on 1014,
VFR,
Estimate St.Ives one seven,
Request basic service’.

This sounds like a lot to remember but again it is just a variation on the theme of 'Who, where, what' with the 'who' including the type of aircraft and where you are from/to, and the 'where' including your altitude, flight rules and an estimate if possible for your next turning point.

You could have an aide memoire on your kneeboard such as,

Callsign/Type
From/To/Route
Where
Alt/Datum
Rules
Estimate
Request

Or you could also use the TRIPACER acronym

TypeRouteIntentionPositionAltitudeConditionsEtaRequest

Having made your request, the reply may be as simple as,

'GTO, basic service'
'Basic service, GTO'.

Or could include a 'squawk'code for your transponder, a request for you to report when you are at a particular point or some relevant traffic information, eg.

'GTO, squawk 4231, traffic is a Cessna 182, 2 miles south at 2500 ft, heading east'.
'Squawk 4231, copy traffic, GTO'.

Or 'GTO, report turning overhead St.Ives'.
'Wilco, GTO'.

Often, you will be given a squawk code before the controller asks you to pass your details. When you have selected the code and the controller has 'radar identified' your aircraft he/she will then ask for your details. If you have been told to 'contact' an ATSU, after your initial request for a basic service you should not need to pass all of your details as the controller should already have this information. As with all of this, there will be many variations on the theme but as long as you follow the basic pattern, there shouldn't be too many surprises.

Arrivals from other frequencies or airfields

Arrival back at Newquay after a local flight where you have been off frequency without landing away would sound something like this,

'Newquay Approach, GBSTO, back on frequency, 10 miles south-west, 3000 ft on 1014, request basic service and joining instructions'.

It would then follow a similar pattern to the exchange on page 5. If you have landed away and are arriving back, you are a completely different flight and would have to give full details.

Basic RT Discipline.

Good airmanship includes good RT. Air Traffic Controllers and other pilots will judge your piloting skills based on your radio work.

Know what you are going to say before you transmit (engage brain before operating mouth!).

Have your pen ready to write down information given to you. Your short term memory will retain only a few pieces of information for a few seconds and then that information is gone.

Don't hold the microphone boom, this can cause a lot of noise at the other end.

Listen out on frequency before speaking so that you don't "tread" on other users!

Don't take shortcuts, but do be as concise as possible.

Try to relax, if you are stressed you will easily confuse what is said to you.

When starting a call, say who you are calling and THEN who you are.

When replying, give your reply, THEN your callsign.

Don't abbreviate your call sign until the Air Traffic Controller uses the abbreviation, and then always use the "Golf" prefix.

If during your flight the Controller knows of any aircraft coming into your area, He/she may call you and tell you about them. Don't just say "Copy traffic, GBSTO" and then forget about it. Consider the information. Does the other aircraft represent a threat to you? Is it at the same altitude to you? Is it coming towards you? Evaluate the potential danger to your aircraft, keep a constant lookout and be ready to take avoiding action. It goes without saying then that a constant "listening watch" is essential if you are to receive traffic alerts and be able to build up a mental picture of the positions of other aircraft.

Each controller has his/her own slight variation in the way he/she speaks to aircraft, therefore do not expect the exactly the same form of words in

each situation. If you know what the controller can be expected to say and listen to what he/she actually says then any variation from normal will be understood. Pilots who expect to hear a precise form of words are often completely thrown by a different format.

Much of our radio phraseology is laid down by the CAA and must be learnt from the Air Pilot's Manual Book 7, or CAP 413 .You should also read appropriate Safety Sense leaflet.