



Class E

FL 600



Class A

No VFR

DME required at and above FL 240 [91.205(e)]

Class A
N/A in Hawaii
(but they sure do
have great dancers.)

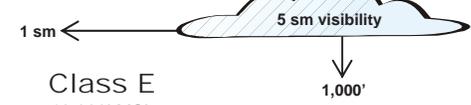
One-third of all
Americans believe in
aliens and UFOs.
(Apparently there are more than
100 million mentally challenged
individuals living amongst us!)



18,000' MSL (FL 180) — Altimeter 29.92

Class E

Class E



Class E
10,000' MSL
or above

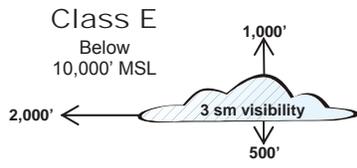
1. **Class E** starts at **1,200' AGL** (at times lower or higher) and extends **up to** but not including **18,000' MSL** the **base of Class A**.
2. In some areas of western U.S. **Class G** extends from the **surface** up to but not including **14,500' MSL** where **Class E takes over** (shaded on enroute charts).
3. In other words — in the **vast majority** of the U.S. — **Class E** starts at **1,200' AGL** and extends **up to** but not including **18,000' MSL**... **EXCEPT** for a few mountainous areas in the west where **Class G** extends from the **surface up to** but not including **14,500' MSL** where **Class E takes over**.
4. Around an **airport**... **Class E** can go down to **700' AGL** (**faded Magenta line**), or **to the surface** (**dashed Magenta line**).
5. A **faded Blue** line fades in the direction where **Class E** begins at **1,200' AGL** **abutting** an area of **Class G** airspace.

CLASS G

14,500' MSL

10,000' MSL — Transponder Mode C (91.215)
Speed Limit — 250 kts below 10,000' MSL

Speed Limit
200 kts below
2,500' AGL
within 4 nm of
an airport in
Class C or D
airspace.
(does not apply to
Class B)



Class E
Below
10,000' MSL

Class B

VFR:
1,000' ceiling
3 sm visibility
clear of clouds

Class E

Class E

2,500' AGL
Class D

4,000' AGL
Class C

Class E



1,200' AGL
Class G

700' AGL
Class G

Class G

Class G

Class G

Class G

Class D — tower
no radar.

Class E can go **down** to
700' AGL to **accommodate**
instrument **approaches**.

Class B — Individually
tailored. **250 kts below**
10,000' (**200 kts below** the
floor or in **VFR corridor**).

Class E to the **surface**:
Dashed Magenta line,
weather reporting &
radio **communications**
with **ATC** to the **surface**.

Class E — **700' AGL** within
faded Magenta border.
(instrument approaches)

Class D with radar
is called a **TRSA**.

Class G — **Uncontrolled**.
Surface to **14,500' MSL**.
Shaded on enroute charts
(mostly western US).

Class C — **Radar**. Individually
tailored but usually **5 nm Core**
from **surface** to **4,000' AGL**,
10 nm Shelf from **1,200'** to **4,000'**
AGL, **Outer Area 20 nm** radius.

VFR operations to, from, or in the traffic
pattern of an airport having any type of
Surface-Based Controlled Airspace
(i.e., Class B, C, D or E) **requires** at least
a **1,000 ft** ceiling and **3 sm** visibility.

Class E:
1,200' AGL when
no inst approach.

CLASS A Airspace: (71.1, 71.31, 71.33, 71.75, 71.133, 91.135, 91.155, AIM 3-2-1, 3-2-2, FAA-H-8083-25)

1. **All** airspace from **18,000** ft MSL (**FL 180**) up to and including **FL 600** within the 48 contiguous States, District of Columbia, most of Alaska, and the airspace within 12 NM offshore. There is no Class A airspace over Hawaii and the Victor airways have no upper limit in Hawaii.
2. **All** aircraft **MUST** be **IFR** unless otherwise authorized. No VFR (unless for purposes of lost communications).
3. No minimum flight visibility or distance from clouds is specified.
4. Altimeter setting for all aircraft operating in US controlled Class A airspace — **29.92**.

CLASS B Airspace: (71.41, 91.117, 91.126, 91.127, 91.129, 91.130, 91.131, 91.155, 91.215, AIM 3-2-1, 3-2-3, 8083-25)

1. **Surface to 7,000'** (Miami) or **up to** as high as **12,500'** MSL (Atlanta) surrounding the busiest airports.
2. Individually tailored upside-down wedding cakes — contain all instrument approaches.
3. **Clearance into Class B required.** (91.131, Chief Counsel interp Jan 10, 2010)
4. **VFR** operations — Ceiling: **1,000 ft** — Visibility: **3 sm** — **Clear of Clouds** (or Special VFR).
5. IFR operations — An operable **VOR** or TACAN receiver is required. (91.131)
6. Unless otherwise authorized by ATC, a **LARGE TURBINE-POWERED** airplane operating to or from a primary airport in Class B airspace **MUST operate AT or ABOVE** the **FLOORS** of the **Class B** airspace while within the lateral limits of that area **even when** operating on a **visual approach**.
7. A **LARGE** (more than 12,500 lbs) **or TURBINE-POWERED** airplane shall, unless otherwise required by distance from cloud criteria, enter the **TRAFFIC PATTERN** at an altitude of at least **1,500' AGL** and maintain 1,500' AGL **until further descent** is **required** for a safe **landing**. [Noise abatement]
8. A **large** or **turbine-powered** airplane approaching to land on a runway served by an **ILS** shall fly **at or above** the **GLIDE SLOPE** **between** the **outer marker** and the **middle marker**.
9. **Any airplane** approaching to land on a runway served by a **VASI** shall maintain **at or above** the **glide slope** (aka glide path) **until** a **lower altitude** is **necessary** for a safe **landing**.
10. **Mode C veil** — All aircraft operating within **30 nm** of a Class B airport, from the surface to 10,000' MSL must have Mode C (unless the aircraft was originally certified without an electrical system and still does not have one).
11. **SPEED LIMIT** — **250 KIAS** below **10,000** feet (**200 KIAS** below the **floor** or in VFR corridor).
 - a. **250 KIAS MUST NOT BE EXCEEDED even if** you are told to **"MAINTAIN BEST FORWARD SPEED."**
 - b. **"Maintain best** (or maximum) **forward speed"** — means — "maximum or best forward ***LEGAL*** speed." ATC does not have the authority to lift the 250 below 10,000 ft speed restriction [91.117(a)]. **You cannot be cleared to violate a regulation**, and you cannot accept such a clearance.
 - c. If a controller assigns you 300 kts or greater inbound (10,000 ft or above), and he later descends you to 8,000 ft, it is **UNDERSTOOD** that you must **slow to 250 KIAS BEFORE descending below 10,000**.



"At or above the glide slope" does not prohibit **normal bracketing maneuvers above or below** the **glide slope** for the purpose of remaining on the glide slope.

"Normal bracketing maneuvers" are maneuvers which remain within the **limits** of the **higher** and **lower** **glide slope signals**.

OpSpec C077 requires **commercial operators to remain within Class B, C, or D** airspace — or within **Class E** airspace when within **35 miles** of the **destination**.

Do you have to hear the words **"Cleared into Class B"** when VFR?

1. The short answer is **yes**. You must hear the magic word **"cleared"** at least **somewhere** in the **instructions** given to you by the approach controller. Radar identification and instructions to maintain a specific altitude and heading that will put you in their airspace can no longer be considered an implicit, implied, or understood clearance into Class B (although it happens *all* the time). A Letter of Interpretation addressed to my good friend Bridgette Doremire from the Office of Chief Counsel dated January 10, 2010 serves to rescind previous policy.
2. So... if you can get a word in edgewise, **always** ask for confirmation, just to get it on the tape.
3. That being said... **if** you've been **radar identified** by the **approach control** having jurisdiction (e.g., Charlotte **Approach**; NOTE: "flight following" from "center" cannot clear you into Class B); the terms "cleared as requested" or even "proceed as requested," or a clearance to a specific **point inside** the Class B will also suffice. Example: "Citation 5CM, radar contact, remain VFR, **cleared direct Charlotte**, climb and maintain four thousand, expect 36R."
4. 91.131 [Operations in Class B airspace] (a)(1) "The operator **must receive** an **ATC clearance** from the ATC facility having jurisdiction for that area **before operating** an aircraft **in that area**." It **does NOT say** — "The operator **must** specifically **hear** the **magic words 'Cleared into Class B' in that precise order**..." If the frequency is totally saturated and you're truly paranoid about the magic words, then turn around and run away. Now **that** will get their attention!:(o)