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Airspace.

A complete, ground-up guide to the U.S. National Airspace System: the six classes, special use airspace, temporary flight restrictions, chart symbols, and the equipment and clearance rules that actually govern where you can fly.

Written by pilots, for people learning to fly.
Flightline Studios

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CHAPTER 01

Why Airspace Is Classified at All

The National Airspace System is divided into six classes, lettered A through G with the letter F unused in the United States, and every one of those letters answers the same underlying question: how much of the separation between you and other traffic is ATC's job, and how much is yours.

Airspace classification is not about geography or scenery. It is about service and risk. Busy airports surrounded by dense airline traffic need every aircraft in the area actively managed by a controller. A grass strip in open farmland needs nothing of the kind. The six classes are the FAA's way of matching the level of control to the level of traffic, without controlling everything everywhere, which would be both impossible and unnecessary.

The two big buckets

Every class falls into one of two categories:

- **Controlled airspace** (Classes A, B, C, D, and E) is airspace where ATC provides some level of separation service, ranging from full positive control in Class A down to fairly light-touch service in parts of Class E.
- **Uncontrolled airspace** (Class G) is airspace where ATC provides no separation service to VFR traffic at all. You are still bound by the regulations, but no controller is watching your position relative to anyone else.

> **KEY IDEA**
> "Controlled" describes the **service available**, not a guarantee that someone is watching you every second, and not a statement about how safe or dangerous the airspace is. A busy uncontrolled grass strip on a Saturday morning can have more traffic conflicts than a quiet Class D tower on a Tuesday night.

What actually changes between classes

Three things vary by class, and this entire guide is really just an exploration of how they vary:

- **Equipment**: what radio and transponder gear you're required to carry and use.
- **Communication or clearance**: whether you need a clearance, two-way radio contact, or nothing at all before entering.
- **Weather minimums**: how far you must stay from clouds and how far you must be able to see under VFR.

The rest of this guide walks through each class from the top down, then covers special use airspace, temporary flight restrictions, and how all of it actually looks on the chart in front of you.

CHAPTER 02

Class A: The Flight-Levels Layer

Class A is the simplest class to describe because it has almost no exceptions: from 18,000 feet MSL up to and including FL600, every operation is IFR, full stop.

The rule with no asterisks

To operate in Class A airspace, you need an instrument rating, an aircraft equipped and certified for IFR flight, and an active ATC clearance. VFR flight is not permitted in Class A under any circumstance, and there is no VFR-on-top or VFR-over-the-top workaround once you cross 18,000 feet. This is the one class in the system with a genuinely hard line.

Class A has no lateral boundaries the way Class B or C do. It simply exists everywhere across the contiguous United States, Alaska (excluding a defined area west of 160°W longitude), and offshore to a specified distance, starting at 18,000 feet MSL and running up to 60,000 feet.

> **WHY THE FLOOR IS EXACTLY 18,000 FEET**
>
> 18,000 feet MSL is also the altitude at which every aircraft, regardless of direction of flight, switches from a local altimeter setting to the standard setting of 29.92 inches of mercury. Above that floor, everyone's altimeter is referenced to the same pressure datum, which is part of what makes strict IFR-only operation practical at that altitude.

Because Class A sits above where most piston general aviation aircraft can practically operate, it matters most to turbine and airline traffic, but the rule applies equally to anyone who finds themselves at that altitude, intentionally or not.

Flight levels, not feet

Altitudes within Class A are expressed as flight levels rather than feet, written as "FL" followed by the altitude with the last two zeros dropped. FL180 is 18,000 feet, FL350 is 35,000 feet, and so on. This isn't just a labeling convention: it's a direct consequence of the standard altimeter setting discussed above. Since every aircraft in the flight levels shares the same 29.92 reference rather than a local setting, the numbers are treated as a shared pressure-based coordinate system rather than a true measurement of height above sea level.

> **TIP**
>
> You'll sometimes hear Class A and the flight levels generally described as "positive control airspace," an older but still common term reflecting the fact that every aircraft present is under an active ATC clearance with no VFR traffic mixed in.

CHAPTER 03

Class B: The Wedding Cake

Class B airspace surrounds the nation's busiest airports, and it's shaped like an upside-down wedding cake: a wide base at the surface around the primary airport, narrowing into progressively smaller, higher tiers as you move outward.

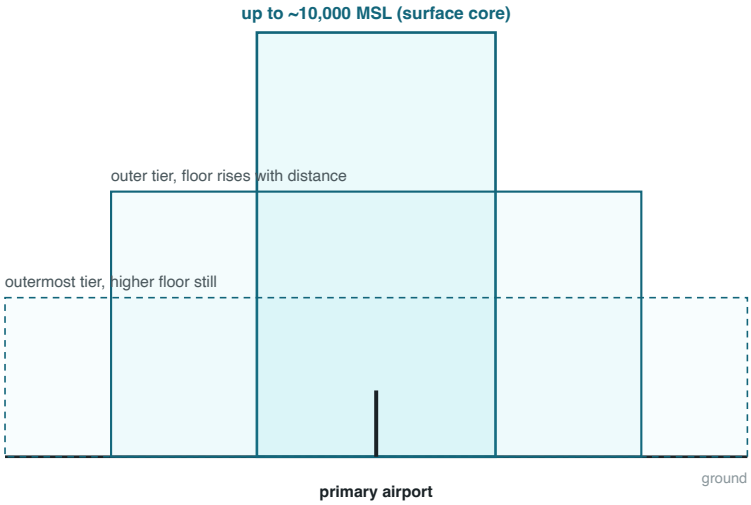

Figure 3.1: Class B in cross-section. Each ring's floor rises as you move away from the primary airport, which is exactly why it reads as a tiered cake from the side.

Who gets one

Class B airspace exists around roughly three dozen of the busiest airports in the country, the exact list set and periodically reviewed by the FAA based on traffic volume. The surface-level core typically extends from the ground up to around 10,000 feet MSL, with progressively wider, higher-floored rings stepping outward from there.

The one rule that matters most

Among airspace classes that allow VFR traffic, Class B is the only one where you need an explicit ATC clearance to enter, not just radio contact. The words that actually matter are some version of "cleared into the Class Bravo airspace." Being in contact with the controller and receiving a squawk code is not the same thing as being cleared in, and pilots have been violated for entering on the assumption that a squawk assignment counted as permission.

> **COMMON MISTAKE**
>
> Assuming that once a controller assigns a transponder code and starts providing traffic advisories, you're cleared to enter. You are not, until you hear the word "cleared" applied specifically to entering the Class Bravo airspace.

Chapter 8 covers the specific weather minimums for Class B, and Chapter 14 covers the equipment you need to be there in the first place.

CHAPTER 04

Class C: The Two-Tier Shelf

Class C surrounds airports with an operating control tower and radar approach control, and a lower volume of traffic than a Class B field. Instead of a multi-tier cake, it's a simpler two-part shape: a core and a shelf.

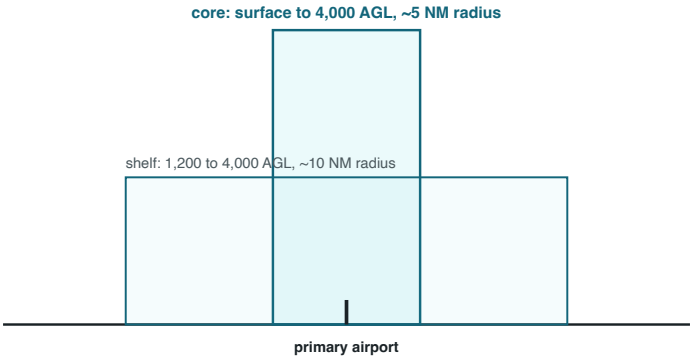

Figure 4.1: The typical Class C footprint, a 5 NM inner core from the surface to 4,000 feet AGL, and a 10 NM outer shelf from 1,200 to 4,000 feet AGL.

Entry: contact, not clearance

Unlike Class B, entering Class C requires only **two-way radio communication** established with ATC, not an explicit clearance. Communication counts as established once the controller responds to your call using your aircraft's callsign, even with something as brief as your tail number read back. A controller answering with only "standby" does not count. If you hear your callsign, you're in; if you don't, you need to try again or hold outside the boundary.

> **TIP**
>
> Call well before the boundary, not right at it. If the frequency is busy and you don't hear your callsign until after you've crossed the line, you've technically entered without established communication.

Equipment

An operable Mode C transponder and ADS-B Out are required to operate within Class C airspace and in the airspace above it up to 10,000 feet MSL. Chapter 14 covers the full equipment picture across all classes in one place.

CHAPTER 05

Class D: Towered, No Radar Approach

Class D surrounds smaller airports with an operating control tower but no radar approach control service of their own. It's the smallest of the controlled cylinders, typically around a 4 nautical mile radius from the surface up to about 2,500 feet AGL, though the exact dimensions are tailored to each airport and shown on the chart.

Entry works the same as Class C

Like Class C, Class D requires two-way radio communication established before entry, not a formal clearance. The same rule applies: you need to hear your callsign acknowledged, not just hear the controller talking on the frequency.

When the tower closes

Many Class D airports operate the tower only part-time. Outside the published tower hours, the airspace typically reverts to whatever class would otherwise apply, often Class E or Class G, and the chart will note the specific times the Class D designation is in effect. Always check the Chart Supplement or the airport's published hours rather than assuming.

Satellite airports inside the same ring

A single Class D boundary sometimes contains more than one airport, a smaller satellite field sharing airspace with the primary towered airport. Traffic at the satellite airport typically self-announces on a common frequency rather than talking to the primary tower directly, and pilots operating at the primary airport need to be aware that non-towered traffic can be working the pattern nearby, inside the same ring, without being on the tower's frequency at all.

> **KEY IDEA**
>
> A dashed blue circle on the sectional means the airspace is Class D **only when the tower is actually operating**. Outside those hours, treat it as whatever the underlying class reverts to, and announce accordingly on the appropriate frequency.

CHAPTER 06

Class E: Controlled, No Tower

Class E is the airspace most pilots fly through the most, and think about the least, because it has no tower, no clearance requirement, and often no radio call requirement at all for VFR traffic. It is still controlled airspace, and ATC still provides IFR separation service within it.

Where the floor actually sits

Unlike the other controlled classes, Class E does not have one consistent starting altitude. Its floor depends on location:

- **700 feet AGL**, shown as a faded magenta vignette on the sectional, typically around non-towered airports with an instrument approach procedure.
- **1,200 feet AGL**, the default floor across most of the country where no other value is charted.
- **The surface**, shown as a dashed magenta line, at some non-towered airports where extending controlled airspace down to the ground supports instrument approaches.
- **14,500 feet MSL**, in a small number of areas, mostly over mountainous terrain in the western United States, shown with a blue vignette.

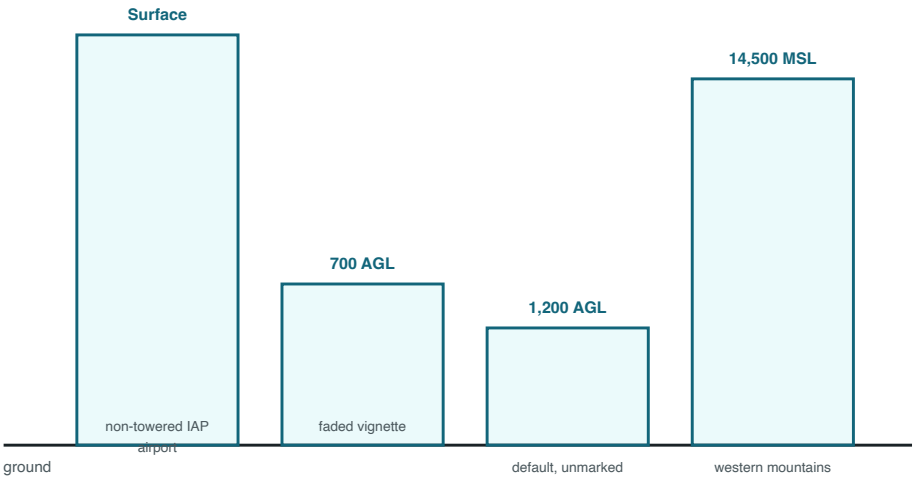

Figure 6.1: Four different Class E floors, side by side. Same class of airspace, four different starting altitudes depending on what's underneath it.

Everywhere else, Class E also exists from 18,000 feet MSL (right below Class A) up to but not including 60,000 feet, which is the layer most en-route IFR traffic below the flight levels actually operates in.

No entry requirement for VFR

VFR aircraft do not need a clearance or radio contact to enter Class E. You simply need to meet the applicable weather minimums, covered in Chapter 8. IFR aircraft, by contrast, need a clearance, exactly as they would in any controlled airspace.

Federal airways live inside Class E

Victor airways, the low-altitude routes defined by VOR radials and labeled with a "V" and a number on charts, are themselves a form of Class E airspace. Each one is a tube 8 nautical miles wide, 4 nautical miles either side of the centerline, running from 1,200 feet AGL up to but not including 18,000 feet MSL. A pilot flying a Victor airway is, in effect, flying down a narrow, pre-defined corridor of Class E strung between VORs, whether or not they're on an IFR flight plan at the time.

CHAPTER 07

Class G: Uncontrolled Airspace

Class G is everything left over: airspace below the floor of the overlying controlled airspace, usually 700 or 1,200 feet AGL, where ATC provides no separation service to VFR traffic at all.

Uncontrolled does not mean unregulated

This is the single most common misunderstanding about Class G. You are still bound by every applicable regulation: weather minimums, right-of-way rules, altitude rules, everything. What's actually absent is ATC separation service, not the rulebook. Nobody is watching your position on a scope, which means the responsibility for seeing and avoiding other traffic sits entirely with you.

> **COMMON MISTAKE**
>
> Treating a busy uncontrolled airport pattern casually because "it's uncontrolled, so there's no one to answer to." The absence of a controller is exactly why self-announced position calls and a disciplined scan matter more there, not less.

Where it's found

Class G exists at low altitude nearly everywhere that isn't already claimed by another class: rural areas, the base of many Class E zones, and around small airports without an instrument approach that would otherwise justify a Class E surface extension. It also exists in a thin sliver above 10,000 feet MSL in a handful of remote mountainous areas where the Class E floor is raised to 14,500 feet.

CHAPTER 08

VFR Weather Minimums

14 CFR 91.155 sets the basic VFR weather minimums, and the table changes based on which class you're in and, in Class G, whether it's day or night. Memorizing the pattern is easier than memorizing the numbers in isolation.

AIRSPACE	VISIBILITY	CLOUD CLEARANCE
Class B	3 SM	Clear of clouds
Class C, D, and E (below 10,000 ft MSL)	3 SM	500 below, 1,000 above, 2,000 horizontal
Class E (at or above 10,000 ft MSL)	5 SM	1,000 below, 1,000 above, 1 SM horizontal
Class G, day (below 1,200 ft AGL)	1 SM	Clear of clouds
Class G, night (below 1,200 ft AGL)	3 SM	500 below, 1,000 above, 2,000 horizontal

The pattern underneath the table

Two thresholds do almost all of the work in this table. Below 10,000 feet MSL, the standard is "3-152": 3 statute miles visibility, 500 feet below, 1,000 above, and 2,000 horizontal from any cloud. At or above 10,000 feet MSL, traffic is moving faster and has less time to react, so the standard tightens to "5-111": 5 statute miles, 1,000 below, 1,000 above, and a full statute mile horizontal.

Class B is the deliberate exception: because ATC is actively separating every aircraft inside it, the regulation only requires staying clear of the clouds themselves, with no specific distance attached, on the reasoning that the controller is already managing the separation problem.

Class G below 1,200 feet AGL is the other exception, split by daylight. In the daytime, 1 mile visibility and clear of clouds is legal, which is what allows genuinely low, marginal-weather flying in remote uncontrolled areas. At night, the same 500/1,000/2,000 standard as controlled airspace below 10,000 feet applies, because the reduced visual reference at night erases the safety margin that daylight scud-running otherwise has.

> **TIP**
>
> If you remember nothing else from this chapter, remember "3-152 below 10, 5-111 above 10, and Class B just wants you clear of the clouds." Nearly every number in the table falls out of those three anchors.

CHAPTER 09

Special Use Airspace: Prohibited and Restricted

Special use airspace falls into two legal categories: regulatory, established through the same formal rulemaking process as any other federal regulation, and non-regulatory, established administratively. Prohibited and restricted areas are the regulatory kind.

Prohibited areas

A prohibited area is airspace where flight is barred entirely, for security or other reasons tied to the national welfare. On a sectional chart, it's marked with the letter "P," a designation number, and a solid blue border. There is no case where you're permitted to enter one; the restriction is absolute.

Restricted areas

A restricted area, marked with "R" and a designation number, contains activity hazardous to aircraft not participating in it: live artillery firing, aerial gunnery, or guided missile activity are typical examples. Unlike a prohibited area, a restricted area isn't always active. When it's "hot" (active), you need permission from the controlling agency to enter. When it's "cold," VFR traffic can typically transit it, though checking with the controlling agency or ATC beforehand is always the safer move, since published schedules aren't always current.

> **KEY IDEA**
>
> Prohibited means never. Restricted means "check first," because the hazard is real but not constant. Confusing the two, or assuming a restricted area is safe just because it's quiet on the radio, is the mistake to avoid.

Two real-world examples

P-56 covers the airspace over the White House, the National Mall, and the Vice President's residence in Washington, D.C., and is generally regarded as the single most restrictive prohibited area in the country. P-40 covers Camp David in Maryland, a 3 nautical mile radius from the surface up to 5,000 feet AGL that's prohibited at all times, and that gets layered with an additional TFR extending the no-fly area out to 10 nautical miles whenever the President is actually in residence there.

CHAPTER 10

Special Use Airspace: MOAs, Warning Areas, and the Rest

The non-regulatory special use airspace types don't carry the force of a hard rule the way prohibited and restricted areas do, but each one signals a real hazard or unusual activity worth understanding before you fly through it.

TYPE	WHAT IT MEANS
Military Operations Area (MOA)	Segregates military training, like air combat maneuvers, from IFR traffic. VFR flight through an active MOA is legal, but demands real vigilance, since high-speed military traffic may be maneuvering unpredictably.
Warning Area	Similar hazards to a restricted area, but located over international or partly domestic waters where the FAA doesn't have full regulatory authority, so it can't be designated "restricted" outright.
Alert Area	Flags unusually high volumes of training or other unusual aerial activity. No permission is required to enter; it's purely a heads-up to expect more traffic than normal.
National Security Area (NSA)	Surrounds sensitive ground sites. Generally advisory, pilots are requested to voluntarily avoid it, though it can be made mandatory during heightened security conditions.
Controlled Firing Area (CFA)	Not depicted on charts at all, because activity is required to stop the moment a non-participating aircraft is detected nearby, which removes the hazard to transiting traffic by design.

> **TIP**
> An active MOA is one of the few situations where filing for flight following, if you aren't already receiving it, genuinely earns its keep, since ATC can call out military traffic operating inside it that you'd otherwise have no way to anticipate.

Checking whether one is actually active

A chart symbol alone doesn't tell you whether an MOA or restricted area is hot at the moment you're flying through it. That status is time-based and gets published separately, through NOTAMs, a briefing from Flight Service, or the special use airspace status shown in most electronic flight bag apps. A published symbol on the sectional just marks the boundary; the actual operating hours and status are found in the current briefing, not on the chart itself.

CHAPTER 11

Temporary Flight Restrictions

A TFR is a temporary, ad-hoc restriction on flight within a defined area, and unlike every other airspace type in this guide, it is never printed on a sectional chart. Catching it is entirely the pilot's responsibility, checked before every flight through NOTAMs.

Common categories

- **VIP movement**: temporary restrictions around the movement of the President, Vice President, and certain other protected officials.
- **Disaster and hazard areas**: wildfires, major accidents, and other emergencies, to keep the airspace clear for firefighting and rescue aircraft.
- **Space operations**: rocket launches and landings.
- **Large stadium events**: a 3 nautical mile, 3,000 foot AGL restriction that automatically applies around stadiums seating 30,000 or more during certain major sporting events, without needing a separately published TFR for each game.
- **Security**: restrictions tied to specific events or locations judged to need enhanced protection.

COMMON MISTAKE

Checking weather the night before a flight and treating the preflight briefing as done. TFRs can be issued with very little notice, sometimes just hours out, which is exactly why they need to be checked again close to departure time, not just once during initial planning.

KEY IDEA

Because a TFR is never on the chart, "I didn't see it printed anywhere" is not a defense. The regulatory expectation is that pilots actively check current NOTAMs before flight, every time, not that TFRs are supposed to be discoverable by some other means.

CHAPTER 12

Entering Controlled Airspace

"I talked to the controller" and "I was cleared in" are not the same sentence, and the difference matters most in exactly the airspace where getting it wrong causes the most trouble.

CLASS	WHAT'S REQUIRED TO ENTER (VFR)
B	Explicit ATC clearance ("cleared into the Class Bravo airspace")
C	Two-way radio communication established (controller responds using your callsign)
D	Two-way radio communication established, same standard as Class C
E	No clearance or contact required for VFR; meet weather minimums
G	No clearance or contact required; meet weather minimums

What "established" actually sounds like

For Class C and D, the FAA's standard is that the controller must respond to your initial call using your aircraft's callsign. A callsign readback, even a brief "Cessna Three Four Charlie, standby," is sufficient. A generic "aircraft calling, standby" with no callsign is not, since the controller hasn't yet acknowledged your specific aircraft.

> **TIP**
> If you're not sure whether you were actually acknowledged by callsign in a busy, fast-talking Class C or D frequency, the safe move is to ask directly: "confirm two-way communications established," rather than assume and press on.

Why the distinction was drawn this way

The difference between Class B's clearance requirement and Class C or D's communication requirement tracks directly with how much active separation ATC is providing. Inside Class B, the controller is separating every VFR and IFR aircraft present from every other one, so entry has to wait for a deliberate, individual decision by that controller. Inside Class C and D, the service is lighter, sequencing and traffic advisories rather than full separation between every aircraft, so simply being in two-way contact is enough to enter safely.

CHAPTER 13

Reading Airspace on a Sectional

Every class has a distinct line style and color on a VFR sectional chart, and once the pattern clicks, decoding any chart becomes close to automatic.

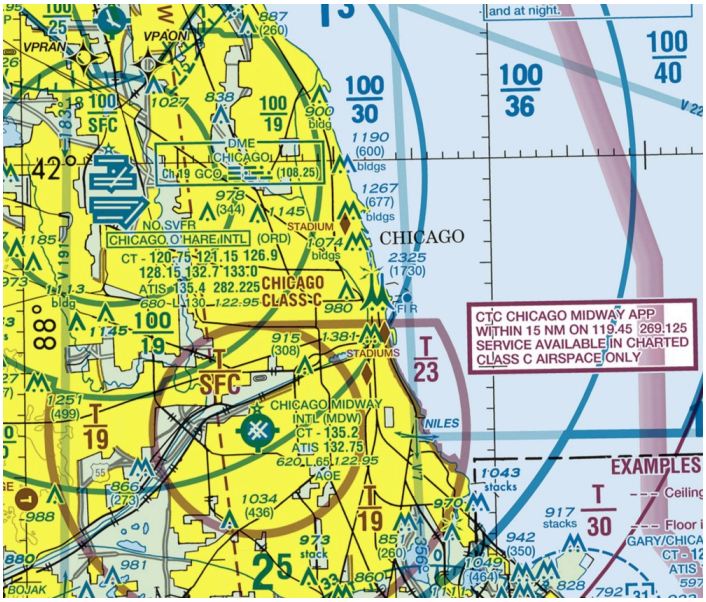

Figure 13.1: A real excerpt from the Chicago sectional chart. The blue "100/30," "100/19" style numbers are Class B ceiling/floor tiers in hundreds of feet; the labeled ring is Chicago's Class C boundary. Source: FAA sectional chart, public domain, via Wikimedia Commons.

CLASS	CHART SYMBOL
B	Solid blue line
C	Solid magenta line
D	Dashed blue line
E (surface)	Dashed magenta line
E (floor 700 AGL)	Faded-edge magenta vignette
E (floor 1,200 AGL, default)	No symbol; unmarked is the assumption everywhere else
E (floor 14,500 MSL)	Blue vignette

Class G has no boundary line of its own on a sectional, because it's defined by what's left over once every other class has been drawn. If an area has no blue or magenta boundary and no vignette, and it's below the floor of whatever controlled airspace sits above it, it's Class G by elimination.

> **KEY IDEA**
>
> Solid lines mean the boundary is a hard edge, usually a surface-level tower requirement. Dashed lines and vignettes mean the boundary is softer, a floor that changes rather than a wall you cross. Reading the line style tells you almost as much as reading the number printed next to it.

CHAPTER 14

Equipment Requirements by Class

Equipment requirements track roughly with traffic density, which is really just the same underlying logic as the whole airspace system applied to hardware instead of clearances.

AIRSPACE	TRANSPONDER / ADS-B OUT
Class A	Required at all altitudes
Class B	Required from the surface to 10,000 ft MSL, including the Mode C veil (a 30 NM ring around the primary airport)
Class C	Required from the surface to 10,000 ft MSL, including the airspace above the lateral boundary up to that altitude
Class D	Not independently required, unless the Class D overlaps a Mode C veil or other zone that requires it
Class E	Required at and above 10,000 ft MSL over the 48 contiguous states and D.C., excluding airspace at or below 2,500 ft AGL
Class G	No transponder requirement by class alone

TIP

The "Mode C veil" is worth learning as its own concept: it's a 30 nautical mile ring around a Class B primary airport, extending from the surface to 10,000 feet MSL, where the ADS-B and transponder requirement applies even outside the charted Class B boundary itself. It's easy to be technically outside the wedding cake and still be inside the veil.

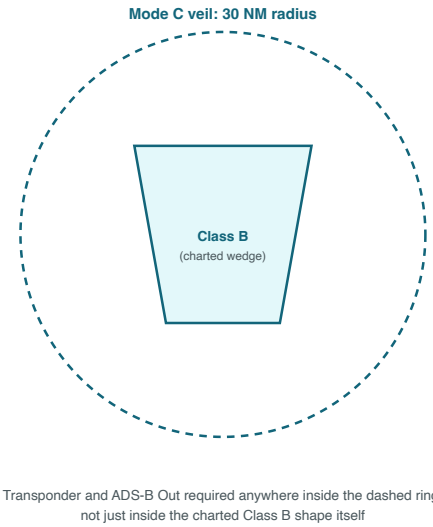

Figure 14.1: The Mode C veil extends well beyond the charted Class B boundary in every direction.

CHAPTER 15

Common Mistakes and Practical Tips

Most airspace violations aren't the result of not knowing the rules. They're the result of a busy cockpit, a rushed radio call, or a chart glanced at once during preflight and never checked again.

Mistakes worth watching for

- **Assuming a squawk code means clearance into Class B.** It doesn't. Wait for the word "cleared."
- **Pressing into Class C or D on an unacknowledged call.** No callsign readback means you're not established yet.
- **Treating an MOA as automatically closed to VFR.** It's legal to transit an active one; it just demands real vigilance.
- **Checking NOTAMs once, days before a flight, and never again.** TFRs can appear with only hours of notice.
- **Misreading a Class D circle as active when the tower is closed.** Check the operating hours, not just the symbol.

> **TIP**
> Brief the airspace along your route the same way you'd brief weather: before you take off, not as you approach each boundary in real time. A rushed decision at a Class C boundary with three other things happening in the cockpit is where most of these mistakes actually happen.

The next section covers every term from this guide in one place, followed by practice questions covering all fifteen chapters.

Glossary

Controlled airspace

Airspace where ATC provides some level of separation service. Classes A, B, C, D, and E.

Uncontrolled airspace

Airspace where ATC provides no separation service to VFR traffic. Class G.

Class A

18,000 ft MSL to FL600. IFR only, no exceptions.

Flight level

An altitude in the flight levels expressed against the standard 29.92 setting, written as FL followed by the altitude with the last two zeros dropped.

Positive control airspace

An older term for Class A and the flight levels generally, reflecting that every aircraft present is under an active ATC clearance.

Class B

Tiered airspace around the nation's busiest airports. Requires an explicit ATC clearance to enter.

Class C

Two-tier airspace around busy towered airports with radar approach control. Requires two-way radio communication to enter.

Class D

Airspace around smaller towered airports without their own radar approach control. Requires two-way radio communication to enter.

Satellite airport

A smaller airport sharing a primary airport's Class D boundary, typically self-announcing rather than talking to the primary tower.

Class E

Controlled airspace with no operating tower. Floor varies by location: 700 AGL, 1,200 AGL, the surface, or 14,500 MSL.

Victor airway

A low-altitude federal airway defined by VOR radials, a tube of Class E 8 NM wide running from 1,200 AGL to 18,000 MSL.

Class G

Uncontrolled airspace, found below the floor of overlying controlled airspace.

Mode C veil

A 30 NM ring around a Class B primary airport, surface to 10,000 ft MSL, requiring a transponder and ADS-B Out even outside the charted Class B boundary.

Two-way radio communication (established)

ATC has responded to your call using your specific aircraft callsign, the standard for entering Class C or D.

Prohibited area

Regulatory special use airspace where all flight is barred, marked "P" with a solid blue border. P-56 over Washington, D.C. is the best-known example.

Restricted area

Regulatory special use airspace containing hazardous activity, marked "R," entry requires permission when active.

Military Operations Area (MOA)

Non-regulatory airspace segregating military training from IFR traffic. VFR transit is legal but requires caution.

Warning area

Airspace similar to a restricted area but located over international or partly domestic waters.

Alert area

Flags high volumes of unusual training activity. No entry restriction.

National Security Area (NSA)

Advisory airspace around sensitive sites; voluntary avoidance requested, can become mandatory.

Controlled Firing Area (CFA)

Uncharted special use airspace; activity halts automatically when non-participating aircraft are detected nearby.

Temporary Flight Restriction (TFR)

A temporary, ad-hoc airspace restriction, never charted, published through NOTAMs.

ADS-B Out

Automatic Dependent Surveillance-Broadcast, a system that transmits an aircraft's position; required in specific airspace by class and altitude.

Vignette

A shaded area on a sectional chart, typically magenta or blue, showing a change in Class E floor altitude rather than a hard boundary line.

Practice Questions

Eighteen questions covering everything in this guide. Answers and explanations follow on the next page.

1. Which airspace class requires an explicit ATC clearance, rather than just two-way radio communication, to enter?

A. Class C
B. Class D
C. Class B
D. Class E

2. Class A airspace begins at:

A. 10,000 feet MSL
B. 14,500 feet MSL
C. 18,000 feet MSL
D. 24,000 feet MSL

3. The typical Class C footprint is:

A. A single cylinder from the surface to 4,000 AGL
B. A 5 NM core and a 10 NM shelf
C. A tiered cake with four rings
D. A 30 NM Mode C veil only

4. A controller responds to your initial call with "Cessna Three Four Charlie, standby." For Class C or D purposes, this is:

A. Not sufficient, you must hear "cleared to enter"
B. Sufficient, two-way communication is established
C. Only sufficient if followed by a squawk code
D. Only sufficient in Class C, not Class D

5. VFR weather minimums below 10,000 feet MSL in Class E airspace are:

A. 1 SM, clear of clouds
B. 3 SM, 500 below/1,000 above/2,000 horizontal
C. 5 SM, 1,000 below/1,000 above/1 SM horizontal
D. 3 SM, clear of clouds

6. VFR weather minimums in Class B airspace are:

A. 3 SM, clear of clouds
B. 3 SM, 500/1,000/2,000
C. 5 SM, 1,000/1,000/1 SM
D. 1 SM, clear of clouds

7. At or above 10,000 feet MSL, VFR visibility and cloud clearance requirements become:

A. Less strict than below 10,000 feet
B. 5 SM, 1,000 below/1,000 above/1 SM horizontal
C. 3 SM, clear of clouds
D. The same as Class G daytime minimums

8. Class G airspace below 1,200 feet AGL, in the daytime, requires:

A. 3 SM visibility, 500/1,000/2,000

B. 1 SM visibility, clear of clouds

C. 5 SM visibility, 1 SM horizontal

D. No minimums apply

9. A prohibited area on a sectional chart is marked with:

A. "R" and a dashed red border

B. "P" and a solid blue border

C. "W" and a dashed magenta border

D. "MOA" and no border

10. A restricted area that is currently "cold" (inactive) means:

A. It is permanently closed to all aircraft

B. VFR traffic can typically transit it, though checking first is safer

C. It has been reclassified as a warning area

D. It requires a TFR to be published before use

11. VFR flight through an active Military Operations Area is:

A. Illegal without prior permission

B. Legal, but requires extra vigilance for military traffic

C. Only legal above 10,000 feet MSL

D. Treated the same as a restricted area

12. Warning areas exist primarily:

A. Over international or partly domestic waters

B. Around military airfields only

C. Inside Class B airspace

D. Around wildfires

13. A Controlled Firing Area is not depicted on sectional charts because:

A. It is classified information

B. Activity stops automatically when a non-participating aircraft is detected nearby

C. It only exists temporarily as a TFR

D. It overlaps entirely with Class A airspace

14. TFRs are:

A. Printed on sectional charts with a dashed yellow border

B. Never printed on sectional charts; checked through NOTAMs

C. Only issued for VIP movement

D. Permanent once published

15. On a sectional chart, Class C airspace is shown with:

A. A solid blue line

B. A dashed blue line

C. A solid magenta line

D. A faded magenta vignette

16. A faded-edge magenta vignette on a sectional chart indicates:

A. Class E floor at 700 feet AGL

B. Class D operating hours

C. Class G airspace boundary

D. A restricted area

17. ADS-B Out is required at and above 10,000 feet MSL in Class E airspace, except:

A. Over the Gulf of Mexico

B. At or below 2,500 feet AGL

C. Inside a Mode C veil

D. During nighttime operations

18. The Mode C veil is best described as:

A. A 30 NM ring around a Class B primary airport requiring a transponder and ADS-B Out, surface to 10,000 ft MSL

B. A synonym for Class C airspace

C. The outer boundary of a MOA

D. A charted TFR category

Answer Key

1. C, Class B. It's the only VFR-entry class requiring an explicit clearance rather than just two-way communication.

2. C, 18,000 feet MSL. Also the altitude where every aircraft switches to the standard 29.92 altimeter setting.

3. B, a 5 NM core and a 10 NM shelf. The core runs surface to 4,000 AGL; the shelf runs 1,200 to 4,000 AGL.

4. B, sufficient. Hearing your specific callsign acknowledged is what establishes two-way communication, regardless of message length.

5. B, 3 SM, 500/1,000/2,000. The standard "3-152" minimums that apply to C, D, and E below 10,000 feet MSL.

6. A, 3 SM, clear of clouds. No specific distance from clouds is specified, since ATC is already separating traffic inside Class B.

7. B, 5 SM, 1,000/1,000/1 SM. The tighter "5-111" minimums, since traffic moves faster at higher altitude with less time to react.

8. B, 1 SM visibility, clear of clouds. The daytime exception that permits low-altitude flying in marginal weather in remote uncontrolled areas.

9. B, "P" and a solid blue border. Flight is barred entirely, with no case where entry is permitted.

10. B, VFR traffic can typically transit it, though checking first is safer. "Cold" doesn't guarantee the published schedule is current.

11. B, legal, but requires extra vigilance. Unlike a restricted area, no permission is required, but high-speed unpredictable military traffic is a real hazard.

12. A, over international or partly domestic waters. Located there because the FAA lacks full regulatory authority to designate the area "restricted" outright.

13. B, activity stops automatically when a non-participating aircraft is detected nearby. That automatic stop is what removes the hazard to transiting traffic, so no charting is needed.

14. B, never printed on sectional charts; checked through NOTAMs. Catching a TFR is entirely the pilot's preflight responsibility.

15. C, a solid magenta line. Solid blue is Class B; dashed blue is Class D.

16. A, Class E floor at 700 feet AGL. The 1,200 foot AGL default floor carries no symbol at all; it's simply left unmarked on the chart.

17. B, at or below 2,500 feet AGL. This exception keeps the requirement from applying to low-altitude local traffic even where the Class E floor is unusually high.

18. A, a 30 NM ring around a Class B primary airport requiring a transponder and ADS-B Out, surface to 10,000 ft MSL. It's easy to be outside the charted wedge of Class B itself and still be inside the veil.

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That's the whole system.

Six classes, two categories of special use airspace, and a temporary restriction system layered on top of all of it. None of it is arbitrary. Every boundary, line style, and equipment rule exists to match the level of control to the level of risk in that particular slice of sky.

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