

Let's Talk VFR

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I want to cover the overall concept of how to handle a VFR aircraft within both the Tower & TRACON environment. I promise I will keep it simple as best as I can.

If you're working at a Class Delta, and a VFR Cessna, Boeing 737, Cherokee, whatever, calls you for VFR to the Northeast. Simply TAXI the airplane to the active runway, and based on traffic permitting (pattern work, idk) clear the aircraft for takeoff. If that aircraft plans on wanting flight following outside of the Delta, simply tell them to contact the necessary TRACON controller for flight following on XXXX frequency. NOTE, I said nothing about a RADAR handoff. Keep it simple "N12345, suggest you contact SOCAL approach on XXXX for flight following".

If you're working at a Class Charlie, and a VFR Cessna, Boeing 737, Cherokee, whatever, calls you for VFR to the South, or a specific destination. Follow what your SOP says about telling the aircraft to "Maintain VFR at or below XXXX, departure frequency XXXX, squawk XXXX". Note, the reason we tell aircraft to Maintain VFR at or below a specific altitude is because that altitude will comply with terrain and obstruction clearance within the vicinity of that airport. If an aircraft tells you he/she is requesting VFR at 1,200 to the south, that's fine and dandy. But we have to think ahead and understand the cause and effect of this. If you tell an aircraft to maintain VFR at 1,200 and later on once airborne, fly's south, and has a NORDO issue, or is never given a higher altitude, and the MVA (minimum vectoring altitude) in that area is 2200 because of a mountain at 1200, and the aircraft hits it..no bueno. *NOTE* In Non-Mountainous terrain, every MVA is set 1,000 feet above the highest obstacle in that area, whereas in Mountainous terrain, every MVA is set 2,000 feet above the highest obstacle (antenna, mountain, etc).

Continuing with Class Charlie...as a Tower/Local controller in the surface area, you CAN issue a heading to an aircraft in the takeoff clearance. Once

airborne, tell the pilot to contact departure (we'll get to TRACON in just a second).

Now you ask yourself, what if the aircraft decides to stay within my 5 mile radius worth of airspace because he/she is on some sort of photo mission? YOU, the tower controller CAN radar identify the aircraft just off the departure end.

"N12345, radar contact, 1 mile west of Daytona, say altitude!" "N12345 is 400 for 1,200" "N345, resume own navigation, advise on station".

Remember, you can always give radar vectors to ANY VFR aircraft BELOW the MVA, as LONG as you state the words "Maintain VFR first!!!!!!" Yes, I know what you're thinking, well if he is below the MVA how do we vector an aircraft? This applies to VFR and only VFR aircraft but the words "Maintain VFR must be stated". Once again, you can only provide radar vectors to a VFR aircraft after radar identification has been established.

Class Bravo. We all know that a VFR aircraft that want's to depart, are required to obtain a Class Bravo clearance. It's fair to say that even in a Class Charlie, once the aircraft is getting READY to leave the typical 5 mile ring (larger at some Bravos) and the aircraft such as a Cessna or Helicopter will NOT penetrate the next ring's vertical limit's of Bravo or Charlie airspace, I would ask the pilot if he/she intends to continue flight following. This goes back to what I said above...if they're typically going to stay low level, the TOWER controller will radar identify the aircraft. Think for a second. If a picture taker 3 miles west of Newark airport at 800 feet intends to fly further west bound and the next vertical boundary of Class Bravo/Charlie airspace does not start until 2000, I highly doubt that the pilot is going to want to talk to ATC. In that case, tell the pilot "N12345, exiting Class Bravo airspace, frequency changed approved". *NOTE* for Class Charlie airspace, that phraseology is not required. Simply state "Radar services terminated, frequency change approved". Most radar controllers are also not going to want to talk to an aircraft that is at 800 feet, below the Class Bravo. Knowing the aircraft's initial intentions while on the ground is KEY!

Continuing with Class Bravo. Understand the separation requirements when providing a service to a VFR aircraft WITHIN Class Bravo. Obviously we know that with a VFR/IFR situation, airplanes can get closer...buttttt that is dependent on the size of the other aircraft. If you are providing a radar

service, remember that the VFR aircraft must be separated by other VFR and IFR aircraft when the aircraft affecting the VFR weighs 19,000lbs or more, by 1 1/2 miles laterally OR 500 vertically, except when wake turbulence applies (1000ft). So be cautious when you are providing a radar service to a VFR aircraft within Class Bravo.

Pattern work within the Class D/C/B. Follow the same instructions above. Picture yourself, physically IN the air traffic control tower, looking outside the big glass windows, and telling the aircraft to extend downwind, upwind, etc etc. The "tower display" aka VRC is technically an "extension" of your eyes. Class D towers do not provide a so called "radar service". Any aircraft within any class of controlled airspace cannot be issued traffic using the "O'Clock method" unless radar identified. It is why you hear tower controllers state "N12345, traffic ahead and to your right, BE36 2 mile final Runway 30"

The juicy part...the TRACON..

Basic VFR flight following..

Squawk the aircraft up, tell the aircraft to maintain VFR, vector as you'd like, or resume own navigation (traffic dependent). Use altitude as necessary (separation etc). If the aircraft is landing at a controlled field, tell the aircraft to Expect Runway XXXX, NOT the visual approach. VFR aircraft are already under visual flight rules, they do not fly visual approaches..that is for IFR only. Once the pilot calls the field in sight..assign the appropriate pattern entry...make straight in Runway 30, contact Tower XXXX. If your goal is to get the aircraft to follow preceding traffic, put the aircraft in a position to see the other airplane and CALL traffic. Once the pilot reports the a/c in sight, tell he/she to FOLLOW that traffic (add wake turbulence advisory if necessary), (insert appropriate pattern leg), contact Tower XXXX.

If a VFR aircraft requests a practice approach, to a controlled airport, the first words out of your mouth should be "Maintain VFR, fly heading XXXX vector ILS 30 approach, how will this approach terminate?". If the aircraft says full stop, you have your answer. If the pilot states this will be an "option approach", follow what your local SOP says, on practice approach

climbouts. If there is no procedure covering it, either YOU, the radar controller shall be assigning a heading an altitude for the aircraft to fly on the go, and then coordinate with the local controller or the tower can assign it, and coordinate with you. Vector the aircraft, just as you would any IFR airplane. Once you are ready to PTAC the aircraft, understand that the rules of separation change...

"N12345, 5 miles from XXXX turn left heading 270, maintain 3000 until established on the localizer, cleared ILS 30 approach." The moment the word "cleared" comes out of your mouth, that VFR aircraft is now being provided IFR separation with the exception of 500 feet! Again, 3 miles laterally is required from another IFR aircraft but you can still cross over the top at 500 feet with another IFR (which is rare), once cleared for an instrument approach.

If a VFR aircraft requests a practice approach, to an uncontrolled field, the first words out of your mouth should be "Maintain VFR, fly heading XXXX vector RNAV 14 approach, how will this approach terminate?" If the aircraft says full stop, you have your answer. If the pilot states, we'll do a low approach and come back around for another RNAV 14, provide the aircraft will climb out instructions "N12345, after completion of the approach, upon entering controlled airspace, fly heading 180, maintain VFR at or below 3000." Vector the aircraft toward the final approach course, and as you get ready for the PTAC, there is a slight change. "N12345, 5 miles from XXXX, turn left heading 170, maintain VFR, practice approach approved, no separation services provided". This phraseology is necessary and important because it lets the pilot know, that he/she is not being separated from other aircraft, as this approach terminates at an uncontrolled field. Prior to changing over the aircraft to advisory frequency (CTAF((assuming other aircraft are in the pattern))), state the following "N12345, maintain present squawk, call me airborne this frequency, change to advisory frequency approved."

Although it does not fall under the VFR category. IFR instrument approaches are just the same. If the aircraft calls you (delivery or approach/center, assuming you are working top down), on the ground...keep it simple. N12345, cleared to the Daytona Beach airport via radar vectors, maintain 3000 expect 5000 in one zero minutes, dep freq XXXX, sq XXXX. Inquire prior to takeoff, what approach the crew intends to fly. ILS? VOR?

Get yourself set up and once airborne, ask how the approach will terminate. Issue climbout. Vector to the final, clear for the approach and move on!

The learning never stops ya'll!