

Military Training Routes (MTRs) Revisited - Part II

thin, grey lines with big consequences...

← IR292

The following is an interview with Lieutenant Colonel Sam Blunt, U.S. Air Force (Retired). During his 23-year military career, Lt. Col. Blunt was a C-17 Instructor/Examiner Pilot; Airspace Manager at Charleston Air Force Base, S.C.; Chief Air Traffic Control Officer at Mountain Home Air Force Base, Idaho; Air Traffic Control Officer at Shaw Air Force Base, S.C.; and Military Training Route (MTR) Scheduler at Shaw Air Force Base, S.C.

Does the U.S. military employ standard procedures for flying low-level MTR VR routes at or below 1,500 feet AGL?

Yes. We employ standard procedures for all MTR routes regardless of AGL altitudes.

Is the squawk code 4000 used to let ATC know that military aircraft are operating at high-speeds and low-levels?

Yes. The meaning of the 4000 code is that high speeds and/or rapid maneuvering are likely from an aircraft squawking 4000. Also, when entering a military operations area (MOA)/Restricted Area as a participating aircraft we also squawked 4000 for the same reason—not just on VR routes but inside Special Use Airspace when uncontrolled by ATC. A squawk of 4000 observed on radar by a controller usually meant that the aircraft operating in Special Use Airspace, exceeding 250 knots below 10,000 feet and/or rapidly maneuvering. It also normally means that they are not talking to an ATC facility. To the controller observing a 4000 squawk, it alerts them to keep non-participating traffic they are working well clear.

On VR routes, is it standard military procedure to contact Flight Service/ATC while airborne and activate their routes (and then again when they leave their routes)?

I recall we were supposed squawk 4000, contract and monitor FSS 255.4 on UHF while operating on VR routes. VR and SR routes were not “activated” really in practice because ATC was not required to “clear” you into the VR route. VR and SR routes were just reserved and deconflicted at the time of reservation (on the telephone during mission planning normally the day prior) with other crossing MTRs. Plus or minus 5 minutes was often the requirement for entry and exit times or else you had to make another reservation. Typically, a minimum of 3,000-foot ceilings and five miles visibility was required to use a VR/SR route.



When U.S. military aircraft fly higher-level MTR IR routes, is it standard procedure for them to contact ATC and request IFR codes for safe separation with other active IFR traffic?

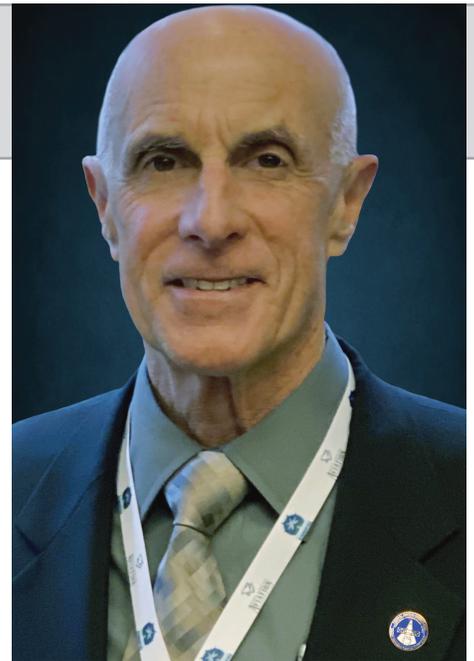
IR routes are another animal completely. IR Routes are flown under IFR regardless of altitude. We file an IFR flight plan including the IR low level route and receive an IFR clearance just as any other IFR aircraft would. The only slight difference is that even if we are “cleared as filed” we still MUST be cleared into the IR “routes and altitudes.” IR routes are filed just

like an airway could be since they are defined in the National Airspace System (NAS). All IR routes are actively controlled by ATC and must be “cleared” by ATC into and out of the IR route. Notice I said “controlled” and not necessarily “observed on radar.” Oftentimes, military aircraft on IR routes are operating under IFR travelling greater than 250 knots below 10,000 feet, as low as 300 feet AGL below radar coverage (which is the point of low level military operations) and possibly below radio coverage to ATC as well. These military aircraft are responsible for their own terrain separation and are worked by ATC using non-radar methods. GA pilots may not be aware, but all MTRs are segmented by alphabetical letters. I.E. IR035 pt A, B, C, D, E, F, etc. So, a position report can be required of the military aircraft to affect IFR separation. “GRITS 34, provide your estimate for (IR35) point Echo, and contact Columbia approach prior to point Foxtrot.” These position reports and estimates along with the IR route corridor’s published altitudes are used to control these aircraft under IFR using non radar controlling procedures (when necessary below radar) to provide IFR separation services for all aircraft both participating and non-participating. Aircraft operating on an IR route are not supposed to be disturbed in speed, direction, or altitude because they are operating inside the IR route corridor carefully defined in direction and altitudes and responsible for progressing in the route and exiting at a specific time. Also safe altitudes are computed by the aircrew should they encounter IMC conditions within the defined IR route corridor.

Other thoughts or comments?

Special Use airspace procedures are spelled out for Department of Defense (DoD) aircrews in publication AP-1B as well as the route descriptions, cautions, requirements, altitudes, segments, restrictions, ownership and scheduling, etc of the special use airspace. Another important consideration GA pilots should be aware of is that the IR/VR routes depicted on sectionals and low level IFR charts only depict the MTR centerline! Routes are often 5 miles either side of centerline (as defined in AP1B) but can be as wide as 30 miles. VR-85 can be 30 miles wide in some segments near Chattanooga, Tenn. (so not just out in the middle of nowhere desert).

Note: All DoD Users of Special Use Airspace go to great lengths to be good neighbors to both civilians on the ground and those flying either in GA or any other aviation airspace users. Flying low and fast is absolutely necessary to defend our country. We have to train here to apply our craft overseas in an effective way to protect our troops while being as lethal as possible to our enemies. As an example, we are supposed to remain 3 miles or 1500 feet away from published airports even if they lie within the confines of the Military Training Route we are using. To that end, we often designate those airfields as a simulated Anti-Aircraft Artillery (AAA) gun to be avoided. That accomplishes the required avoidance but we use it as a training tool as well.



Safety Update

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