Appendix K: MSP Class B Airspace

All of the open sky covering the United States, from less than an inch off the ground all the way to outer space, is part of America's airspace. This airspace resource is recognized in both the Minnesota state airports system plan (SASP) and the Minneapolis-St. Paul Metropolitan regional aviation system plan (RASP). All of this airspace is divided into several standardized types ranging from A through G, with A being the most restricted and G the least restrictive as depicted in Figure K-1.

Coordination and proper planning are required to make efficient and safe use of the airspace between the different classes of airports and air-transportation users. At lower altitudes this airspace is shared with the nation's communications industry and others that requires airport and airways protection from potential obstructions to air navigation, or activities that disrupt aviation communications and navigation/landing aids. Each type of airspace has its own required level of air traffic control services and its own minimum requirements for pilot qualifications, aircraft equipment, and weather conditions. In addition, there is other airspace reserved for special purposes called special use airspace (SUA).

Within the U.S., airspace is classified as either controlled or uncontrolled. Controlled airspace will have specific defined dimensions (e.g. altitude ranges or vertical boundaries, and an applicable surface area or horizontal boundaries). Within controlled airspace air traffic control (ATC) services are provided to all pilots operating under instrument flight rules (IFR), because they are flying solely by reference to instrument indicators. The services are also provide to some pilots operating under visual flight rules (VFR) even though they are using points on the ground to navigate.

Class A airspace covers the entire U.S. at altitudes between 18,000 and 60,000 feet mean sea level (msl). All jet routes are in this airspace that is used primarily by jets and airliners traveling over long distances between major cities. Air traffic in this airspace operates under IFR rules and must maintain radio contact with enroute ATC. As aircraft transition from a jetway to lower altitudes they are handed off to a specific destination airport's ATC. In most cases they will be arriving to an airport with an air traffic control tower (ATCT) that is surrounded by a Class B, C, or D airspace.

Class B airspace surrounds the nation's busiest airports, such as Minneapolis-St. Paul International Airport (MSP) as depicted in Figure K-2. This airspace extends from the surface to 10,000 feet and out to 30 nautical miles and is structured like an upside-down wedding cake. This structure helps separate the larger high-performance airline traffic arrivals and departures from the smaller and usually slower general aviation traffic operating at the reliever and local airports. At the outer limits of the Class B airspace, from the surface to 10,000 feet MSL at MSP, there is a Mode-C Veil. This is an imaginary vertical surface that delineates where an aircraft must have a Mode-C transponder so ATC can track their flight. VFR transition routes are specific designated flight paths used by ATC to route VFR traffic through Class B airspace. VFR flyways are general flight paths through low altitudes for general aviation to fly from one

ground-based radio beacon to another across the U.S. It helps pilots plan flights into, out of, through, or near complex Class B terminal airspace, especially where IFR routes occur.

Class C airspace extends from the surface to 4,000 feet above ground level (AGL) for a 20 nautical mile distance from the airport. This airspace surrounds other busy airports that have radar services for arriving and departing aircraft. No Class C airport airspace is designated in the Twin Cities metro area airspace.

Class D airspace surrounds airports with operating air traffic control towers and weather reporting services. This airspace extends from the surface to 2,500 feet AGL within 4.3 nautical miles (5 statute miles) of the airport. In the metro area the Anoka County-Blaine, Crystal, Flying Cloud and St. Paul Downtown Airports have a Class D airspace designation. These airports have part-time ATCT and their airspace reverts to Class E airspace areas when the towers are not in operation.

Class E airspace includes all other controlled airspace in the U.S. This airspace extends to 18,000 feet MSL to the surface and various altitudes in between that are established for areas generally located east or west of the Rocky Mountains. Class E airspace also surrounds airports with weather reporting services in support of IFR operations, but no operating control tower. In the Twin Cities area the Airlake Airport is such a facility.

Class F designated airspace is not used in the U.S.

Class G airspace is uncontrolled, it includes all airspace in the U.S. not classified as Class A, B, C, D, or E. No ATC services are provided and the only requirement for flight is certain visibility and cloud clearance minimums. Most of the airspace above 1,200 feet AGL is Class G airspace; virtually no Class G airspace exists east of the Rocky Mountains.

Special Conservation Area includes airspace surrounding national parks and wildlife refuges. In the Twin Cities region the St. Croix National and Scenic Wild River is such an area and pilots are requested to maintain a minimum altitude of 2,000 feet AGL whenever possible. One objective is to avoid bird strikes and another is to minimize noise intrusion on wildlife and quietude for user experience in protected natural settings.

Special Use Airspace is where aeronautical activity must be limited, usually because of military use or national security concerns, and includes the following areas: (Note: None of these limited airspace use area occur within the Twin Cities region).

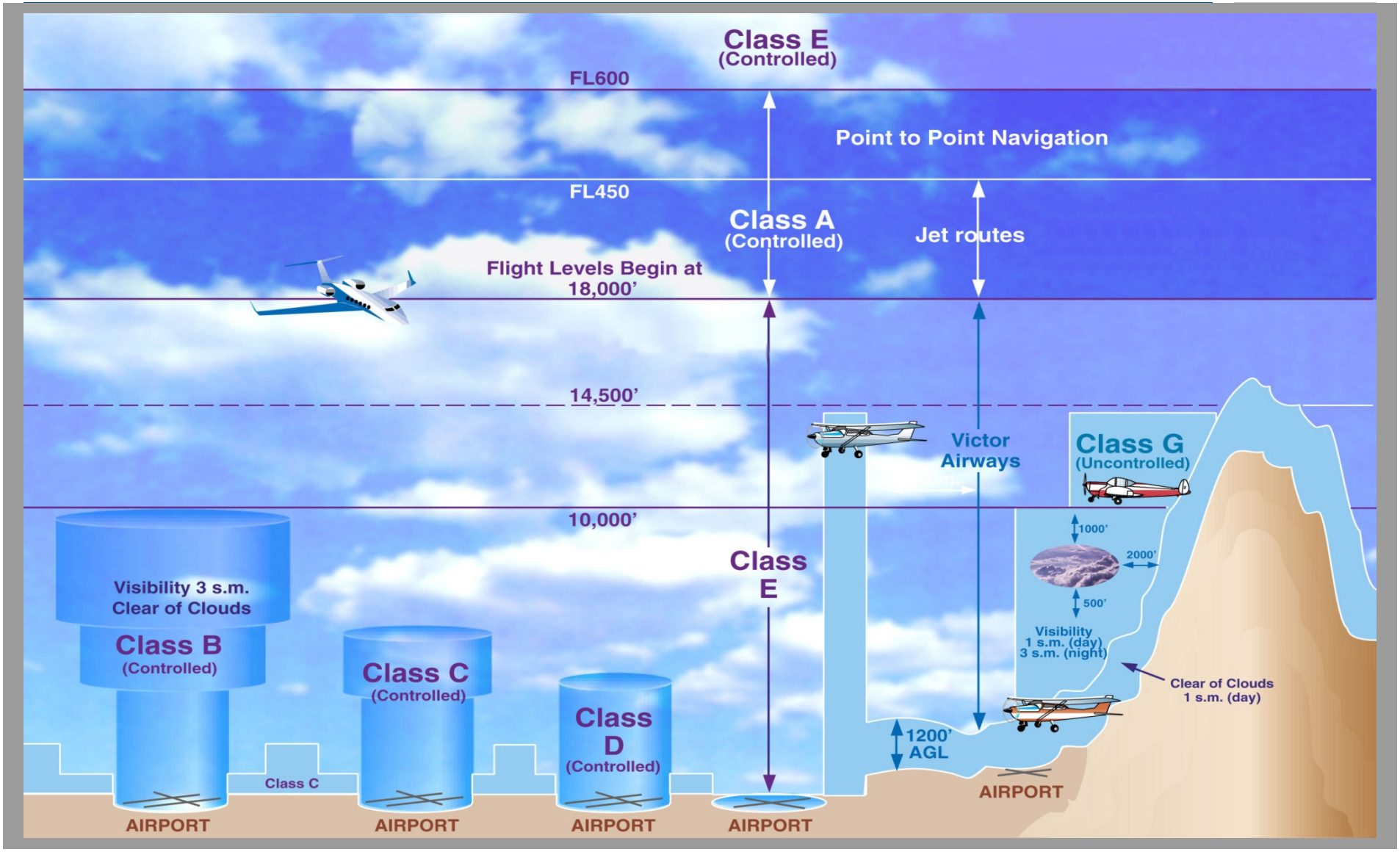
- Prohibited areas (e.g. Camp David)
- Restricted areas (military activities including Controlled Firing Areas)
- Warning Areas (extends outward from 3 nm off the coast).
- Military Operations Areas (MOA established for military training activities)

- Alert Areas (e.g. established for areas with a high volume of pilot training)

Other Airspace Areas are designated usually as temporary limitations for specific events and include:

- Airport Advisory Areas
- Military Training Routes (MTRs)
- National Security Area (NSA)
- Temporary Flight Restrictions (TFRs)

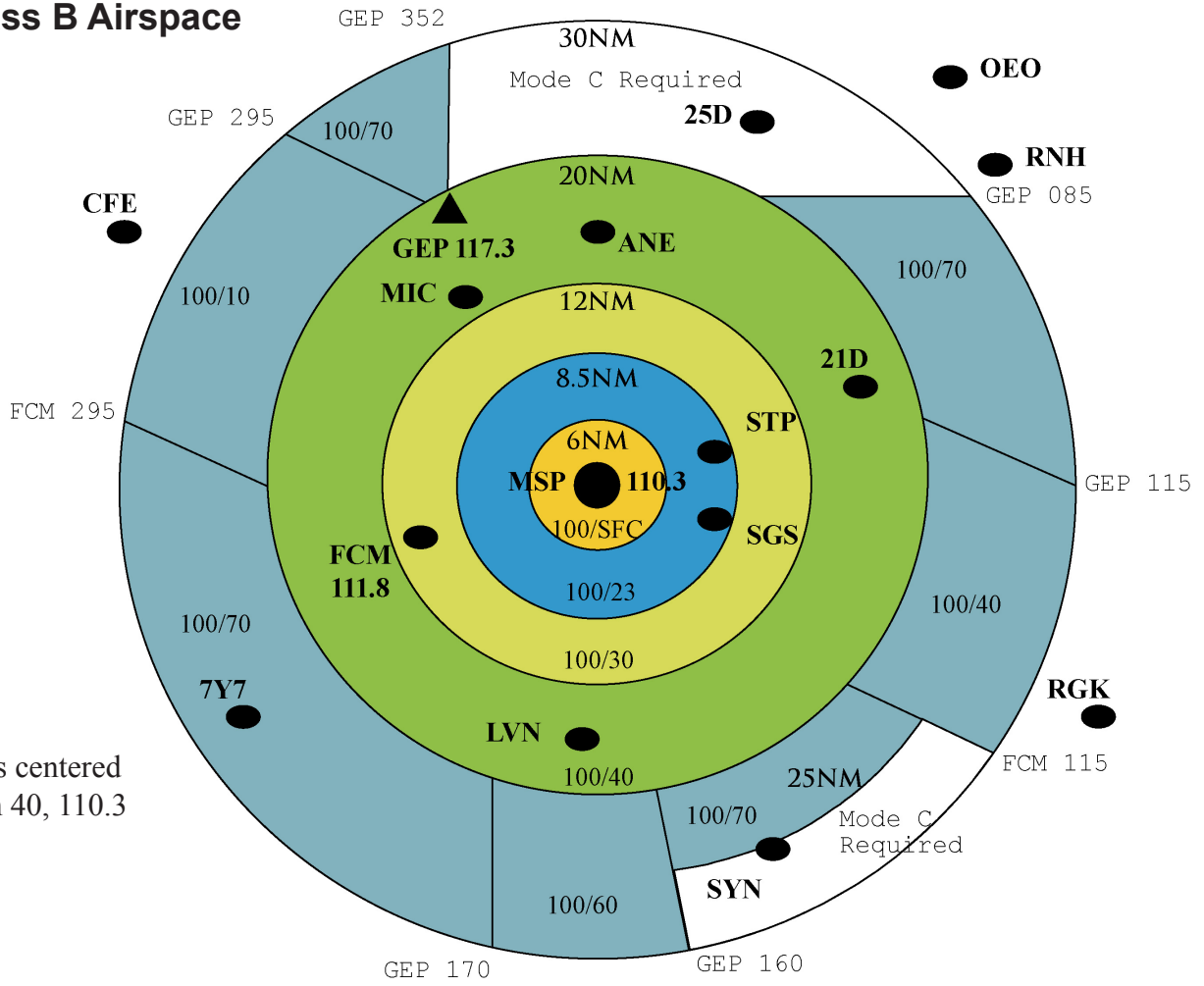
Figure K-1: National Airspace Classification



Source: FAA and HNTB Corporation

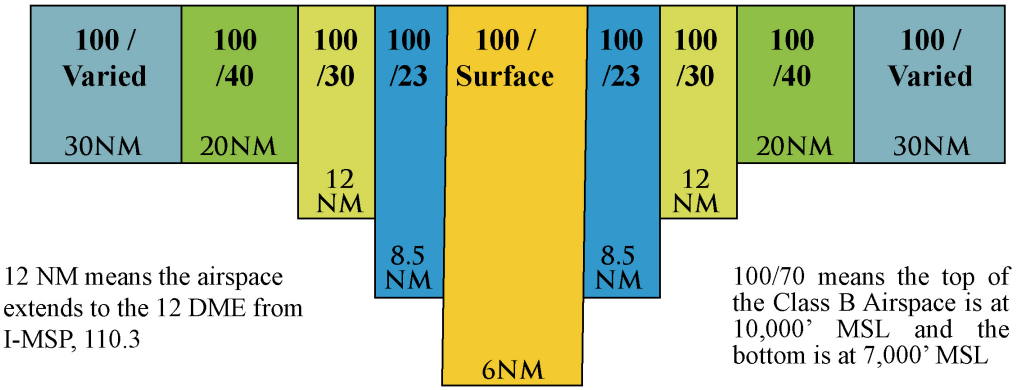
Figure K-2: Minneapolis - St. Paul Class B Airspace

Effective February 16, 2006



The Minneapolis – St. Paul Class B Airspace is centered on the Minneapolis DME Antenna (I-MSP) Ch 40, 110.3

Transponder with Mode C is required for operation within 30 DME of I-MSP



12 NM means the airspace extends to the 12 DME from I-MSP, 110.3

100/70 means the top of the Class B Airspace is at 10,000' MSL and the bottom is at 7,000' MSL

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