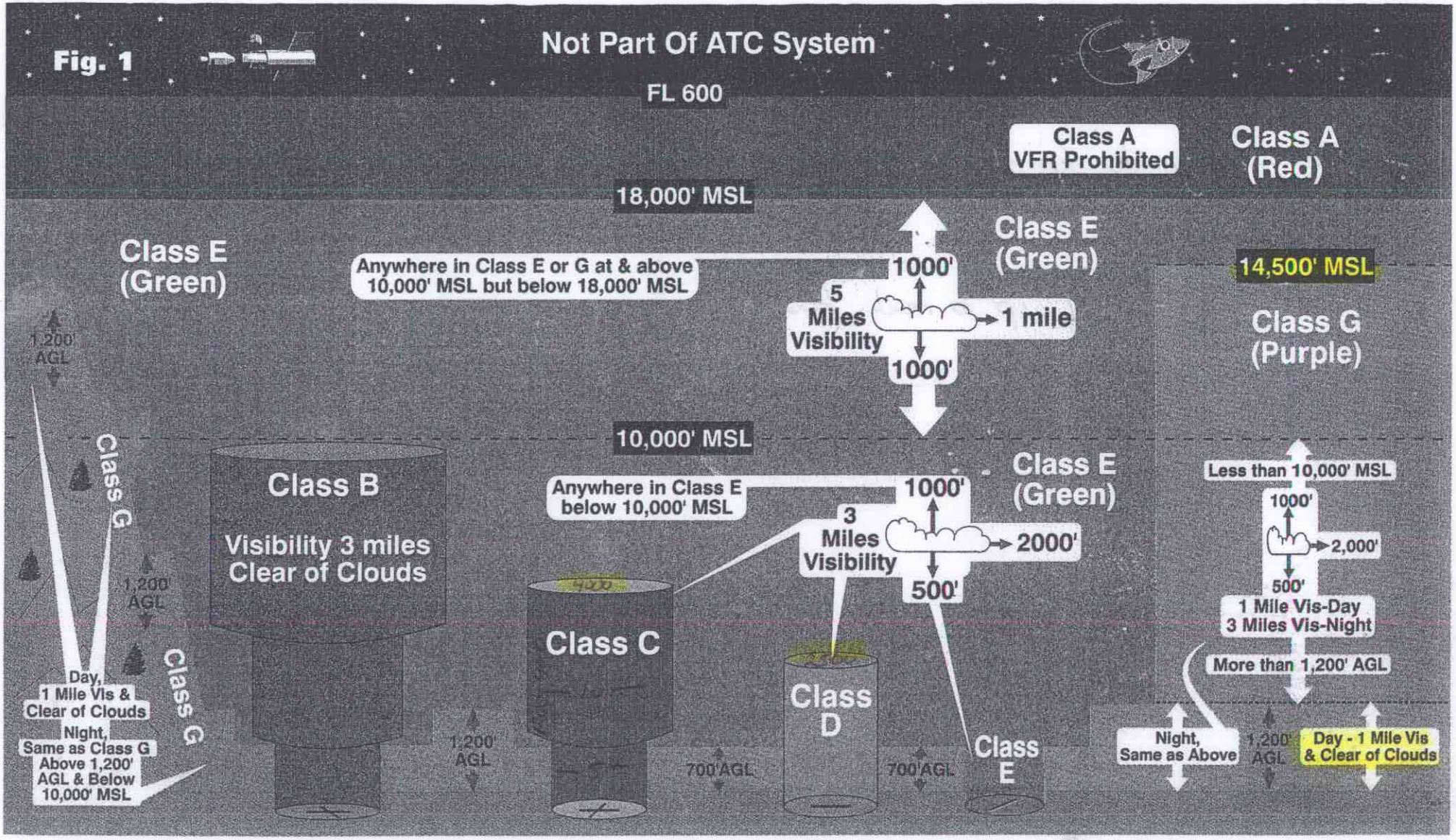
National Airspace System :



- Describe A/S from surface ↑ up.

- MoA etc go to top of check

+ 300 ft - Highest up to read Hundred

Quadrangle

THE FLIGHT ENVIRONMENT

Safety Of Flight

Collision Avoidance/Visual Scanning

- F.A.R. 91.113: pilot is responsible to see and avoid other aircraft

Eyes

-can observe about a 200° arc of the horizon at one glance.
-Fovea- small center area in rear of the eye that sends sharply focused images to the brain. Anything out of fovea appears less detailed.
-Dark adaption: in darkness, the eyes become more sensitive to light. It takes 20-30 min. for complete dark adaption.
-Cones active in day, rods (peripheral) active at night.

- Scanning

-important to develop good scanning techniques
-use short, regularly-spaced eye movements across successive areas of the sky.
-each eye movement should not exceed 10°, and should be held for at least 1 second.
-Timeshare between outside and inside, don't focus on instruments for more than 4-5 sec. at a time.

- Clearing Procedures

Should be used in several situations: before takeoff, climbs/descents, straight and level, traffic patterns, VOR sites, etc.
Always before maneuvers- either one 180° turn, or two 90° turns in opposite directions.

Judgment Aspects

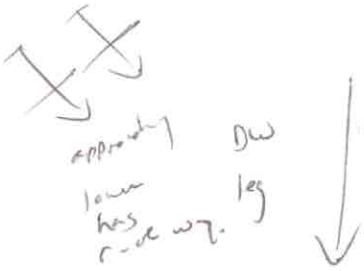
Determining relative altitude- use horizon. If traffic is above, it's probably higher, if below, it's probably lower.

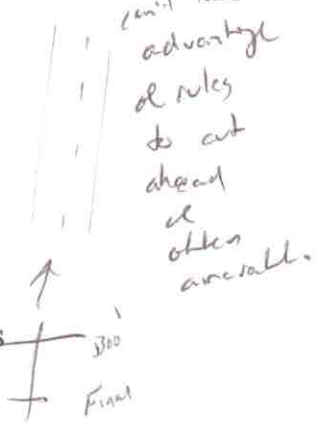
- Evasive action- always evade right if on a head-on collision course. Any aircraft with no relative motion is likely on a collision course.

- Recognize high hazard areas- VOR's, class B, C, D, E airspace.

- Cockpit management- organize materials before flight to permit scan time-maps, checklists, manuals, etc.

- Visibilty- smoke, haze, dust, rain, sun can all reduce visibility. Clean windshield if necessary.





can't take advantage of rules to cut ahead of other aircraft.

Right-of-Way rules

- -When two aircraft are converging, the one to the right has right-of-way.
- -Less maneuverable aircraft has right of way.
- -When two aircraft are in the traffic pattern, lower aircraft has right-of-way.

Minimum safe altitudes

-Congested areas- at least 1000 ft. above highest obstacle within 2000 ft. radius of A/C

-Other than congested areas- 500 ft above the surface

- Open water / Sparsely populated area - 500' from any person vessel, vehicle, or structure.

Taxiing in Wind

- Head-wind- turn aileron into wind, ~~nuetral~~ neutral elevator.
- Tail-wind- turn aileron away from wind, forward elevator (dive away)

- More impt. in high wing airplane - goes up both

Airports

Controlled and Uncontrolled

Any airport with an operating control tower is a controlled airport. If an airport does not have a control tower, or has one but is closed, it is a non-controlled airport.
Non-controlled airports: pilots communicate with each other on a Common Traffic Advisory Frequency (CTAF). 7-Hi 5-Med - 3 low

Runway Layout

Runways are numbered according to their magnetic heading, and dropping the last digit. e.g.- Runway 36 has a magnetic heading of 360°. A runway with a magnetic heading of 240° would be runway 24.

Traffic Patterns

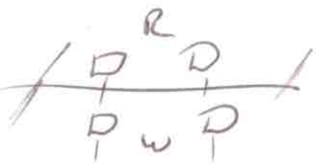
Upwind leg-maintain alignment with runway, crabbing if necessary. Maintain Vy.
Crosswind leg- commence turn to crosswind when within 300 ft. of TPA. Crab if necessary. Start turn to downwind leg to maintain ½ mile distance from runway.
Downwind leg- Maintain straight and level flight, and straight groundtrack relative to runway. Usually 2200-2300 rpm, about 90 knots.
Abeam touchdown point, reduce power, add flaps, initiate 300-400 ft/min descent. Start turn to base when about 45° past touchdown point.
Base leg- add 2nd notch of flaps. Crab if necessary.
Final- Add last notch of flaps, maintain final approach speed.

TPA - Traffic pattern altitude

Airport visual aids
Wind direction indicators: Wind socks, tetrahedrons, wind T's
Segmented circle, landing direction indicators-indicate direction of base to final turn.

LAHSO
Land and hold-short operations. If assigned, you must hold short of runway indicated. If you accept a LAHSO clearance, you <u>must</u> hold short. If you will not be able to, state "unable" to tower. (Manditory readback)

VASI (DPA) - 2/2 lights 2 Bar vasi



- red over white all right
- red on red - sorry be dead
- white/white - fly all night

PAPI ○○○○ ← 4 lts row (precision approach path indicator)
4 white Hi
3 white 1 red - med hi
2 white 2 red - right on
1 white 3 red - low
4 red - very low

write down ATIS - - wind - speed - info -
- Altimeter
- clouds
- notams
- Twr/Ground combined

work w/ charts - learn legends + ch.

Airspace

11 monday

ground 121