Services Available to VFR Pilots… And How to Get Them

- VFR Flight Following
- Flight Service Station (FSS) services via RCO, GCO, telephone, online
- Class Bravo clearance and transition
- Special VFR
- Emergency
- Lost Communications

5 Ws of Communication:

- Who you are talking to: (Minneapolis Approach)
- Who you are: (Cessna 79567)
- Where you are: (5 north of Anoka at 3000)
- What you want: (Request….)
- Weather: (Sometimes needed, sometimes not)

These are the basic 5 Ws of radio communication. They work for talking with Ground, Tower, Approach, Center, Flight Service. Follow the same pattern and communication is much easier. Sometimes on initial contact to FSS or Center, just begin with **"Princeton Radio (Minneapolis Center or Approach), Cessna 12345."** They may be busy with another pilot and this alerts them your tail number until they can get back to you.

Who Provides Services?

- **Ground/Tower:** Control surface movement and airspace within Class B, C, D
- **Approach/Departure:** Control arrival and departure traffic within the Class B Terminal Radar Control area (TRACON). Class C, and sometimes D Radar Control areas.
- **Center**: Controllers once you leave Tracon area. Their territory is divided into sectors across the country. You will be handed off to the next controller as you near their sector.
- **Flight Service Station (FSS):** They do not control traffic. Their duties include weather briefings, acceptance, activation, amendment, closing of flight plans, initiation of search and rescue, emergency and lost procedures

VFR Flight Following (Excellent Aid for Cross Country Flight)

- ATC watches your flight with a discrete transponder code and can give you traffic advisories, time permitting.
- Extra pair of eyes in sky for you, which is good when visibility is poor or when there is a lot of traffic in the area
- They can advise you of hazardous weather such as impending thunderstorms and let you know which way to deviate, direct you to the airport if you are having difficulty spotting it.
- Improves your communication skills, and helps you understand the ATC system.

Procedures for Flight Following

- **How to get it:** Initial call to Ground would sound like this: Anoka Ground, Cessna 79567, East side with Bravo, request flight following to Brainerd, 4500 ft, ready to taxi
- **What happens next:** Ground will say: Cessna 79567, Departure Frequency 126.5, squawk 4527
- **Next:** You repeat: 126.5, squawk 4527, put the code in the transponder….and of course there would be taxi instructions in that conversation
- Once you take off, Tower will tell you to contact Departure (or Approach…same people). You will contact Departure like this: Minneapolis Departure, Cessna 79567 off of Anoka at One Thousand Eight Hundred for 3500 (whatever your altitude is and what you are climbing for)
- They will tell you to Ident, and then tell you they have you on radar. They already know you want flight following, so from then on you will get traffic advisories, time permitting, for the duration of your flight.
- As you get close to leaving the Terminal Area (white box on the TAC chart), Departure will say…Contact Minneapolis Center on 121.05
- You acknowledge by saying: Contact Center on 121.05, 79567
- Switch frequencies, then say: Minneapolis Center, Cessna 79567 level at 3 thousand, 500
- They will acknowledge and hand you off to the next Center frequency when appropriate
- When you want to get weather at your destination, just ask Center for a frequency change to get weather. They will tell you to report back on with them.
- When you are getting close to your destination, either you will request to cancel flight following or Center will tell you where the airport is and tell you "radar services terminated, squawk VFR and change to advisory frequency." This means you can switch to CTAF and squawk 1200

Flight Following at Non Towered Airports

- Check Chart Supplement for Approach/Departure/Center frequency listed for your departure airport
- Once airborne (might be able to do it on the ground), contact Center on that frequency by saying: Minneapolis Center, Cessna 79567 off Brainerd, 3000, with request
- They will say: Cessna 79567, what is your request?
- You will say: Cessna 79567 is a Cessna 172, requesting flight following to Anoka at (5500)
- They will give you a squawk code for transponder and give advisories, time permitting

Class Bravo Clearance

(For Transition/Flight Following to An Airport or Orbiting Downtown…some purpose)

- To enter Class Bravo you need: Two way radio and transponder with Mode C, **a clearance from ATC,** must maintain 3 miles visibility and clear of clouds
- **To request a clearance:** Start with ground control at ANE: "Cessna 79567 (after telling your location on the airport, with ATIS) request VFR squawk for clearance into Bravo enroute to (Owatonnna)(or "over the top of MSP" enroute to KOWA) or wherever you are going.
- Tower will give you a squawk code and a frequency to contact Approach (126.5)
- On departure from ANE, Tower will tell you to contact approach
- You will say: Minneapolis Approach, Cessna 79567, off Anoka at One Thousand 500
- They say: Cessna 79567, Ident
- You push the ident button and wait for them to tell you they have radar contact and ask you Cessna 79567, what is your request?
- You say: Cessna 79567 request transition through Bravo enroute to (Owatonna)(or orbit downtown Minneapolis)
- **You will either get lucky or you will be asked to remain clear of Bravo**
- If you get the clearance it will sound something like this: Cessna 79567, climb and maintain 3 thousand five hundred, fly heading 180, cleared into Class Bravo
- You say: 3 Thousand 500, 180, Cleared into Bravo, 79567
- Now you just fly their altitudes and headings and ENJOY THE RIDE!!!
- When they are ready to, they will tell you to descend and resume your own navigation to wherever you are going.
- To enter Bravo from somewhere else, call approach on appropriate frequency, tell them who you are, where you are, with request. Then request clearance into Bravo enroute to….

What Does Flight Service Station (FSS) Do?

- Weather Briefings (Complete ones best done over phone)
- NOTAMs and TFRs
- Accept flight plans
- Activate and close flight plans
- Amend flight plans
- Monitor Emergency Frequency (121.5)
- Special VFR clearances (FSS is go between for ATC)
- Direction find steer (DF Steer) if you are lost
- Accept PIREPs (Pilot Reports)
- Weather Advisories Enroute

Flight Briefing from FSS (1-800-992-7433 1-800-WX BRIEF)

- A briefing from FSS is a legal briefing
- **Four kinds: Outlook briefing** (+6 hours from departure), **Standard briefing** (close to departure), **Update briefing** (shortened, get right before you leave)**Abreviated** (just need to know stuff)
- When briefer answers give this information:
    - Aircraft type and tail number
    - Request standard briefing for VFR flight from ANE to BRD
    - Departing 15 Zulu, returning 21 Zulu
    - At 4500 feet
    - Can request for them to go slow (play the "student pilot card")

Briefing Information

- Overview of weather systems
- Current weather at departure, destination and enroute
- Airmets, Sigmets (IFR, Icing, Turbulence)
- Forecasted weather at departure, destination and enroute
- Winds aloft at your desires altitudes (3, 6, 9, etc.) This is what you want to know for your flight planning for ground speeds
- NOTAMS and TFRs

Filing A Flight Plan With FSS

- **Filing a flight plan adds a measure of safety! Someone is expecting you.**
- Call FSS and tell them you want to file a flight plan (or 2). You can file both legs at the
    - same time. FSS briefer has the flight plan form in front of him/her. You just read to them what you have written in the boxes (no captions, just the info). If filing both legs, you only have to read what is changed (Destination, departure time, etc.)

- File on 1800wxbrief.com. (create an account)
- You can also use Foreflight, other tablet apps

How to Reach FSS

On the Ground

- 1-800-992-7433 (WX-BRIEF)
- RCO (Remote Communications Outlet) (122.55 at ANE)
- GCO (Ground Communications Outlet) (121.725)(4 clicks on mic for ATC, 6 clicks for FSS)

In the Air

- Designated frequency found in blue numbers above Nav Aid boxes (122.1, 122.2, 122.4, etc)
- Frequency shown with an "**R**" **after it (122.1R)** means: **They receive you on 122.1, you will hear them on the NAV AID**

Using a GCO (Ground Communications Outlet)

- Airport Facility Directory will tell you if airport has a GCO
- Frequency is always **121.725**
- Only works on the ground
- **Six clicks on the mic to reach FSS, 4 clicks to reach ATC**
- Connects by modem (actually dials the FSS or ATC telephone number…you will hear dial tone and phone ringing)
- FSS will answer like normal
- You call back using your mic on 121.725

Activating/Closing Flight Plans on Radio

- Initial Call: Princeton Radio, Cessna 79657 (to establish communication)
- They say: Cessna 79567, Princeton Radio, go ahead
- You say: Cessna 79567 would like to open (or activate) our flight plan to Brainerd, or close flight plan from Anoka to Brainerd
- They say: Flight plan activated (or closed), appreciate Pilot Reports on FSS frequencies, etc., etc.
- You can end by saying thank you…79567

FSS Enroute Services

- **Weather updates for your route of flight:** Helpful if weather is deteriorating. Can help decide on deviation
- **Amend your flight plan:** If you have to deviate, or ground speed is much slower, you can call them and amend your flight plan (new destination, new arrival time)
- **Accept Pilot Reports:** These can be very helpful to your fellow pilots and are easy to give. Give your aircraft type, location, altitude, flight conditions. Goes in system and others can see them.

Special VFR

- Special VFR is an ATC issued clearance for you to operate in less than VFR conditions (less than 3 miles vis and closer than 500 ft below to clouds or when ceiling in controlled airspace designated for an airport is less than 1000 ft.)
- **It must be pilot requested**
- FSS can coordinate it with ATC for you, or you can request it directly from ATC (Approach, Departure, Center or Tower)
- You might be given a squawk code and a frequency for ATC
- **You now must maintain 1 mile and clear of clouds**

Why Would You Want or Need to Get Special VFR?

- You want to work the pattern, but ceiling is less than 1000 feet
- You are returning from flight and ATIS is reporting 2 miles visibility or ceiling is less than 1000 ft.
- You are departing with a low layer here that you know ends just outside of Class D, and it's clear and a million after that
- When ceiling is less than 1000 and/or vis is less than 3 at Class C, D and Class E to surface airport (KBRD)

How Do We Get It and What Happens Next?

- You will need to know who to contact depending on where you are:
    - Approaching or departing towered airport, request from tower
    - Approaching or departing non-towered airport, request from either FSS or Center (You will need your AFD for Center frequency, a sectional can show you the nearest FSS frequency above the nearest Navaid box)
    - **LOOK UP THESE FREQUENCIES AHEAD OF TIME. If you have to do this in low visibility, you need to be prepared!!**
- **Call appropriate frequency, tell them who you are, where you are (location and altitude), requesting Special VFR to land/depart/work the pattern at the requested airport**
- IFR traffic has priority over SVFR traffic unless you declare an emergency
- When arriving or departing a Class E to the surface airport, you must report to ATC when on the ground or clear of the airspace. (Once you receive a SVFR clearance, you own that airspace and ATC can't clear anyone else in until you cancel SVFR)

Air to Air (Talking to Another Pilot While Airborne)

- **Use 122.75** (CTAF or 123.45 are not the proper frequencies)
- Use if you want to reach someone else who is flying at the same time as you are
- Use this frequency considerately. There may be others who are using it too, to coordinate a flight of several aircraft, etc. **DON'T HOG THE FREQUENCY!**

Emergency

- **Emergency Frequency: 121.5 Squawk 7700**
- If you can, climb for better radio reception
- Say**: Mayday, Who you are, Where you are, What the emergency is, What assistance you need**
- **Monitored by:** ATC, Other pilots, FSS, Military

Loss of Communications

Troubleshoot

- Correct Frequency
- Volume, pull knob to hear squelch
- Correct radio selected on audio panel
- Proper button pushed on audio panel
- Headphones plugged in
- Volts, amps at proper level (do you have power?)
- Circuit breakers in
- Try hand mic if there is one, overhead speaker, or different headset
- **Do you have a handheld transceiver?**
- Next: 7600 on transponder, Call Tower on cell phone 763-717-3045 (KANE)
- Enter traffic pattern at 500 feet above pattern altitude and circle
- If you have power, flash landing light and rock your wings
- **Watch tower for light gun signals, follow instructions (Keep copy of signals on your kneeboard, and/or review them often)**

Progression of Communication Frequencies on a VFR Cross Country

- ATIS (ANE 120.625)
- Ground 121.85 (taxi clearance, request flight following)
- FSS (to activate flight plan) (122.55 at ANE)
- Tower 132.40 (takeoff clearance)
- MSP approach (for flight following)(126.5)
- MSP center (when leaving TAC)
- AWOS at destination (10 miles out)
- Terminate flight following when airport in sight
- CTAF at destination
- FSS (to close flight plan)

What To Do the Improve Your Communications Skills

- Listen to Tower on a hand held transceiver
- Practice radio calls using the 5 Ws and an airport diagram…make up your own scenarios
- Write down and think about what you are going to say before you key the mic
- Use Flight Following on cross countries!!!
- Do not assume anything…LISTEN, PAY ATTENTION and VISUALIZE what is going on
- PLAN AHEAD: Have list of needed frequencies