



Foreword

FOR CENTURIES man looked longingly at the skies. Finally, some forty years ago, at Kill Devil Hill, near Kitty Hawk, N. Carolina, Orville and Wilbur Wright successfully completed the first mechanical flight.

Today, thanks to the Wright brothers, man can fly. The Air Age is here! Thousands of military and commercial airplanes are speeding across the country on well-defined, carefully regulated airways. Air routes are reaching across every continent, into every corner of the world. No place on the globe is now more than 60 flying hours from your nearest air field.

As aviation comes of age air traffic is becoming more and more of a problem to pilots. Uniform rules and regulations are necessary to insure maximum safety in flight.

To the young men of America whose hearts are in the sky, we present this booklet. Its pictures teach the rules that every pilot must know before he can earn his wings. Learn what this booklet has to tell and you will have taken a long step toward the day when you can say, "I've Got Wings."

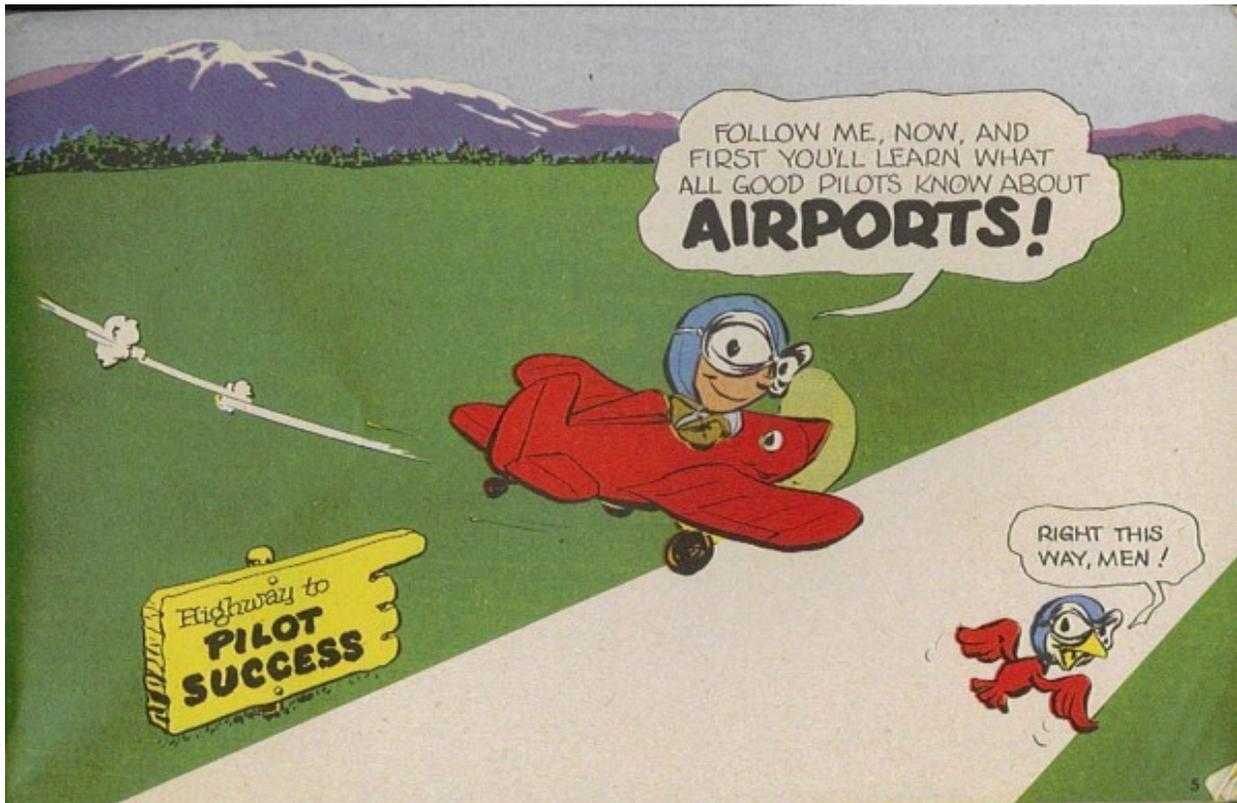


Information contained in this booklet is based primarily on Civil Air Regulations as amended to March 20, 1944. Certain Army flight procedures which vary from Civil Air Regulations are included so that the reader will have a complete picture of present day flying.

Art ideas for this booklet were contributed by personnel of the Air Traffic Control Division of the Civil Aeronautics Administration. "I've Got Wings" was prepared and published by the U. S. Army Air Forces, Office of Flying Safety.

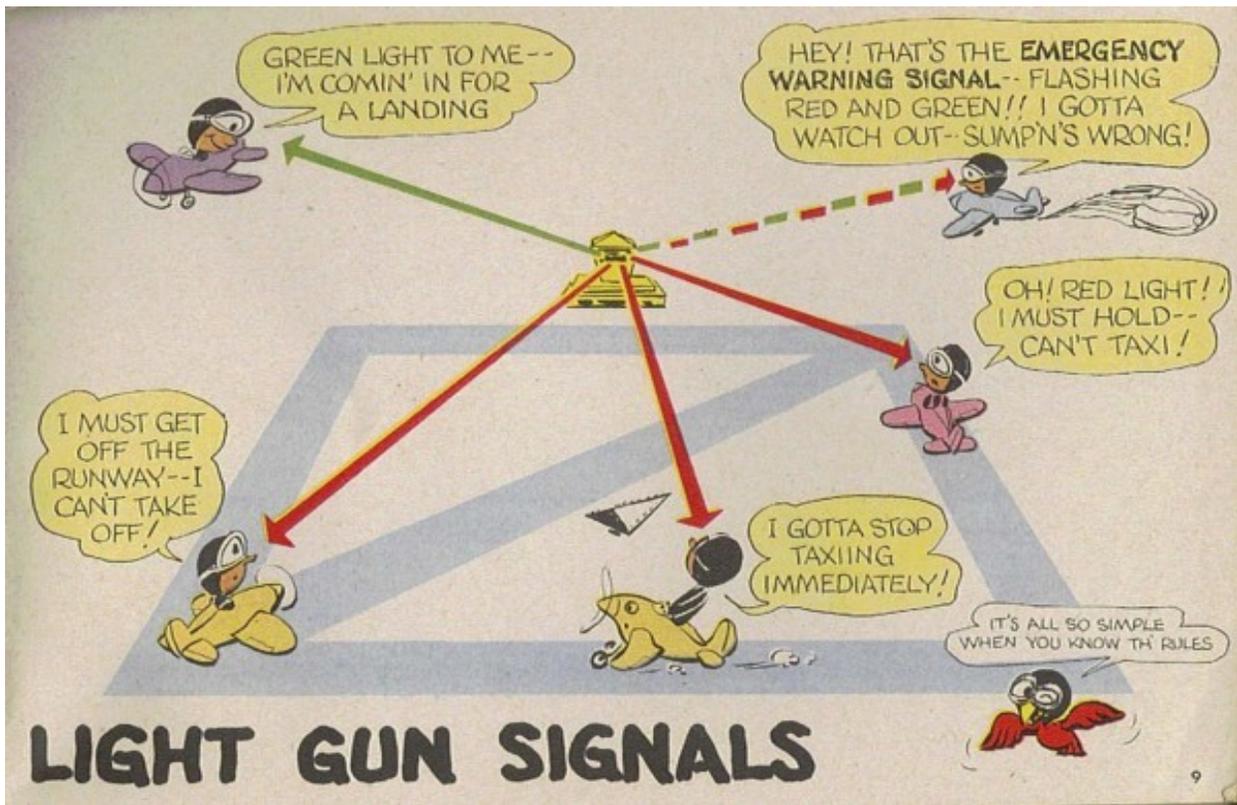
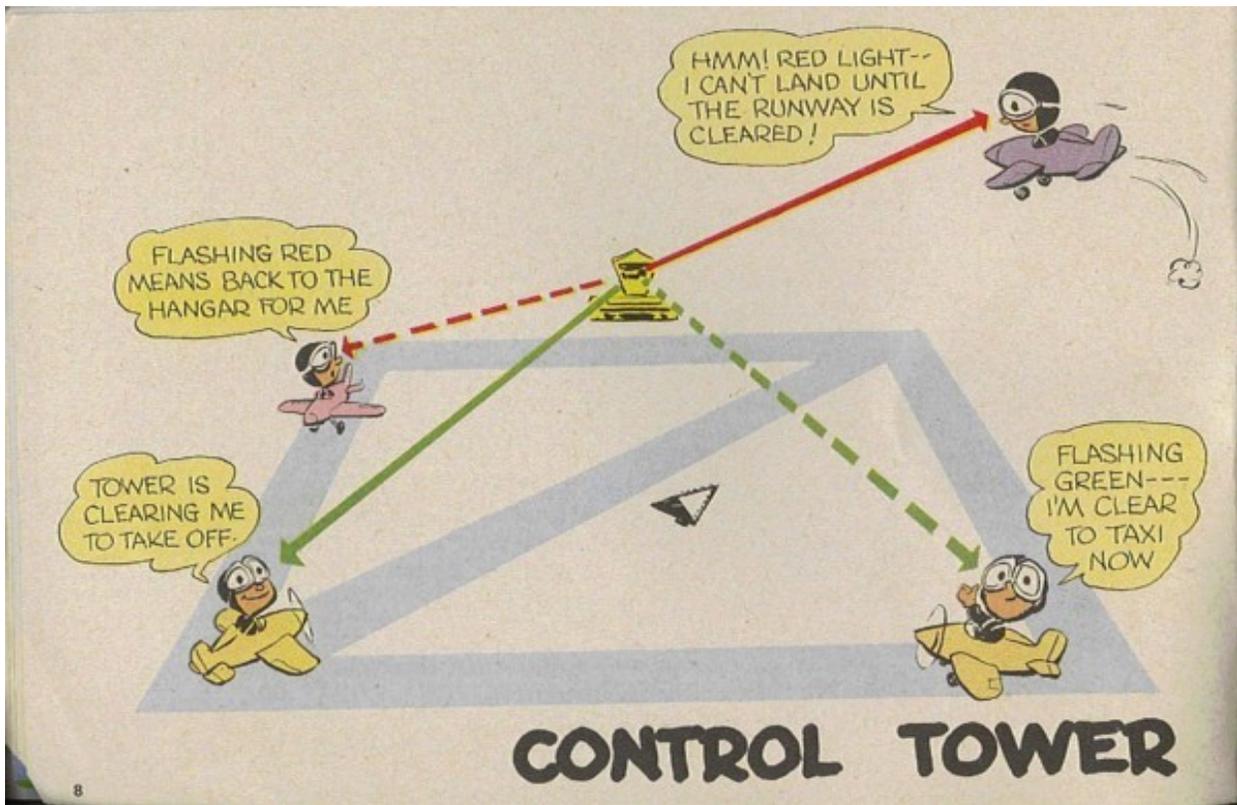


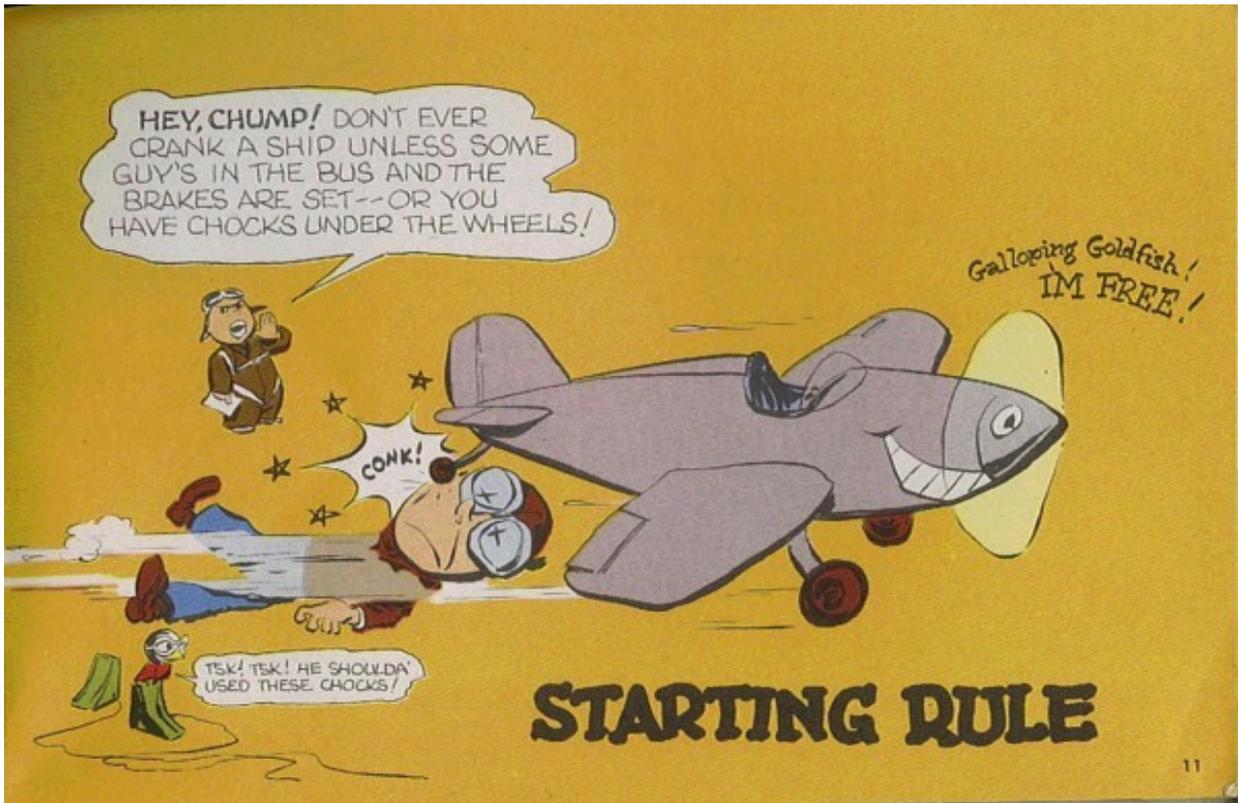
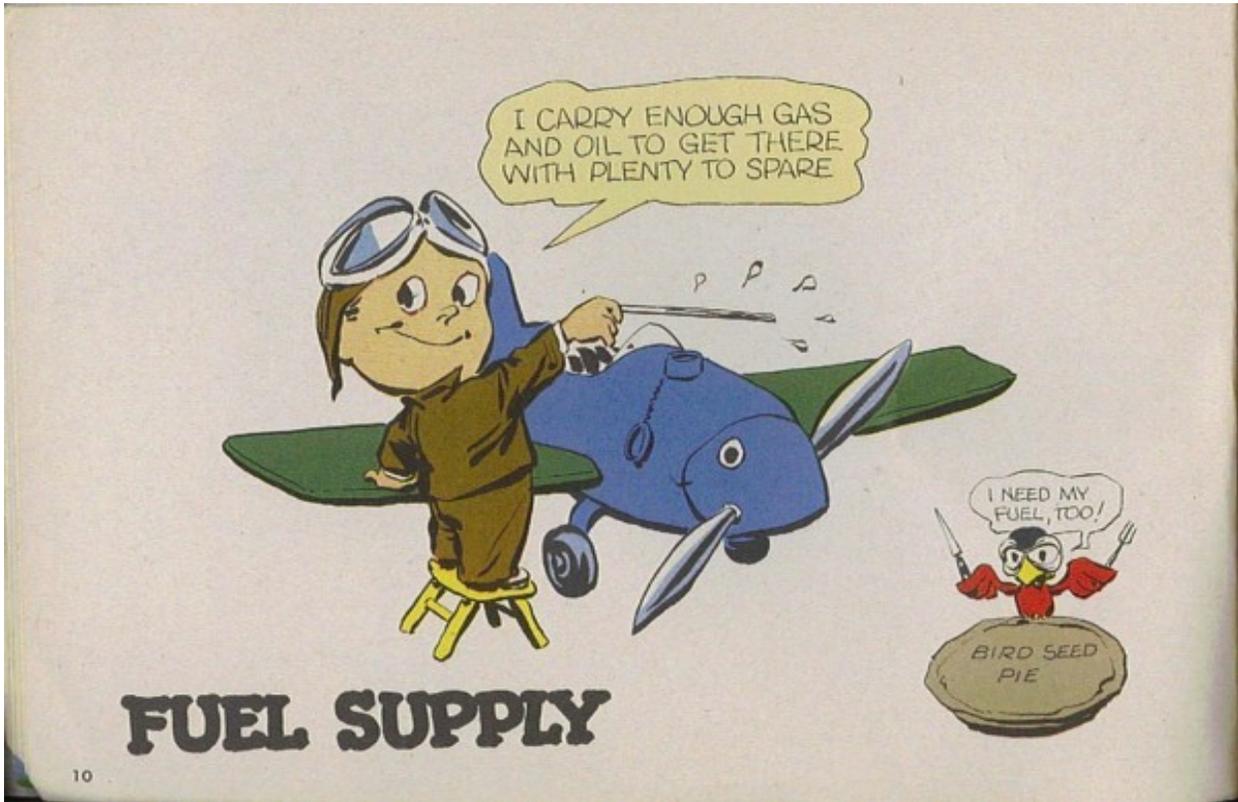
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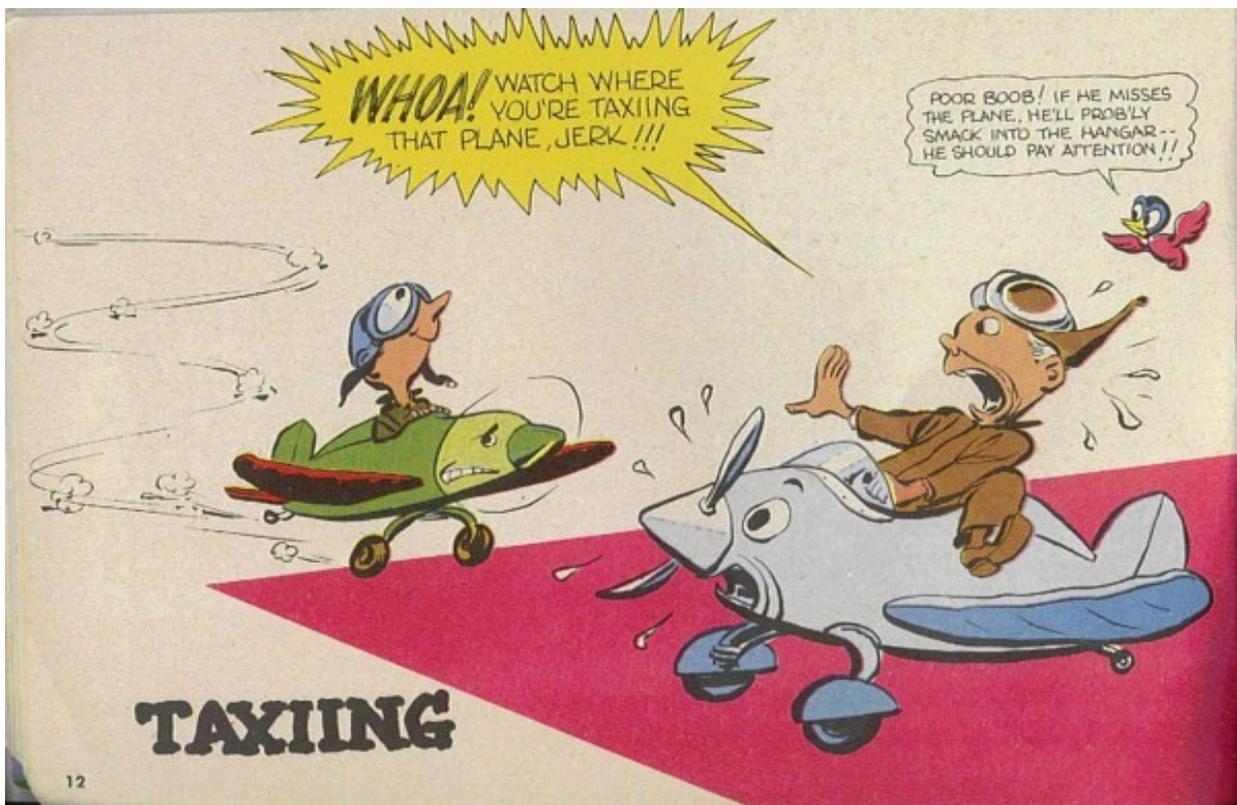


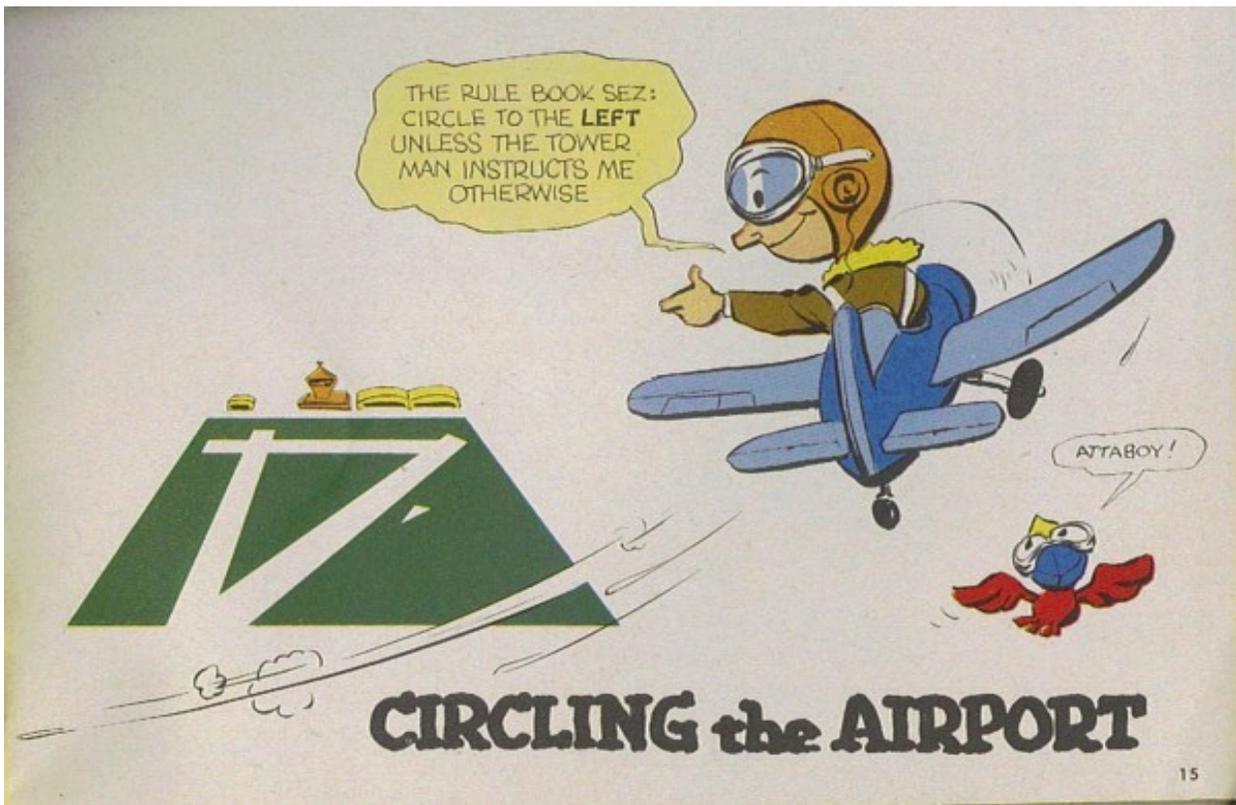
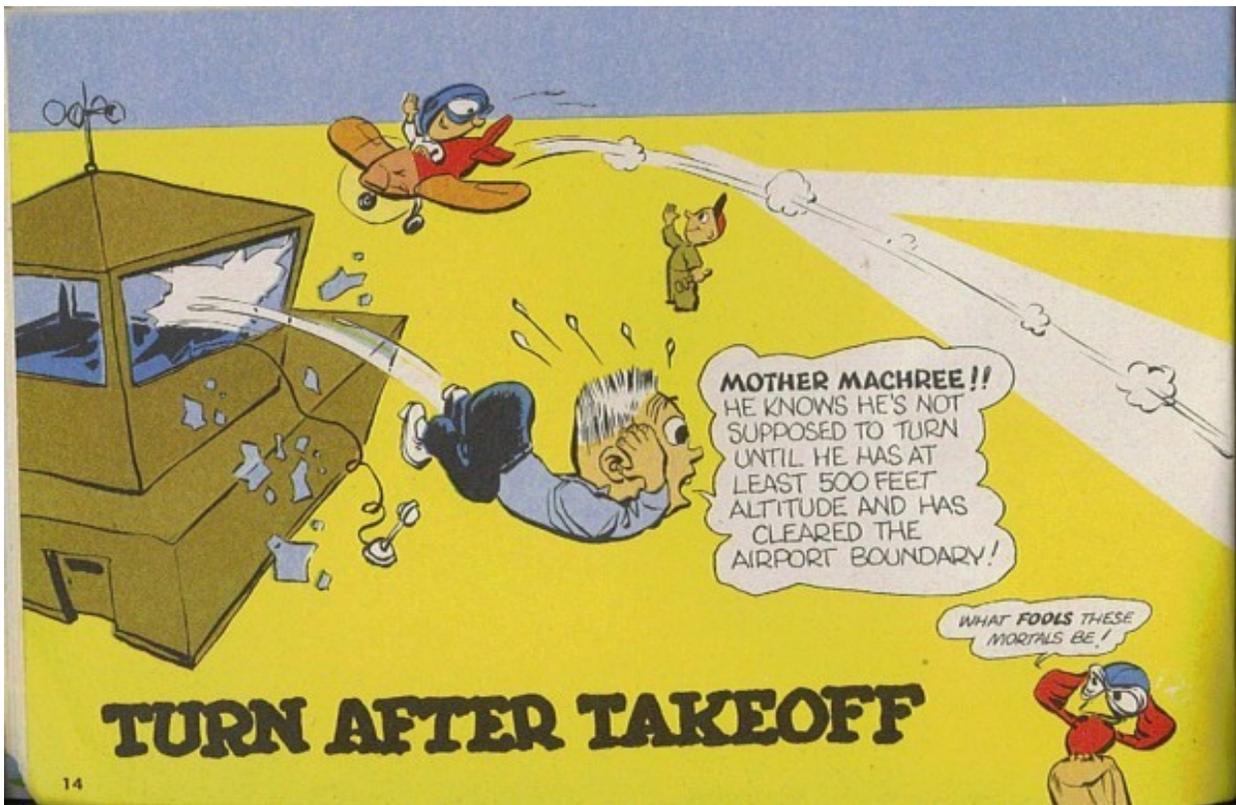
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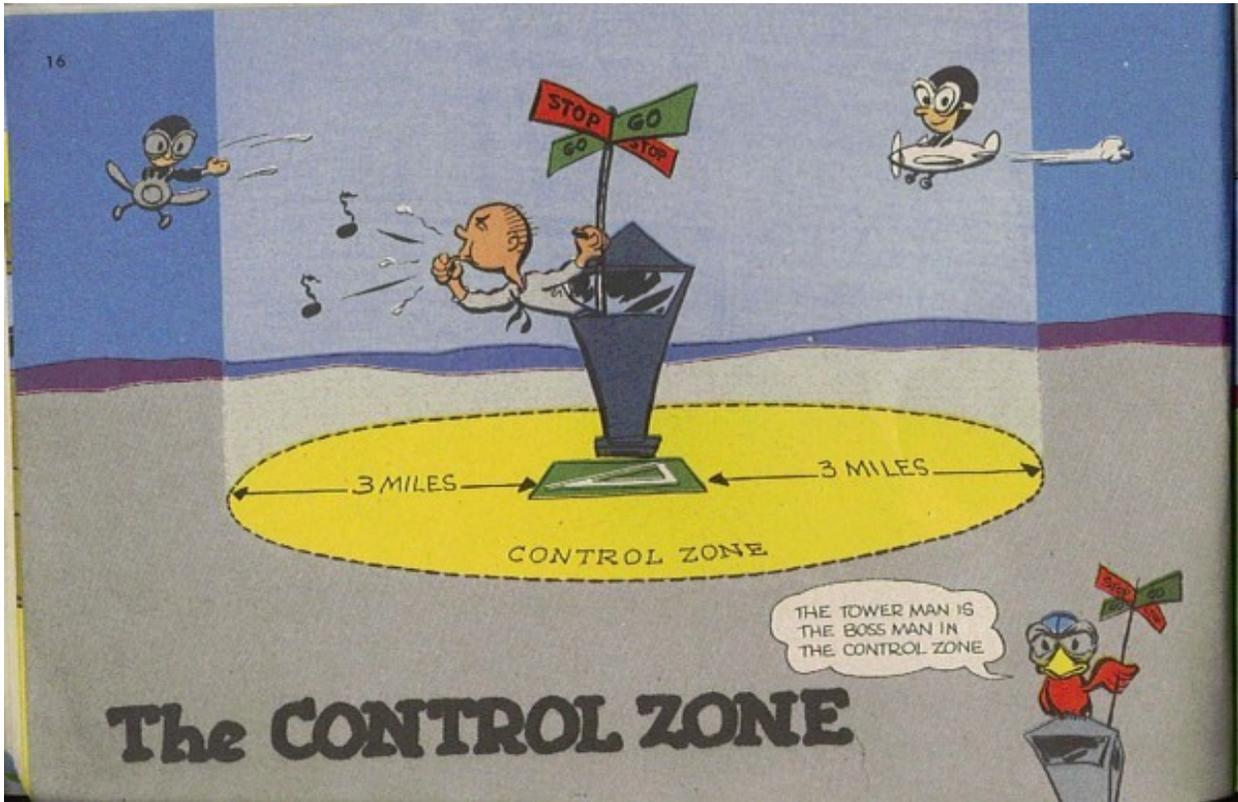






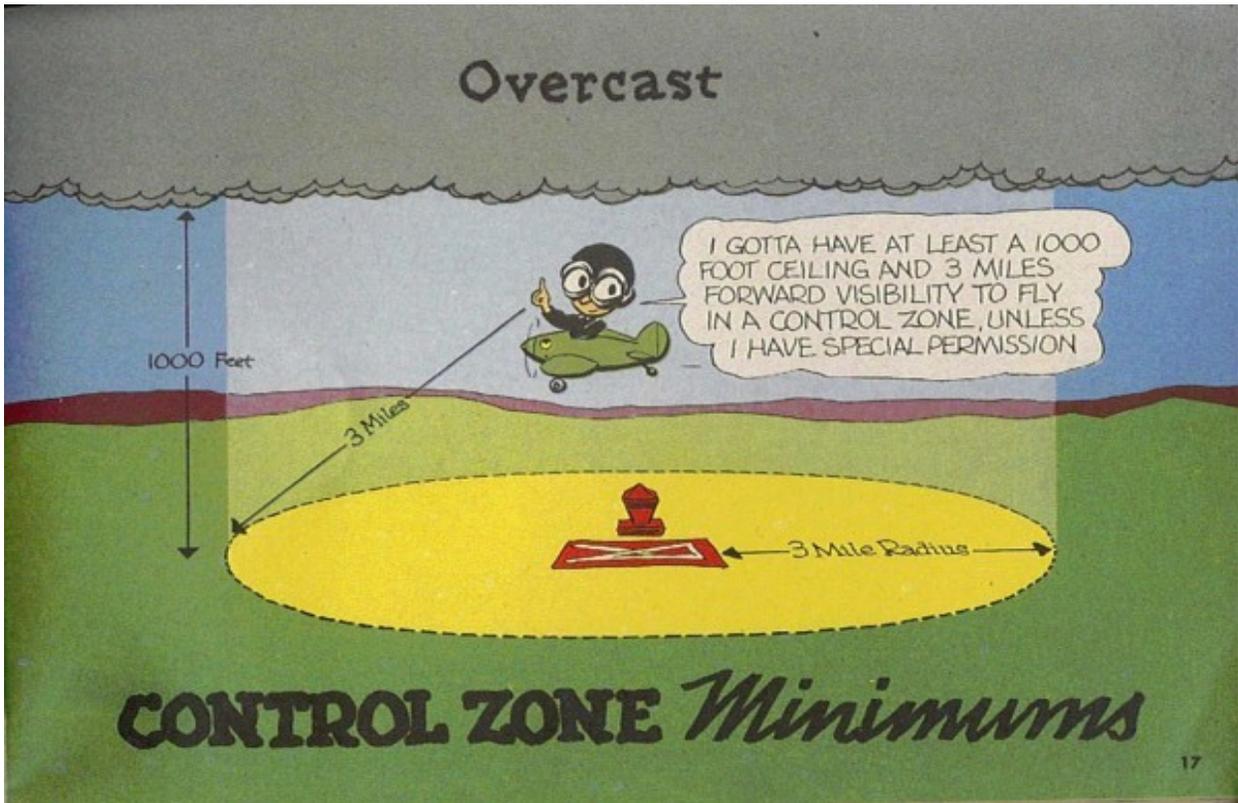






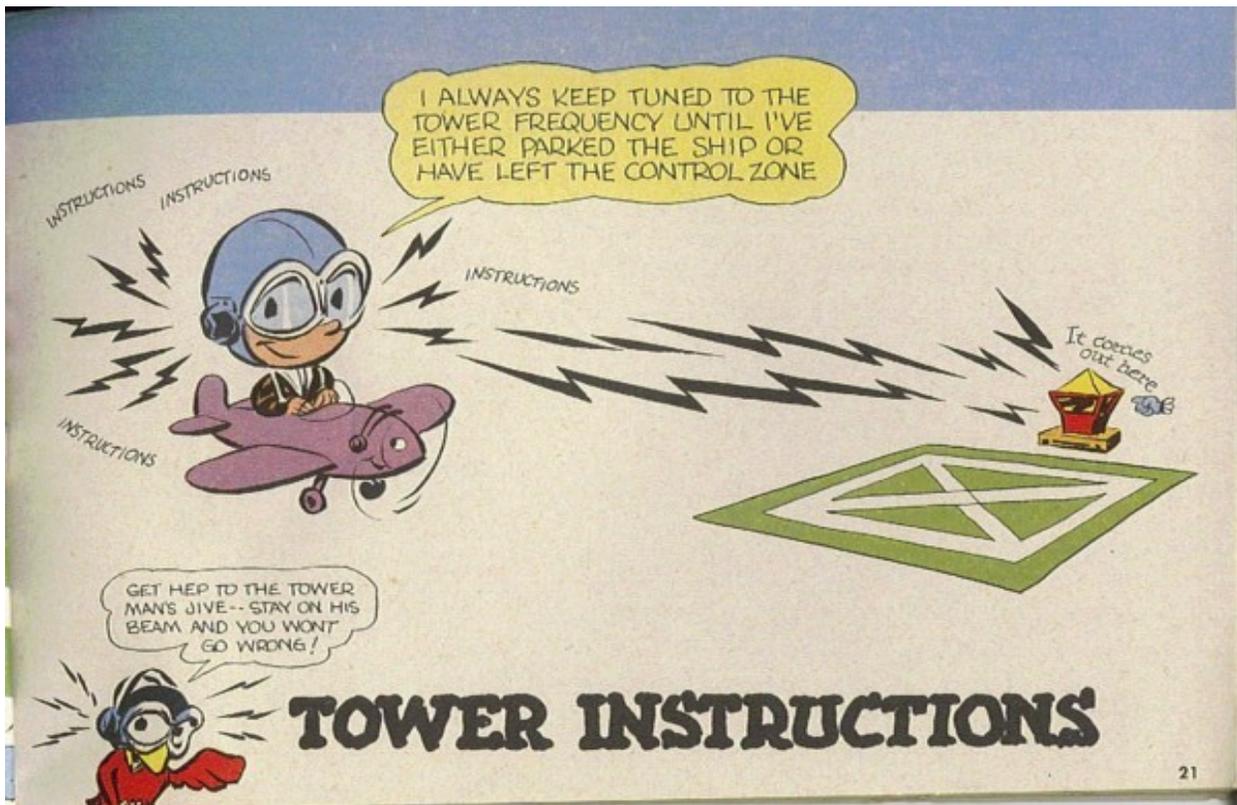
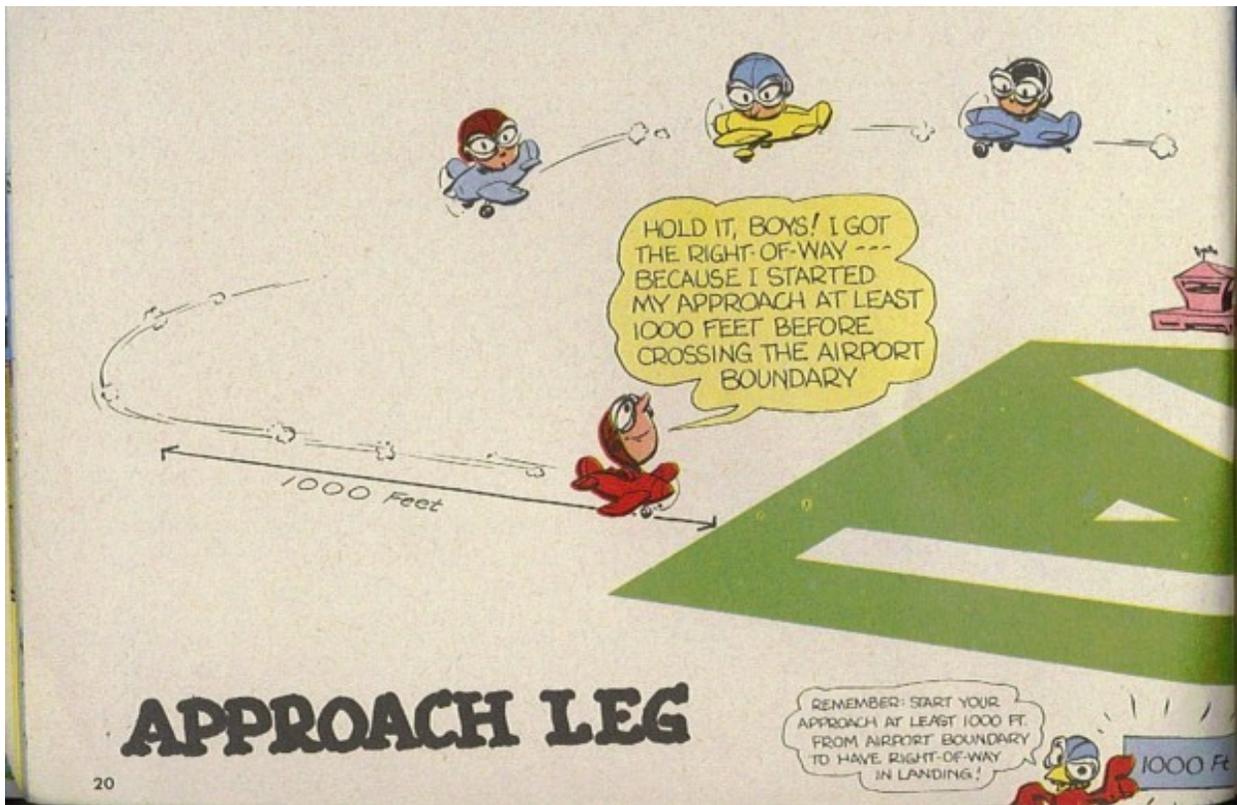
The CONTROL ZONE

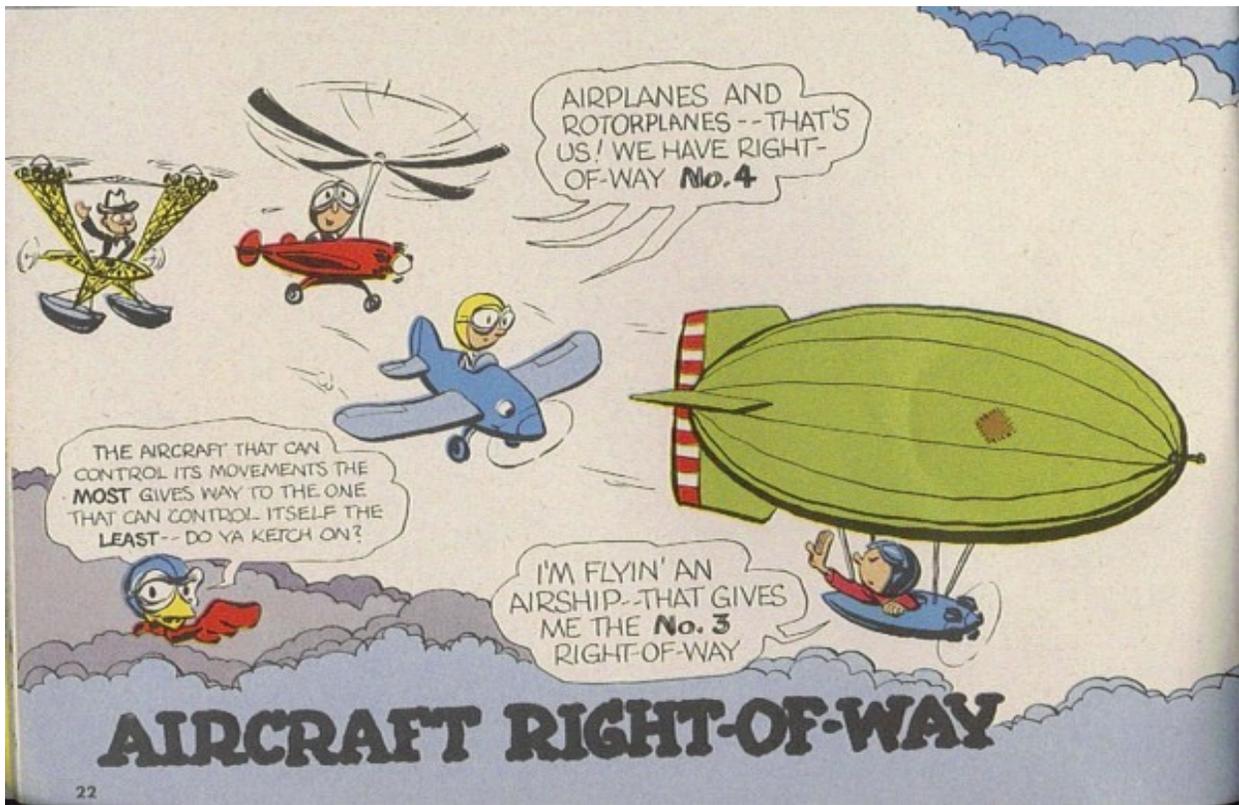
Overcast

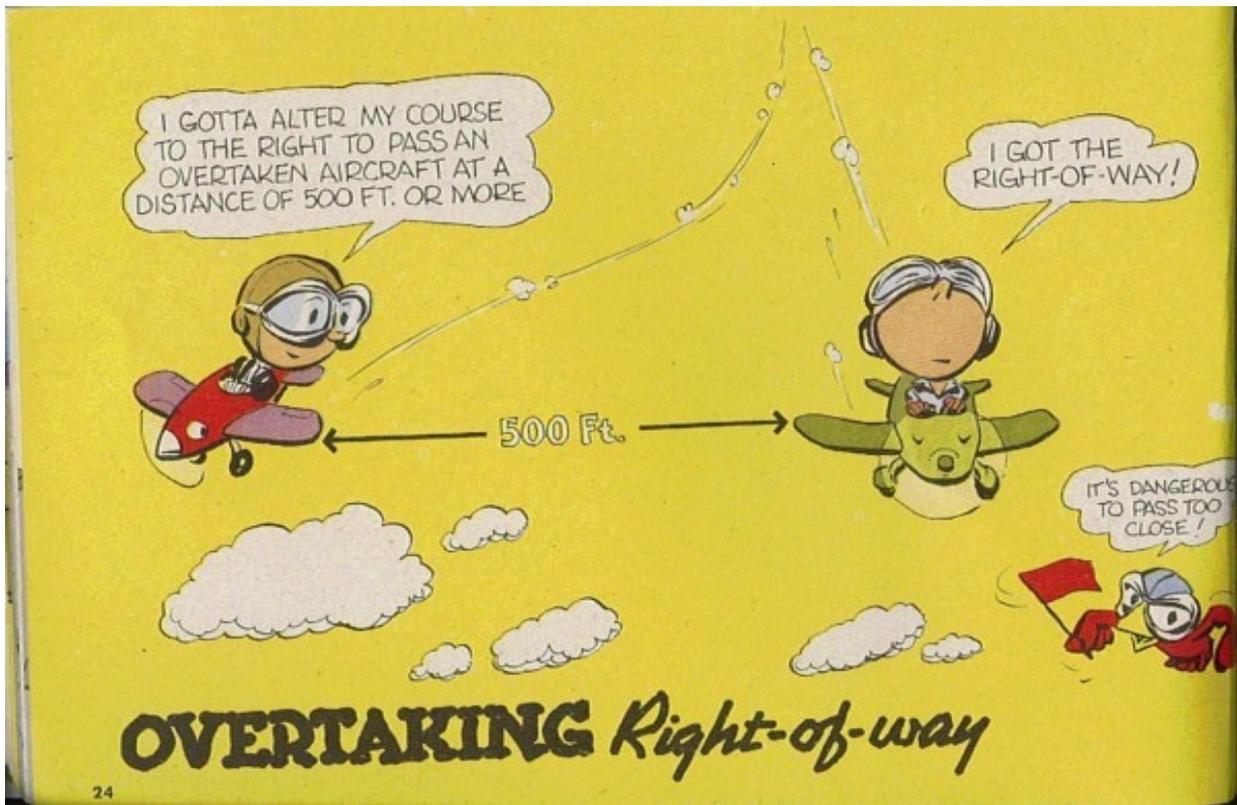


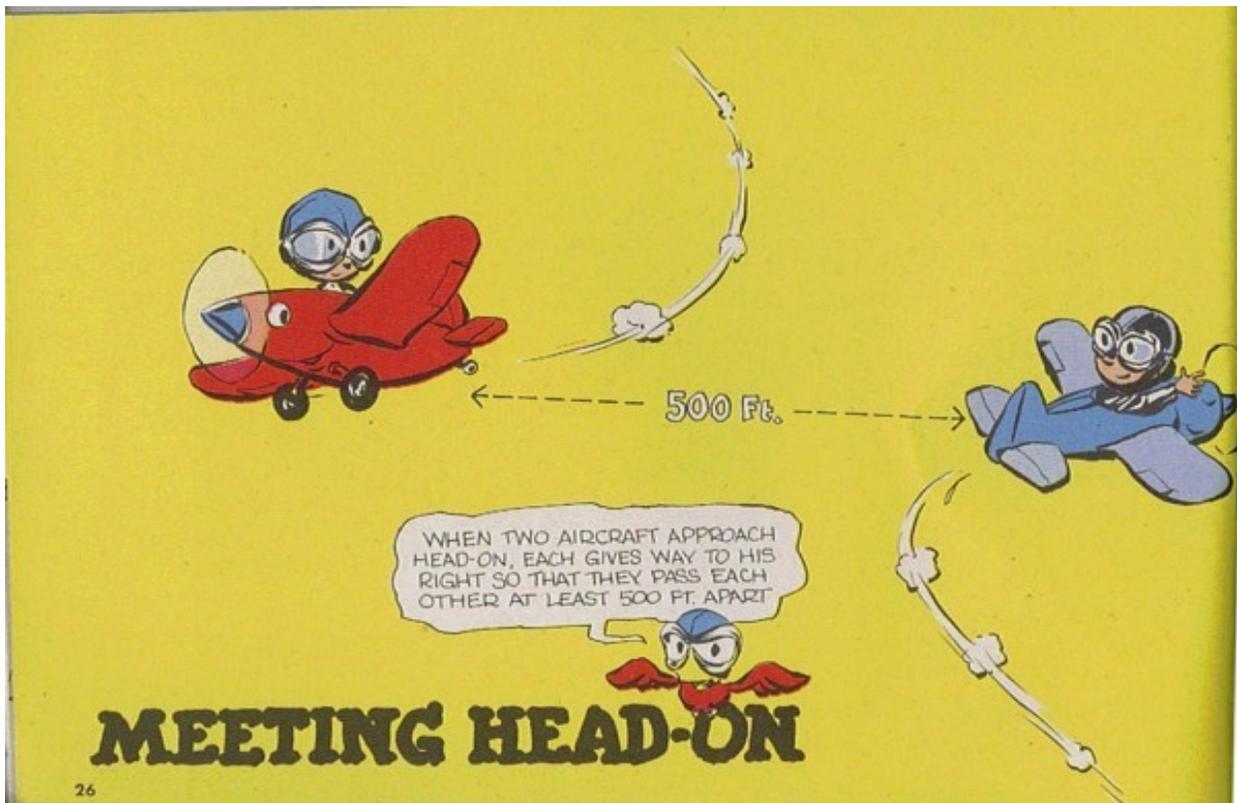
CONTROL ZONE *Minimums*













EXCEPT IN TAKEOFFS OR LANDINGS, I MUST FLY HIGH ENOUGH TO GLIDE CLEAR OF THIS STUFF, AND NEVER BELOW 1000 FEET!

DON'T FLY BELOW THIS ALTITUDE OVER CITIES, OPEN AIR ASSEMBLIES, HOUSES, BOATS, OR VEHICLES



1000 Ft.



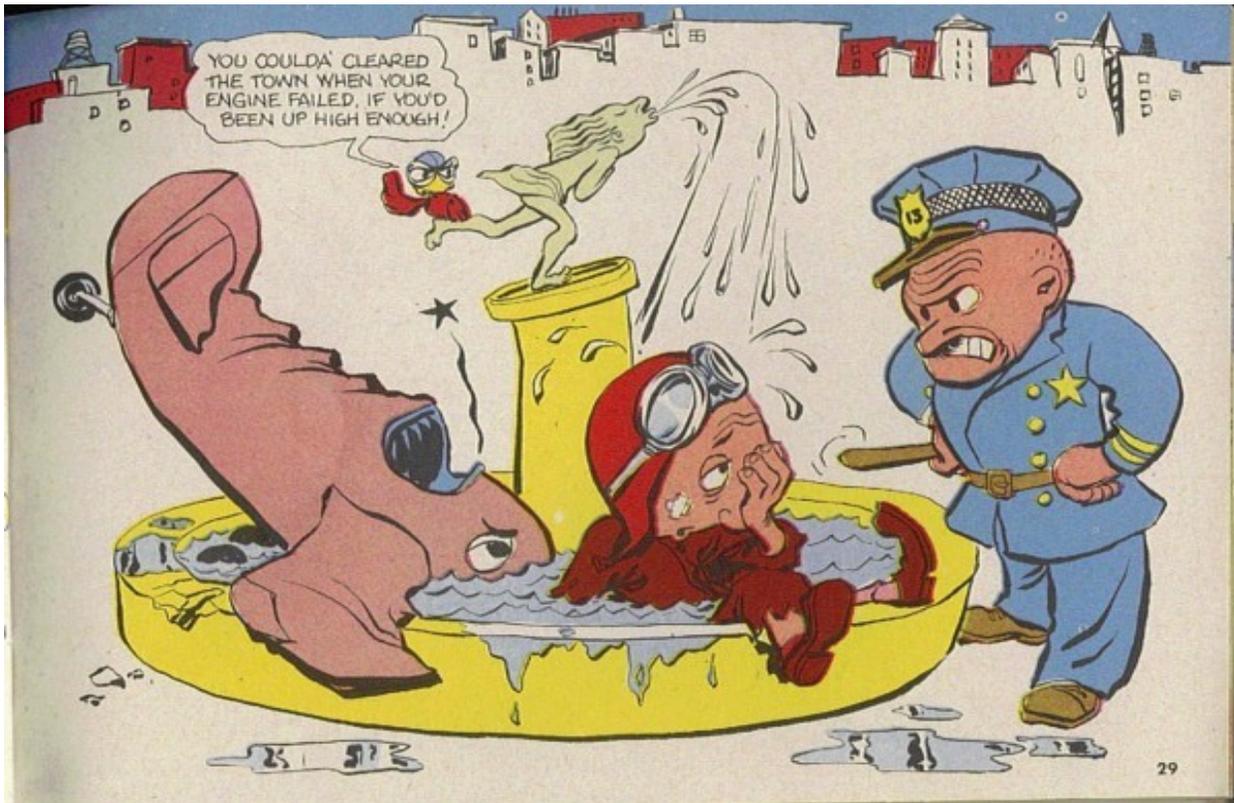
1000 Ft.



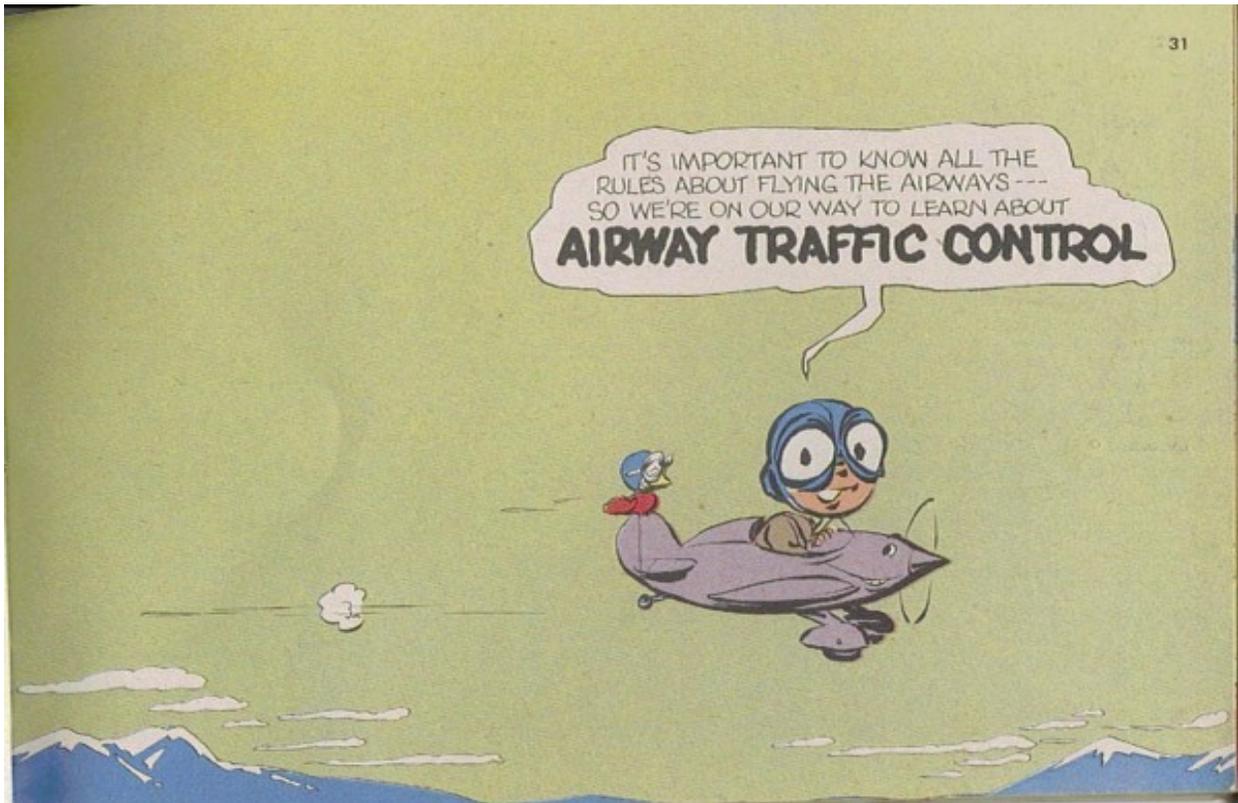
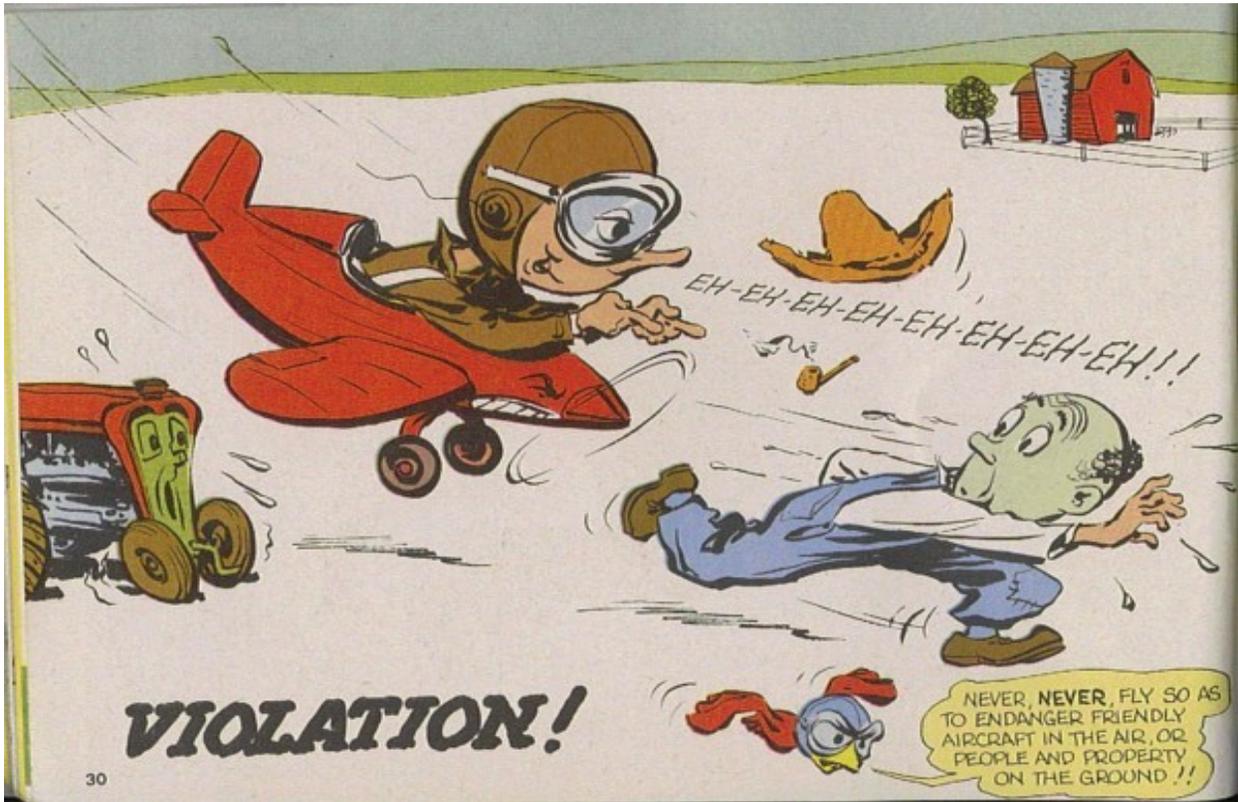
ALAS! IT CAN HAPPEN TO YOU IF YOU FLY TOO LOW!

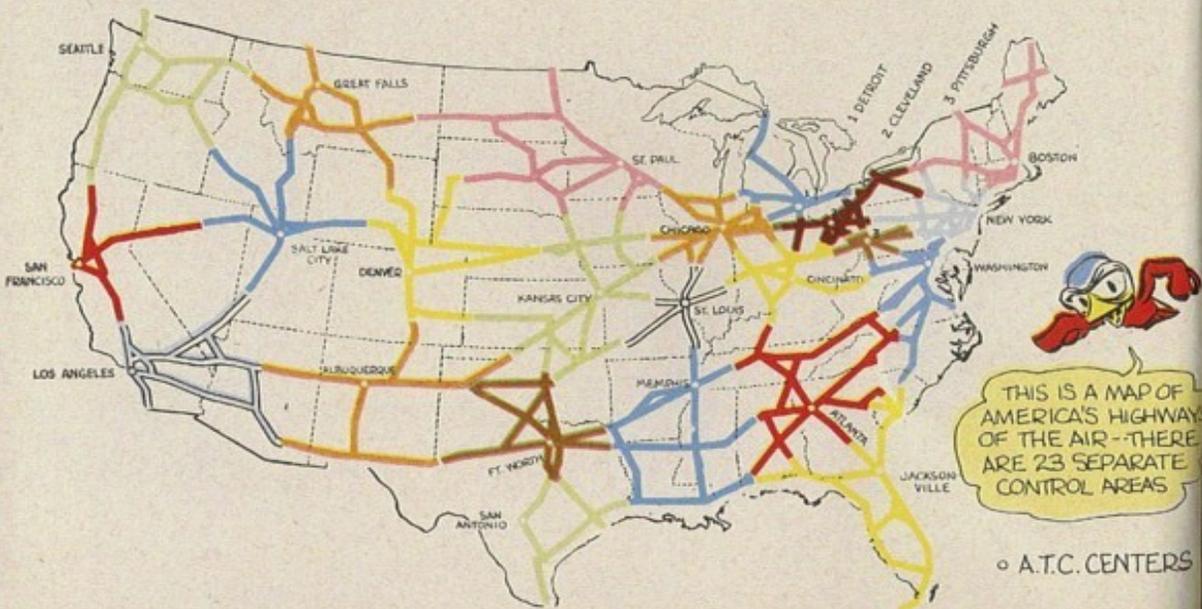


MINIMUM ALTITUDE: 1000 Feet



YOU COULDA' CLEARED THE TOWN WHEN YOUR ENGINE FAILED, IF YOU'D BEEN UP HIGH ENOUGH!

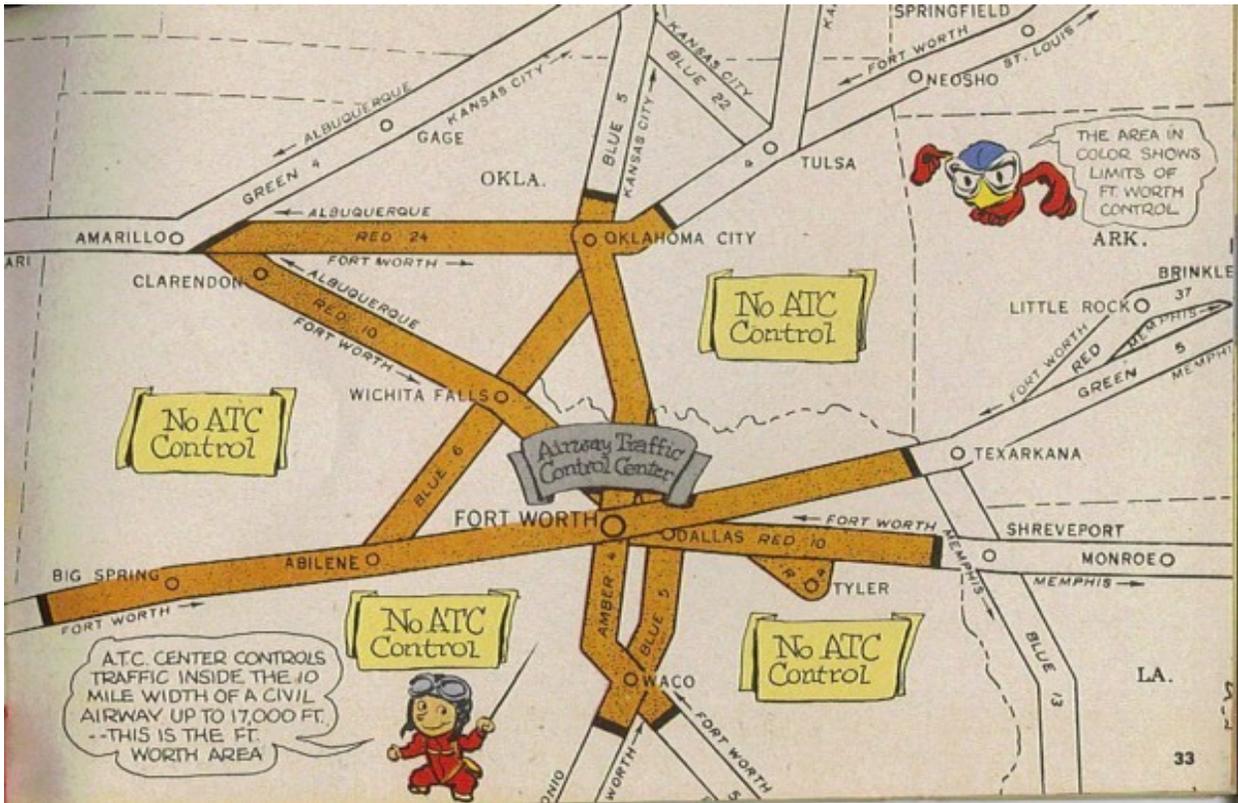




THIS IS A MAP OF AMERICA'S HIGHWAYS OF THE AIR - THERE ARE 23 SEPARATE CONTROL AREAS

o A.T.C. CENTERS

AIRWAY TRAFFIC CONTROL AREAS of U.S.



THE AREA IN COLOR SHOWS LIMITS OF FT. WORTH CONTROL

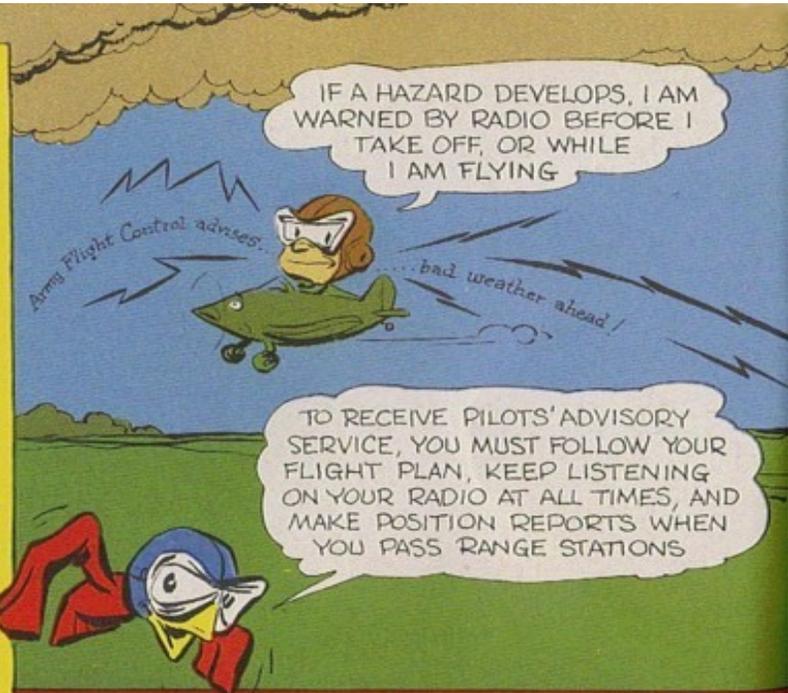
A.T.C. CENTER CONTROLS TRAFFIC INSIDE THE 10 MILE WIDTH OF A CIVIL AIRWAY UP TO 17,000 FT. - THIS IS THE FT. WORTH AREA



Alongside each Airways Traffic Control Center in the United States is an Army Flight Control Center*. In these Centers, Army experts trace all military flights, both Army and Navy, flying within their areas, by maps or by other flight following devices.

They know approximately where all military planes engaged in cross-country flight are at any time. If some unforeseen hazard develops, such as bad weather, they advise pilots by radio through the communications station nearest the flight. This is called

Pilots' Advisory Service



TO RECEIVE PILOTS' ADVISORY SERVICE, YOU MUST FOLLOW YOUR FLIGHT PLAN, KEEP LISTENING ON YOUR RADIO AT ALL TIMES, AND MAKE POSITION REPORTS WHEN YOU PASS RANGE STATIONS

*** 34 ARMY FLIGHT CONTROL**



A service for Military Pilots only ³⁵

A.T.C. CLEARANCE FOR INSTRUMENT FLIGHT

APPROVAL REQUESTED, NC18432,
DOUGLAS SMITH, NEW HACKENSACK,
4000 FEET, NEWARK, PHILADELPHIA,
RICHMOND-- SPEED 160, RADIO 3105,
PROPOSED DEPARTURE 0930*
ELAPSED TIME 2 + 20 --
ALTERNATE, WASHINGTON--

*9:30 AM

Operations Office



1. Flight plan filed with AIRWAY TRAFFIC CONTROL Center

3. Airport tower reports departure

ATC Center

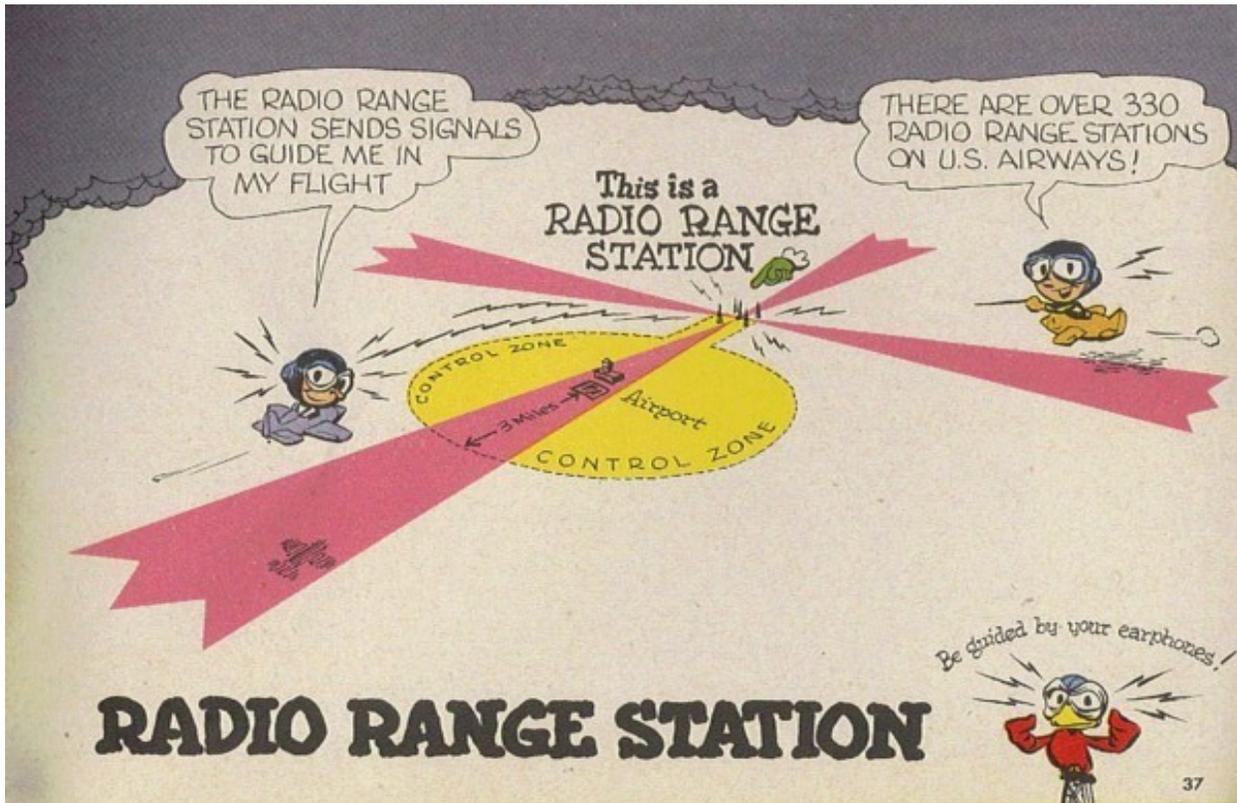
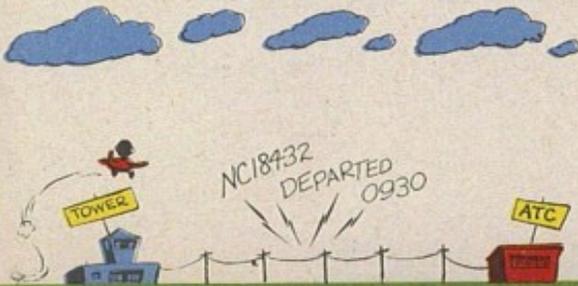
NC18432 CLEARED FROM
NEW HACKENSACK OVER
NEWARK AND PHILADELPHIA
TO 25 MILES SOUTHWEST OF
PHILADELPHIA, TO CRUISE AT
4000 FEET-- CLEARANCE
VOID IF AIRCRAFT NOT OFF
GROUND BY 0935*

*9:35 AM

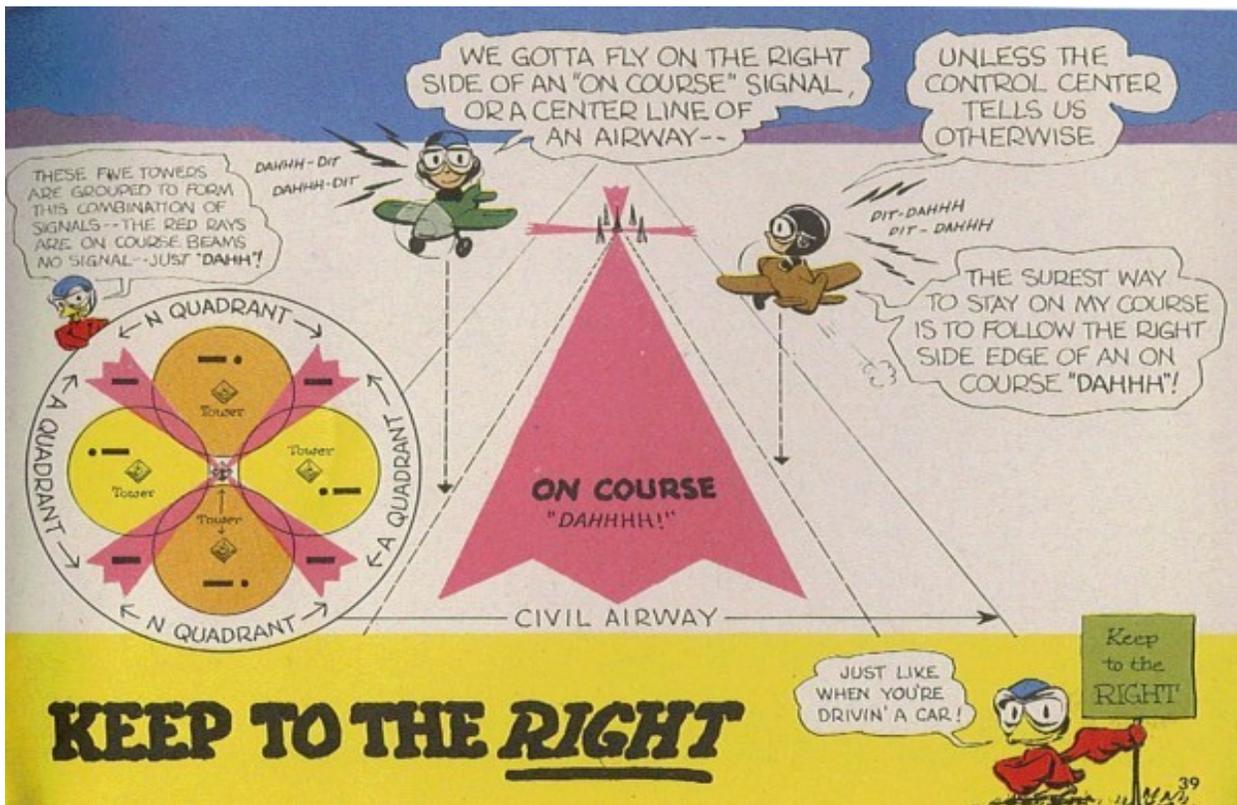
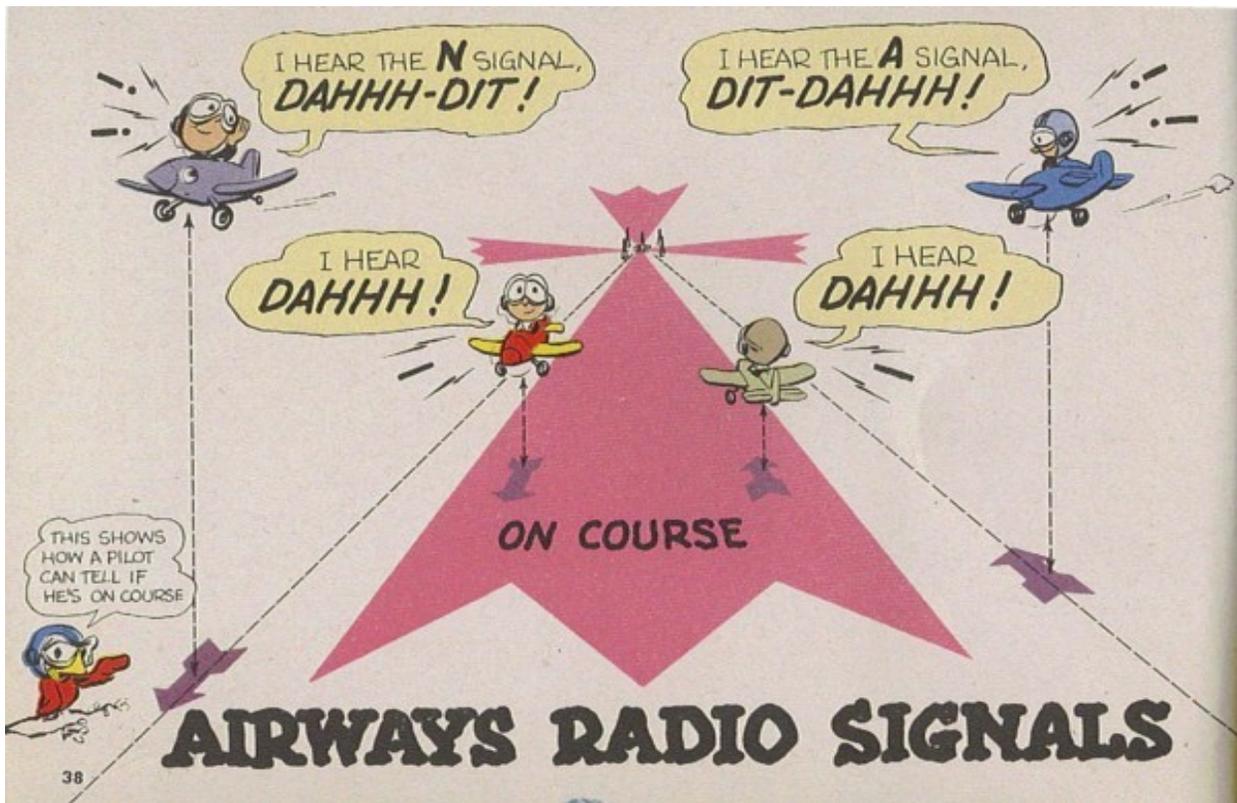


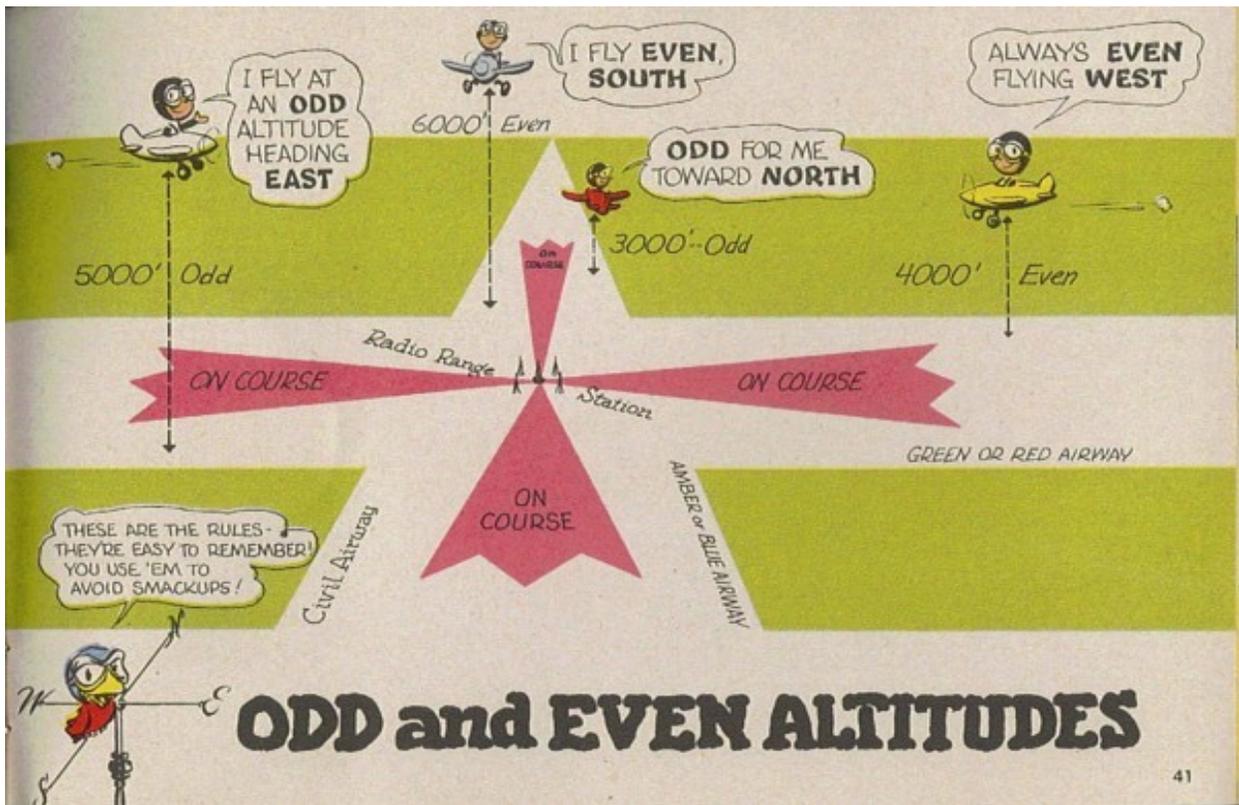
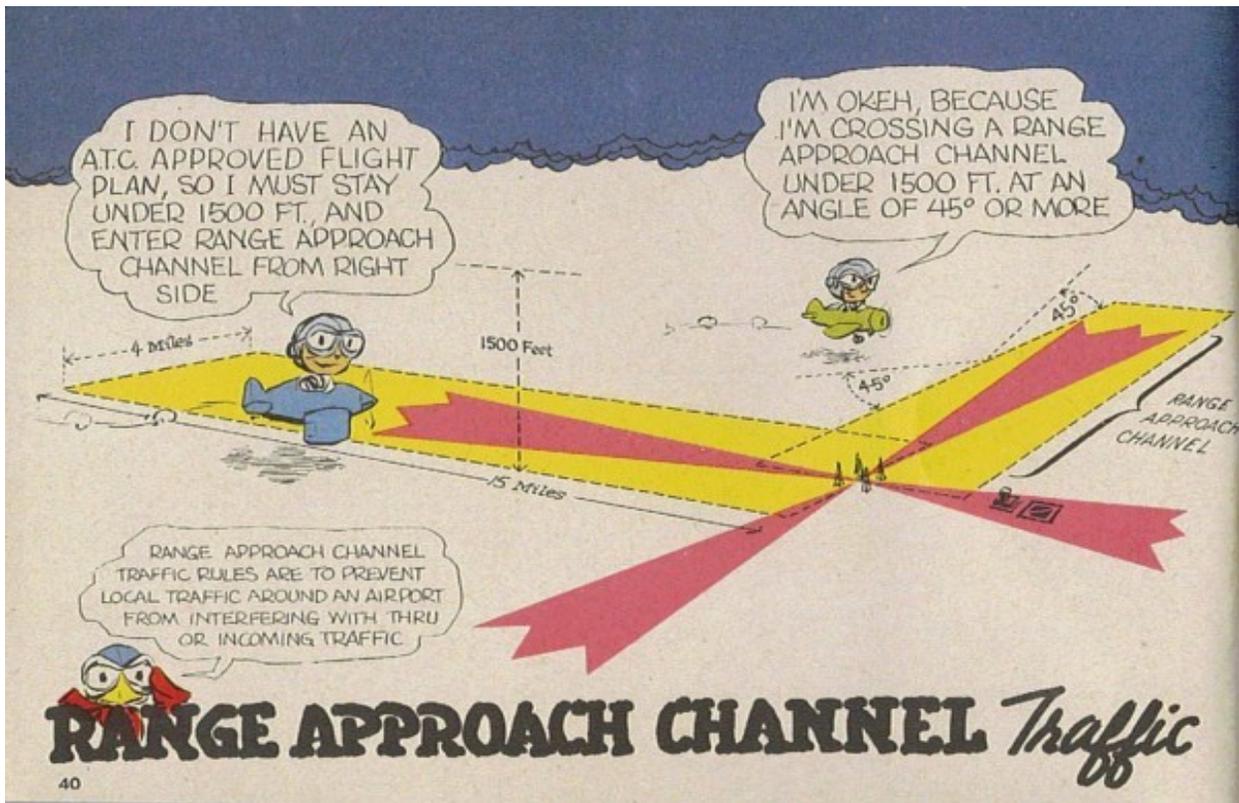
2. ATC clears the flight

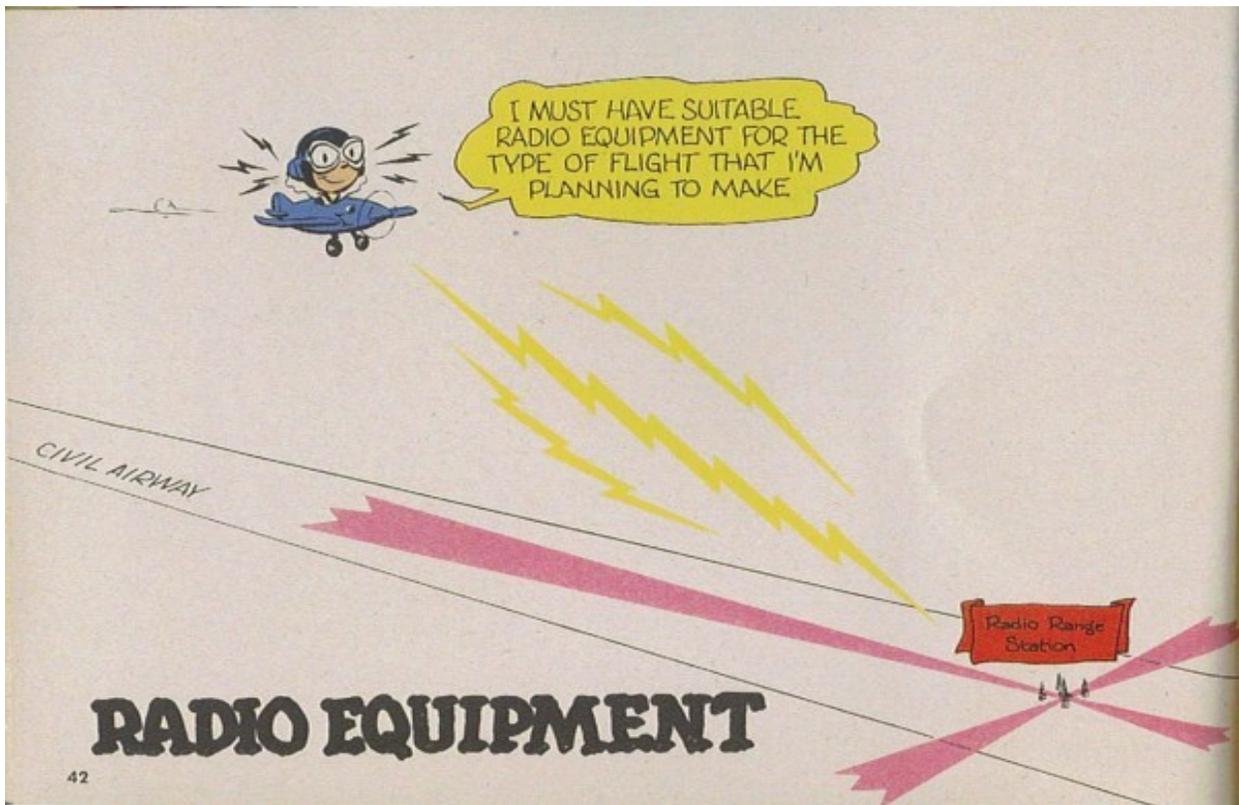
4. NC18432 is on his way at 4000 feet!

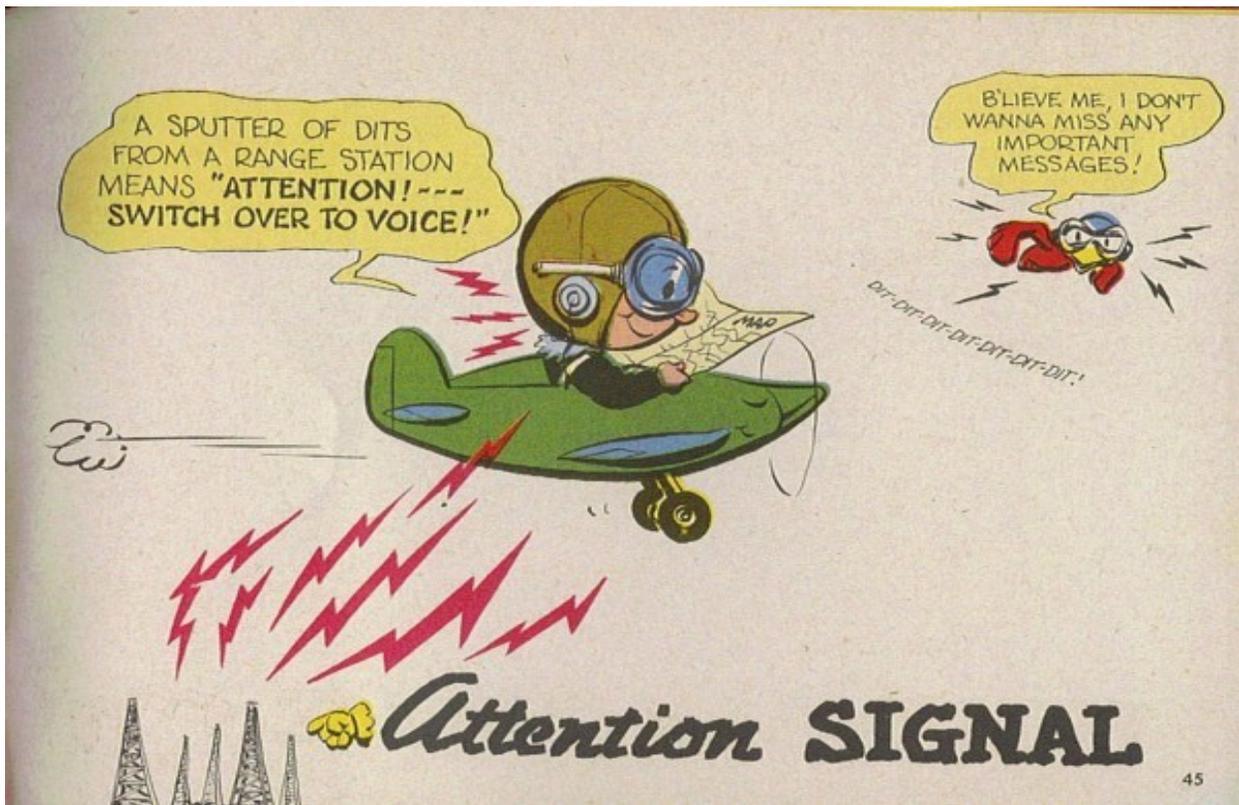
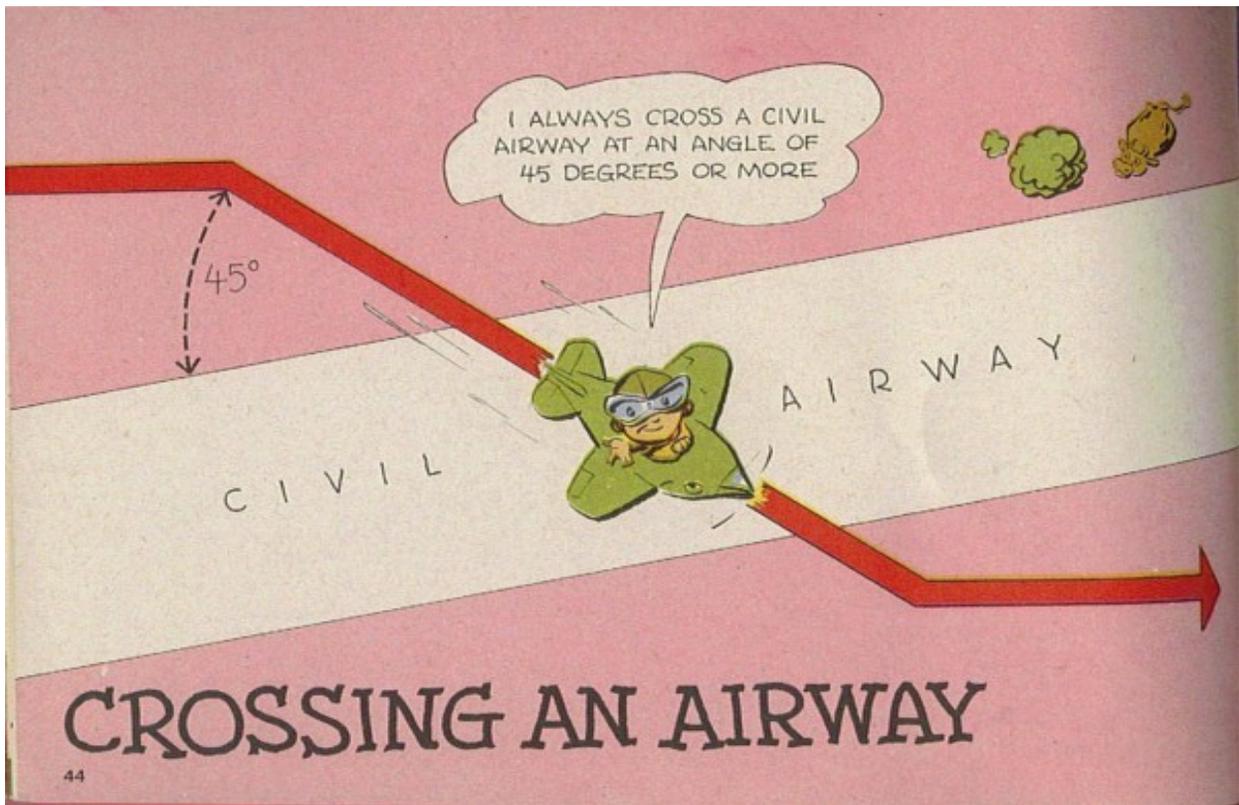


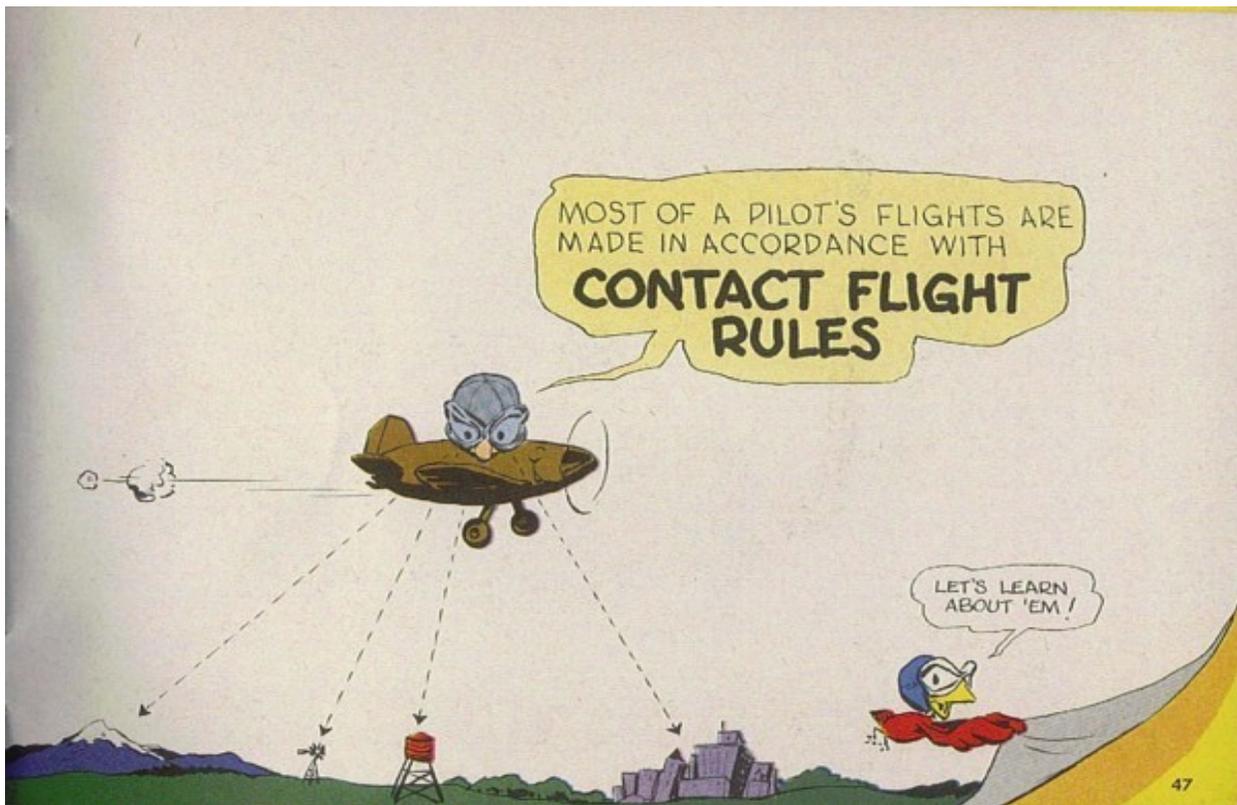
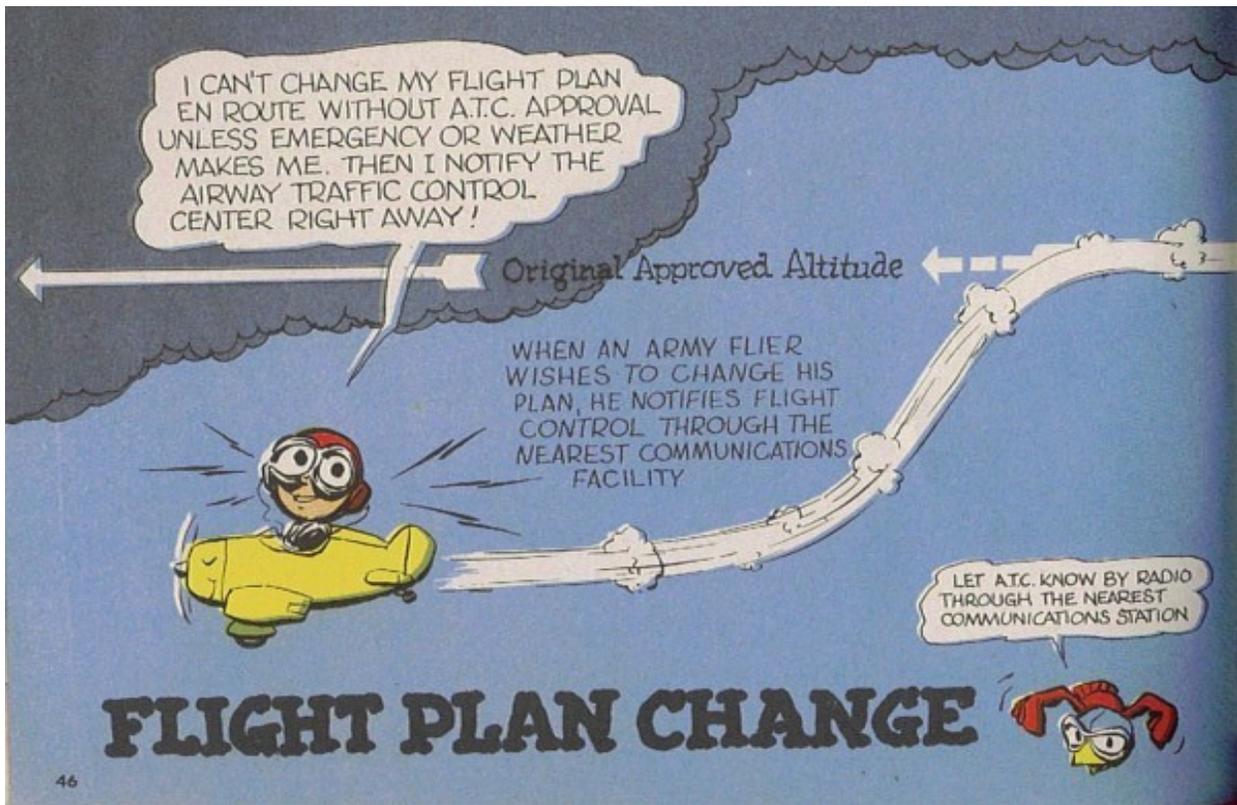
RADIO RANGE STATION



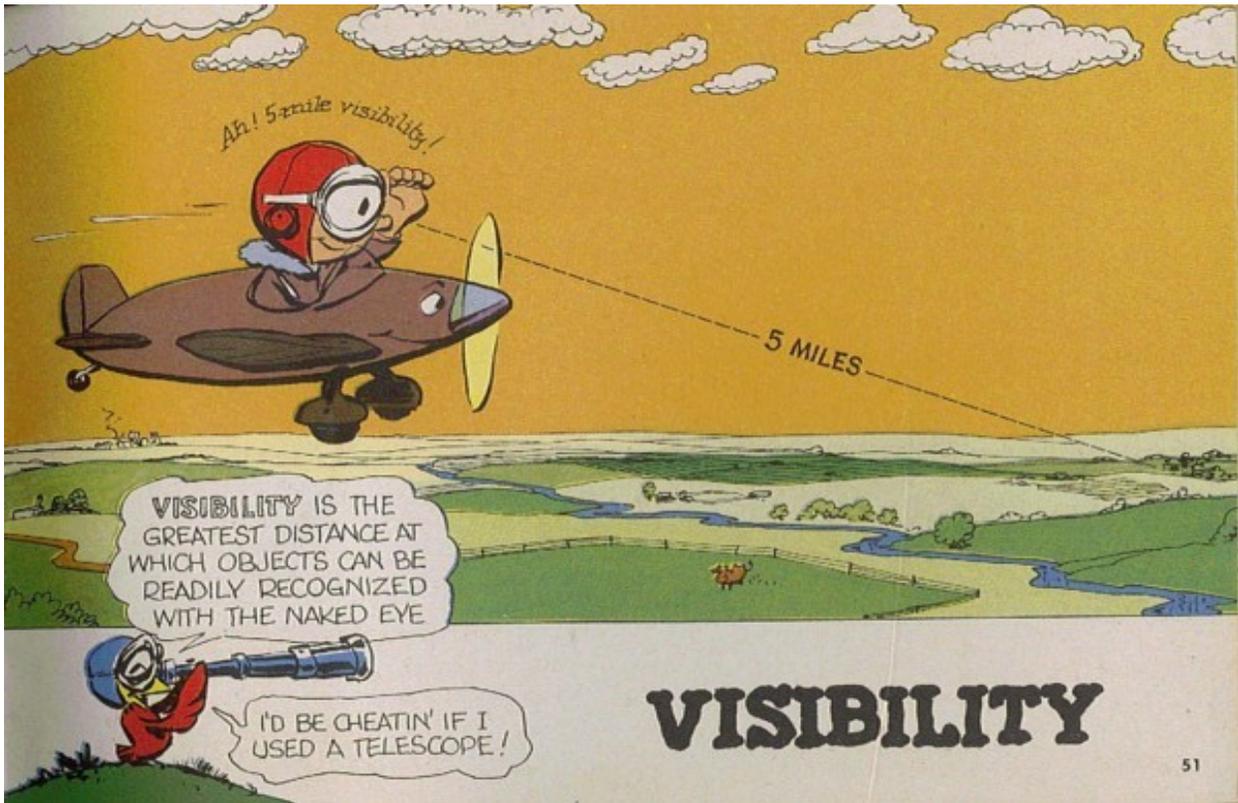
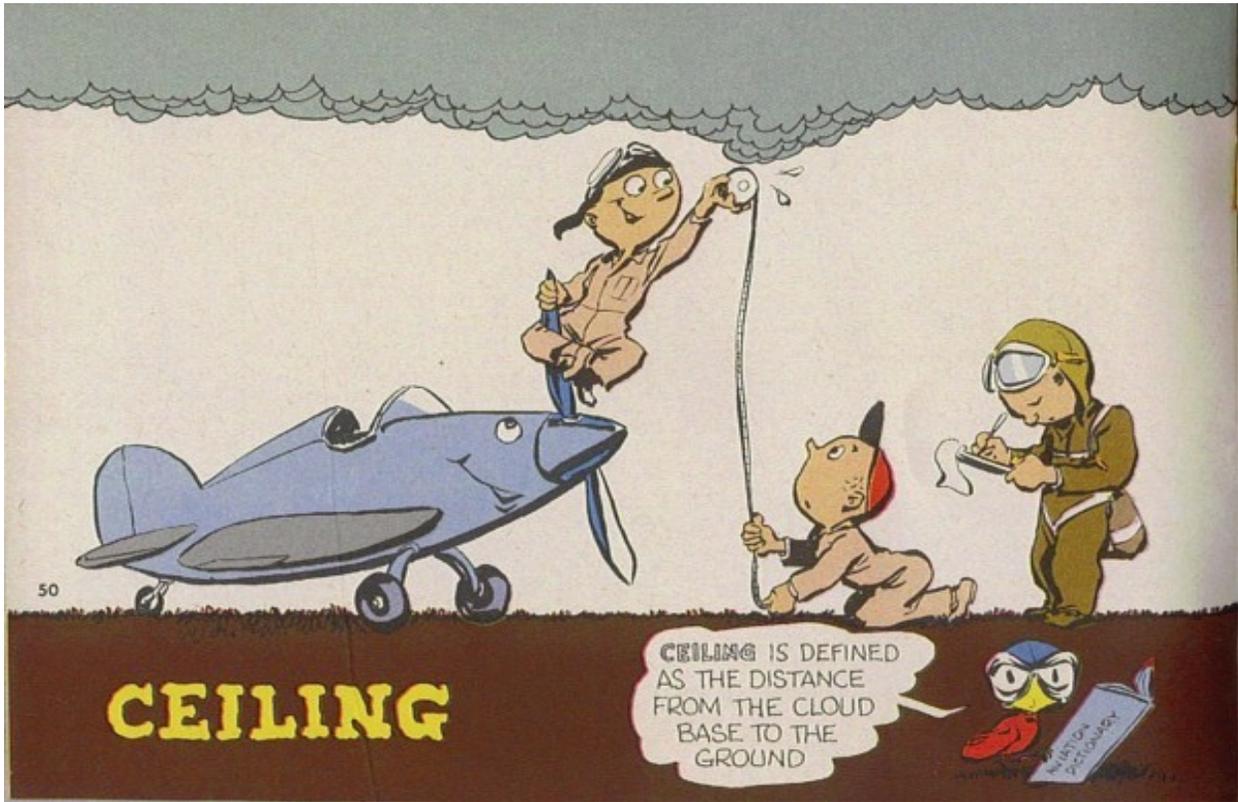












Day **FLIGHT BELOW 1000 FT.** **Night**

1000 Ft.

1 Mile

2 Miles

WEATHER MINIMUMS *Outside*

52

FLIGHT ABOVE 1000 FT.

Day or Night

500 Ft.

CRUISING ALTITUDE

1000 Ft. Altitude

3 Miles

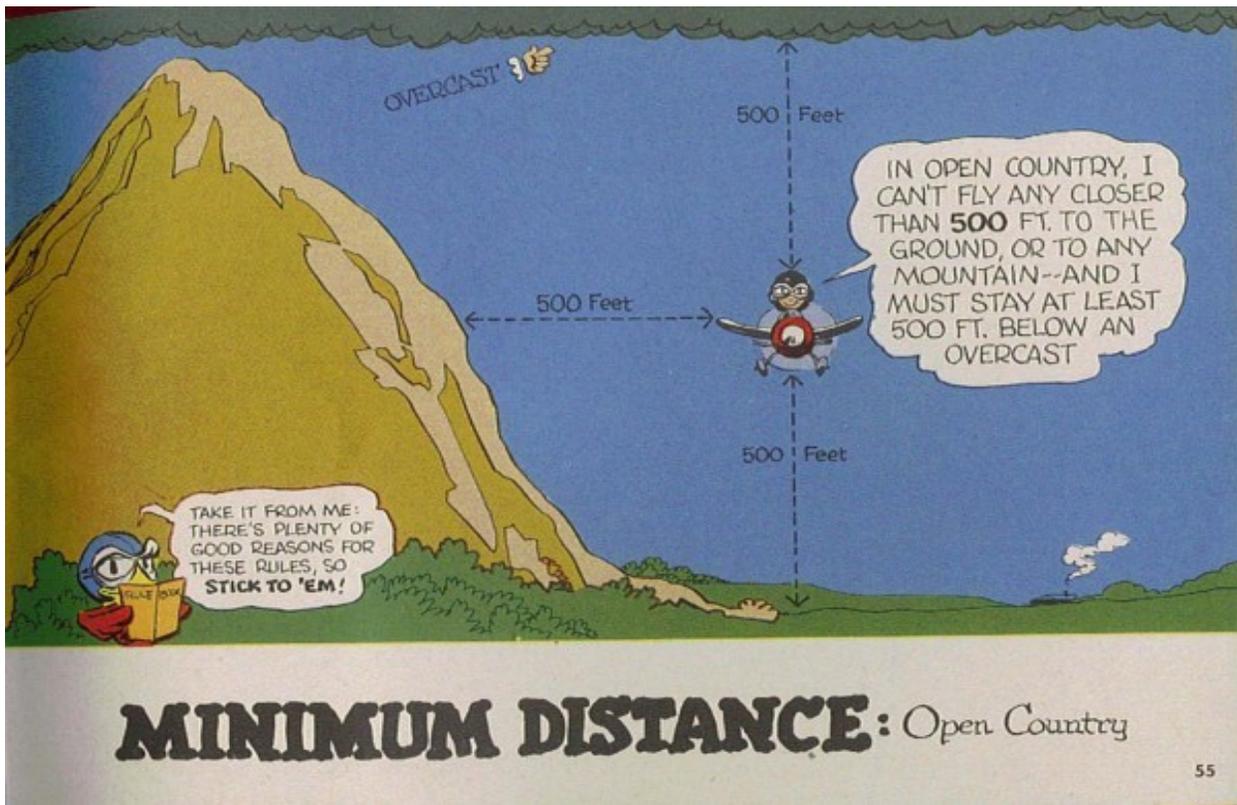
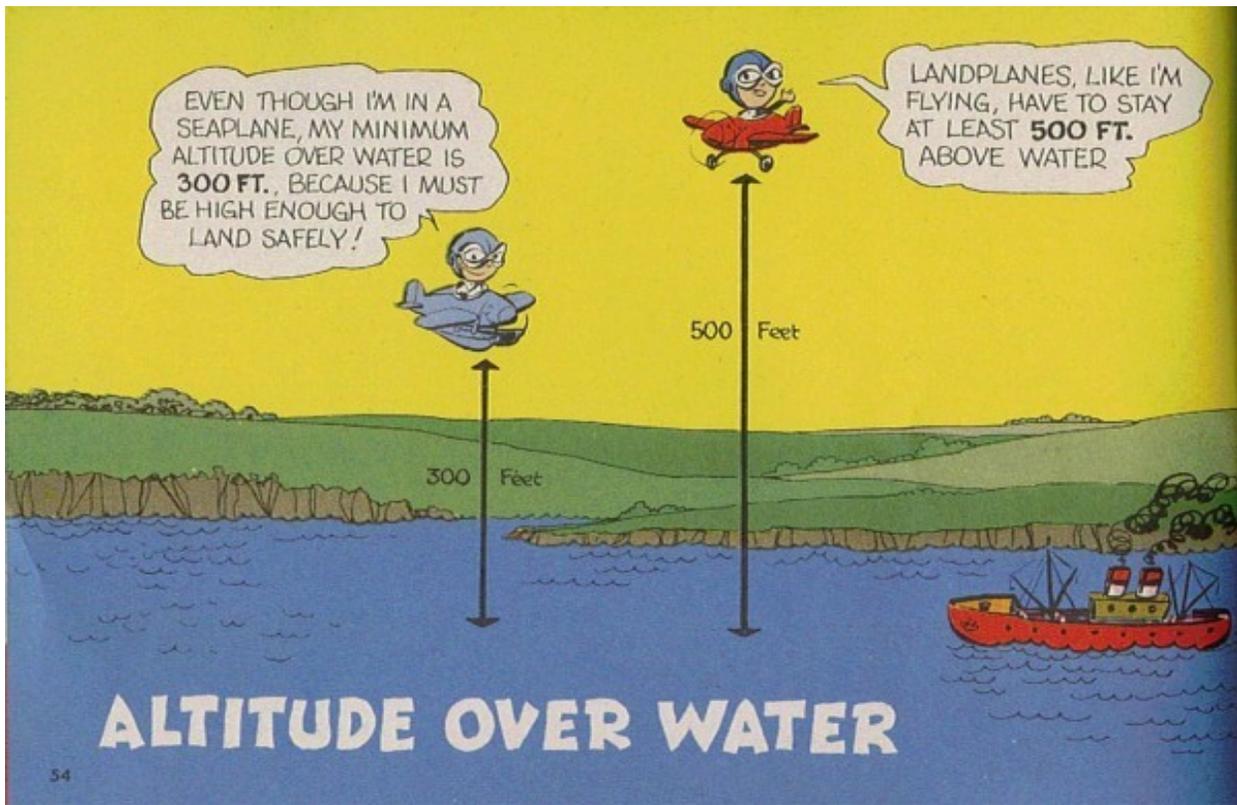
AIRPORT

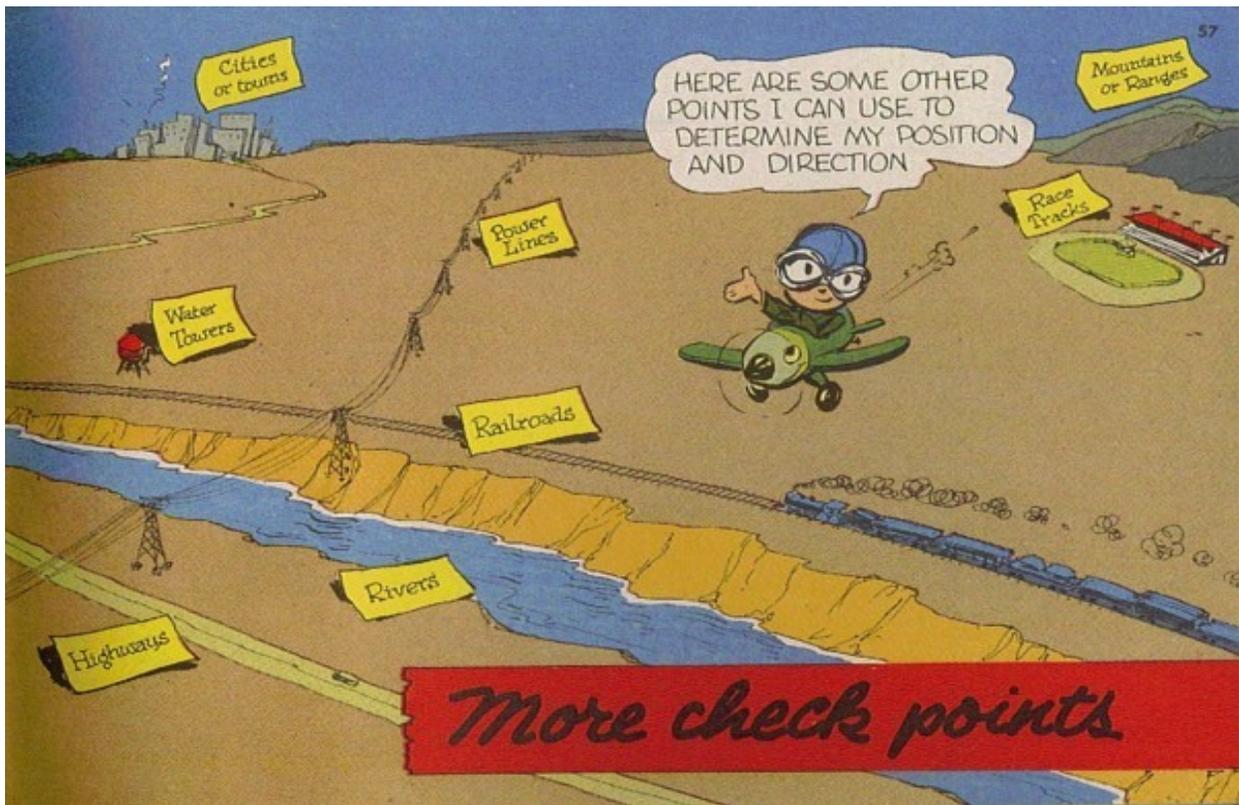
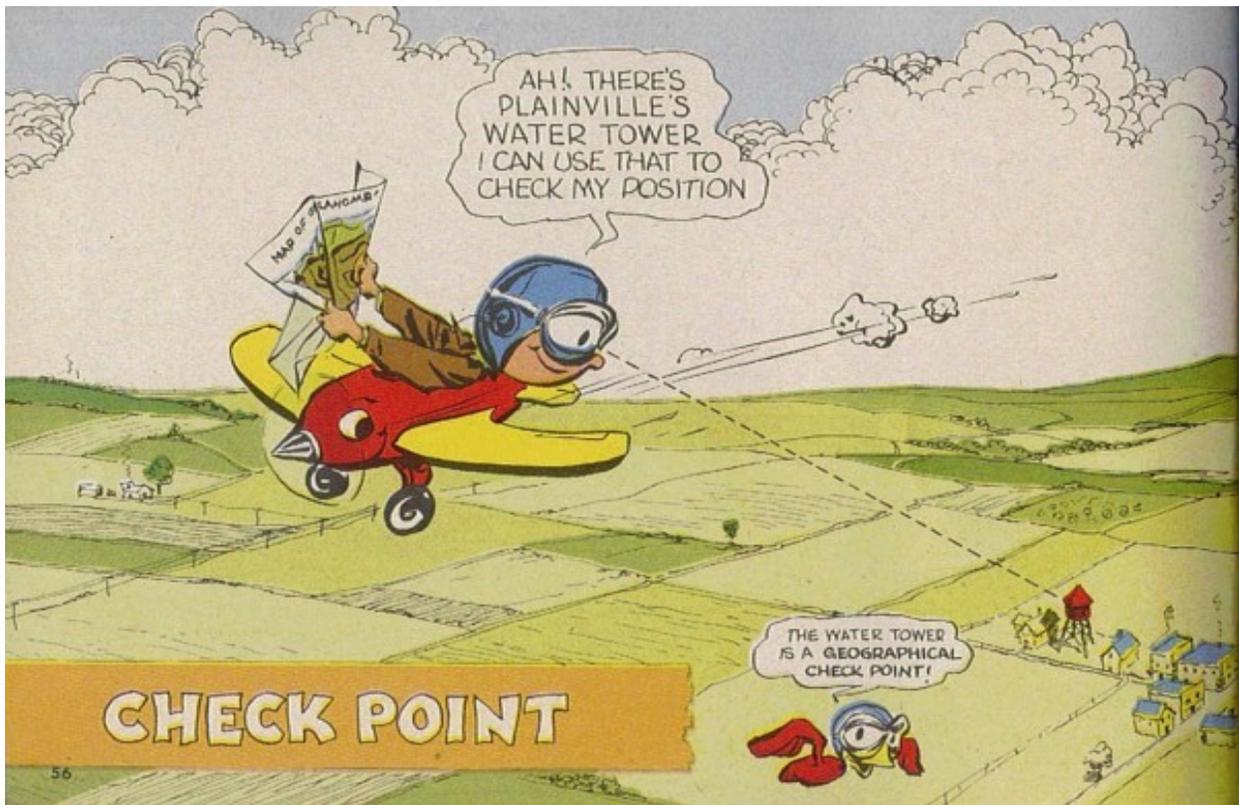
3 Miles

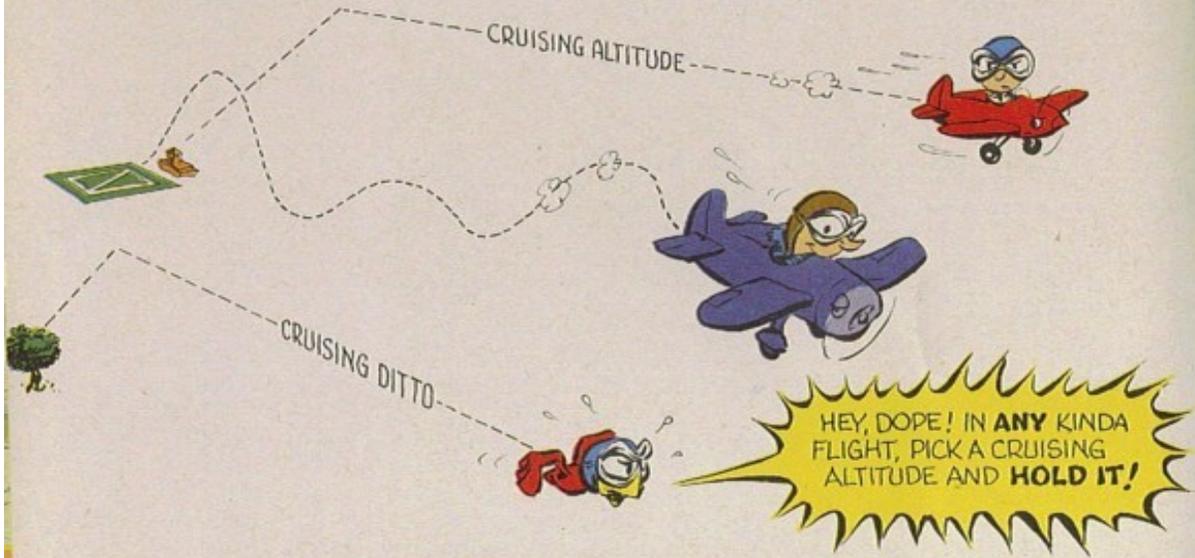
Control Zone

Inside Control Zone

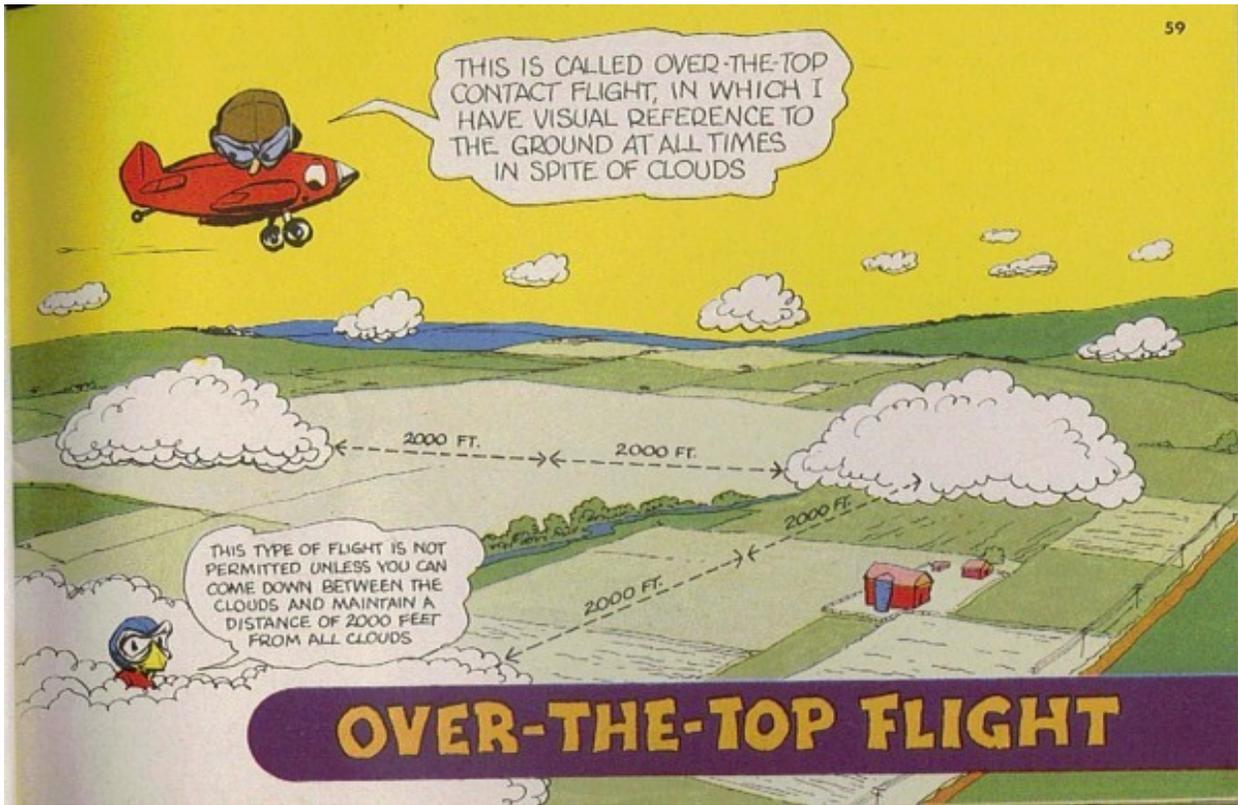
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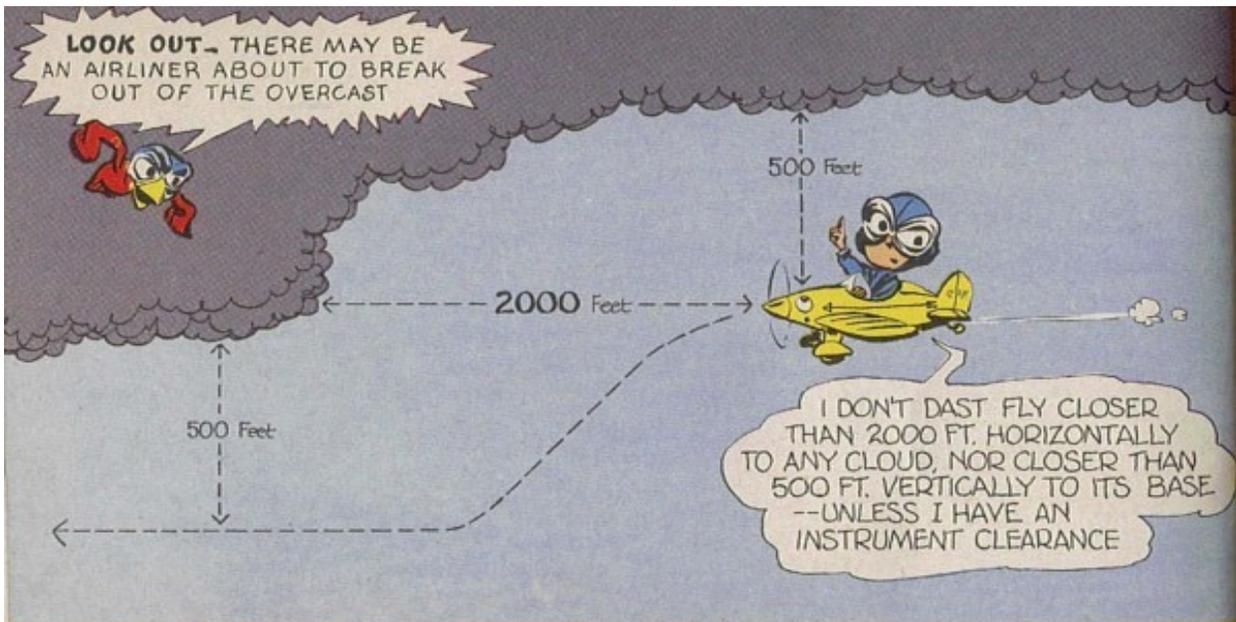




CRUISING ALTITUDE

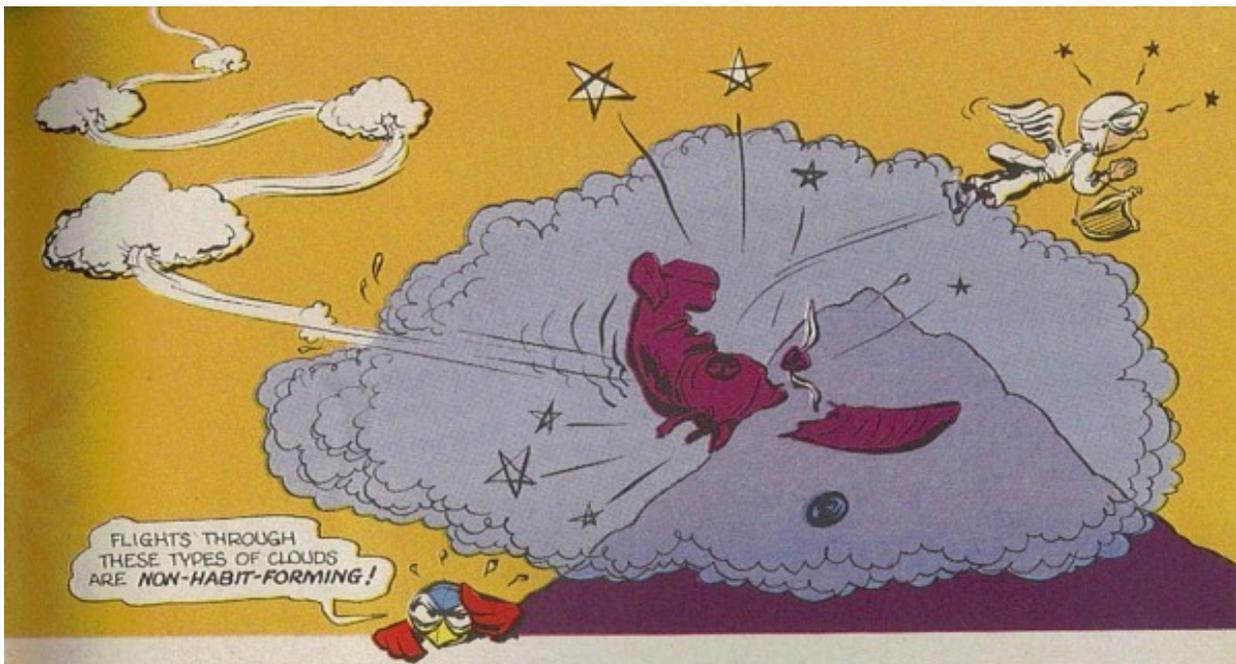


OVER-THE-TOP FLIGHT



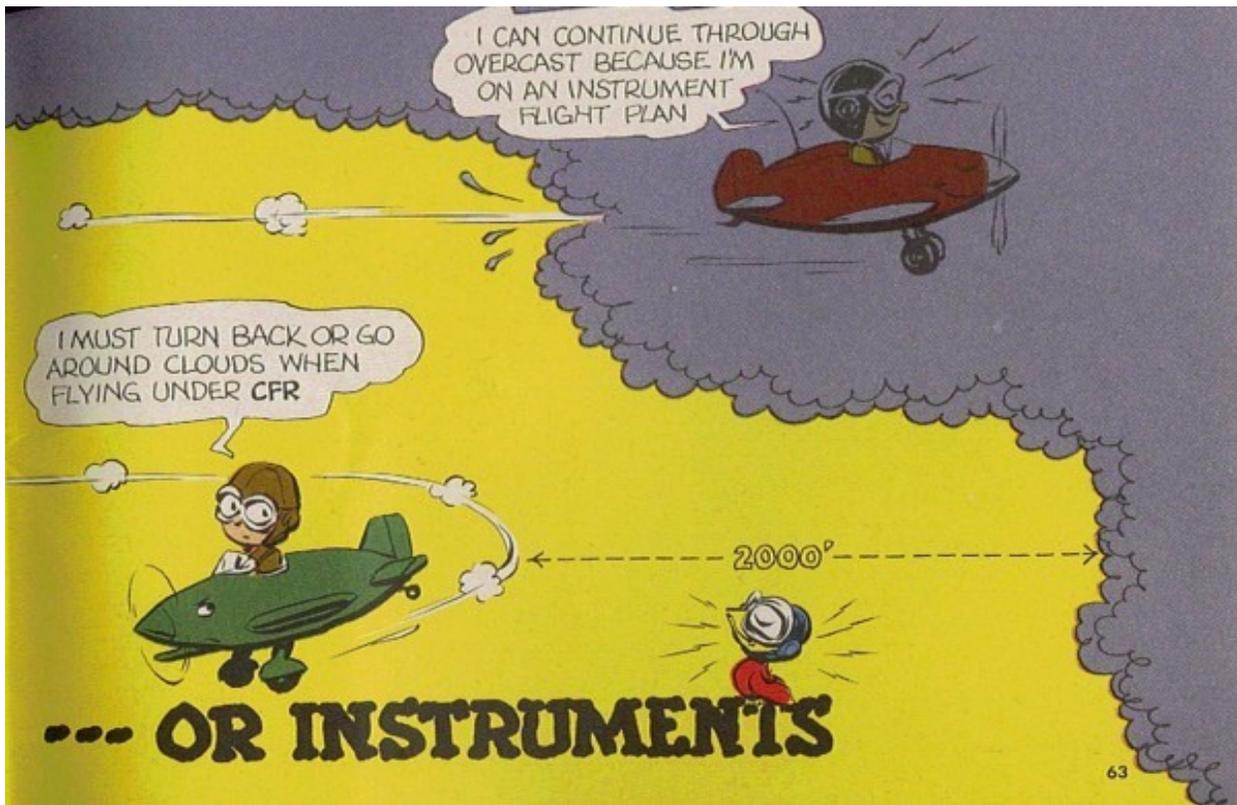
BEWARE OF CLOUDS *During Contact Flight*

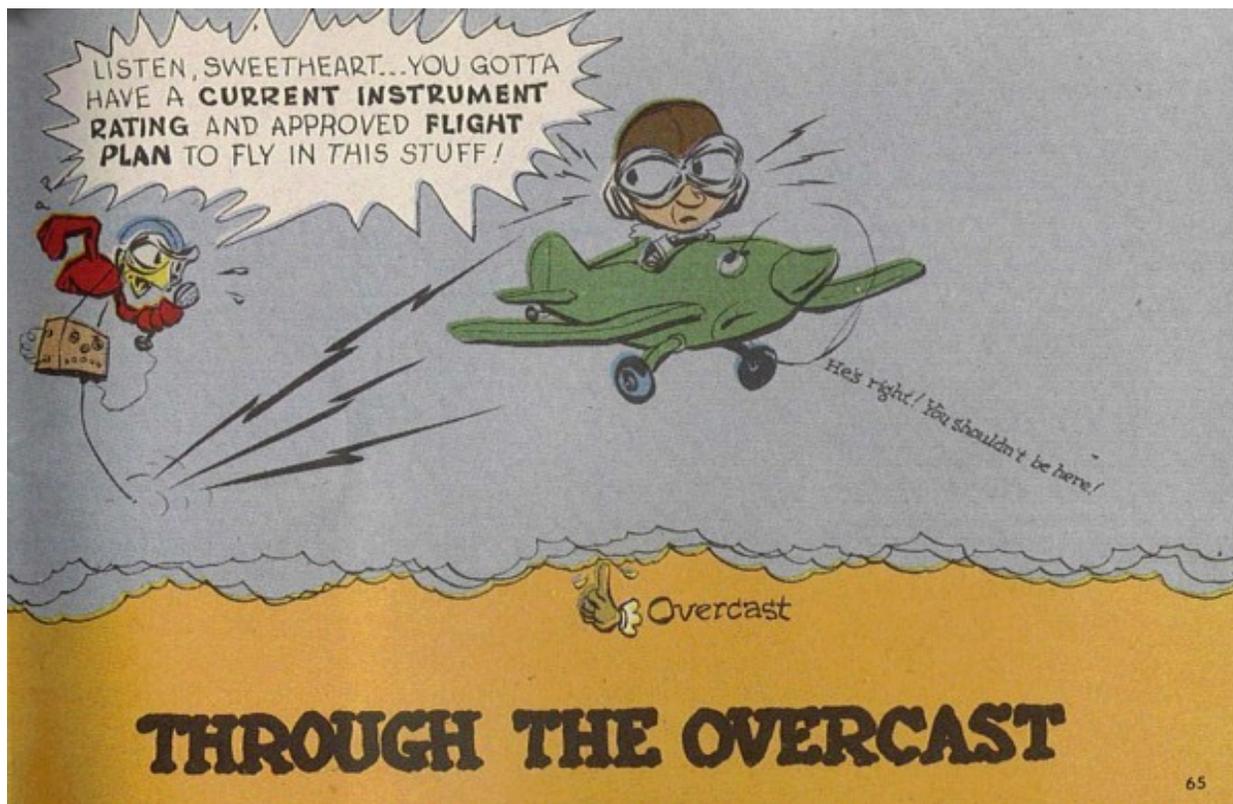
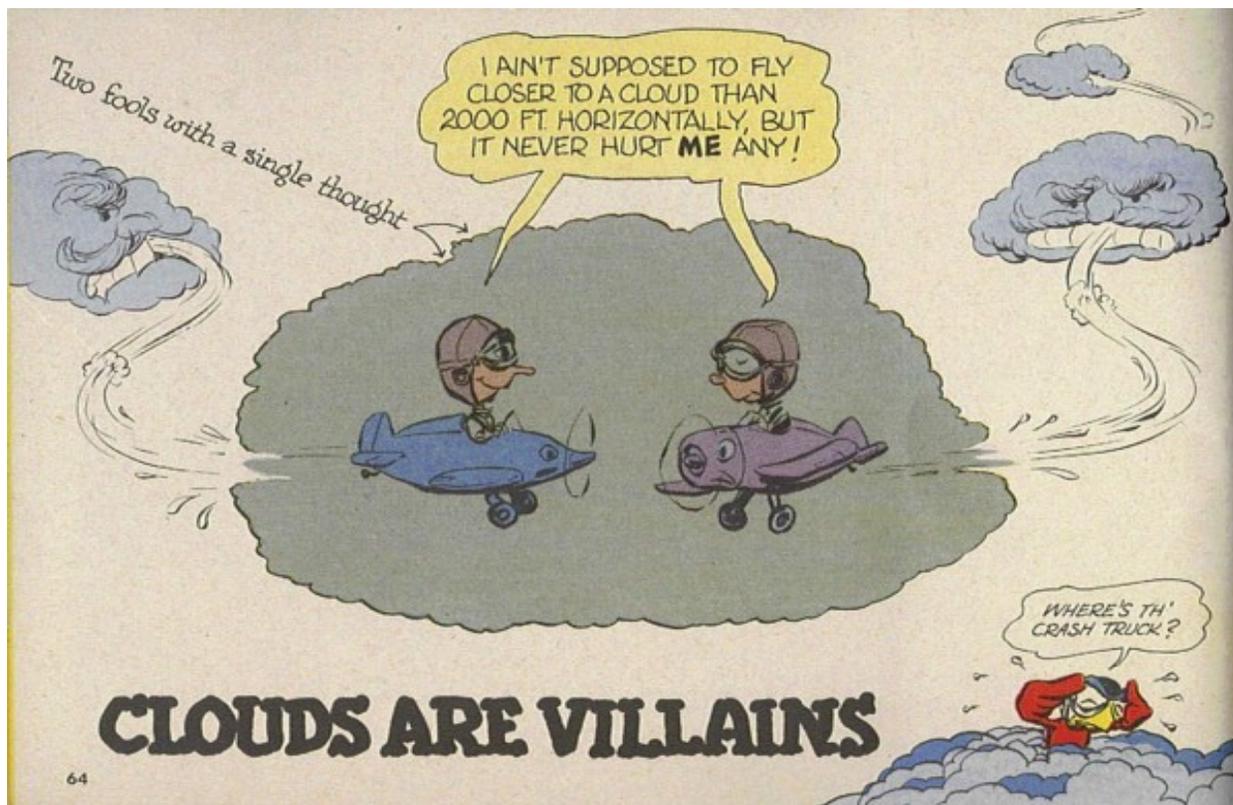
60

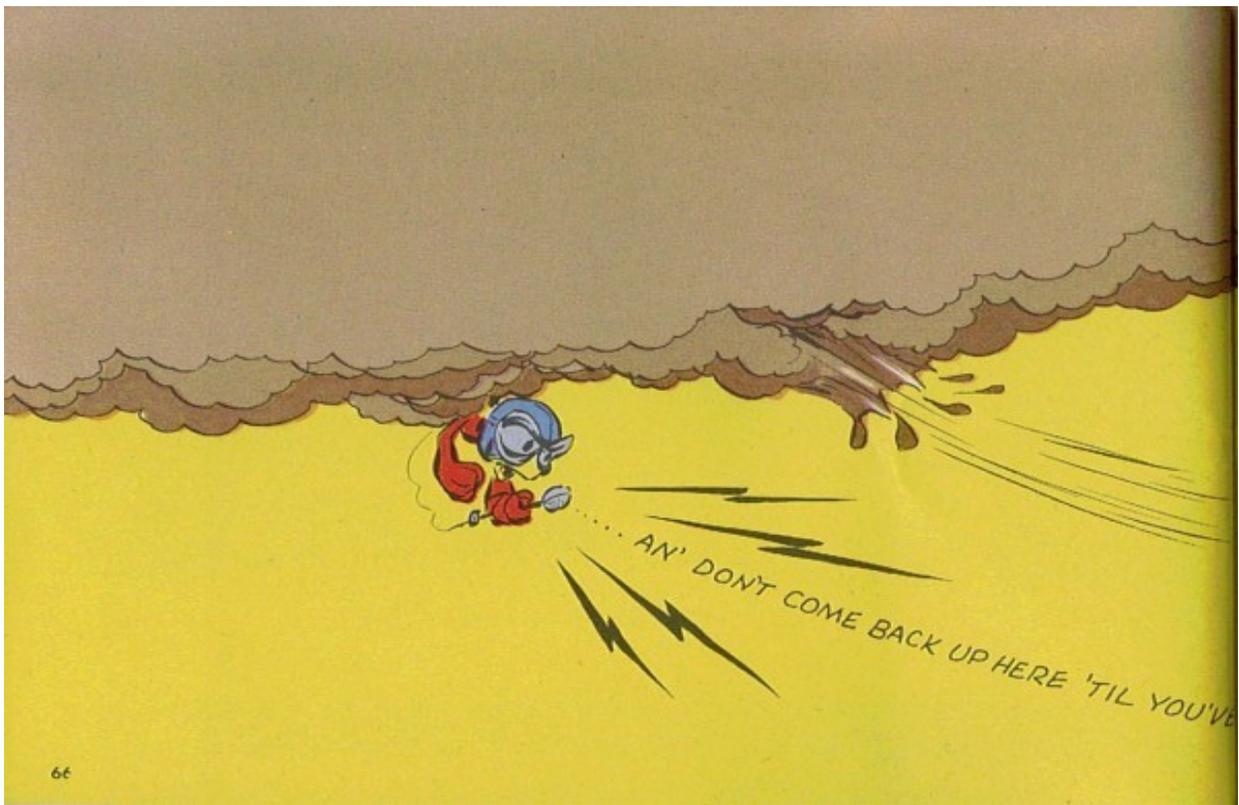


--- They may have a **SOLID CORE!!**

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I GOT MY CURRENT INSTRUMENT RATING-- I GOTTA FILE THIS FLIGHT PLAN AND GET IT APPROVED BY A.T.C. BEFORE I CAN MAKE AN INSTRUMENT FLIGHT



BEFORE Instrument Flight

<p>Identification</p>	<p>Type of Plane</p>	<p>Pilot</p> <p>MY NAME IS JONES</p>	<p>Point of Departure</p>	<p>Route and Altitude</p>	<p>Point of First Intended Landing</p>	<p>Air Speed</p>
<p>Radio Frequency</p>	<p>Proposed Departure Time</p>	<p>Elapsed Time</p>	<p>Alternate Airport</p>	<p>Radio Fixes</p>	<p>Remarks</p> <p>CENSORED</p>	<p>Fuel Supply</p>

INSTRUMENT FLIGHT PLAN

Instrument



I'M ABOVE A SOLID OVERCAST, AND CONTROL THE DIRECTION OF MY COURSE BY REFERRING TO INSTRUMENTS --- THIS IS OVER-THE-TOP INSTRUMENT FLIGHT

OVERCAST

Contact



500 Feet (minimum)

500 Feet

HE'S FLYING STRAIGHT CONTACT FLIGHT RULES



My Checklist:

1. Weather?
2. Check Points?
3. Radio Facilities?
4. Fuel?
5. Maps?
6. Alternate Airports?
7. Airplane?
8. Myself????



CHECKLIST

This pilot is sad because he loves to fly, but he has a white card and can't take off 'til the ceiling is at least 500 feet and there's one mile visibility... sad, sad, sad!

Army pilots hold one of two kinds of instrument cards..... either a white or a green card. Takeoff weather minimums for these cards are:

WHITE CARD	500 Ft. Ceiling 1 Mi. Visibility
GREEN CARD	200 Ft. Ceiling ½ Mi. Visibility

HE COULD FLY NOW WITH A GREEN CARD!

72 TAKEOFF *Weather Minimums*

IF I HOLD A GREEN CARD, I'M SUPPOSED TO HAVE ENOUGH EXPERIENCE TO DECIDE UNDER WHAT WEATHER CONDITIONS I CAN LAND. IF I HOLD A WHITE CARD I CAN'T TAKE OFF ON AN INSTRUMENT FLIGHT PLAN UNLESS....

DAY

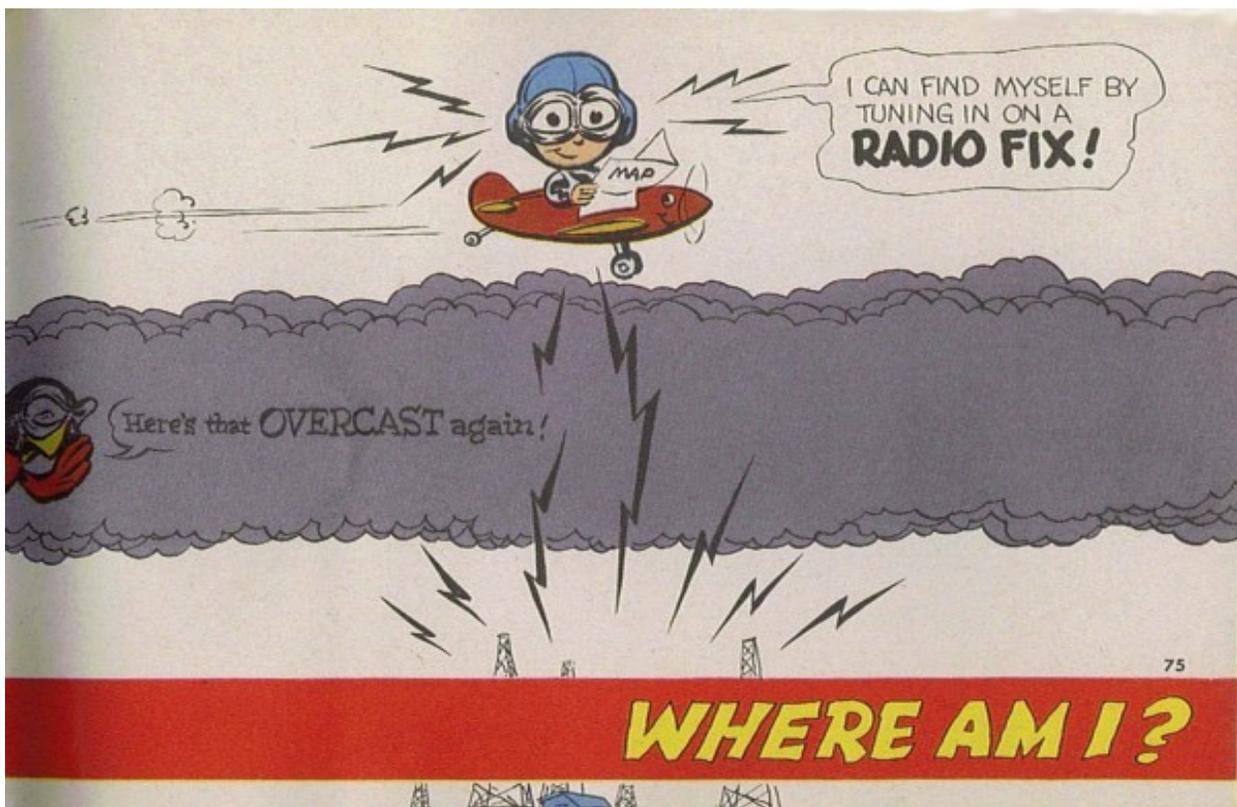
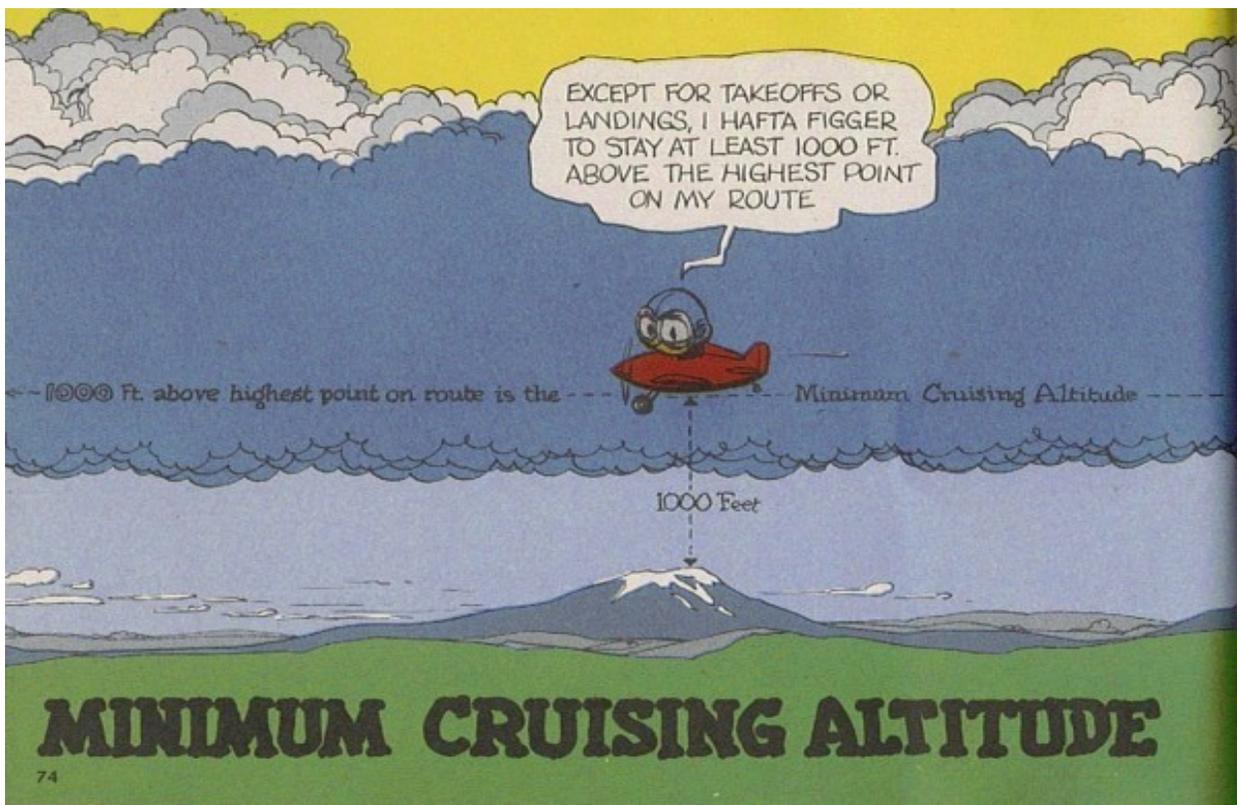
800' Ceiling ...THE CEILING AT MY DESTINATION IS AT LEAST 800 FEET WITH 1 MILE FORWARD VISIBILITY	700' Ceiling OR 700 FEET AND 1½ MILES	600' Ceiling OR 600 FEET AND 2 MILES	500' Ceiling OR 500 FEET AND 3 MILES
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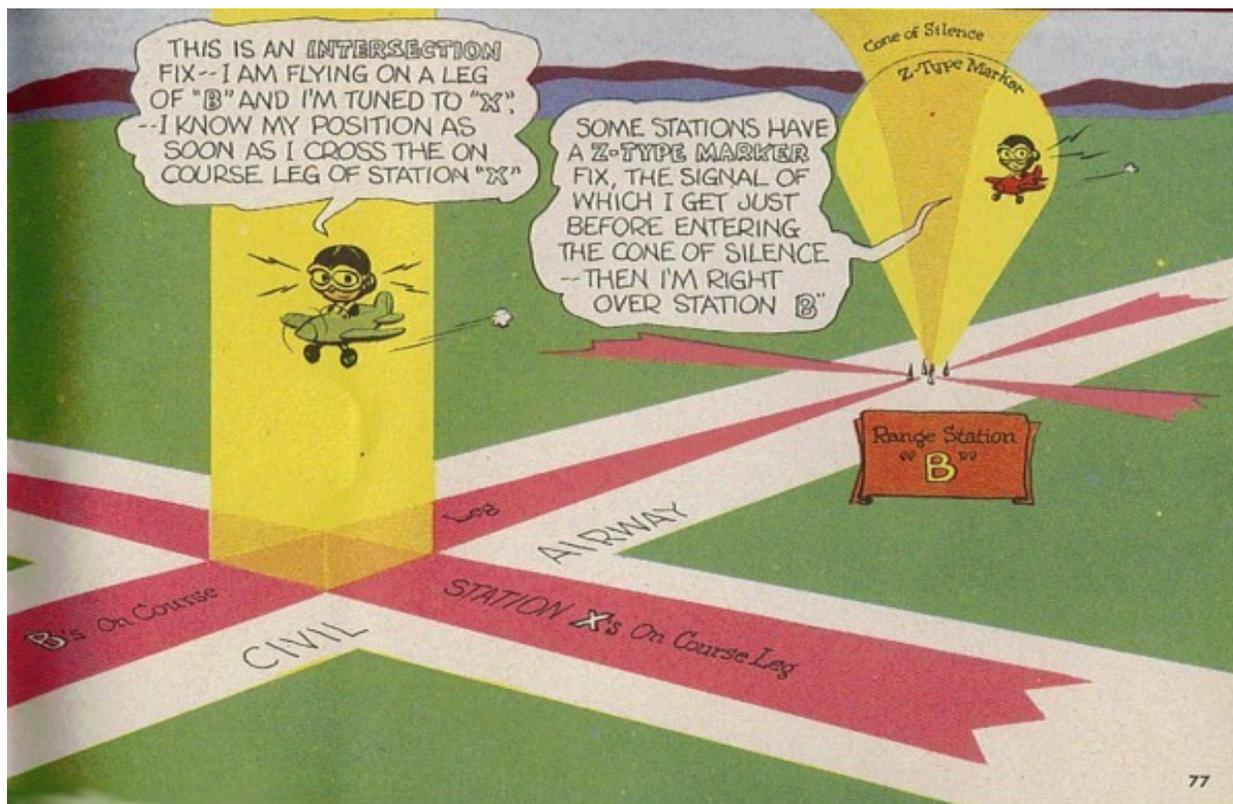
NIGHT

1000' Ceiling 1000 FEET AND 2 MILES
800' Ceiling OR 800 FEET AND 3 MILES

NOTE: Some Army Fields have established weather minimums, published in Standard Instrument Approach Procedures. Where no weather minimums are published, the above apply.

ARMY PILOTS' *Instrument Landing Minimums*







I CAN USE AN AIRPORT AS MY ALTERNATE IF IT HAS A RADIO DIRECTIONAL RANGE, A CEILING OF 2000 FEET, AND 3 MILES FORWARD VISIBILITY--

-- OR A CEILING OF BROKEN CLOUDS AT 1500 FEET AND 3 MILES FORWARD VISIBILITY

WITHOUT THE RADIO DIRECTIONAL AID, MY ALTERNATE AIRPORT MUST HAVE AN UNLIMITED CEILING AND A FORWARD VISIBILITY OF 3 MILES

With RADIO DIRECTIONAL RANGE

Without R. D. R.

this or this

3 MILES

2000 FEET

1500 FEET

Ceiling Unlimited!

3 MILES

ALTERNATE AIRPORT *Weather Minimums*

80

THE WEATHER HAS "CLOSED IN" AT THE AIRPORT WHERE I WAS GOING--SO I'M USING MY ALTERNATE!

☆ Here an airport lies concealed, By the clouds so darkly drear. Smart pilot! He knows of a field, Out where the weather's clear!

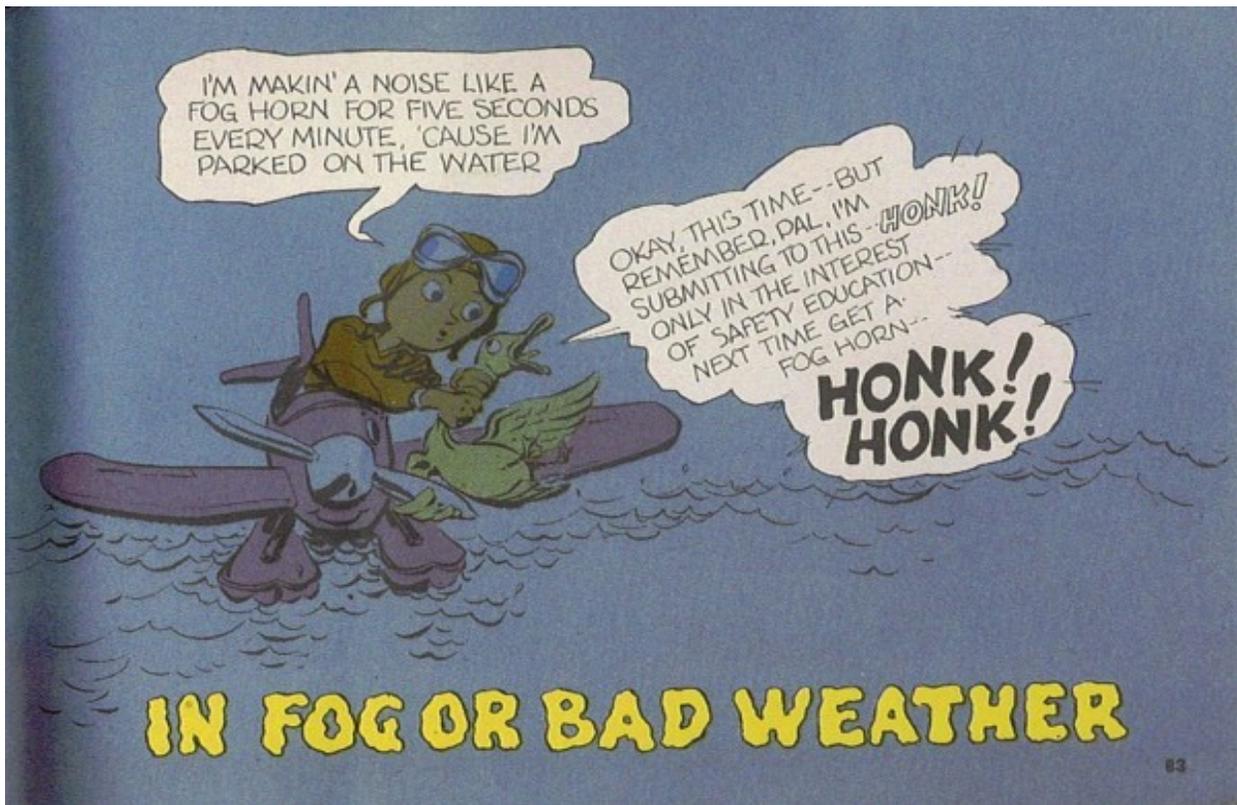
ORIGINAL--FLIGHT PLAN

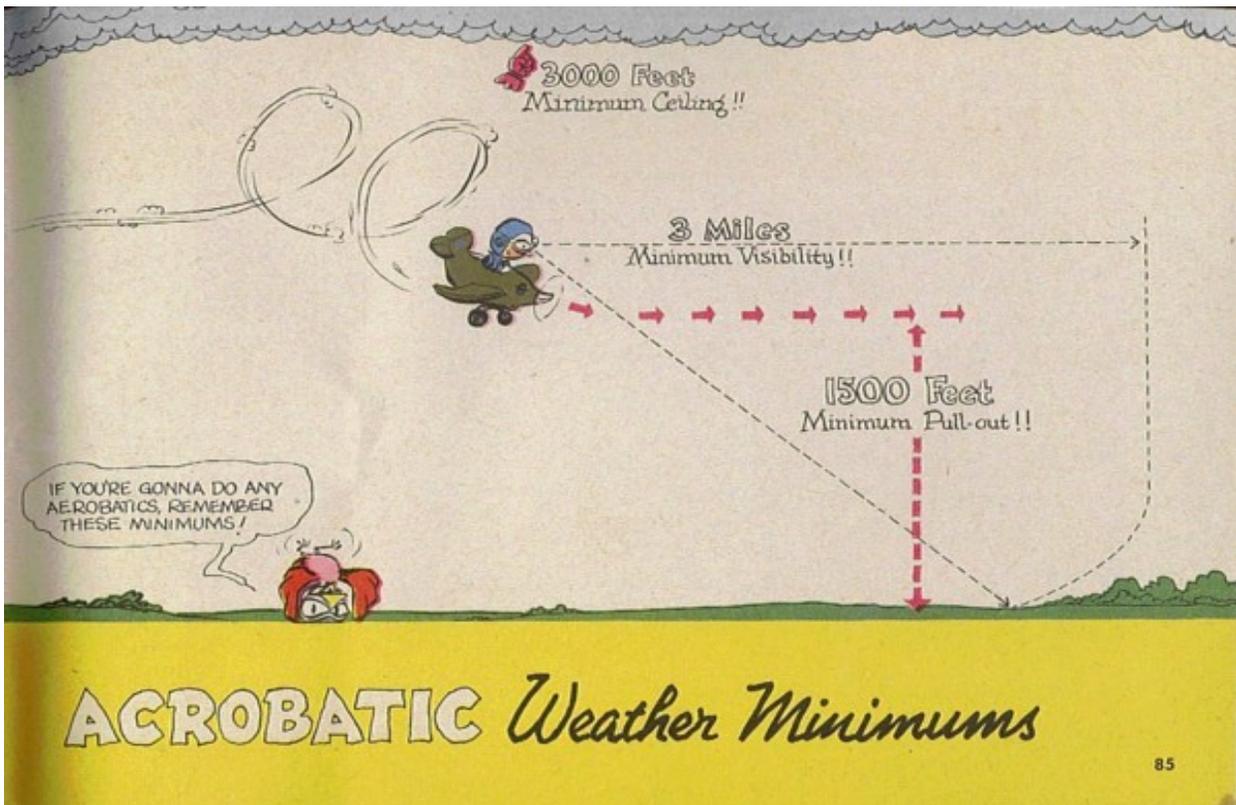
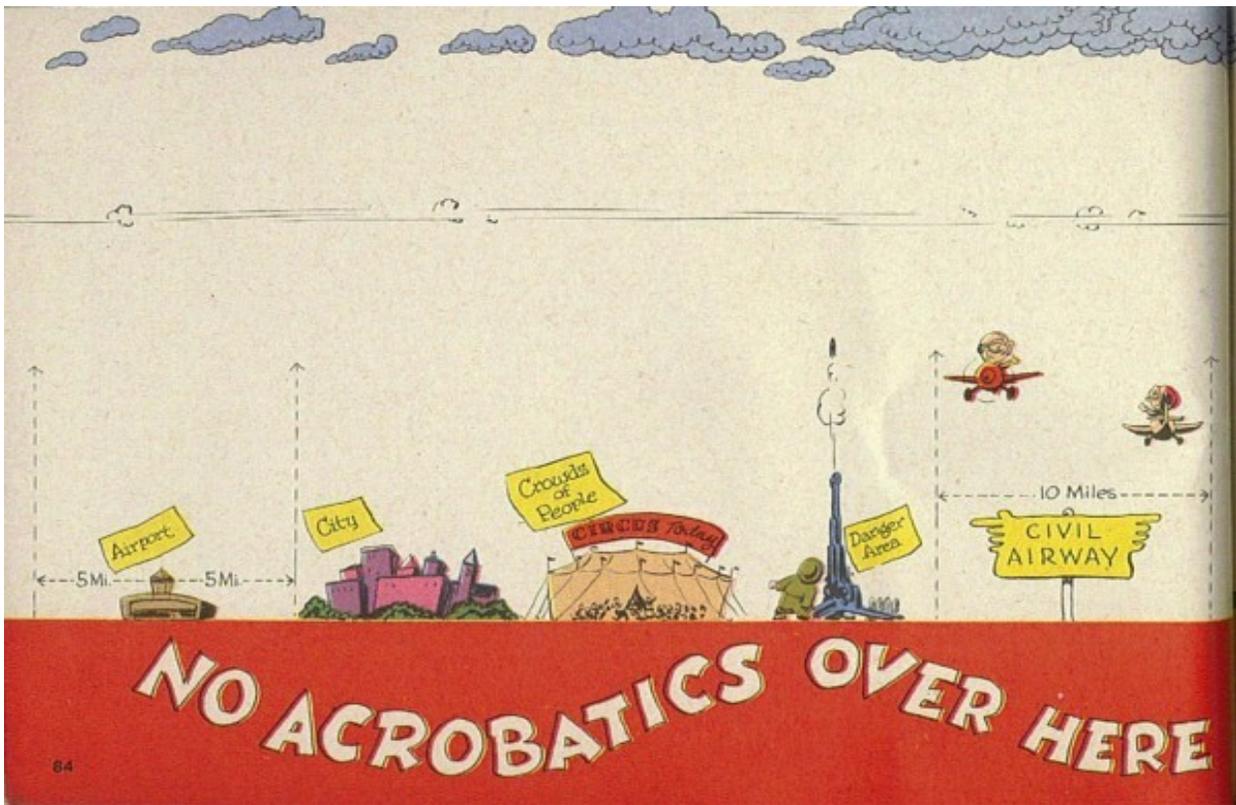
ALWAYS PICK AN ALTERNATE AIRPORT-- YOU CAN'T ALWAYS WAIT 'TIL THE CLOUDS LIFT!

ABOUT---

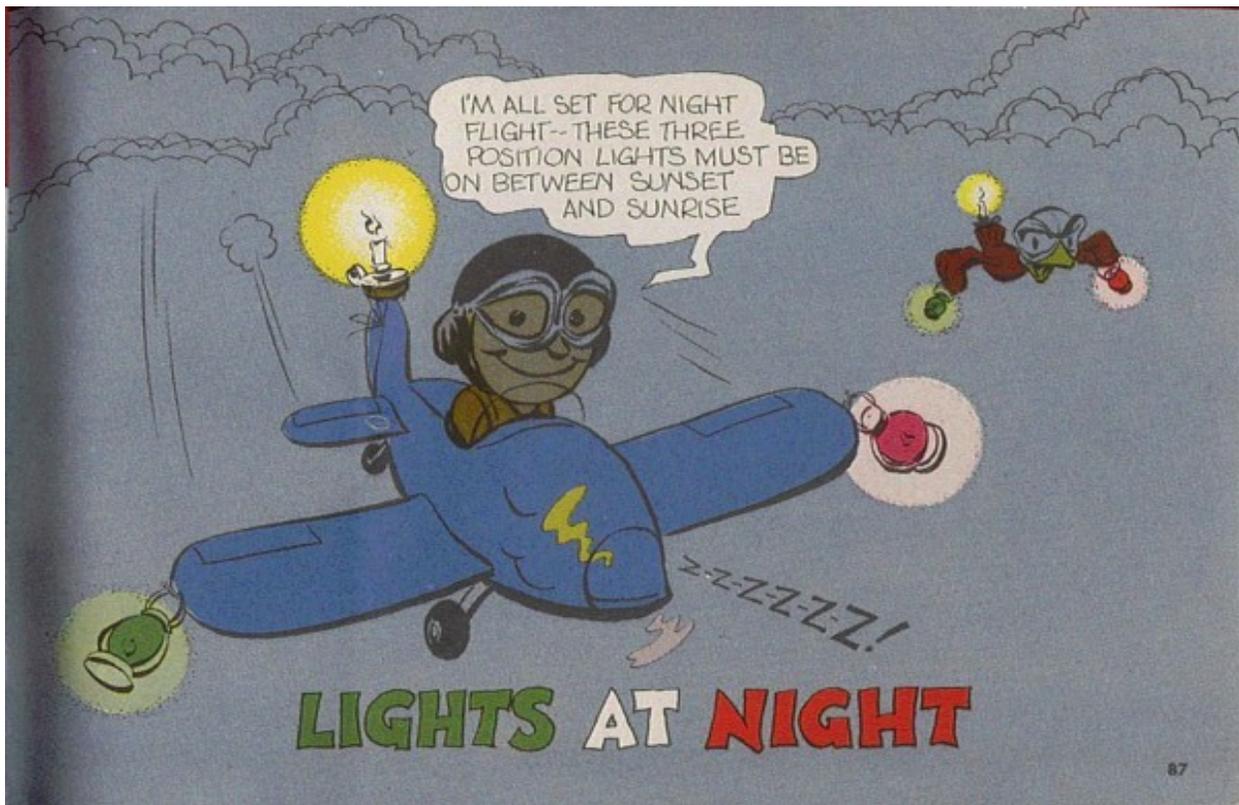
--FACE!!

81





LOOK OUT BELOW!!





TEST YOUR KNOWLEDGE

YOU'VE BEEN THROUGH THIS BOOKLET ONCE. Now study it again. Each time you look at a page you'll find something new that escaped your attention before. When you are satisfied that you have mastered "I've Got Wings," then try your hand at the two quizzes on the following pages.

There are twenty questions in each quiz. Each question is followed by the number of the page containing the correct answer. The correct answers are also listed on page 92.

Each question correctly answered is worth 5 points. A score of 100 is perfect. Good going! Ninety is good. Eighty . . . you're getting wobbly. A good pilot knows all the answers. Dig in. Your wings are worth a lot of work and study.

QUIZ NUMBER 1

True False

- ___ ___ 1. A flashing red light-gun signal means "Taxi back to the hangar." (p. 8)
- ___ ___ 2. I will usually circle the airport to the right. (p. 15)
- ___ ___ 3. An air vehicle that can control itself the most gives way to the one that can control its movements the least. (p. 22-23)
- ___ ___ 4. Eight hundred feet is the minimum altitude over cities, crowds, etc. (p. 28)
- ___ ___ 5. I must alter my course to pass 500 feet or more to the right of overtaken plane. (p. 24)
- ___ ___ 6. When I am in the center of the beam I hear "Dahhh." (p. 38)
- ___ ___ 7. Heading north I fly at an even altitude. (p. 41)

True False

- ___ ___ 8. I need not keep tuned to control tower after take-off. (p. 21)
- ___ ___ 9. Ceiling is the distance from the top of the clouds to the ground. (p. 50)
- ___ ___ 10. When flying above 1,000 feet, day or night, I must be at least 500 feet below the ceiling and have 3 miles or more visibility. (p. 53)
- ___ ___ 11. CFR over open country I must not fly any closer than 500 feet to the ground, mountains, or the ceiling. (p. 55)
- ___ ___ 12. On instrument flights I must stay at least 500 feet above hills, mountains or water, except for take-offs and landings. (p. 74)
- ___ ___ 13. If my radio goes bad, as long as I receive sufficient radio signals I can follow my last approved flight plan. (p. 78)
- ___ ___ 14. You need a 1,000 foot ceiling and 2 miles forward visibility to fly in a control zone. (p. 17)

True False

- ___ ___ 15. I pick the runway in line with the wind-marker and land with the wind. (p. 18-19)
- ___ ___ 16. When two aircraft approach head-on, they give way to the right to pass each other with 500 feet between them. (p. 26)
- ___ ___ 17. The plane approaching from the right has the right of way. (p. 25)
- ___ ___ 18. The sound of the A signal is "Dit-Dahhh." (p. 38)
- ___ ___ 19. I can fly on either side of an "on course" signal on an airway. (p. 39)
- ___ ___ 20. Army Flight Control warns Navy pilots flying in the United States of unforeseen weather hazards. (p. 34-35)

QUIZ NUMBER 2

- ___ ___ 1. I can change my flight plan en route by notifying an A.T.C. center through the nearest communication station. (p. 46)

True False

- ___ ___ 2. An airplane has number 3 right-of-way in the air. (p. 22)
- ___ ___ 3. Power lines, bridges, oil wells, rivers, and race tracks are good check points. (p. 57)
- ___ ___ 4. I stay 2,000 feet horizontally from clouds when flying CFR. (p. 60)
- ___ ___ 5. If the ceiling is under 500 feet or the visibility is less than one mile, I can't take off on instruments. (p. 72)
- ___ ___ 6. For an Army instrument flight during daylight, a 600-foot ceiling and 3 miles forward visibility at destination are satisfactory minimums. (p. 73)
- ___ ___ 7. No acrobatics when flying over control zones, cities, crowds, restricted areas, or civil airways. (p. 84)
- ___ ___ 8. I may turn after clearing the airport boundary when I have reached 400 feet altitude. (p. 14)
- ___ ___ 9. To have the right-of-way in landing I start my approach at least 1,000 feet from the airport boundary. (p. 20)

True False

- — 10. Emergency landings have the right-of-way only when a plane is on fire. (p. 27)
- — 11. The sound of the N signal is "Dahhh-dit." (p. 38)
- — 12. Heading east I fly at an odd altitude. (p. 41)
- — 13. In contact flight the pilot controls his flight by reference to the ground or water. (p. 49)
- — 14. At night, when flying outside a control zone and below 1,000 feet, I must have a minimum visibility of 4 miles. (p. 53)
- — 15. Both land planes and seaplanes are allowed to fly over water at an altitude of 300 feet. (p. 54)
- — 16. In contact flight it isn't important to pick any particular cruising altitude. (p. 58)
- — 17. When flying contact flight rules I must turn back or go around clouds. (p. 63)

True False

- — 18. An alternate airport with a ceiling of broken clouds at 1,500 feet must have 3 miles forward visibility. (p. 80)
- — 19. When the weather closes in ahead of me or at my destination—the smartest maneuver I can make is an 180-degree turn (about face). (p. 81)
- — 20. I can do acrobatics if I pull out at least 1,000 feet from the ground. (p. 85)

ANSWERS

	Quiz 1	Quiz 2	10.	Quiz 1	Quiz 2
1.	T	T	11.	T	F
2.	F	F	12.	F	T
3.	T	T	13.	T	T
4.	F	T	14.	F	F
5.	T	T	15.	F	F
6.	T	F	16.	T	F
7.	F	T	17.	T	T
8.	F	F	18.	T	T
9.	F	T	19.	F	T
			20.	T	F



"SLANGUAGE"

Ace—a combat pilot with five or more victories.

Blanket Drill—sleeping.

Blind Flying—a date with a girl you've never seen.

Bumps—the effect of updrafts and downdrafts encountered in flight.

Bunk Flying—talking aviation in quarters.

Buzzing—flying dangerously low over people or property on the ground; (taboo).

Caterpillar Club—a jump for life in a parachute qualifies for membership.

Chinese Landing—one wing low.

Clinker—a poorly executed maneuver.

Conservatory—a power-operated, glass-enclosed machine gun turret.

Contact—a warning called out by the pilot to inform the mechanic the ignition switch is on.

Cracking Good Show—highest possible praise of a performance.

Dead Stick—gliding plane, after the engine has conked.

Dogfight—combat between two planes.

Drive It In The Hangar—stop talking aviation.

Dummer—a bonehead act.

Dust Bin—underside rear gun turret in an enemy aircraft.

Eggs—bombs.

Fat Friends—balloons.

Flak—anti-aircraft fire.

Flying The Iron Beam or Iron Compass—pilot flying along railroad.

Flying Pig—aerial torpedo.

Flying the Gauges—instrument flying.

Gain Some Altitude—come to a more erect standing or sitting position. Used to correct the "civilian slouch" in new cadets.

Geese—enemy bomber formation.

Get Eager—do your best; strive to the utmost.

Give It The Gun—advance the throttle to accelerate engine speed.

Glasshouse—power operated turret.

Go Into A Tailspin—get mad.

Going Upstairs—gaining altitude; climbing.

Good Show—a commendable action.

Grab A Brace—come to a position of super attention; usually directed at new cadets.

Hangar Pilot—mechanic who talks a great flight.

Hedge Hopping—low flying.

He's In A Flat Spin—a bit touched.

Hit The Deck—when an aviator lands.

Hitting The Silk—to make a parachute jump.

Hot Crate—a speedy plane.

H. P.—a hot pilot.

Jinking—dodging anti-aircraft fire.

Lame Duck—damaged plane.

Laying The Eggs—dropping bombs.

Life Saver—a parachute.

Mustard—smart pilot.

Office—the pilot's cockpit, usually in a large airplane.

Onions—flaring anti-aircraft shells.

Overshoot—to glide beyond the landing field before landing.

Pea Shooters—the high-powered planes of the Air Forces.

Pulpit—the cockpit.

Ready Room—the room where pilots on duty assemble, ready for instant call to action.

Reef Back—pull back the stick in flying a plane.

Roll Up Your Flaps—stop talking.

Shoot Landings—to acquire practice in landing a plane.

Short Snorter—a member of an unofficial flyers' club, each member of which carries a one dollar bill autographed by fellow short snorters. Any members being unable to show the bill upon request of a fellow member, must forfeit a comparable bill or note to each short snorter present.

Shot Down In Flames—jilted by a girl friend.

Show—action in the air.

Slap On The Coal—open the throttle to give a plane more gas.

Solo—flying alone; hence doing anything else without company.

Spin Off—take a nap; or go to bed.

Spit Curl—a side slip in a plane.

Sugar Report—a letter to or from a girl friend.

Tear Off A Strip—to give someone a bawling out.

Tin Fish—an aerial torpedo.

Woofing—the telling of tall tales.