

Air Traffic Control (ATC) and Flight Information

Hanscom Flight Training Center Private Pilot Ground School

Air Traffic Control

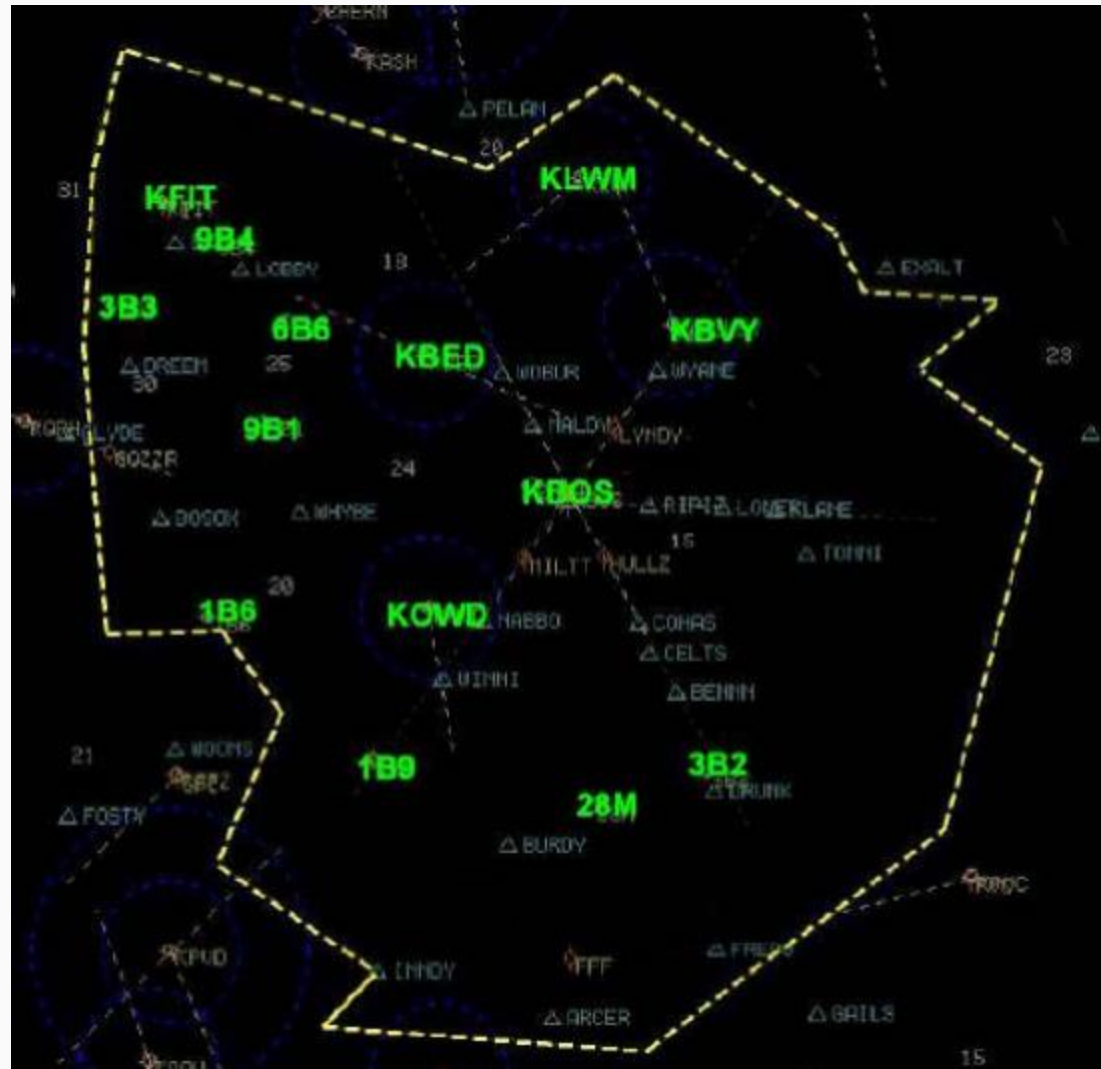
2-1-1 ATC Service

- a. The primary purpose of the ATC system is to prevent a collision involving aircraft operating in the system.
- b. In addition to its primary purpose, the ATC system also:
 - 1. Provides a safe, orderly, and expeditious flow of air traffic.
 - 2. Supports National Security and Homeland Defense missions.

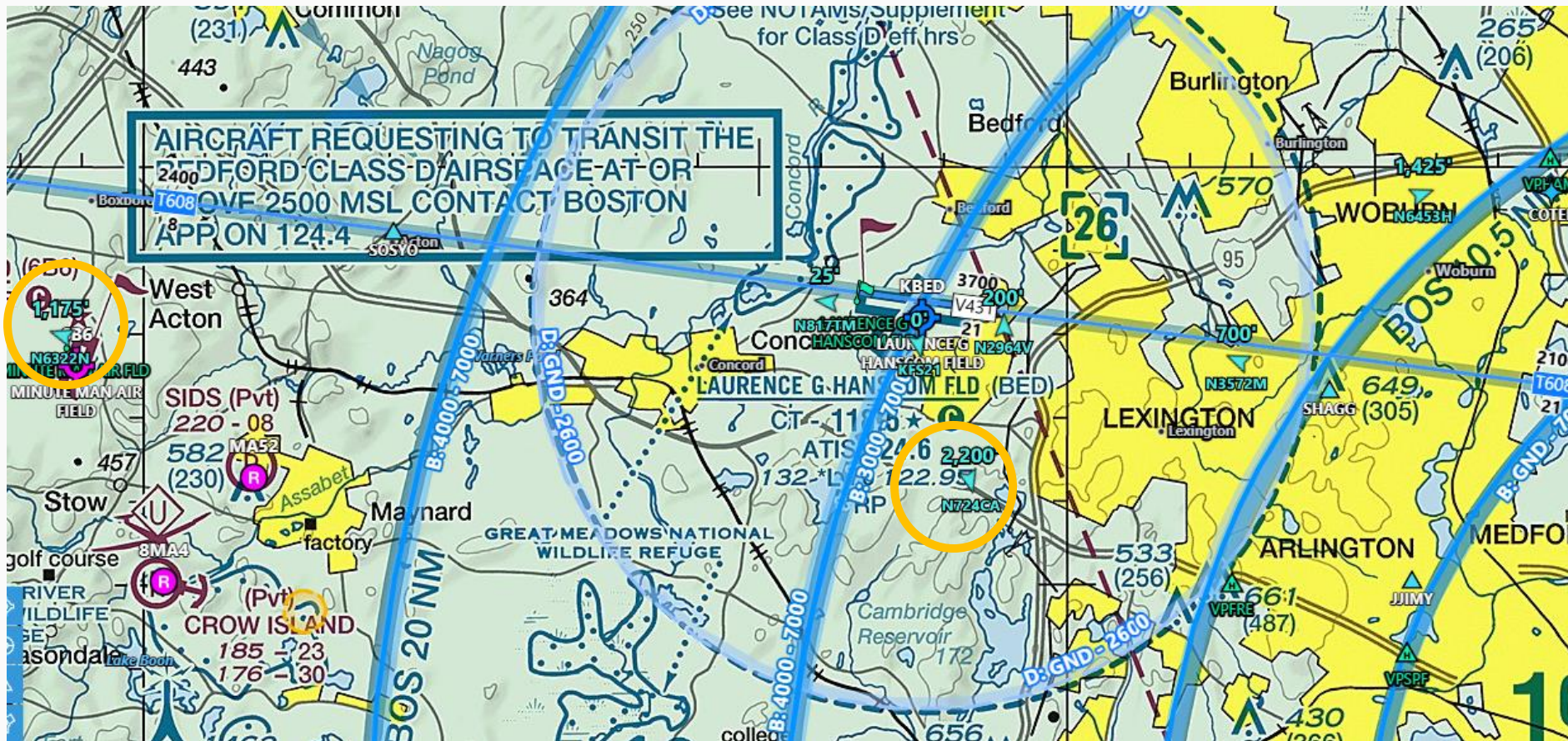
– [FAA Order JO 7110.65AA - Air Traffic Control](#)

How Pilots View Airspace.....



[illegible]

How Does ATC See Traffic?



Primary and Secondary Surveillance Radars



Airport Surveillance Radar (ASR-11)

- **Primary and Secondary Surveillance Radar:**
- **The primary surveillance radar** is a 60 nautical mile S-Band radar (2700 to 2900 MHz) with peak effective power of 25kW.
 - The radar uses a continually rotating antenna mounted on a tower that range between 25–75 feet tall.
 - The primary radar transmits electromagnetic waves (radar beams) that travels in a straight path until an aircraft or object interrupts the radar beam.
 - The aircraft's actual location is determined by combining the distance and the azimuth of the reflected radar beam.
- **The secondary surveillance radar** uses a second radar beacon antenna attached to the top of the primary radar antenna to transmit and receive area aircraft data for barometric altitude, identification code, and emergency conditions. The Air Traffic Control centers uses this system data to verify the location of aircraft.





Transponder



- Squawk – 4-digit octal codes allowing secondary radar to identify aircraft
 - 1200 – VFR (no radar service)
 - 7500 – hijack/unlawful interference
 - 7600 – radio failure
 - 7700 – emergency
- Mode: Standby, On (Mode A), Alt (Mode C/Mode S), Ident
- Mode S address – 24-bit addresses fixed to a unique aircraft

Mode A



Who are you?

My squawk is 1200



Mode C



Who are you?

My squawk is 1200

My pressure altitude is 5900'



Mode C Equipage Requirements

- Inside Class A, B and C airspaces
- Above Class B and C airspaces
- In Class E airspace and over 10,000' MSL, except within 2500' AGL
- Within Mode C Veil (30 nm from the primary Class B airport)

Mode S



Who are you?

My squawk is 1200

My pressure altitude is 5900'

My permanent aircraft address is A068B8



Mode S Addresses

N-NUMBER ENTERED: 12502			
AIRCRAFT DESCRIPTION			
Serial Number	17262025	Status	Valid
Manufacturer Name	CESSNA	Certificate Issue Date	02/08/1975
Model	172M	Expiration Date	07/31/2029
Type Aircraft	Fixed Wing Single-Engine	Type Engine	4 Cycle
Pending Number Change	None	Dealer	No
Date Change Authorized	None	Mode S Code (base 8 / Oct)	50064270
MFR Year	1973	Mode S Code (Base 16 / Hex)	A068B8
Type Registration	Corporation	Fractional Owner	NO

ADS-B Out



My permanent aircraft address is A068B8

My pressure altitude is 5900'

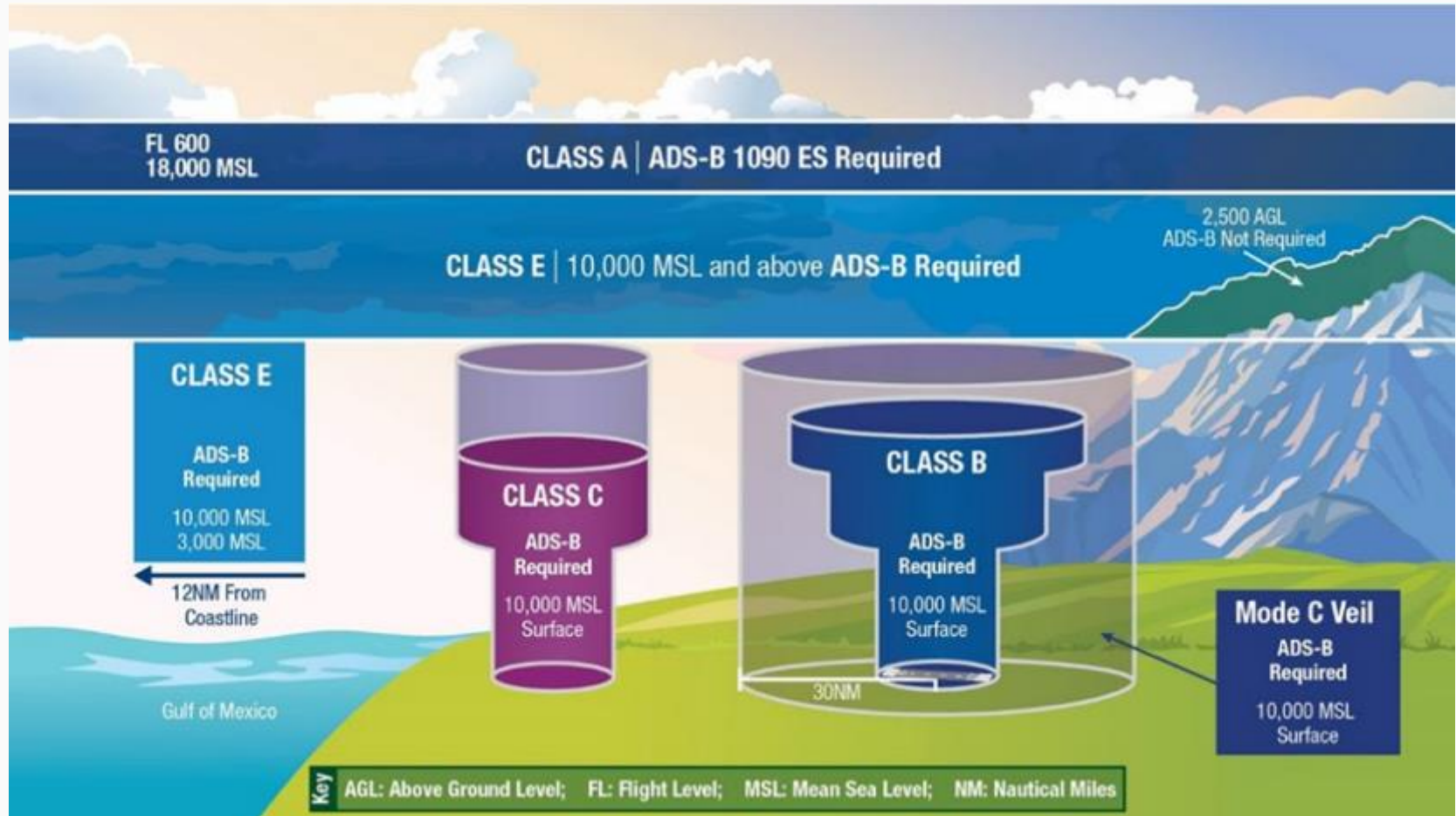
My coordinates are 40°N 88.5°W

My callsign is N12502

By the way...



ADS-B Out



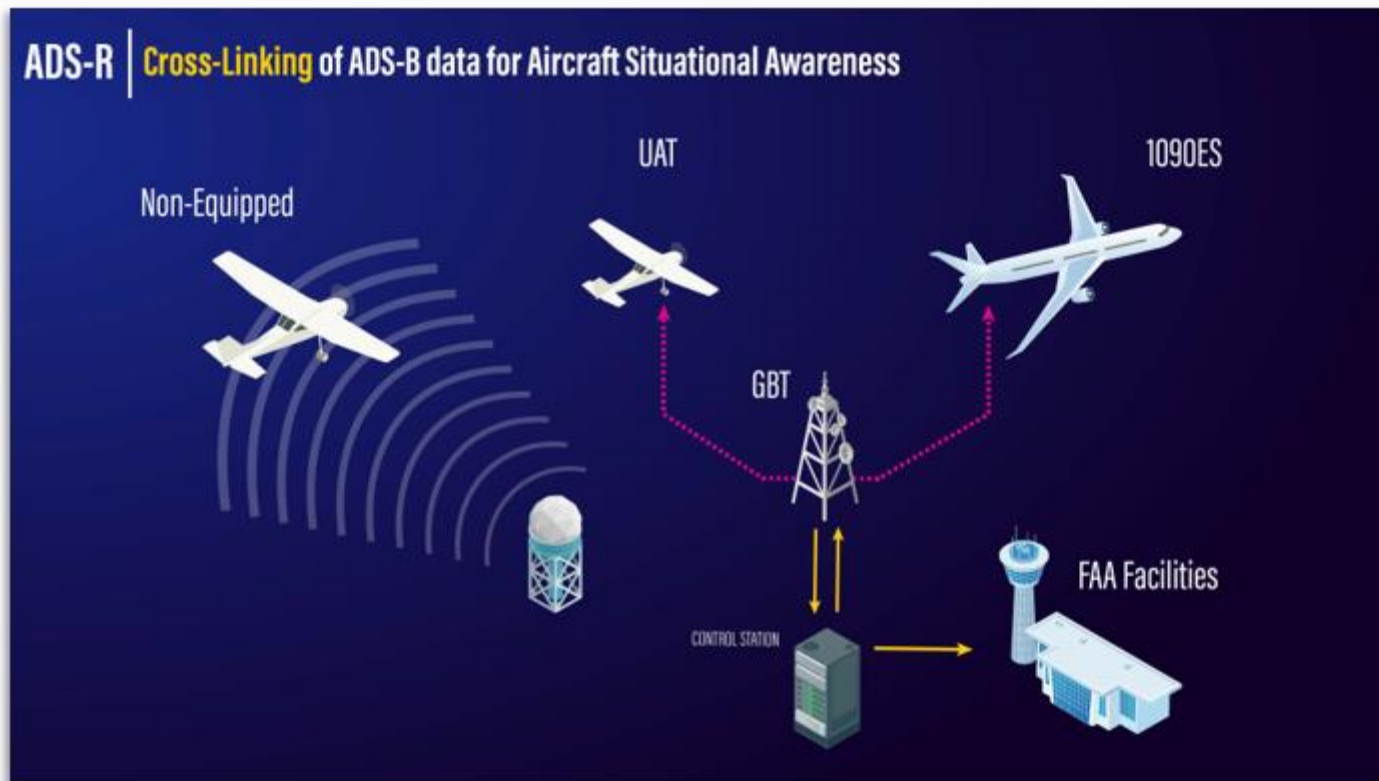
[[FAA AC 90-114B CHG 1](#)]

ADS-B In

- ADS-B In-equipped aircraft have access to
 - Positions of other traffic, if available
 - Graphical weather displays in the cockpit
 - Text-based advisories, including NOTAMs and significant weather



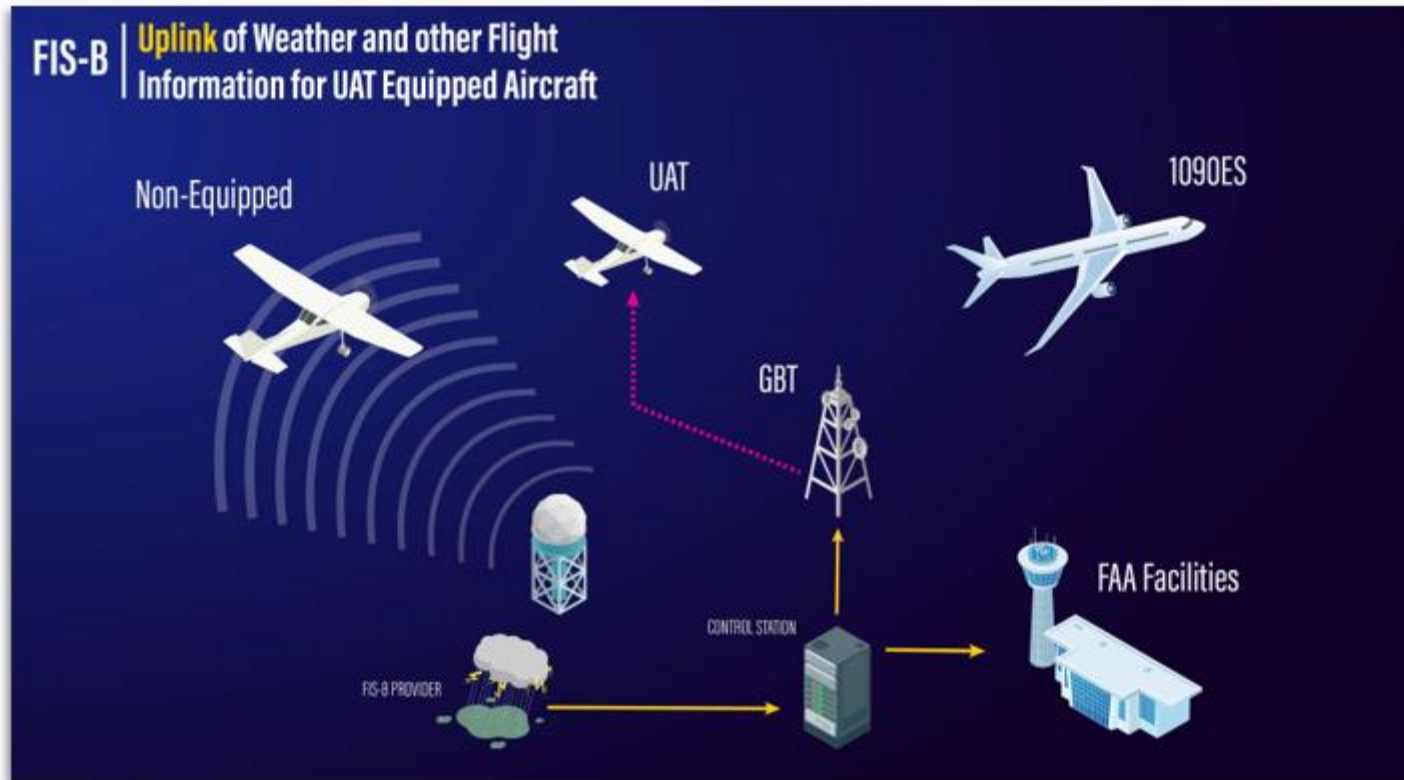
Automatic Dependent Surveillance – Rebroadcast



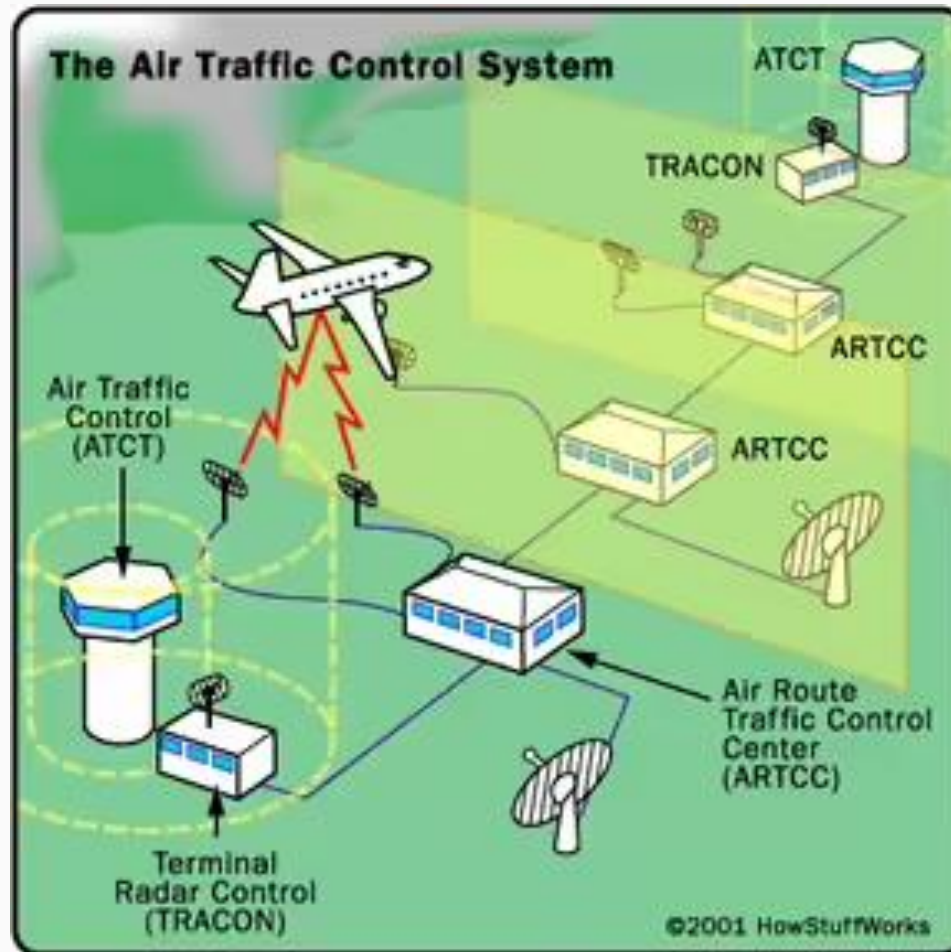
Traffic Information Services – Broadcast



Flight Information Services – Broadcast



Air Traffic Control Services



Air Traffic Control Tower (ATCT)

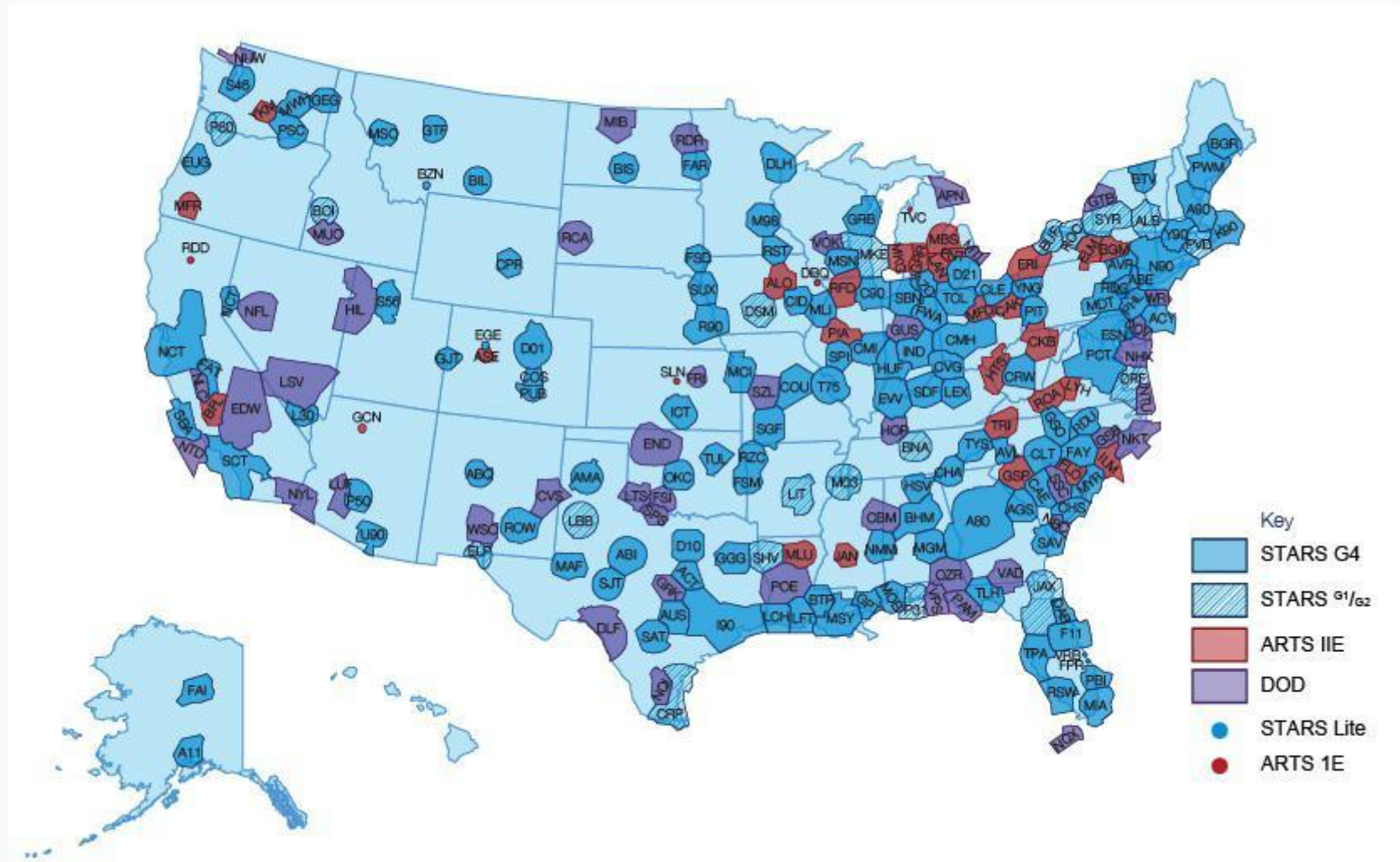


ATC Towers – Services Provided

AKA “Local”

- Clearance Delivery
- VFR Flight Following
- Ground
 - If no clearance delivery, obtain clearance with Ground Control
 - Taxi instructions
- Tower
 - Responsible for airspace and active runways
 - Coordinates with departure controller

Terminal Radar Approach Control Facilities (TRACON)



Operations Room



Terminal Radar Control (TRACON)

AKA “Approach / Departure”

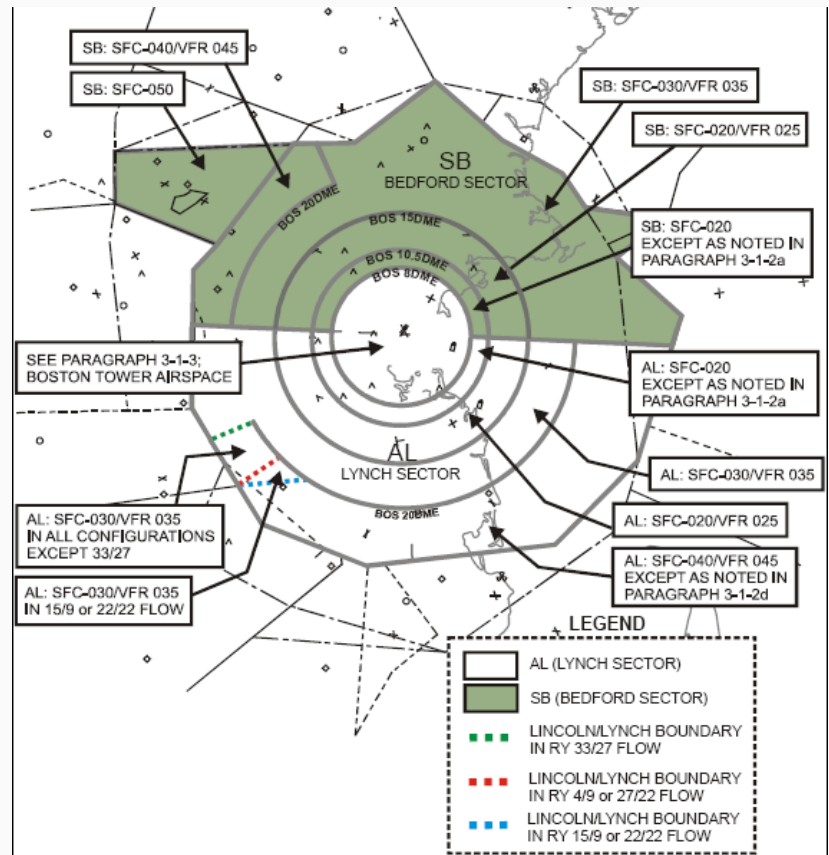
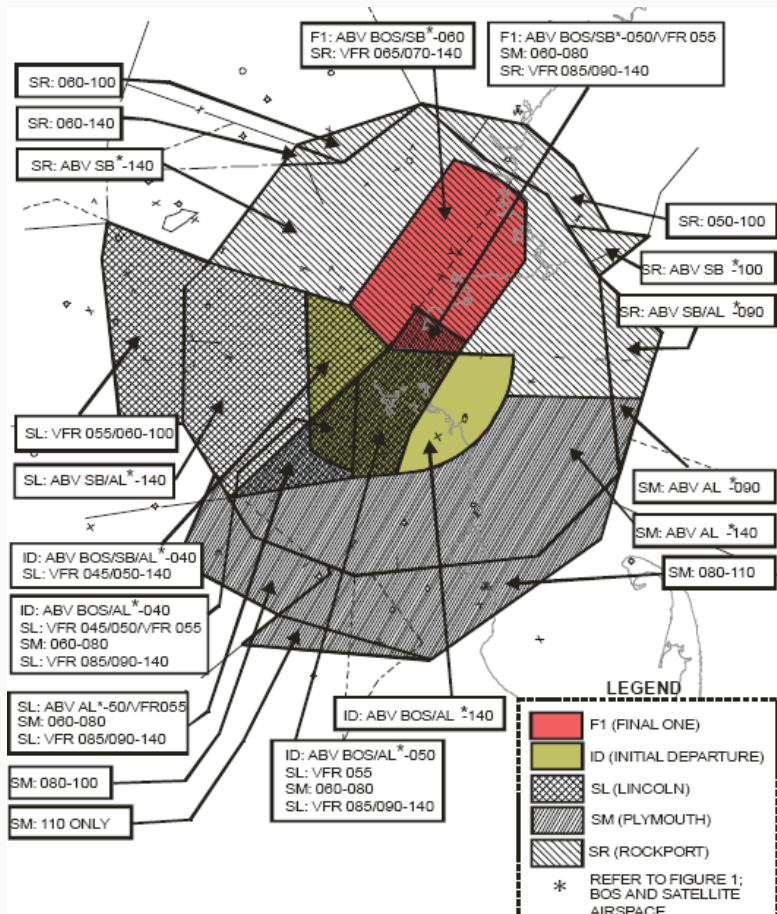
- Provides the link between the departure airport and enroute structure
- 30 nm from the facility up to 10,000’
 - Divided into sectors
- Release pilots into the departure flow
- Control aircraft in the terminal area
- Contact TRACON when directed by tower

Terminal Radar Service Area (TRSA)



CLASS B, CLASS C, TRSA, AND SELECTED APPROACH CONTROL FREQUENCIES		
FACILITY	FREQUENCIES	SERVICE AVAILABILITY
CLEVELAND CLASS B	125.35 [340°-300°] 126.35 [201°-339°]	CONTINUOUS
DETROIT CLASS B	132.35 [NW/NE] 134.3 [SE] 118.95 [SW] PRIOR TO ENTERING CANADIAN CLASS D CTL ZONE OR BELOW 3000' MSL, CONTACT WINDSOR TOWER ON 124.7	CONTINUOUS
PITTSBURGH CLASS B	133.7 [181°-270°] (PT) 121.25 [271°-360°] (PT) 123.95 [091°-180°] (PT) 124.15 [001°-090°] (PT) 279.625 [270°-089°] (PT) 360.8 [090°-269°] (PT) 119.35 285.575 [090°-269°] OTHER 124.75 338.2 [270°-089°] OTHER	CONTINUOUS
AKRON CLASS C	125.5 371.875 [000°-180°] 118.6 269.25 [187°-006°] O/T 134.9 317.7 CLEVELAND CNTR	0600-0100 O/T CLASS D
BUFFALO CLASS C	126.15 263.125 [053°-233°] 126.5 317.6 [234°-052°]	CONTINUOUS
COLUMBUS CLASS C	125.95 317.775 [280°-099°] 134.0 279.6 [100°-279°]	CONTINUOUS
FUNI CLASS C	118.8 257.9 O/T 126.75 348.75 CLEVELAND CNTR	0545-2330 O/T CLASS E
LANSING CLASS C	118.65 226.4 O/T 126.75 348.75 CLEVELAND CNTR	0530-2400 O/T CLASS D
ROCHESTER CLASS C	123.7 322.3 [161°-329°] 119.55 269.6 [330°-160°]	CONTINUOUS
TOLEDO CLASS C	126.1 307.0 [360°-179°] 134.35 317.55 [180°-359°]	CONTINUOUS
ELANRA TRSA	128.425 257.8 O/T 133.35 372.0 NEW YORK CNTR	0600-2400
ERIE TRSA	257.8 O/T 127.075 292.175 CLEVELAND CNTR	0600-2400
SAGINAW TRSA	126.45 235.625 O/T 127.7 290.425 CLEVELAND CNTR	0530-2400
YOUNGSTOWN TRSA	133.95 322.3 O/T 120.775 298.95 CLEVELAND CNTR	0600-2400
SELFIDGE ANGB	119.6 318.2 O/T 132.35 363.2 DETROIT APP	0700-2300

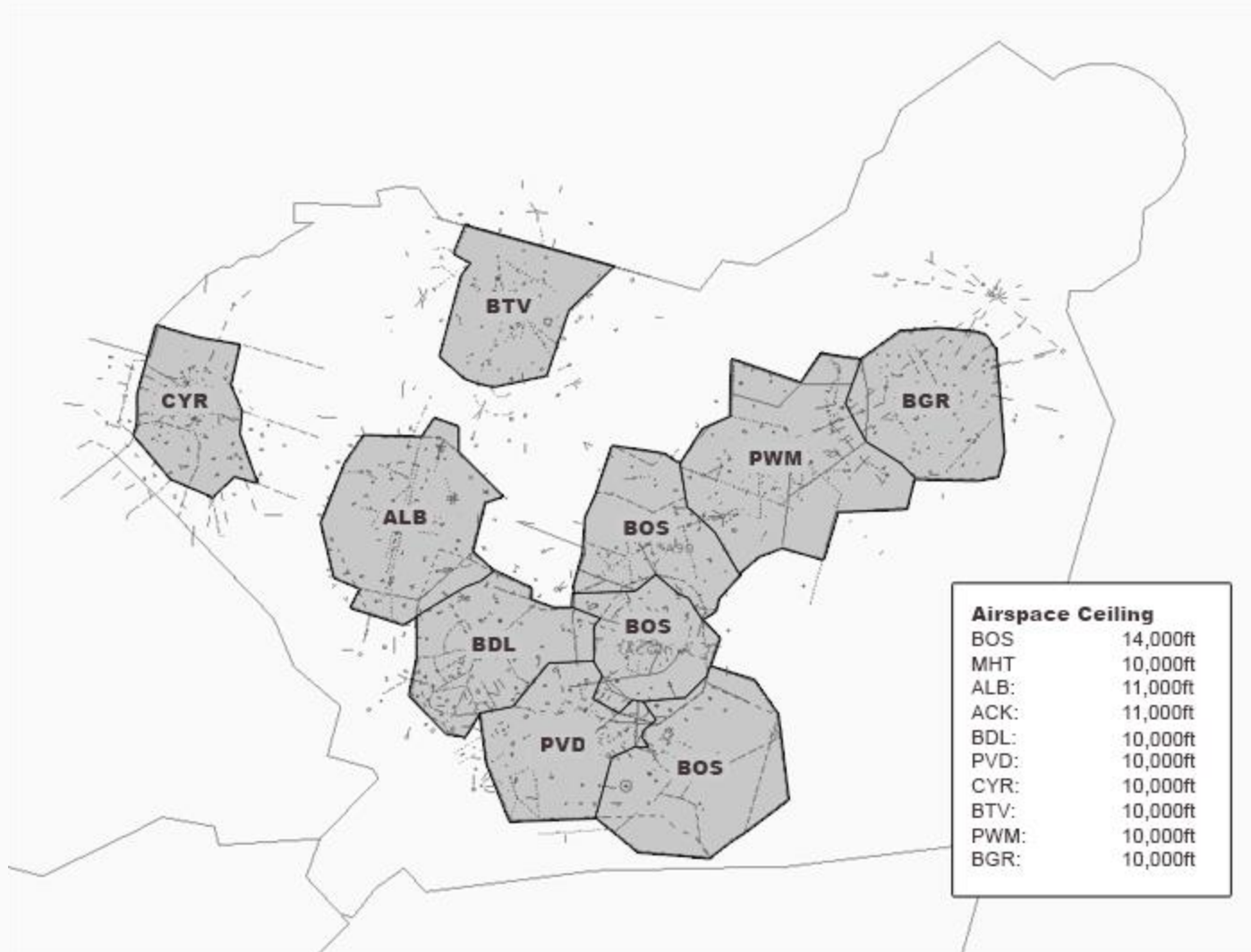
Sectors



Air Route Traffic Control Center (ARTCC)



Each ARTCC includes multiple TRACON facilities



VFR Radar Services

Flight Following

- Safety alerts, traffic advisories, limited radar vectoring (workload permitting)

TRSA Service

- Radar sequencing and separation for VFR aircraft in a TRSA

Class C Services

- Separation between IFR and VFR, and sequencing of VFR traffic to the airport

Class B Services

- Separation based on IFR, VFR, and/or weight, and sequencing of VFR arrivals

Class D Services?

VFR Radar Services

Radar Service Requirements

- Can communicate with ATC
- Within radar coverage
- Can be radar identified

Limitations

- Based on controller discretion
- Guidance information is advisory
- Cannot determine if their instructions will lead to flight into IMC

• Example Radio Call:

- Who they are (Boston Approach)
- Who you are (Warrior 43128)
- Where you are (10 miles south of Pease)
- What you want (Request CFR Flight Following to Hanscom, BED)

Terminal Radar Services for VFR Aircraft (Flight Following)

- Radar facilities provide the following basic radar services for VFR aircraft, on a workload permitting basis:
 - Safety alerts
 - Traffic advisories
 - Limited radar vectoring
- Flight following does not relieve PIC of their responsibilities to
 - See and avoid other traffic operating in basic VFR weather conditions
 - Avoid serious wake encounters
 - Maintain appropriate terrain and obstruction clearance
 - Remain in weather conditions above weather minima required by 14 CFR 91.155
- Advise ATC and obtain a revised clearance whenever safety is likely to be compromised by complying with an ATC clearance

Separation Services Available

Airspace	You are under IFR	You are under VFR
Class A	Separation from other IFR traffic	No VFR in Class A
Class B	Separation from all traffic	Separation from all traffic Sequencing into primary airport(s)
Class C	Separation from all traffic	Separation from IFR traffic Advisories for other VFR traffic Sequencing into primary airport
Class D	Separation from other IFR traffic Advisories for VFR traffic	Advisories for all traffic
Class E	Separation from other IFR traffic Advisories for VFR traffic	Advisories for all traffic

Selection & Use of ATC Frequencies

Understanding

- Know the purpose of each controller/frequency & when to use it

Preflight Planning

- Look up & record the frequencies you expect to use
 - ATIS, Clearance Delivery, Ground, Tower, Departure
- Chart Supplement, Sectional Charts, ForeFlight, Airport Diagram, etc.

In-Flight

- Be organized & prepared
- Fly first – Aviate, Navigate, Communicate
- Use available resources to find the frequencies needed
 - Chart Supplement, Sectional, ForeFlight, ATC

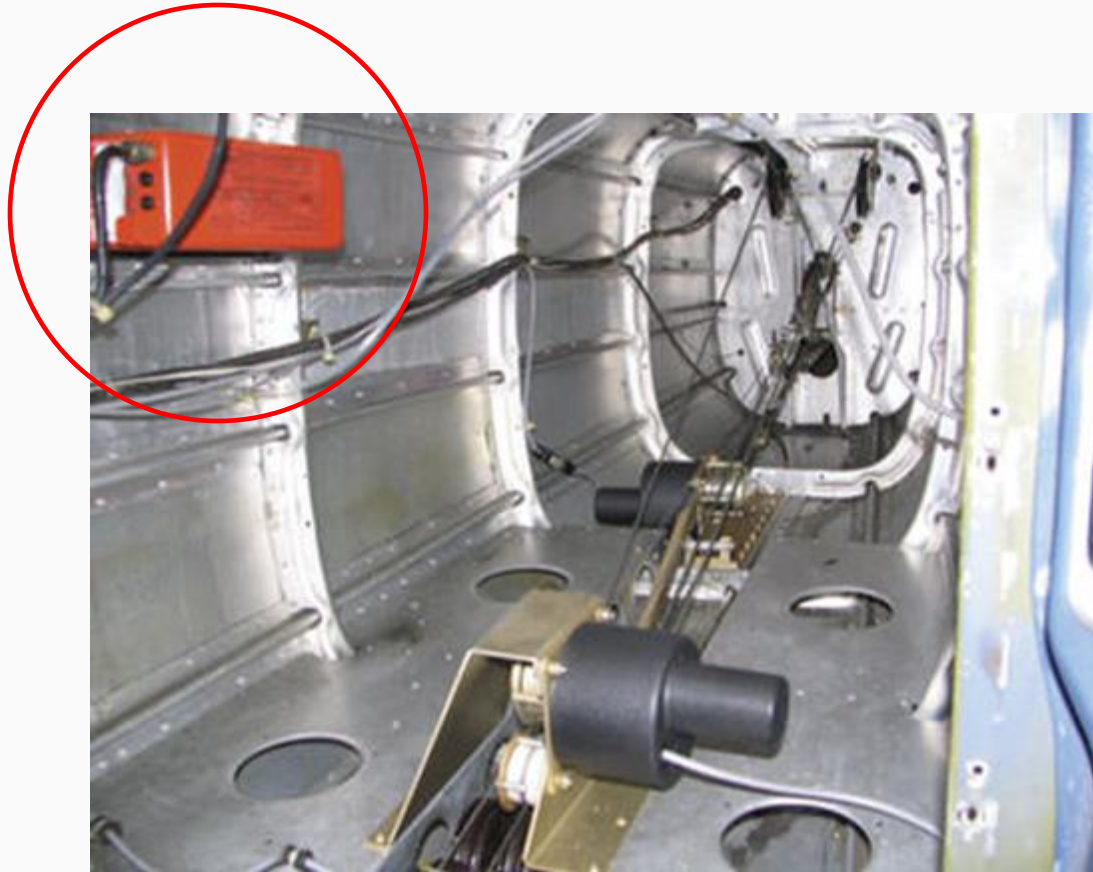
Lost Comm Procedures

1. Check your equipment
 - Volume, frequency, try another radio
 - Is the headset plugged in?
2. Communicate
 - Squawk 7600
 - Use your cellphone and call ATC facility or an FSS
 - Turn on all your lights
3. Fly with extra room between you and the cloud
4. Prepare to land
 - At a towered airport, circle *outside* the airspace and wait for light gun signals
 - At a non-towered airport, fly 1000' above the TPA to observe wind direction and other traffic; fly well clear of the pattern, descend to TPA and then enter the traffic pattern and land

Emergency Procedures

- PIC Authority
- “First thing always, fly the airplane.”
 - Aviate
 - Navigate
 - Communicate – “Mayday” and “Panpan”
- Engine failure in flight
 - Airspeed
 - Best field: land into the wind if possible
 - Checklist
 - Declare on active ATC frequency / 121.5 MHz; XPDR 7700; ELT
 - Execute: secure the aircraft; prepare for egress

Emergency Locator Transmitter



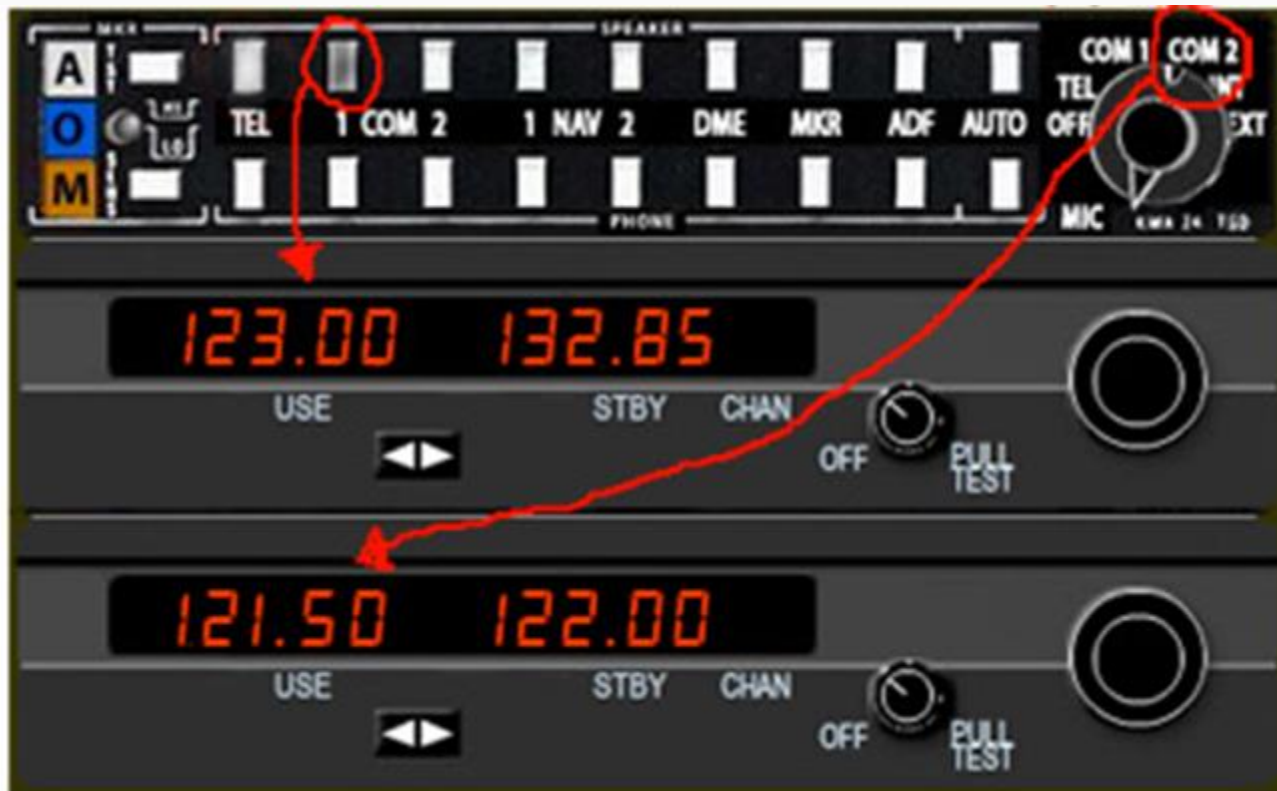
ELT Test Procedures

- Analog 121.5/243 MHz ELTs should only be tested during the first 5 minutes after any hour.
 - Tests should be no longer than three audible sweeps.
 - If operational tests must be made outside of this period, they should be coordinated with the nearest FAA Control Tower.
 - If the antenna is removable, a dummy load should be substituted during test procedures
- Digital 406 MHz ELTs should only be tested in accordance with the unit's manufacturer's instructions
- Airborne tests are not authorized

VHF Communication Equipment

Receiving COM 1

Transmitting & receiving COM 2



Phonetic Alphabet

CHARACTER	MORSE CODE	TELEPHONY	PHONIC (PRONUNCIATION)
A	• —	Alfa	(AL-FAH)
B	— • • •	Bravo	(BRAH-VOH)
C	— • — •	Charlie	(CHAR-LEE) or (SHAR-LEE)
D	— • •	Delta	(DELL-TAH)
E	•	Echo	(ECK-OH)
F	• • — •	Foxtrot	(FOKS-TROT)
G	— — •	Golf	(GOLF)
H	• • • •	Hotel	(HOH-TEL)
I	• •	India	(IN-DEE-AH)
J	• — — —	Juliett	(JEW-LEE-ETT)
K	— • —	Kilo	(KEY-LOH)
L	• — • •	Lima	(LEE-MAH)
M	— —	Mike	(MIKE)
N	— •	November	(NO-VEM-BER)
O	— — —	Oscar	(OSS-CAH)
P	• — — •	Papa	(PAH-PAH)
Q	— — • —	Quebec	(KEH-BECK)
R	• — •	Romeo	(ROW-ME-OH)

CHARACTER	MORSE CODE	TELEPHONY	PHONIC (PRONUNCIATION)
S	• • •	Sierra	(SEE-AIR-RAH)
T	—	Tango	(TANG-GO)
U	• • —	Uniform	(YOU-NEE-FORM) or (OO-NEE-FORM)
V	• • • —	Victor	(VIK-TAH)
W	• — —	Whiskey	(WISS-KEY)
X	— • • —	Xray	(ECKS-RAY)
Y	— • — —	Yankee	(YANG-KEY)
Z	— — • •	Zulu	(ZOO-LOO)
1	• — — — —	One	(WUN)
2	• • — — —	Two	(TOO)
3	• • • — —	Three	(TREE)
4	• • • • —	Four	(FOW-ER)
5	• • • • •	Five	(FIFE)
6	— • • • •	Six	(SIX)
7	— — • • •	Seven	(SEV-EN)
8	— — — • •	Eight	(AIT)
9	— — — — •	Nine	(NIN-ER)
0	— — — — —	Zero	(ZEE-RO)

Radiophone Procedures

- AIM 4-2 discusses the reading of altitude and numbers
- Practices
 - “N123A, descend and maintain 12,000, turn left heading 360, maintain 220 knots.”

Automated Terminal Information Service (ATIS)



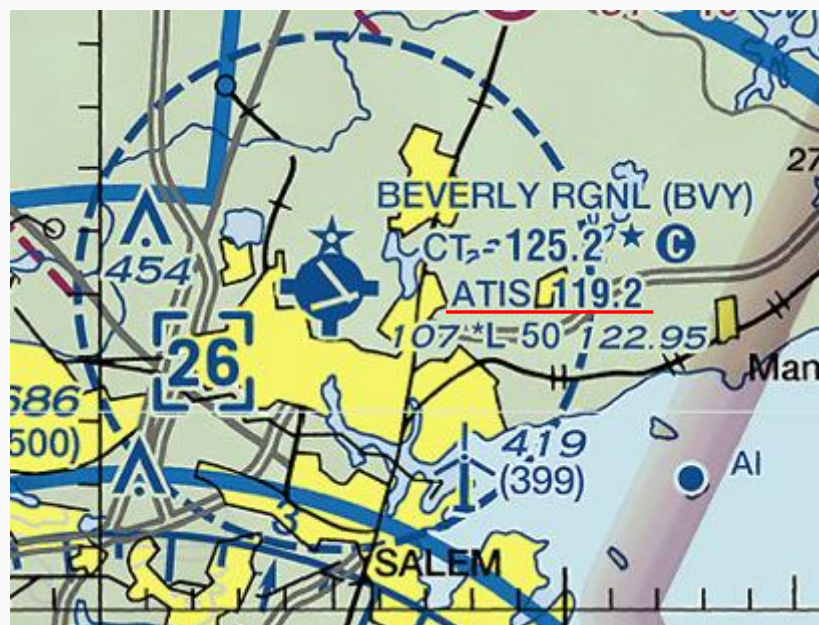
ATIS DEPARTURE	ATIS ARRIVAL
 INFORMATION BED 2351Z	 INFORMATION PWM 0659Z
WIND 100/05	WIND 010/15G21
ALTIMETER 2994	ALTIMETER A2979
SKY FEW030	SKY SCT100, SCT120
TEMP / DP 22/21	TEMP / DP 17/11
RW 11 ILS	RW --
TAXI --	TAXI --

NOTES

BED
5/23 CLSD
5/23 NOT GRVD S OF 11

PWM
DA005
CTAF/PCL 120.9
CD BOS CTR 128.2

Finding ATIS Frequency



BEVERLY RGNL (BVY)(KBVY) 3 NW UTC-5(-4DT) N42°35.05' W70°54.97'

107 B LRA NOTAM FILE BVY

Rwy 16-34 H5001X100 (ASPH-GRVD) S-30, D-55, 2D-103 MIRL 0.5% up NW

Rwy 16 MALS, PAPI(P4L)—GA 3.5° TCH 41', Thld displcd 239', Trees.
Rwy 34 REIL.

Rwy 09-27 H4755X100 (ASPH-GRVD) S-30, D-114, 2S-145, 2D-180 MIRL 0.4% up E

Rwy 09 PAPI(P4L)—GA 3.0° TCH 43', Tree.

Rwy 27 PAPI(P4L)—GA 3.22° TCH 46', Thld displcd 250', Trees.

LAND AND HOLD-SHORT OPERATIONS

LDG Rwy	HOLD-SHORT POINT	AVBL LDG DIST
Rwy 09	16-34	3450
Rwy 16	09-27	4000

SERVICE: S4 FUEL 100LL, JET A, A+ OX 3, 4 LGT Rwy 16 nstd MALS-800 ft. When twr clsd ACTVT MALS Rwy 16; REIL Rwy 34; PAPI Rwy 16, 09 and 27; MIRL Rwy 09-27 and Rwy 16-34—CTAF.
NOISE: Noise sensitive arpt. Voluntary compliance req of all acft exceeding 75 db to not land/depart arpt 0400-1200Z. Noise abatement procedures in effect ctc arpt manager 978-921-6072. All arrival/departure acft follow manufacturers recommended procedures for quiet ops and minimum noise. Noise sensitive area off the DER 27 to the W, SW, & S and off the DER 34 to the NW.

AIRPORT REMARKS: Attended 1330-2130Z. Birds frequently on or in/ovt arpt, occasional deer or coyote on rwy. Fld cond not met 0200-1200Z 15 May-31 Oct; 0100-1200Z 01 Nov-14 May. Fuel svc 1030-2330Z; after hrs req only call 978-774-2070. Fuel, parking ctc FBO 129.725 or 978-774-2070. No ultralight or banner towing allowed. Rwy 16 is the preferred calm wind rwy. Rwy 16-34; due to hump at midpt, opposite ends of the rwy not vsb at gnd level. No tiedown ropes on public tsnt prkg. E ramp tsnt spaces: space nrs 15, 16 & 17 only. Ldg fees for transient acft. Overnight parking fee. Flight Notification Service (ADCUS) available.

AIRPORT MANAGER: 978-921-6072

WEATHER DATA SOURCES: ASOS 119.2 (978) 921-5042. LAWRs.

COMMUNICATIONS: CTAF 125.2 ATIS 119.2 UNICOM 122.95

® BOSTON APP/DEP CON 124.4

TOWER 125.2 (1200-0200Z 15 May-31 Oct; 1200-0100Z 01 Nov-14 May) **GND CON** 121.6

AIRSPACE: CLASS D svc 1200-0200Z 15 May-31 Oct, 1200-0100Z 01 Nov-14 May; other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE LWM.

LAWRENCE (L) DME 112.5 LWM Chan 72 N42°44.43' W71°05.69' 140° 12.3 NM to fld. 306.

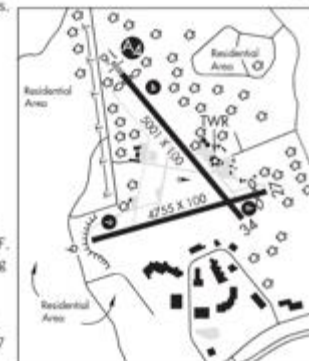
DME unusable:

160°-195° byd 23 NM blo 2,500'

LOC/DME 110.5 I-BVY Chan 42 Rwy 16, LOC unusable byd 15° left of course, DME unusable byd 15° left of course.

COMM/NAV/WEATHER REMARKS: Emerg frequency 121.5 not available at twr. When twr not opn, close flight plan with Boston apch—121.6.

**NEW YORK
COPTER
H-110, 12X, L-330
IAP, AD**



Flight Service Stations

- Primary source for obtaining preflight briefings and inflight weather information.
 - Does not perform ATC control functions only relay and issues
 - Transitioned from a government to a contracted service (Leidos)
- Flight Service Specialists are qualified and certificated by the NWS as Pilot Weather Briefers.
 - Not authorized to make original forecasts
 - Authorized to translate and interpret available forecasts and reports directly into terms describing the weather conditions expected along flight route and at destination
- Access
 - Radio: as shown on sectional or universal frequency: 122.2 MHz
 - 1-800-WX-BRIEF (992-7433) in the US
 - <https://www.1800wxbrief.com/>

Flight Service Station (FSS)

- Services
 - Pilot Briefings
 - Receive & process flight plans
 - Relay ATC clearances
 - Originate NOTAMs
 - Broadcast aviation weather
- Contacting the FSS
 - 1-800 WX BRIEF
 - Radio
 - Direct transmission
 - Remote Communication Outlet (RCO)
 - Ground Communication Outlet (GCO)
 - Transmitting through certain NAVAIDs
 - Chart Supplement/legend panel on sectional charts



Aeronautical Charts

Sectional Chart (most commonly used)

- Airport data, navigation aids, airspace, topography
- 1:500,000 scale (1" = 6.86 NM); Revised every 56 days

Terminal Chart

- More detailed version of the Sectional Chart – Helpful around Class B
- 1:250,000 scale (1" = 3.43 NM); Revised every 56 days

VFR Wall Planning Chart

- Aeronautical & topographic info covering the conterminous US
- 1:3,100,000 scale (1" = 43 NM); Revised annually

Current Charts

- Information changes rapidly, always verify current charts
- Check NOTAMs for updates between publication cycles



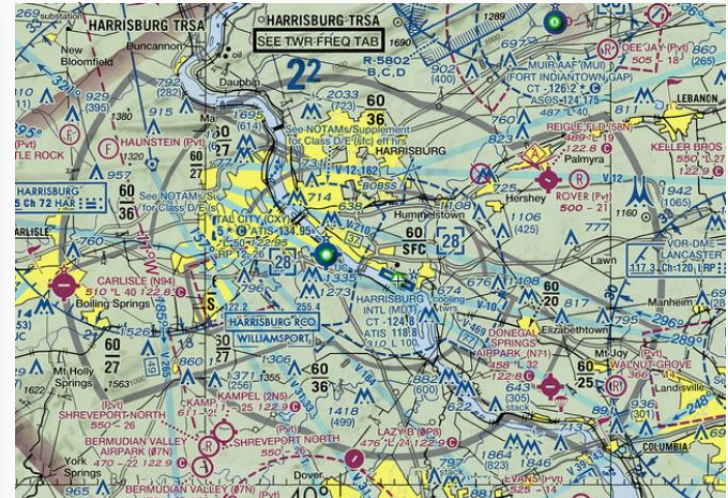
VFR Charts

Chart Symbolology

- [Aeronautical Chart User's Guide](#)
- Hard copy legend on sectional charts and TAC

Updates & Currency

- Terminal & Sectional Charts – Every 56 days
- Wall Planning Chart – Annually
- Always verify and use current chart editions



Aeronautical Chart Users' Guide

https://aeronav.faa.gov/user_guide/cug-complete_20250612.pdf

VFR SECTIONAL AND TERMINAL AREA CHARTS

GENERAL INFORMATION

The symbols shown in this section illustrate those that appear in the Sectional Aeronautical Charts (Sectionals) and Terminal Area Charts (TACs). The same symbology is utilized in VFR Flyway Planning Charts, Helicopter Route Charts and Caribbean Aeronautical Charts (CACs), however the scale of the symbols may be different due to the particular chart scales. Where symbology is distinctive to a given chart, examples and explanations are given in the additional examples. These charts are updated every 56 days.

AIRPORTS

Landplane: Civil

Airports having control towers (CT) are shown in blue, all others are shown in magenta.

All recognizable runways, including some that may be closed, are shown for visual identification purposes. Fuel available.

Runway patterns will be depicted at airports with at least one hard surfaced runway 1500' or greater in length.

Landplane: Civil-Military

Landplane: Military

Refueling and repair facilities not indicated.

Helipad

(Selected)

Foreign

Foreign Airport Note

NOTE: Airports outside the U.S. Flight Information Region (FIR) are shown with the standard symbol. Only the airport names and ICAO identifiers are shown.

Non-Towered

Towered

Non-Towered

Towered

Non-Towered

Towered

Non-Towered

Towered

Non-Towered

Towered

Non-Towered

Towered

Ultralight Flight Park

(Selected)

Landplane: Landmark Value

Fuel not available

or

Complete information is not available.

PUBLIC USE - (Soft surfaced runway, or hard surfaced runway less than 1500' in length.) Fuel not available.

RESTRICTED OR PRIVATE - (Soft surfaced runway, or hard surfaced runway less than 1500' in length.) Non-public use having landmark value.

OBJECTIONABLE
OBJECTIONABLE is an airport that has an airspace determination based upon a number of factors including conflicting traffic patterns with another airport, hazardous runway conditions, or natural or man-made obstacles in close proximity to the landing area.

UNVERIFIED - A landing area available but warranting more than ordinary precaution due to:

(1) lack of current information on field conditions,

and/or

(2) available information indicates peculiar operating limitations.

ABANDONED - Depicted for landmark value or to prevent confusion with an adjacent usable landing area. (Normally at least 3000' paved).

Appropriate note as required for hard surfaced runways only: "(CLOSED)"

Airport Diagram Features:

1. Runways

- Complete with magnetic headings (including magnetic variation and epoch year) and identifiers.
- Runways under construction shall also be shown.
- Runway dimensions, displaced thresholds, runway end elevations.
- Runway surface composition.
- Weight bearing capacity (landing gear configuration or Pavement Classification Number).
- Land and Hold Short (LAHSO) lines, ILS hold lines, Localizer/Glide Slope Critical Areas.
- Arresting Gear. To include Engineered Materials Arresting System (EMAS).

2. Taxiways, with identifiers. Taxiways under construction shall also be shown.

3. Hot Spot locations.

4. Parking areas, run-up pads, alert areas, landing pads, "Non-Movement" areas (where pilot is NOT under air traffic control), ramps, aprons and hold pads.

5. Turnarounds and run-up areas.

6. Stopways, overruns, and blast pads.

7. Large tanks, including fueling area.

8. Control towers (include tower height).

9. Airport beacon.

10. Landing direction indicators.

11. Lighting.

12. Navigational Aids (NAVAIDs).

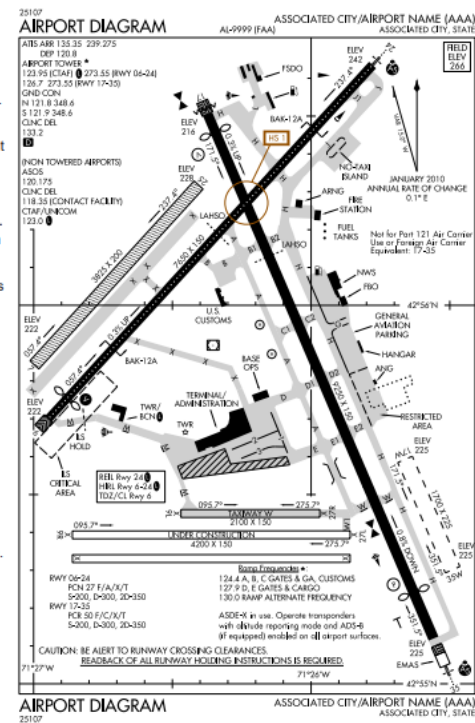
13. Helicopter pads.

14. Radar reflectors.

15. Any building that pilot can taxi to. Other buildings to include terminal/administration and Base operations, fire station, NWS, AFSS, FAA, FSDO, ANG, USCG, FBO.

16. Comm Frequencies.

Note: Star when used in the Comm Frequencies indicates part-time status. Check Chart Supplement for times of operation.



Airport / Facility Directory - (AFD/Chart Supplement)

Essential to planning

Most comprehensive information on a given airport

- Detailed runway info, procedures, frequencies, services, hours of operation, & more

Reference all airports during planning

- Departure, Destination, all potential alternates



Airport / Facility Directory Contents

GENERAL INFORMATION

1

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AFD Legends

12

AIRPORT/FACILITY DIRECTORY LEGEND

SAMPLE

1 CITY NAME

2 AIRPORT NAME (ALTERNATE NAME) (LTS)(KLT/S) CIV/MIL 3 N UTC-6(-5DT) N34°41.93' W99°20.20' 200 B TPA-1000(800) ADE LRA Class IV, ARFF Index A NOTAM FILE ORL Not Insp. MON Airport

3 RWY 18-36 H12004X200 (ASPH-CONC-GRVD) S-90, D-160, ZD-300 PCN 80 R/B/W/T HIRL CL RWY 18-RLS: MALS/F, TDZL, REIL PAPI(P2R)—GA 3.0° TCH 36'. RVR-TMR. This displac 300'. Trees. Rgt tlc. 0.3% up. RWY 36: ALSF1. 0.4% down.

4 RWY 09-27: H6000X150 (ASPH) PCR 1234 R/B/W/T MIRL RWY 173-353: H3515X150 (ASPH-PFC) AUW PCN 59 F/A/W/T

5 LAND AND HOLD-SHORT OPERATIONS

LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
Rwy 18	09-27	6500
Rwy 36	09-27	5400

6 RUNWAY DECLARED DISTANCE INFORMATION

Rwy 18: TORA-12004 TODA-12004 ASDA-11704 LDA-11504
Rwy 36: TORA-12004 TODA-12004 ASDA-12004 LDA-11704

7 ARRESTING GEAR/SYSTEM

Rwy 18 HOOK E5 (65' OVRN) BAK-14 BAK-12B (1650')
BAK-14 BAK-12B (1087') HOOK E5 (74' OVRN) RWY 36

8 SERVICE: S4 FUEL 100LL, JET A OX 1, 3 LGT ACTIVATE MALS/Rwy 29, REIL Rwy 11, VASI Rwy 11, HIRL Rwy 11-29, PAPI Rwy 17 and Rwy 35, MIRL Rwy 17-35—CTAF. MILITARY—A-GEAR E-5 connected on dep end, disconnected on apch end.

9 JASU 3(AM32A-60) 2(A/M32A-86) FUEL J8(MIRL)(NC-100, A) FLUID W SP PRESAIR LUX O-128 MAINT S1 Mon-Fri 1000-2200Z; TRAN ALERT Avbl 1300-0200Z; svc limited weekends.

10 NOISE: Noise abatement 3 miles from Rwy 18. Contact tower manager.

11 AIRPORT REMARKS: Special Air Traffic Rules—Part 93, see Regulatory Notices, Attended 1200-0300Z. Parachute Jumping. Deer invol arpt. Heavy jumbo jet training surface to 9000'. Twy A cld indef. Flight Notification Service (ADCUS) avbl.

12 MILITARY REMARKS: ANG PPR/Official Business Only. Base OPS DSN 638-4390, C503-335-4222. Ctc Base OPS 15 minutes prior to ldg and after dep. Limited train parking.

13 AIRPORT MANAGER: (580) 481-5739

14 WEATHER DATA SOURCES: AWOS-1 120.3 (202) 426-8000. LAWRS.

15 COMMUNICATIONS: SFA CTAF 122.8 UNICOM 122.95 ATIS 127.25 273.5 (202) 426-8003 PFD 372.2

16 NAME FSS (ORL) on arpt. 123.65 122.65 122.2 NAME RCO 112.2T 112.1R (NAME RADIO)

17 NAME APP/DEP CON 128.35 257.725 (1200-0400Z)

18 TOWER 119.65 255.6 (1200-0400Z) GND CON 121.7 600 135.075 (ORLANDO CLNC) CLNC DEL 125.55

19 CPOLC D-HZWXR, D-TAXI, DCL (LOGON KMEM)

20 NAME COMD POST (GERONIMO) 311.0 321.4 6761 PMSY METRO 239.8 NAME OPS 257.5

21 AIRSPACE: CLASS B See VFR Terminal Area Chart.

22 VOR TEST FACILITY (VOT): 116.7

23 RADIO AIDS TO NAVIGATION: NOTAM FILE ORL VHF/DF ctc FSS.

(VOT) (H) VORTAC 112.2 MCO Chan 59 N28°32.55' W81°20.12' at fld. 1110/8E.
(H) TACAN Chan 29 CBU (109.2) N28°32.65' W81°21.12' at fld. 1115/8E.
HERNY RDB (LOM) 221 OR N28°37.40' W81°21.05' 177° 5.4 NM to fld.
ILS/DME 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.
ASR/PAR (1200-0400Z)

24 COMM/NAV/WEATHER REMARKS: Emerg frequency 121.5 not avbl at twr.

25 HELIPAD H1: H100X75 (ASPH)

26 HELIPAD H2: H60X60 (ASPH)

27 HELIPORT REMARKS: Helipad H1 lctd on general aviation side and H2 lctd on air carrier side of arpt. 187 TPA 1000(813)

28 WATERWAY 15-33: 5000X425 (WATER)

29 SEAPLANE REMARKS: Birds roosting and feeding areas along river banks. Seaplanes operating adjacent to SW side of arpt not visible from twr and are required to ctc twr.

30 JACKSONVILLE COPTER H-46, L-19C JAP, BAP, AD

All bearings and radials are magnetic unless otherwise specified. All mileages are nautical unless otherwise noted. All times are Coordinated Universal Time (UTC) except as noted. All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted. The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

AIRPORT/FACILITY DIRECTORY LEGEND

13

10 SKETCH LEGEND

RUNWAYS/LANDING AREAS

Hard Surface

Metal Surface

Other than Hard Surface Runways

Water Runway

Under Construction

Closed Rwy

Closed Pavement

Helicopter Landings Area

Displaced Threshold

Taxiway, Apron and Stopways

MISCELLANEOUS BASE AND CULTURAL FEATURES

Buildings

Power Lines

Towers

Wind Turbine

Tanks

Oil Well

Smoke Stack

Obstruction

Controlling Obstruction

Trees

Populated Places

Cuts and Fills

Cliffs and Depressions

Ditch

Hill

RADIO AIDS TO NAVIGATION

VORTAC

VOR/DME

TACAN

DME

VOR

NDB

NDB/DME

MISCELLANEOUS AERONAUTICAL FEATURES

Airport Beacon

Wind Cone

Landing Tee

Tetrahedron

Control Tower

APPROACH LIGHTING SYSTEMS

A dot "*" portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g. (A) Negative symbology, e.g. (A)

Indicates Pilot Controlled Lighting (PCL).

Runway Centerline Lighting

(A) Approach Lighting System ALSF-2

(A1) Approach Lighting System ALSF-1

(A2) Short Approach Lighting System SALS/SALSF

(A3) Simplified Short Approach Lighting System (SSALS) with RAIL

(A4) Medium Intensity Approach Lighting System (MALS and MALSF/SSALS and SSALF)

(A5) Medium Intensity Approach Lighting System (MALS) and RAIL

(A6) Omnidirectional Approach Lighting System (ODALS)

(D) Navy Parallel Row and Cross Bar

(F) Air Force Overrun

(V) Visual Approach Slope Indicator with Standard Threshold Clearance provided Pulsating Visual Approach Slope Indicator (PVASI)

(V2) Visual Approach Slope Indicator with a threshold crossing height to accommodate long bodied or jumbo aircraft

(V3) Tri-color Visual Approach Slope Indicator (TRCV)

(V4) Approach Path Alignment Panel (APAP)

(P) Precision Approach Path Indicator (PAPI)

BEVERLY RGNL (BVY)(KBVY) 3 NW UTC-5(-4DT) N42°35.05' W70°54.97'

107 B LRA NOTAM FILE BVY

RWY 16-34: H5001X100 (ASPH-GRVD) S-30, D-55, 2D-103 MRL

0.5% up NW

RWY 16: MALS. PAPI(P4L)—GA 3.5° TCH 41'. Thld dsplcd 239'. Trees.

RWY 34: REIL.

RWY 09-27: H4755X100 (ASPH-GRVD) S-30, D-114, 2S-145,

2D-180 MRL 0.4% up E

RWY 09: PAPI(P4L)—GA 3.0° TCH 43'. Tree.

RWY 27: PAPI(P4L)—GA 3.22° TCH 46'. Thld dsplcd 250'. Trees.

LAND AND HOLD-SHORT OPERATIONS

LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
RWY 09	16-34	3450
RWY 16	09-27	4000

SERVICE: S4 FUEL 100LL, JET A, A+ OK 3, 4 LGT Rwy 16 nstd
MALS-800 ft. When twr clsd ACTVT MALS Rwy 16; REIL Rwy 34;
PAPI Rwy 16, 09 and 27; MRL Rwy 09-27 and Rwy 16-34—CTAF.

NOISE: Noise sensitive arpt. Voluntary compliance req of all acft exceeding 75 db to not land/depart arpt 0400-1200Z. Noise abatement procedures in effect ctc arpt manager 978-921-6072. All arrival/departure acft follow manufacturers recommended procedures for quiet ops and minimum noise. Noise sensitive area off the DER 27 to the W, SW, & S and off the DER 34 to the NW.

AIRPORT REMARKS: Attended 1330-2130Z. Birds frequently on or invof arpt, occasional deer or coyote on rwy. Fld cond not mnt 0200-1200Z; 15 May-31 Oct; 0100-1200Z; 01 Nov-14 May. Fuel svc 1030-2330Z, after hrs req only call 978-774-2070. Fuel, parking ctc FBO 129.725 or 978-774-2070. No ultralight or banner towing allowed. Rwy 16 is the preferred calm wind rwy. Rwy 16-34: due to hump at midpt, opposite ends of the rwy not vsb at gnd level. No tiedown ropes on public tsnt prkg. E ramp tsnt spaces; space nrs 15, 16 & 17 only. Ldg fees for transient acft. Overnight parking fee. Flight Notification Service (ADCUS) available.

AIRPORT MANAGER: 978-921-6072

WEATHER DATA SOURCES: ASOS 119.2 (978) 921-5042. LAWRS.

COMMUNICATIONS: CTAF 125.2 ATIS 119.2 UNICOM 122.95

® BOSTON APP/DEP CON 124.4

TOWER 125.2 (1200-0200Z; 15 May-31 Oct; 1200-0100Z; 01 Nov-14 May) GND CON 121.6

AIRSPACE: CLASS D svc 1200-0200Z; 15 May-31 Oct, 1200-0100Z; 01 Nov-14 May; other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE LWM.

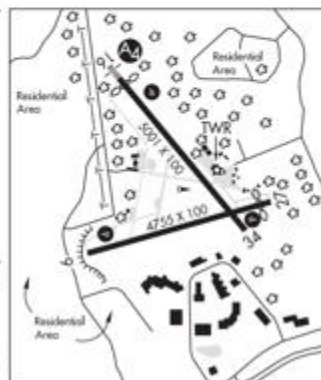
LAWRENCE (L) DME 112.5 LWM Chan 72 N42°44.43' W71°05.69' 140° 12.3 NM to fld. 306.

DME unusable:

160°-195° byd 23 NM blo 2,500'

LOC/DME 110.5 I-BVY Chan 42 Rwy 16. LOC unusable byd 15° left of course. DME unusable byd 15° left of course.

COMM/NAV/WEATHER REMARKS: Emerg frequency 121.5 not available at twr. When twr not opn, close flight plan with Boston apch—121.6.



NEW YORK
COPTER
H-110, 12K, L-330
IAP, AD

BOMDE N41°43.93' W70°26.48' NOTAM FILE FMH.

NDB (LOM) 362 FM 235° 5.7 NM to Cape Cod Coast Guard Air Station.

118

MASSACHUSETTS

BEDFORD

LAURENCE G HANSCOM FLD (BED)(KBED) P (AF) 0 NE UTC-5(-4DT) N42°28.20' W71°17.34'

132 B TPA—See Remarks. Class I, ARFF Index B NOTAM FILE BED

H-110, 12K, L-330, 341
IAP, AD

RWY 11-29: H7011X150 (ASPH-GRVD) S-120, D-250, 2S-127,

2D-389, 2D/2D2-916 PCR 950 F/D/W/T HIRL

RWY 11: MALSR. PAPI(P4L)—GA 3.0° TCH 67'. RVR-T Hill.

RWY 29: MALSR. PAPI(P4R)—GA 3.0° TCH 52'. RVR-R

RWY 05-23: H5107X150 (ASPH-GRVD) S-120, D-248, 2S-149,

2D-323, 2D/2D2-823 PCR 770 F/D/W/T MIRL

RWY 05: REIL. PAPI(P4L)—GA 3.5° TCH 55'.

RWY 23: REIL. PAPI(P4R)—GA 3.2° TCH 55'.

LAND AND HOLD—SHORT OPERATIONS

LDG RWY	HOLD—SHORT POINT	AVBL LDG DIST
RWY 05	11-29	3000
RWY 11	05-23	2650
RWY 29	05-23	3662

RUNWAY DECLARED DISTANCE INFORMATION

RWY 05: TORA-5107 TODA-5107 ASDA-5107 LDA-5107

RWY 11: TORA-7011 TODA-7011 ASDA-7011 LDA-7011

RWY 23: TORA-5107 TODA-5107 ASDA-5107 LDA-5107

RWY 29: TORA-7011 TODA-7011 ASDA-7011 LDA-7011

SERVICE: S4 FUEL 100LL, JET A Q1, 2, 3, 4 LGT Actvt MALSR

Rwy 11 and 29; REIL Rwy 05 and 23; HIRL Rwy 11-29; MIRL Rwy

05-23; twy lghts—118.5. **MILITARY—JASU** 3(A/M32A-86) 2(MA-1A) FUEL 100LL, A **TRAN ALERT** Opr 1200-0400Z; wkld; 1400-2200Z; Sun; PPR OT and hol DSN 845-5589/5592. De-icing avbl fr vendor. Ltd hgr space and extremely ltd maint. Fleet svc avbl fr vendor. Mil acft must arng for prkg on east ramp with tran alert or vendor.

NOISE: Noise abatement procs in effect, helicopters opr within controlled airspace are rqr'd to maintain highest possible alt. Voluntary noise abatement procs in effect ctc amgr 671-212-6592. Noise sensitive historic area S of arpt; for Rwy 23 dep cont rwy hdg to 1000 ft AGL, turning crosswind over Rte 2.

AIRPORT REMARKS: Attended continuously. Birds and wildlife on and in/ov arpt. PPR for all acft carrying explosives call 617-212-6592. APU-GPU ops ltd to max of 30 mins. No PLAs/TGLs for acft 12,500 lbs and over. No PLAs/TGLs for acft under 12,500 lbs 0400-1200Z. Be alert for small acft parked on ramps. Rwy 29 right tlc acft over 12,500 lbs. TPA—1132(1000) fixed wing, 1632(1500) turbojet, 1932(1800) heavy jet acft. Clsd to Part 121 ACR ops with over 60 seats excp 24 hr PPR call 781-869-8000. Twy C, F, J, N, R, S, T, Twy M south of Twy E & Twy G btn Rwy 11-29 & Rwy 05-23 clsd to acft gtr than 118 ft wingspan. Twy R clsd to ACR ops—GA use only. Twy R1, R2 clsd to acft gtr than 49 ft wingspan. Surcharge for each ldg and dep 0400-1200Z. Coml and tsnt ldg fee. Flight Notification Service (ADCUS) avbl. User fee arpt. NOTE: See Special Notices—Arrival Alert.

AIRPORT MANAGER: 617-212-6592

WEATHER DATA SOURCES: ASOS 124.6 (781) 372-5512. LAWRS.

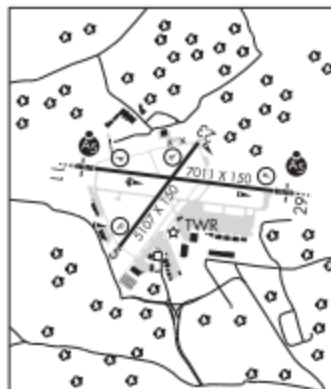
COMMUNICATIONS: CTAF 118.5 ATIS 124.6 (781) 372-5509 UNICOM 122.95

® BOSTON APP/DEP CON 124.4

HANSCOM TOWER 118.5 (1200-0400Z) GND CON 121.7 CLNC DEL 121.85

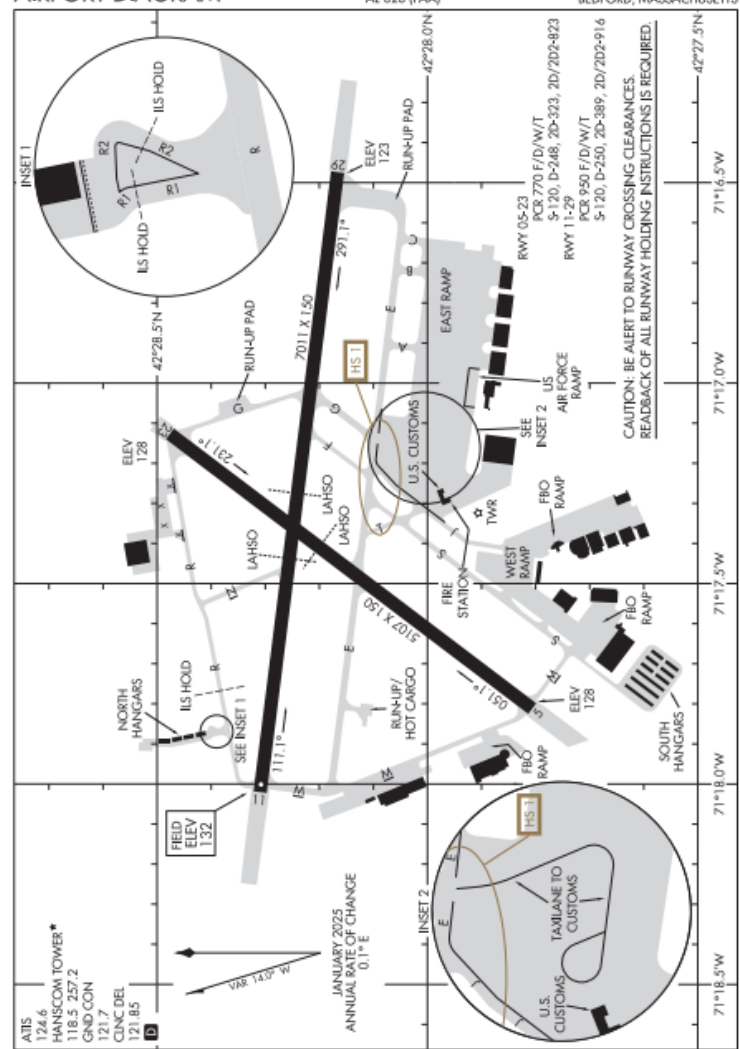
AIRSPACE: CLASS D svc 1200-0400Z; other times CLASS G.

CONTINUED ON NEXT PAGE



25163

AIRPORT DIAGRAM



AIRPORT DIAGRAM

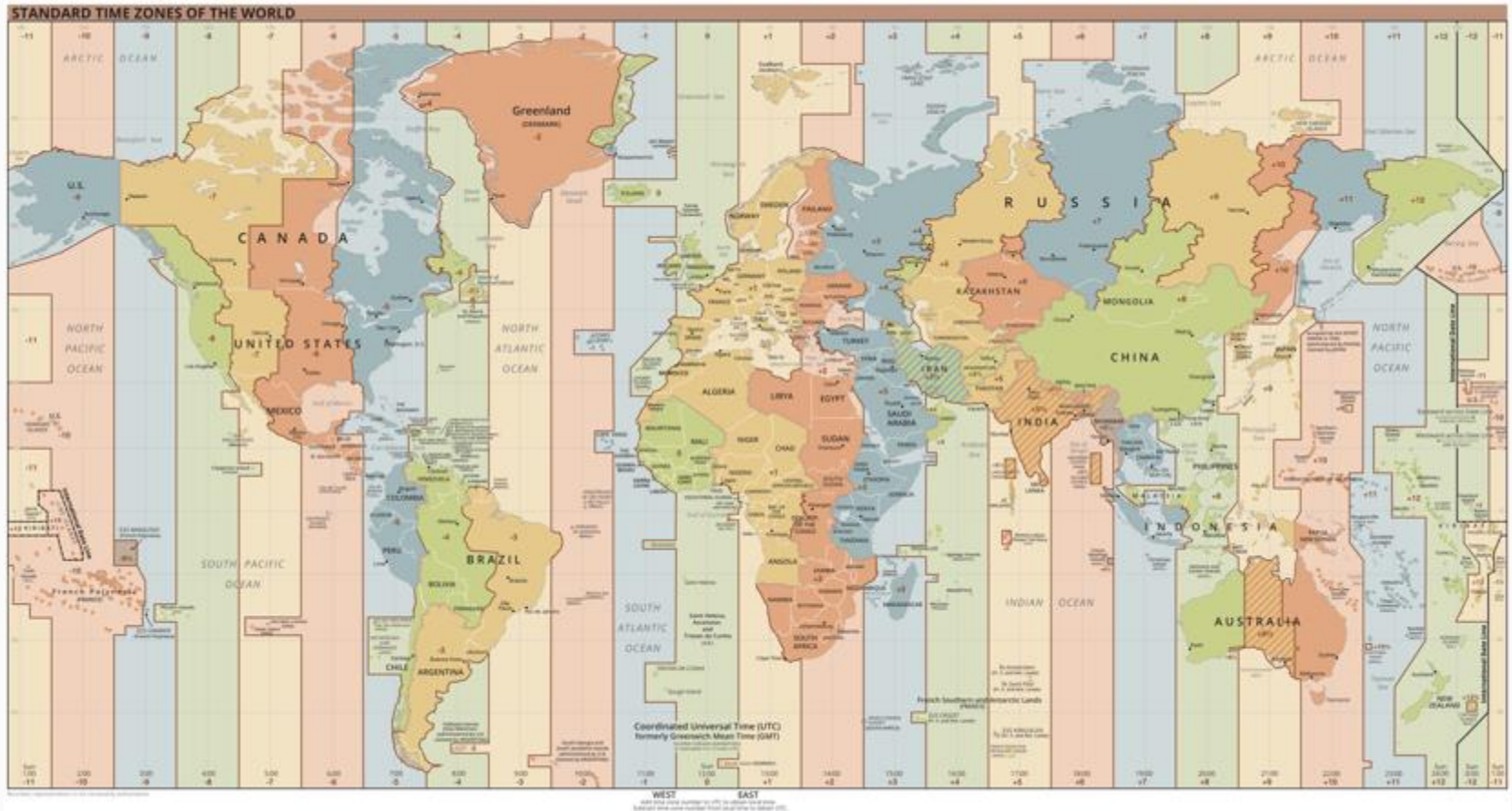
25163

BEDFORD, MASSACHUSETTS
LAURENCE G HANSCOM FLD (BED)

Coordinated Universal Time (“Zulu”)



Time Zones



Daylight Savings Time

BEVERLY RGNL (BVY)(KBVY) 3 NW UTC-5(-4DT) N42°35.05' W70°54.97'
107 B LRA NOTAM FILE BVY

RWY 16-34: H5001X100 (ASPH-GRVD) S-30, D-55, 2D-103 MIRL
0.5% up NW

RWY 16: MALS. PAPI(P4L)—GA 3.5° TCH 41'. Thld dspcd 239'. Trees.

RWY 34: REIL.

RWY 09-27: H4755X100 (ASPH-GRVD) S-30, D-114, 2S-145,
2D-180 MIRL 0.4% up E

RWY 09: PAPI(P4L)—GA 3.0° TCH 43'. Tree.

RWY 27: PAPI(P4L)—GA 3.22° TCH 46'. Thld dspcd 250'. Trees.

LAND AND HOLD—SHORT OPERATIONS

LDG RWY	HOLD—SHORT POINT	AVBL LDG DIST
RWY 09	16-34	3450
RWY 16	09-27	4000

SERVICE: S4 FUEL 100LL, JET A, A+ OX 3, 4 LGT Rwy 16 nstd
MALS-800 ft. When twr clsd ACTVT MALS Rwy 16; REIL Rwy 34;
PAPI Rwy 16, 09 and 27; MIRL Rwy 09-27 and Rwy 16-34—CTAF.

NOISE: Noise sensitive arpt. Voluntary compliance req of all acft exceeding
75 db to not land/depart arpt 0400-1200Z‡. Noise abatement
procedures in effect ctc arpt manager 978-921-6072. All
arrival/departure acft follow manufacturers recommended procedures
for quiet ops and minimum noise. Noise sensitive area off the DER 27
to the W, SW, & S and off the DER 34 to the NW.

NEW YORK

COPTER

H-11D, 12K, L-33D

IAP, AD



⑥ TIME CONVERSION

Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as "Z" time. The directory indicates the number of hours to be subtracted from UTC to obtain local standard time and local daylight saving time UTC-5(-4DT). The symbol ‡ indicates that during periods of Daylight Saving Time (DST) effective hours will be one hour earlier than shown. In those areas where daylight saving time is not observed the (-4DT) and ‡ will not be shown. Daylight saving time is in effect from 0200 local time the second Sunday in March to 0200 local time the first Sunday in November. Canada and all U.S. Conterminous States observe daylight saving time except Arizona and Puerto Rico, and the Virgin Islands. If the state observes daylight saving time and the operating times are other than daylight saving times, the operating hours will include the dates, times and no ‡ symbol will be shown, i.e., April 15-Aug 31 0630-1700Z, Sep 1-Apr 14 0600-1700Z.

Notices to Air Missions (NOTAM)

Location	Number	Class	Start Date UTC	End Date UTC 	Condition
LWM	08/009	Aerodrome	08/11/2023 1431	11/10/2023 2359	TWY D CLSD 2308111431-2311102359
LWM	09/015	Obstruction	09/25/2023 0111	10/24/2023 0001	OBST TOWER LGT (ASR 1005780) 424026.00N0711124.00W (3.9NM SW LWM) 602.7FT (402.9FT AGL) U/S 2309250111-2310240001
LWM	09/020	Aerodrome	09/26/2023 2013	10/15/2023 1900	RWY 14/32 CLSD 2309262013-2310151900
LWM	09/022	Aerodrome	09/28/2023 1822	10/06/2023 2100	RWY 32 PAPI U/S 2309281822-2310062100
LWM	09/023	Aerodrome	09/28/2023 1823	10/06/2023 2100	RWY 32 RWY END ID LGT U/S 2309281823-2310062100
LWM	LTA-A90-25	LTA	02/17/2022 1200	02/17/2024 1200	Practice Instrument Approaches

Lawrence Muni

Facility: LWM

NOTAM #: 09/023

Class: Aerodrome

Status: Active

Issue Date UTC: 09/28/2023 1823

Start Date UTC: 09/28/2023 1823

End Date UTC: 10/06/2023 2100

Domestic ICAO Plain Language

Issuing Airport: (LWM) Lawrence Muni

NOTAM Number: 09/023

Effective Time Frame

Beginning: Thursday, September 28, 2023 1823 (UTC)

Ending: Friday, October 6, 2023 2100 (UTC)

Affected Areas

Runway: 32

Runway Light Type: Runway end identifier Lights

Operational Status: Out of Service

[\[FAA FNS NOTAM Search\]](#)

Purpose for NOTAMs

- Hazards, such as air shows, parachute jumps, kite flying, and rocket launches
- Flights by important people such as heads of state
- Closed runways
- Inoperable radio navigational aids
- Military exercises with resulting airspace restrictions
- Inoperable lights on tall obstructions
- Temporary erection of obstacles near airfields
- BIRDTAMs, SNOWTAMs, ASHTAMs
- Software code risk announcements with associated patches to reduce specific vulnerabilities

Types of NOTAMs

- NOTAM (D)
 - For all navigational facilities that are part of the NAS, and all public use airports, seaplane bases, and heliports in the C/S U.S.
- FDC NOTAM
 - Interim IFR flight procedures
 - Temporary flight restrictions (TFRs)
- Pointer NOTAM
- Military

NOTAM Composition

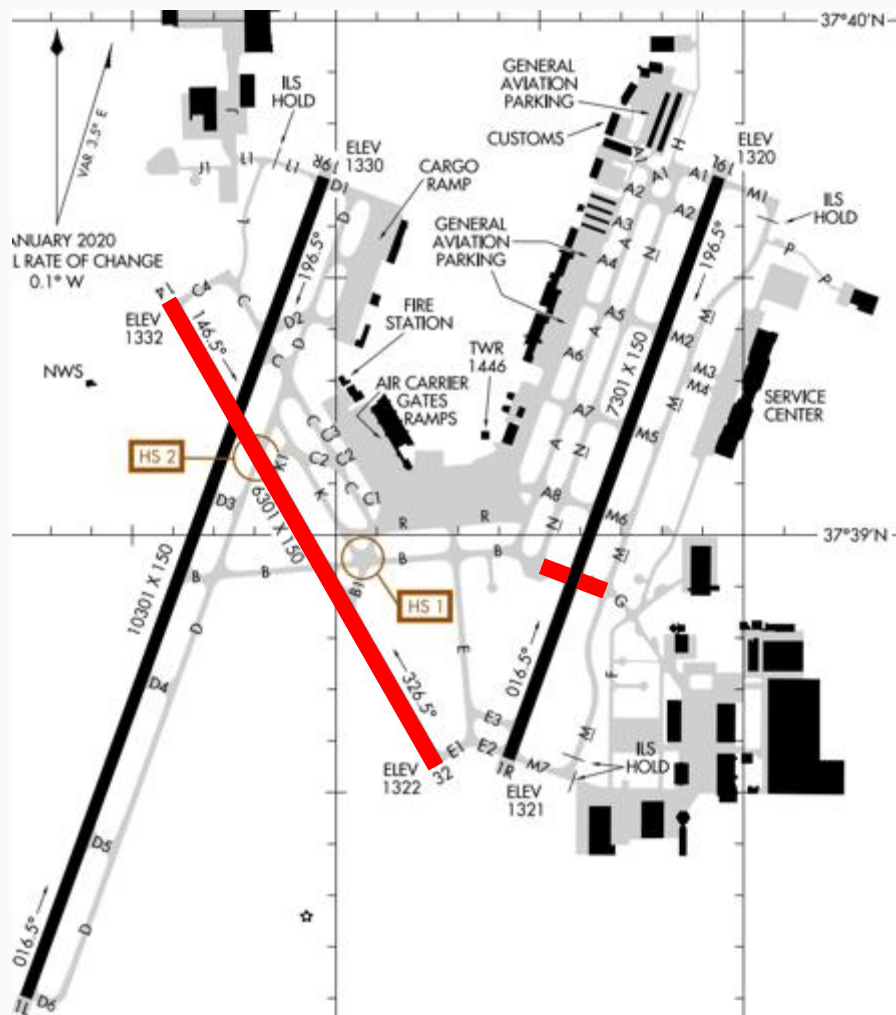
- NOTAM Composition
 - An exclamation point (!)
 - Accountability Location (the identifier thereof)
 - Affected Location (the identifier thereof)
 - KEYWORD (one of the following: RWY, TWY, RAMP, APRON, AD, COM, NAV, SVC, OBST, AIRSPACE, (U) and (O))
 - Surface Identification (if runway related, taxiway related, or ramp/apron related)
 - Condition (the condition being reported)
 - Time (identifies the effective time(s) of the NOTAM condition)
- Example
 - !BDR 10/002 6B6 RWY 12/30 CLSD 2310020400-2405010200

NOTAM (D) Keywords

Keyword	Example	Meaning
RWY	RWY 3/21 CLSD	Runways 3 and 21 are closed to aircraft.
TWY	TWY F LGTS OTS	Taxiway F lights are out of service.
RAMP	RAMP TERMINAL EAST SIDE CONSTRUCTION	The ramp in front of the east side of the terminal has ongoing construction.
APRON	APRON SW TWY C NEAR HANGARS CLSD	The apron near the southwest taxiway C in front of the hangars is closed.
AD	AD ABN OTS	Aerodromes: The airport beacon is out of service.
OBST	OBST TOWER 283 (245 AGL) 2.2 S LGTS OTS (ASR 1065881) TIL 0707272300	Obstruction: The lights are out of service on a tower that is 283 feet above mean sea level (MSL) or 245 feet above ground level (AGL) 2.2 statute miles south of the field. The FCC antenna structure registration (ASR) number is 1065881. The lights will be returned to service 2300 UTC (Coordinated Universal Time) on July 27, 2007.
NAV	NAV VOR OTS	Navigation: The VOR located on this airport is out of service.
COM	COM ATIS OTS	Communications: The Automatic Terminal information Service (ATIS) is out of service.
SVC	SVC TWR 1215-0330 MON -FRI/1430-2300 SAT/1600-0100 SUN TIL 0707300100	Service: The control tower has new operating hours, 1215-0330 UTC Monday Thru Friday. 1430-2300 UTC on Saturday and 1600-0100 UTC on Sunday until 0100 on July 30, 2007.
	SVC FUEL UNAVBL TIL 0707291600	Service: All fuel for this airport is unavailable until July 29, 2007, at 1600 UTC.
	SVC CUSTOMS UNAVBL TIL 0708150800	Service: United States Customs service for this airport will not be available until August 15, 2007, at 0800 UTC.
AIRSPACE	AIRSPACE AIRSHOW ACFT 5000/BLW 5 NMR AIRPORT AVOIDANCE ADZD WEF 0707152000-0707152200	Airspace. There is an airshow being held at this airport with aircraft flying 5,000 feet and below within a 5 nautical mile radius. Avoidance is advised from 2000 UTC on July 15, 2007, until 2200 on July 15, 2007.
U	ORT 6K8 (U) RWY ABANDONED VEHICLE	Unverified aeronautical information.
O	LOZ LOZ (O) CONTROLLED BURN OF HOUSE 8 NE APCH END RWY 23 WEF 0710211300-0710211700	Other aeronautical information received from any authorized source that may be beneficial to aircraft operations and does not meet defined NOTAM criteria.

NOTAM Examples

- !ICT 08/337 ICT TWY B BTN TWY M AND TWY N CLSD 2008241439-2011102359
- !ICT 10/083 ICT RWY 14/32 CLSD 2010151330-2010152000



Now answer this

When information is disseminated about a taxiway closure, it will be located in

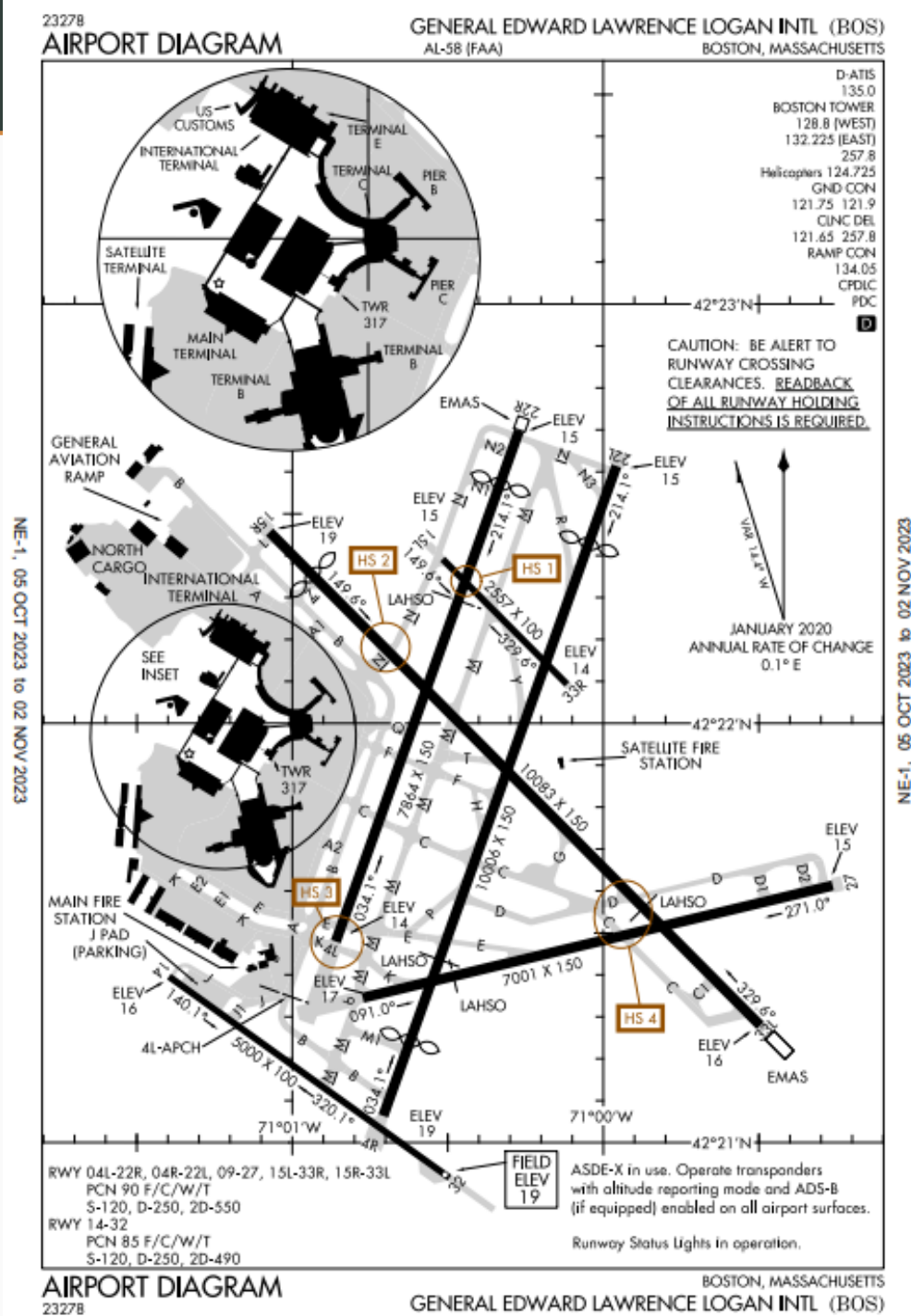
- A. FDC NOTAMs.
- ➔ B. NOTAM (D) distribution.
- C. Pointer NOTAMs.

Try a few

!BOS 08/452 BOS RWY 15R/33L
CLSD 2308202322-2311250459

!BOS 09/024 BOS TWY F BTN RWY
15R/33L AND RWY 04R/22L CLSD
2309011755-2311230459

!BOS 08/479 BOS TWY L BTN TWY
B AND APCH END RWY 15R CLSD
2308221156-2311252359



Automated Terminal Information Service (ATIS)



ATIS DEPARTURE	ATIS ARRIVAL
 INFORMATION BED 2351Z	 INFORMATION PWM 0659Z
WIND 100/05	WIND 010/15G21
ALTIMETER 2994	ALTIMETER A2979
SKY FEW030	SKY SCT100, SCT120
TEMP / DP 22/21	TEMP / DP 17/11
RW 11 ILS	RW --
TAXI --	TAXI --

NOTES

BED
5/23 CLSD
5/23 NOT GRVD S OF 11

PWM
DA005
CTAF/PCL 120.9
CD BOS CTR 128.2

Federal Aviation Regulations (FARs)

[Part 1:](#) Definitions & Abbreviations

[Part 61:](#) Certification: Pilots, Flight Instructors, and Ground Instructors

[Part 91:](#) General Operating and Flight Rules

[Part 21:](#) Certification Procedures

[Part 39:](#) Airworthiness Directives

[Part 43:](#) Maintenance

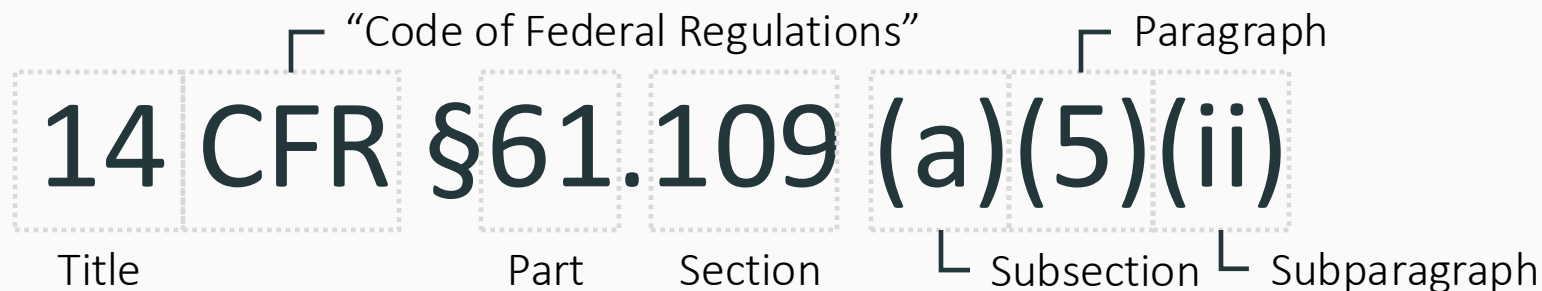
[Part 67:](#) Medical Standards & Certification



The old saying:

Part 61 is how you get your certificate and Part 91 is how you keep it.....

Federal Aviation Regulations (FARs)



- Title 14: Aeronautics & Space
 - Part 1 Definitions & Abbreviations
 - Part 21, 23 Aircraft Certification
 - Part 39 Airworthiness Directives
 - Part 43 Maintenance
 - Part 61 Certification: Pilots & Instructors
 - Part 71, 73 Airspace
 - Part 91 General Operating and Flight Rules
- Title 49: Transportation
 - Part 830 Notification of Aircraft Accidents or Incidents

Aeronautical Information Manual (AIM)

69

- Official guide to flight information and ATC procedures
- Navigation, airspace, ATC, medical facts, procedures, pilot/controller glossary, & more

Chapter 1. [AIR NAVIGATION](#)

Chapter 2. [AERONAUTICAL LIGHTING AND OTHER AIRPORT VISUAL AIDS](#)

Chapter 3. [AIRSPACE](#)

Chapter 4. [AIR TRAFFIC CONTROL](#)

Chapter 5. [AIR TRAFFIC PROCEDURES](#)

Chapter 6. [EMERGENCY PROCEDURES](#)

Chapter 7. [SAFETY OF FLIGHT](#)

Chapter 8. [MEDICAL FACTS FOR PILOTS](#)

Chapter 9. [AERONAUTICAL CHARTS AND RELATED PUBLICATIONS](#)

Chapter 10. [HELICOPTER OPERATIONS](#)

Chapter 11. [UNMANNED AIRCRAFT SYSTEMS \(UAS\)](#)

Appendix 1. [BIRD/OTHER WILDLIFE STRIKE REPORT](#)

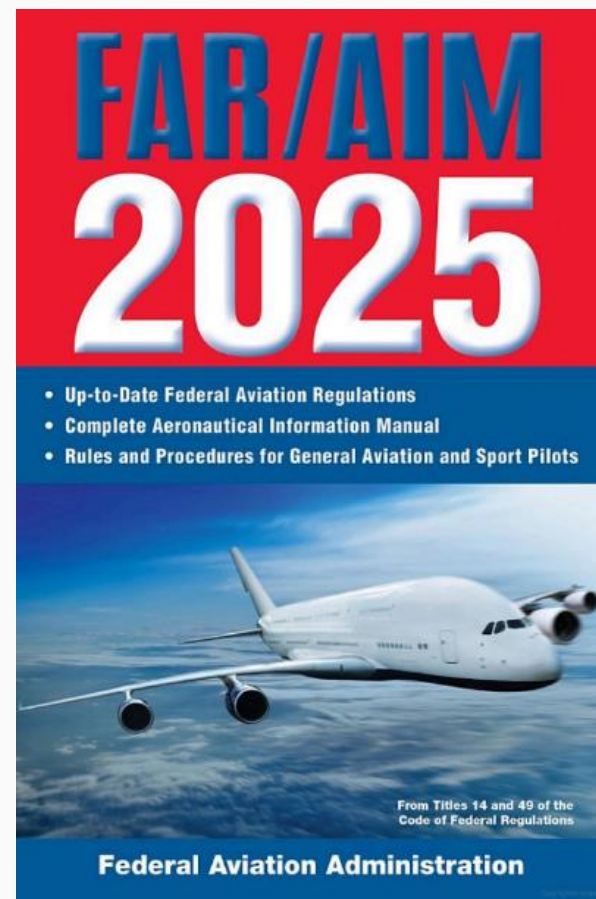
Appendix 2. [VOLCANIC ACTIVITY REPORTING FORM \(VAR\)](#)

Appendix 3. [ABBREVIATIONS/ACRONYMS](#)

Appendix 4. [FAA FORM 7233-4 INTERNATIONAL FLIGHT PLAN](#)

Appendix 5. [FAA FORM 7233-1 FLIGHT PLAN](#)

[PILOT/CONTROLLER GLOSSARY](#)



Aeronautical Information Manual (AIM)

- The [Aeronautical Information Manual \(AIM\)](#) is the official guide to basic flight information and ATC procedures for the aviation community flying in the NAS
 - An international version, containing parallel information as well as specific information on international airports, is also available
- Also contains information of interest to pilots, such as
 - Health and medical facts
 - Flight safety
 - Pilot/controller glossary of terms used in the system
 - Information on safety, accidents, and reporting of hazards.

Advisory Circulars (ACs)

- ACs provide a single, uniform, agency-wide system that the FAA uses to deliver advisory material to FAA customers, industry, the aviation community, and the public.
- An AC may be needed to:
 - Provide an acceptable, clearly understood method for complying with a regulation
 - Standardize implementation of a regulation or harmonize implementation for the international aviation community
 - Resolve a general misunderstanding of a regulation
 - Respond to a request from some government entity, such as General Accounting Office, NTSB, or the Office of the Inspector General
 - Help the industry and FAA effectively implement a regulation
 - Explain requirements and limits of an FAA grant program
 - Expand on standards needed to promote aviation safety, including the safe operation of airports

Advisory Circulars (ACs)

- FAA Advisory Circulars
- Informational document the FAA wants to distribute to the aviation community
- https://www.faa.gov/regulations_policies/advisory_circulars/

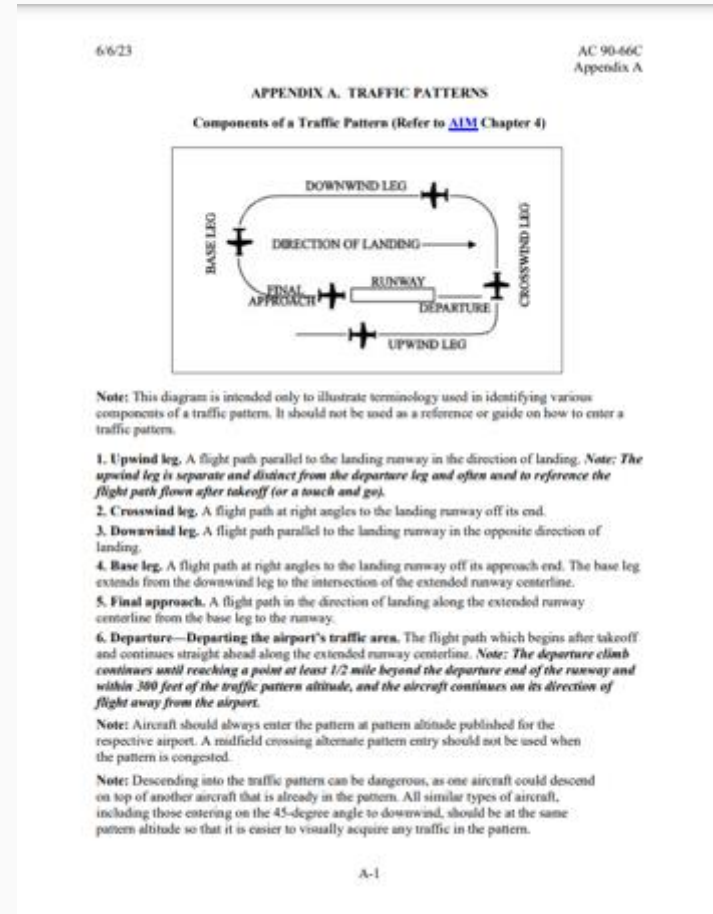


Examples of Important ACs

- AC 90-66C - Non-Towered Airport Flight Operations
- AC 91-92 - Pilot's Guide to a Preflight Briefing
- AC 60-22 - Aeronautical Decision Making
- **Aviation Weather Handbook**
 - AC 00-6, Aviation Weather.
 - AC 00-24, Thunderstorms.
 - AC 00-30, Clear Air Turbulence Avoidance.
 - AC 00-45, Aviation Weather Services.
 - AC 00-54, Pilot Windshear Guide.
 - AC 00-57, Hazardous Mountain Winds.

AC Example

- [14 CFR § 91.126](#) simply states that “Each pilot of an airplane must make all turns of that airplane to the left unless the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot must make all turns to the right.”
- [AC 90-66C](#) describes in detail the practice to fly at a non-towered airports that will best encourage flight safety



Jeppessen Information Services

- A subscription service for pilots which provides revisions for several flight information publications including the Jeppessen AIM, Jeppesen FARs for Pilots, the Jeppesen Airport Directory, JeppGuide, and the GPS/LORAN Coordinate Directory.
- Foreflight