Highlights of the DOD FLIP

Flight Information Publications

NOVEMBER 1965

PUBLISHED BY

THE AERONAUTICAL CHART AND INFORMATION CENTER

UNITED STATES AIR FORCE

INTRODUCTION

USAF/USN Flight Information Publications (FLIPS) were introduced in 1959 to meet Air Force and Navy requirements for a modernized flight information program offering maximum utility and flexibility. During the development of these FLIPs, all aeronautical information of direct interest to the two Services was carefully analyzed to determine the sequence and manner in which it would be used. This led to the establishment of categories based on primary operational use, i.e., planning, enroute, and terminal. The objectives in subsequent design of the products were: to segregate information according to the above categories and thus limit the amount of material required in the cockpit; and, to assure that the publication series could be readily adapted to future innovations in the control of air traffic.

United States coverage was produced first and subjected to a thorough operational test and evaluation by USAF/USN users before the new publication concept was approved. Subsequently, the program was extended to the overseas theaters and now provides standardized FLIP products for Air Force and Navy use in all areas of the free world.

During the ensuing years, the various components have been modified, as necessary, to meet changing operational requirements and to reflect the continuing refinement of the many national air traffic control systems. For the most part, this evolutionary process has been accomplished with a minimum of fanfare. Current changes are a bit out of the ordinary, however, for Navy and Air Force users and to Army users the package will be entirely new. Special attention is therefore warranted.

In recent months, DIAMC has convened an Ad Hoc Group consisting of representatives of the three Military Departments. The purpose of this group was to review the Flight Information Publications produced/procured by DOD in order to preclude duplition and establish standard DOD specifications where operational requirements permit.

The DOD FLIPs, which are discussed in some detail in the following pages, reflect the results of the DOD FLIP Ad Hoc Group. Recently identified Air Force and Navy requirements have been incorporated along with that additional information essential to US Army operations.

The new products are now to be evaluated to establish any further revision of specifications which may be necessary to meet the total military need for flight information. The DOD concept is being introduced initially in the United States. Selected elements of the three Military Departments will participate in an operational evaluation to identify any shortcomings in the products. Thereafter, the concept will be applied to the overseas products in accordance with local operational requirements of the three Military Departments.

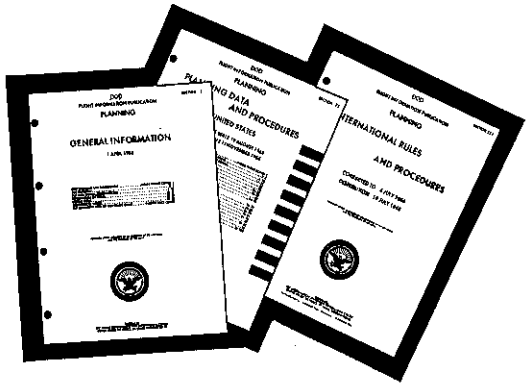
TABLE OF CONTENTS

FLIP PLANNING

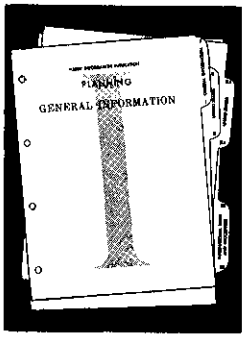
FLIP Planning is, by design, a publication media for aeronautical information which has been operationally identified as not normally required for "in-flight" reference. As a back-up document for enroute and terminal operations, it contains a wide range of data with which you must be familiar.

FLIP Planning is used, primarily, at Operations Offices for preparation for flights within the area of coverage, i.e., United States, Europe and North Africa, etc. Issuance for aircraft use may be authorized when the unit mission involves flight planning away from the home base at locations where FLIP publications are not available.

The scope of the publication is worldwide, however, not all sections are required for operations in any one theater. For utility and ease of maintenance, the sections are bound as individual booklets and punched for insertion in a special 4-ring binder bearing the title "Flight Information Publication – PLANNING".

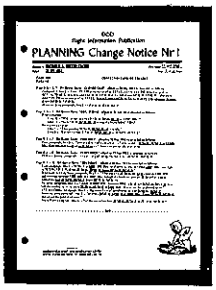


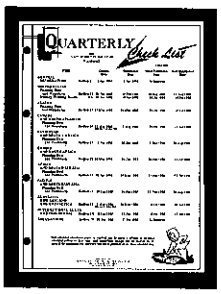
Total world coverage consists of eleven booklets, eight of which are devoted to planning data and procedures for separate geographical areas. Due to the bulk, two binders are recommended for those of you requiring complete coverage.



Tabbed divider cards are provided to separate the various booklets. Each Section II divider is a different color in conformance with the standard FLIP color code used for the related Enroute Supplement and Terminal covers.

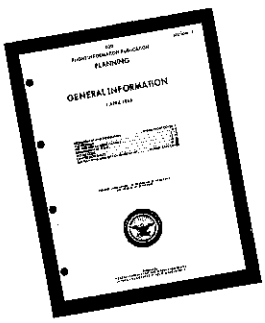
Individual Sections are issued at specific intervals. (See Section I for details). Schedules are based on the rate of change of information. Where necessary, Planning Change Notices (PCNs) or replacement pages are published between issues to disseminate critical information changes and corrections. They may also be used in lieu of complete Section reissue where accumulated changes are minor in nature.





A check list covering FLIP Planning is issued each quarter to enable you to verify that all sections appearing in the document are current.

SECTION I
GENERAL INFORMATION



This section of FLIP Planning contains information on items of general interest to all FLIP users. Here, for example, will be found a resume of the FLIP Program, in which all components are identified and briefly described.

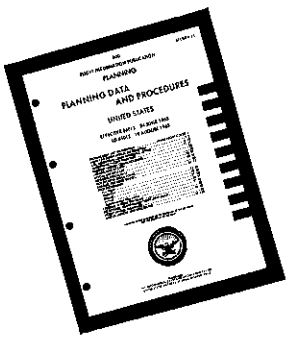
Various data listings ond tables have been grouped together. For instance, the aeronautical terms used most frequently in FLIPs and ATC communications are presented in a consolidated "Explanation of Terms" listing.

In the future, other types of data identified as opplicable worldwide, regulatory for all services, or of general educational value, may be transferred to Section I. Examples are the Visual (light gun) Signals and the Clearance Symbols and Abbreviotions now provided in each area Section II.

SECTION II
PLANNING DATA AND PROCEDURES

The series of booklets published under the above title constitute the major portion of FLIP Planning. Separate coverage is provided for eight geographical areas, as follows: United States; Alaska; Canada & North Atlantic; Caribbean & South America; Europe & North Africa; Africa & Southwest Asia; Pacific & Southeast Asia; and Australia, New Zealand & Antarctica. A chart of the area boundaries is shown on the back cover of Section I, General Information.

Each area Section II contains pertinent planning data and procedural information in support of its companion Enroute products. Every effort is made to confine the content to those items of concern during the pre-flight planning phase. Thus, the need for in-flight reference is reduced. Individual publication cycles range from monthly to bi-monthly, depending upon the stability of the content.



Section II for the United States is representative of the type and sequence of information which will be found in these booklets as they are converted to the DOD format. For example:

The INDEX FOR AERONAUTICAL INFORMATION shows the location of each piece of information in the FLIPs. Cross-references are used to assist in the location of data.

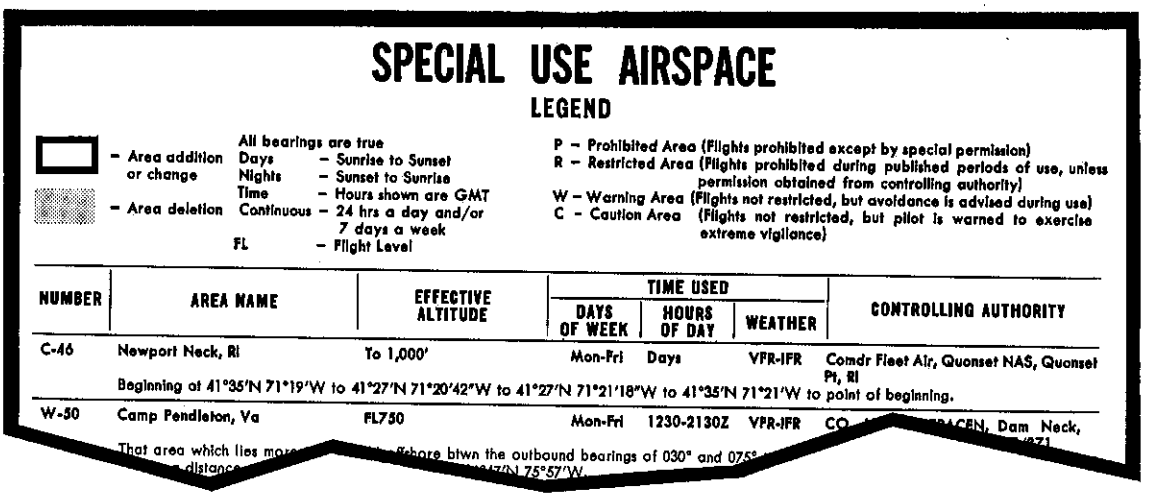
INDEX FOR AERONAUTICAL INFORMATION

Index lists pages of FLIP Planning on which information may be found and/or other primary publications to which reference may be made.

ES.....FLIP Enroute Supplement
EC.....FLIP Enroute Charts (Low and High Altitude)
E LA....FLIP Enroute Low Altitude Charts
E HA....FLIP Enroute High Altitude Charts
AAC.....Area Arrival Chart
VFR-S....FLIP Enroute VFR Supplement (US only)
IFR-S....FLIP Enroute IFR Supplement (US only)
TC.....FLIP Terminal Charts (Low and High Altitude)
T LA....FLIP Terminal Low Altitude Charts
T HA....FLIP Terminal High Altitude Charts
SID.....Standard Instrument Departure
FCG.....Foreign Clearance Guide
II 18....FLIP Planning (Section/Page)
AS.....FLIP Aerodrome Sketches

of Planning Sections Indexed: I - 1 Apr 1965, II - 19 Aug 1965, IIA - 19 Aug 1965, III - 6 July 1965.

A complete listing of SPECIAL USE AIRSPACE, in numerical sequence by designator number, provides the details needed to determine exact location, controlling authority, etc. Telephone numbers are shown, when available, to expedite your requests for area utilization.



SPECIAL USE AIRSPACE

LEGEND

- Area addition or change
- Area deletion

All bearings are true
Days – Sunrise to Sunset
Nights – Sunset to Sunrise
Time – Hours shown are GMT
Continuous – 24 hrs a day and/or 7 days a week
FL – Flight Level

P – Prohibited Area (Flights prohibited except by special permission)
R – Restricted Area (Flights prohibited during published periods of use, unless permission obtained from controlling authority)
W – Warning Area (Flights not restricted, but avoidance is advised during use)
C – Caution Area (Flights not restricted, but pilot is warned to exercise extreme vigilance)

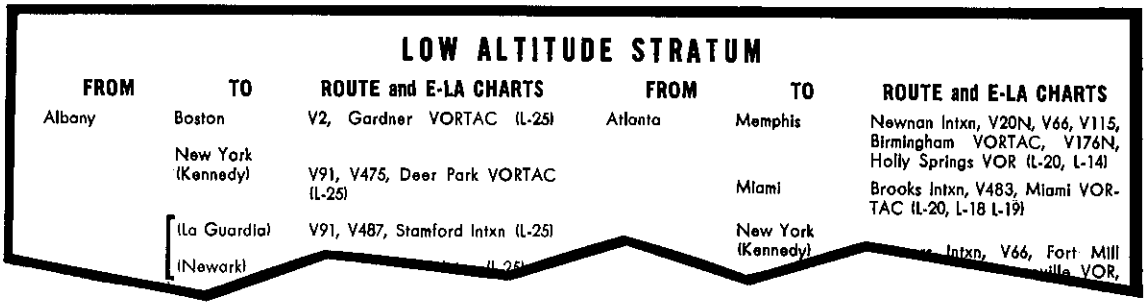
NUMBER	AREA NAME	EFFECTIVE ALTITUDE	TIME USED			CONTROLLING AUTHORITY
			DAYS OF WEEK	HOURS OF DAY	WEATHER	
C-46	Newport Neck, RI	To 1,000'	Mon-Fri	Days	VFR-IFR	Comdr Fleet Air, Quonset NAS, Quonset Pt, RI
	Beginning at 41°35'N 71°19'W to 41°27'N 71°20'42"W to 41°27'N 71°21'18"W to 41°35'N 71°21'W to point of beginning.					
W-50	Camp Pendleton, Va	FL750	Mon-Fri	1230-2130Z	VFR-IFR	CO... RACEN, Dam Neck,
	That area which lies mar... offshore btwn the outbound bearings of 030° and 075°... distance... 47'N 75°57'W					

Recent additions to the US Section II include the following two features:

METEOROLOGICAL DATA – The aeronautical weather services offered through the cooperation of the US Weather Bureau and FAA Flight Service Stations are described in detail. These include transcribed and scheduled (live) weather broadcasts, flight safety advisories, and instructions for initiating Pilot Weather Reports (PIREPS).

VOR RECEIVER CHECK POINTS – Under this title, you will find a complete listing of FAA certified VOR equipment check points. It is broken down under the headings "VOR Test Facilities (VOT)", "Airborne Check Points", and "Ground Check Points". Very High Frequency Omni Test (VOT) transmitters are presently located at 61 major civil airfields. These VOT's radiate a VOR signal to a specific check point and cannot be used for navigational purposes. Airborne and ground check points are established along radials emitted for VOR/VORTAC facilities which are normally used for air navigation. Checks may be made on the ground or in the air over the points, as applicable.

PREFERRED ROUTES – A complete listing of these routes and the Enroute Charts on which each is located is provided in Section II. They have been established by FAA to minimize enroute diversions, and to provide for a systematic flow of traffic in the low altitude airway structure. They are usually established between major civil terminal oreas.



LOW ALTITUDE STRATUM

FROM	TO	ROUTE and E-LA CHARTS
Albany	Boston	V2, Gardner VORTAC (L-25)
	New York (Kennedy)	V91, V475, Deer Park VORTAC (L-25)
	(La Guardia)	V91, V487, Stamford Intxn (L-25)
	(Newark)	

FROM	TO	ROUTE and E-LA CHARTS
Atlanta	Memphis	Newnan Intxn, V20N, V66, V115, Birmingham VORTAC, V176N, Holly Springs VOR (L-20, L-14)
	Miami	Brooks Intxn, V483, Miami VOR-TAC (L-20, L-18 L-19)
	New York (Kennedy)	Intxn, V66, Fort Mill VOR,

Several pages of the Section are devoted to PILOT PROCEDURES. Under this general title are such items as:

Instructions for filling out the Military Flight Plan (DD Form 175)

Instructions for filling out the Civil Flight Plan (FAA Form 398)

Departure, Enroute, and Arrival Clearances and Procedures

Position Reporting Procedures

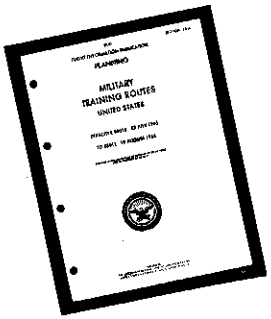
Radar Beacon Procedures

Holding Procedures

All of this information is presented from the pilot's point of view and is arranged in the sequence that it normally would be used in flight. Supporting graphics in the form of an Air Defense Identification Zone Chart and a Mountainous Area Chart are included.

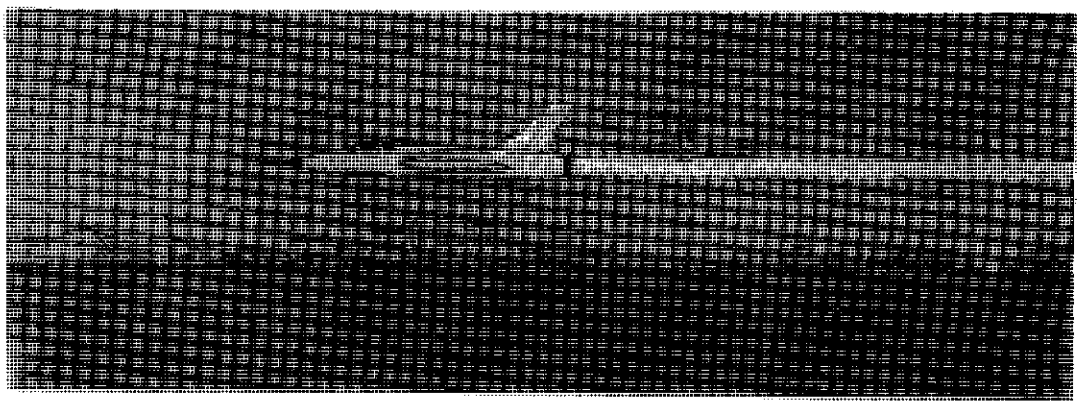
The final portion of Section II is comprised of SPECIAL NOTICES AND PROCEDURES. These notices are of a more or less permanent nature and deal, primarily, with special air traffic rules in congested terminal areas. Quite often such items will be first brought to your attention in the Enroute Supplement and later transferred to Section II. A check of these notices during pre-flight planning is necessary.

SECTION IIA
MILITARY TRAINING ROUTES
UNITED STATES



This booklet and the companion chart provide complete textual and graphic coverage of the Oil Burner Routes, Low Altitude High Speed VFR Routes, and Air Refueling Tracks used for military training operations throughout the United States. The frequency with which these routes are changed necessitates revision of the product every four weeks.

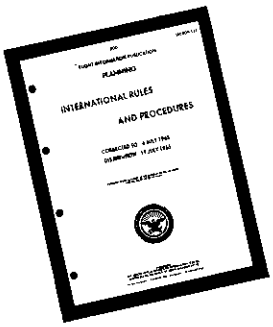
At last count there were 19 Oil Burner Routes and 285 VFR Routes in daily use by various military units. It is particularly important, therefore, that all pilots, especially non-participating, be extra vigilant when flying in the vicinity of these operations.



Low Altitude High Speed Routes are effective only upon publication in Section IIA, whereas Oil Burner Routes may be modified between issues. If possible, these changes are publicized by describing both the current route and the impending change within the appropriate issue. The revised route is then shown on the current chart and a Special Notice is placed on the booklet cover requesting users to retain the previous chart until the revised route is implemented.

As an alternative, route changes which take effect between issues may be published in a Planning Change Notice. Arrangements have been made to issue these PCNs, as required, on a fixed schedule with distribution to be completed mid-way through the effective life of Section IIA.

SECTION III
INTERNATIONAL RULES AND PROCEDURES



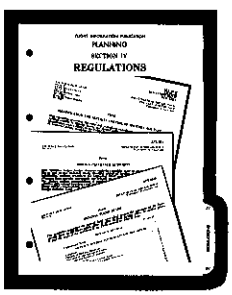
This section is devoted, mainly, to providing you with general information on Internotional Civil Aviation Organization (ICAO) Rules and Procedures. Over 100 nations subscribe to these rules in varying degrees, therefore, it is incumbent upon U.S. military pilots to acquire a good understanding of their provisions.

The bulk of the informational content is extracted from ICAO Annex 2, Rules of the Air. In addition, details are provided for such items as ICAO Position Reporting Procedures and ICAO Air Traffic Services. The ATS write-up is supported by a series of graphics showing the boundaries of local control within the eight ICAO Regions and a consolidated tabulation of communications frequencies employed with the Regions.

In view of its international scope, Section III is also used to disseminate information on subjects such as Loran coverage, Time Signals, and CIRVIS Reporting Procedures.

As previously stated, Section III contains general information on ICAO and related subjects. For this reason, the booklet will only be up-dated and reissued twice a year. Those of you operating in foreign areas are cautioned to refer regularly to the appropriate Section II booklet for special national procedures which are at variance with standard ICAO practices.

SECTION IV
REGULATIONS



As issued, this section consists only of a separator card and a single index page listing various service and FAA regulations recommended for insertion. Certain of these regulations, such as pertinent AFR's, OPNAV Instructions, and AR's, should be readily available to avoid the need for publishing extracts elsewhere in the document. Automatic distribution of service regulations is not economical, however, due to variations in local requirements. Base Operations Officers and/or individual users (as authorized) are, therefore, encouraged to requisition desired regulations through established channels.

FLIP PLANNING CHART
LOW ALTITUDE

Two Low Altitude Wall Planning Charts are presently included in the FLIP inventory. One covers the conterminous United States at a scale of 1 inch equals 25 NMs and is approximately 65" x 100" in size. The second covers Europe & North Africa at an overall scale of 1 inch equals 53 NMs with a congested area inset at 1" equals 26 NMs. The size of this second chart is 35" x 45.5".

The purpose of these charts is to facilitate preliminary route selection in those instances where the path between point of departure and destination crosses two or more variable scale Enroute charts. Once the basic route is determined, you can turn to the Enroute charts for detailed flight planning.

Content must necessarily be restricted to that essential for route selection. On the US planning chart, for example, this includes:

a. All active aerodromes at which military landing rights exist with a minimum of 3000 feet hard surfaced runways, plus selected additional fields.

b. All commissioned radio aids to navigation.

c. All VOR and LF airways (including mileage and identification).

d. All Special Use Airspace.

e. ADIZ and Time Zone boundaries.

f. Enroute Low Altitude chart limits.

FLIP ENROUTE

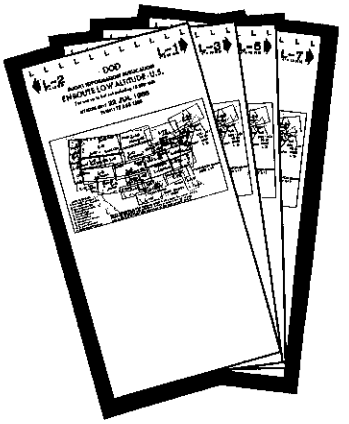
Enroute flight information is provided in both graphic and textual form through the medium of Enroute charts, Area Arrival charts, and Supplement booklets. Cardboard containers are available for convenience in carrying and storing the products in the cockpit or in Operations offices.

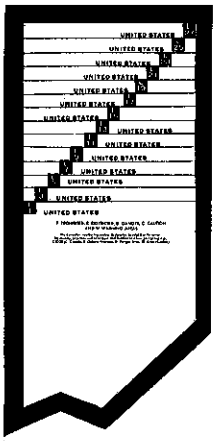
Separate Enroute packages are produced for each of the eight free world geographical areas in common with the Section II, FLIP Planning area breakdown. Format and content is standardized throughout to the maximum practicable extent, with due consideration given to unique area requirements.

For the purpose of this brochure, the following discussions are related directly to United States Enroute coverage. Many of the features discussed under Low Altitude Charts apply equally to the High Altitude series.

LOW ALTITUDE CHARTS

Basic United States low altitude airways coverage is provided by 26 charts printed back-to-back on thirteen 20"x 45" sheets and accordian-folded to 5"x10" to facilitate cockpit use. Two additional charts, L-27 and L-28, which are aligned lengthwise along the East Coast, are available on special request. The chart series is numbered 1 through 28, preceded by the letter "L" to denote Low Altitude usage.





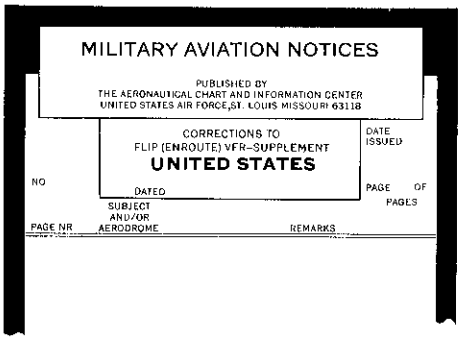
The NUMBERED TABS positioned along the fold of the charts serve a dual purpose. When the charts are arranged in numerical sequence with the fold up, those missing are readily apparent. Secondly, if positioned this way in the container, a desired chart can be quickly selected or refiled.

Each chart contains a GRAPHIC INDEX of the entire series on the front panel, with its own outline distinguished by a heavier line. Adjacent charts can be identified either by reference to this index or to the overlap notes positioned around the margin of the chart face.

A complete CHART LEGEND is shown on the back panel of each sheet. It has been subdivided into four categories of information: Aerodromes; Radio Aids to Navigation and Communication Boxes; Air Traffic Services and Airspace Information; and, Special Use Airspace. Frequent review is recommended to assure clear understanding of each symbol's function.

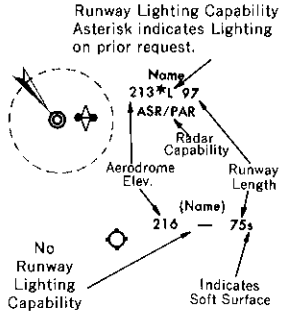
The primary feature shown on these charts is, of course, the FAA LOW ALTITUDE AIRWAYS SYSTEM which extends up to but not including 18,000 feet MSL. Frequently, the paths of two or more airways coincide, in which case all assigned airway designators are shown. Where space is limited, the "V" (for VICTOR airways) is shown only once, e.g., V480-56-88 .

The FLIP Enroute publication schedule is predicated on the 28 day cycle established by FAA for implementation of airway changes. There are times when circumstances do not permit changes to coincide with the effective date, however, these are held to a minimum. When necessary, NOTAMs or MILITARY AVIATION NOTICES (MANs) in textual or graphic form will be issued to advise you of such changes, special military exercises, etc.

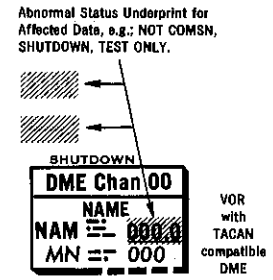


AERODROMES shown on the charts are those required for DOD use and/or for emergency. Included are all active aerodromes with a minimum of 3000 ft. hard surfaced runways at which military landing rights are in effect. Additional aerodromes are shown to satisfy special military requirements which are consistent with the purpose of this chart series. Selected aerodromes within 30 NM of the Mexico and Canada borders and/or airways are provided for emergency purposes. If a requirement exists for an aerodrome not shown, a request for publication must be submitted through command channels in accordance with Service policies and procedures.

If an aerodrome has NO military landing rights, the name will be enclosed by parentheses. If other than hard surfaced, the letter "s" is shown following the runway length. A blue aerodrome symbol indicates that o Low Altitude Instrument Approach Procedure is published in the DOD Terminal Low Altitude. Those in brown DO NOT have an instrument approach procedure published in the DOD Terminal Low Altitude. (A civil procedure may be available but not included in the Terminal publication due to absence of an established requirement by any DOD user)



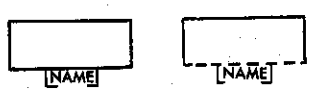
Distinctive COMMUNICATION BOXES are provided to indicate whether or not a Flight Service Station is associated with a particular radio navigation aid. In addition, the boxes are color coded, using blue for VHF/UHF navaids and brown for LF aids. To further differentiate between navaids under red light, the bottom line of the LF box is dashed. Combined LF/VHF/UHF boxes are shown in blue and one half of the bottom line is dashed. A line under a frequency indicates that it is not used for voice transmissions. When an abnormal condition exists for an aid, the frequency will be overprinted with a light toned cross-hatch and an explanatory note shown in the immediate vicinity. NOTAMs should be checked for current status.



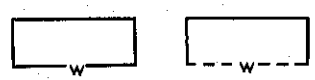
A shadow box indicates standard FSS frequencies 272.7, 255.4, 126.7, and 123.6 are available.

A plain box indicates limited FSS frequencies are available. Refer to the Supplement for those currently in use.

The name of the CONTROLLING Area FSS is shown below the box if it is remoted to an outlying navaid. Controlling Area FSS and/or remoted frequencies are shown in the Supplement.



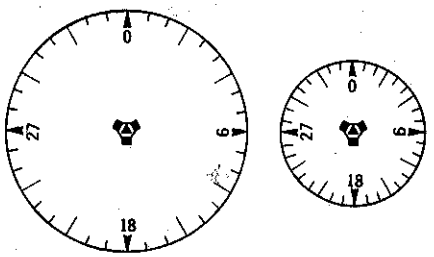
If a "W" is shown at the bottom of the box, no FSS is associated with the navaid. It may be used for voice transmissions by approach control, etc., however.



REMOTED ARTCC TRANSMITTER sites are identified on the charts by the CENTER and remoted site names enclosed in a box formed by the same symbol as that used to denote ARTCC area boundaries. All frequencies are listed within the Enroute IFR Supplement.

It is not possible to include all military and civil frequency information on the panels of each chart in addition to the other data now shown. All frequency data pertinent to an aerodrome and/or facility is, therefore, contained in the IFR or VFR Enroute Supplement, as appropriate.

FAA has begun authorizing the use of DME for determining the location of many REPORTING POINTS. These designated DME fixes are identified by an open arrowhead for compatibility with the small, solid arrowheads otherwise used to show reporting point formation. A circled, total mileage value is attached to the arrowhead when there are two or more segment mileages between the reporting point and the related VORTAC station.



There is no significance to the different sizes of COMPASS ROSES on the Low Altitude Charts. A large size is normally used, however, if several navaids are in close proximity smaller ones are used to prevent overlap.

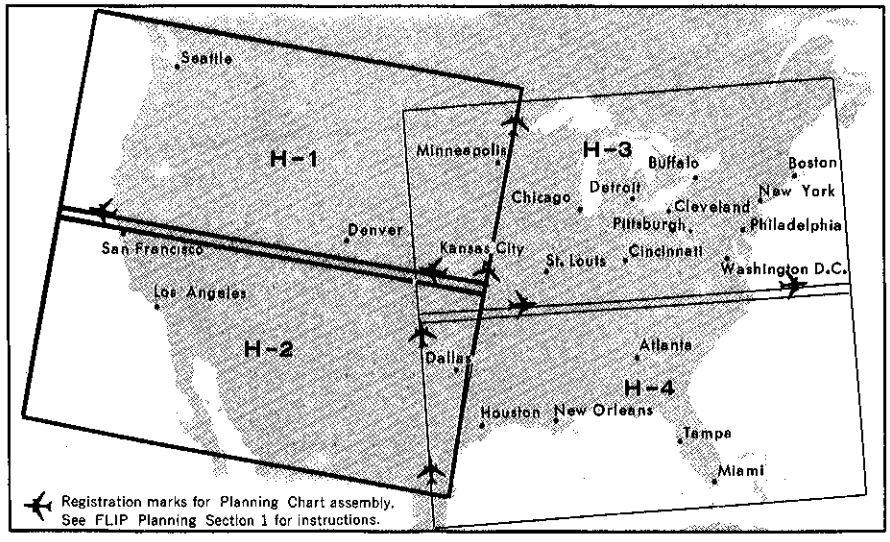
SPECIAL USE AIRSPACE is outlined on the charts and identified by type and assigned number. Supporting data includes effective altitudes, times of operation, conditions for use, and controlling agency. A sample profile of a Military Climb Corridor is shown in the legend. Effective altitudes, which vary due to operational necessity and terrain, are shown in FLIP Planning. Enroute operation through special use airspace requires prior approval from the appropriate controlling authority. Under IFR, this is the responsibility of ATC, whereas under VFR, the pilot must obtain specific approval. It should be noted that in some instances, restricted areas may lie within the designated airway width even though it does not cut the centerline. Appropriate cautionary notes concerning special use airspace restrictions are shown on the chart.

AREA ARRIVAL CHARTS

These charts cover selected major U.S. high density traffic hubs and are normally printed back-to-back on 15" x 15" sheets. They supplement the Low Altitude Enroute charts and contain detailed arrival data such as terminal reporting points, navaids (including ILS components), holding patterns, arrival routings and route terminating fixes (when designated). Only that information required for enroute use is shown in the same area on the Enroute charts. Each sheet is numbered on the left hand edge along with the three letter codes for front and back charts to permit ready identification. An index to reporting points and the Center and Terminal Communications frequencies are shown at the top of each chart. To reduce the number of Arrival Charts in the package, we are eliminating those where the essential terminal area data can be accommodated on the Enroute Chart.

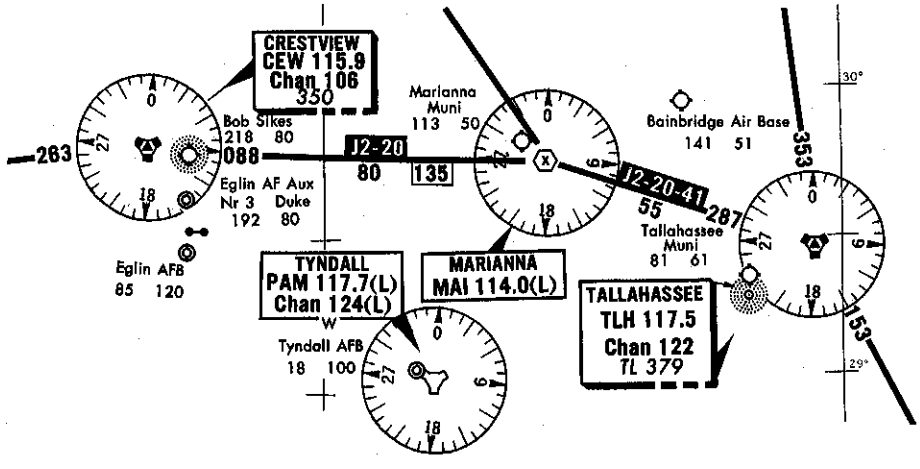
HIGH ALTITUDE CHARTS

The U.S. Enroute High Altitude Chart series consists of 4 charts (2 sheets) printed in a "head-to-toe" manner to facilitate North/South transition.

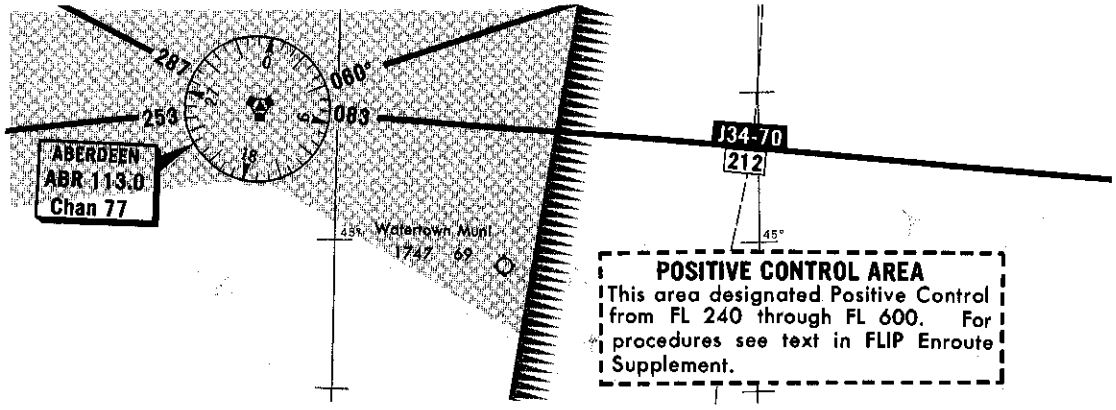


Airplane silhouettes are positioned on each chart face, as shown on the above index, to identify overlap areas. The charts are constant scale and can, therefore, be assembled as a planning chart by matching the airplane silhouettes (instructions are provided in Section I, FLIP Planning).

NAVAIDs shown in solid blue have been approved by FAA for use within the High Altitude system. Additional aids to meet special USAF/USN requirements are shown in subdued blue. All VHF/UHF navaids on these charts are designated "H" category unless otherwise specified by the letters "T" or "L" after the frequency. These letters identify the range and altitude to which the facility frequency is protected, as tabulated on the front panel.

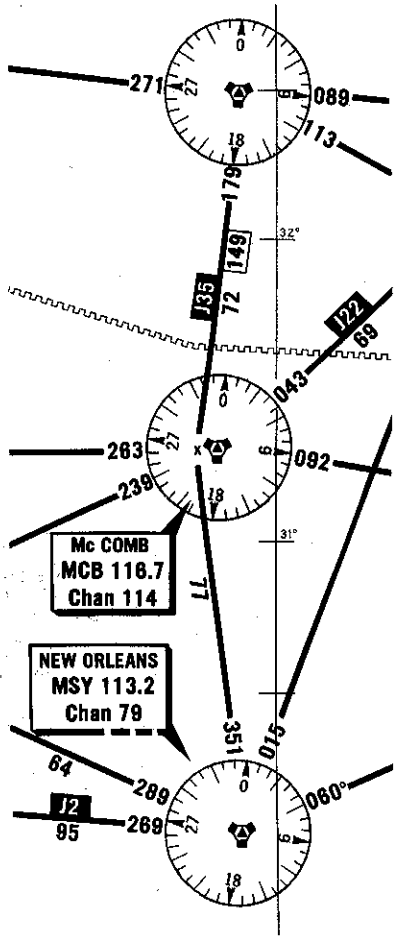


Nearly all airspace in the U.S. between Flight Level 240 and Flight Level 600 is designated as POSITIVE CONTROL AREA. To increase readability, the area boundary symbol is shown only where the area does not extend to the U.S. coastline or international boundary.



Outside the Positive Control Area (but within U.S. territory), FAA has designated JET ADVISORY AREAS along certain routes with specific operating procedures for non-air carrier traffic. These areas are identified by a subdued brown waffle pattern.

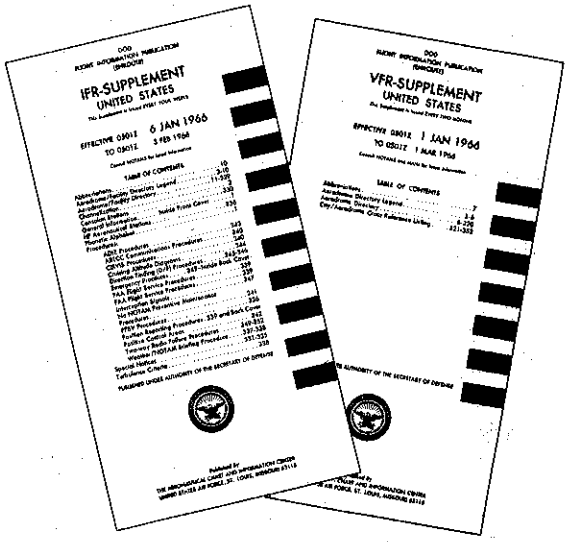
As a standard portrayal practice, Jet Route centerlines are terminated outside the Compass Roses. However, the line is continued through when the navaid is not part of the route. Occasionally, routes are also offset for clarity. For example, J-35 actually passes over McCOMB VORTAC but compulsory reporting applies only to the East/West routes. A mileage breakdown is provided for J-35 over McComb to facilitate flight planning even though the navaid is not part of the route.



Comments received from operational users have supported the position that the number of charts in the High Altitude series should not be increased unless absolutely necessary. As you can see, however, legible portrayal is becoming a problem in certain portions of the United States. For this reason, information shown is confined to that which is essential for enroute operations. Transitional information to and from the High Altitude structure is provided by Standard Instrument Departures (SIDs) and High Altitudes Instrument Approach Procedures published in FLIP Terminal (High Altitude).

ENROUTE SUPPLEMENTS

The Enroute Supplements consist of two 5"x10" books divided, basically, to provide separate IFR and VFR aerodrome directories. Together, they form a complete directory of all aerodomes (land, sea, and selected heliports) available to both military and general aviation aircraft. The text on the front cover is printed in blue for the IFR Supplement and brown for the VFR Supplement. This color code corresponds to that used for IFR and VFR aerodrome symbols on the Enroute Charts.



The General Information and Legend pages should be thoroughly reviewed. They will assist you in becoming acquainted with the contents of the books and eliminate confusion on where to find desired data.

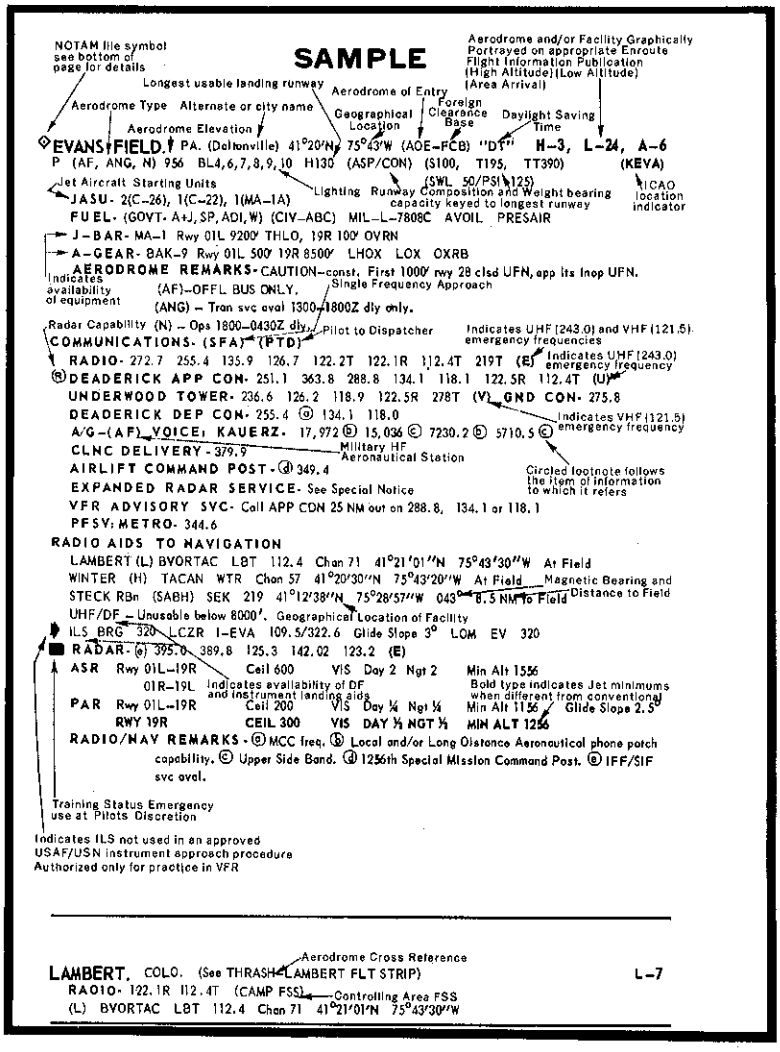
IFR SUPPLEMENT

USAF/USN users will notice very little change from the earlier Enroute Supplement. The primary difference is the removal of VFR aerodromes, except for those in the Canada and Mexico Enroute Chart overlap selected to meet special military requirements. The major categories of informational content and the order in which they appear are: Aerodrome/Facility Directory; Special Notices; and Procedures. The IFR Supplement is issued every 28 days on the same schedule as the U.S. FLIP Enroute High and Low Altitude Charts.

The AERODROME/FACILITY DIRECTORY entries are arranged in alphabetical order by name within a country and consist of (1) All aerodromes within the area of coverage having a published DOD (High/Low Altitude) Instrument Approach Procedure or USAF/USN Seaplane Procedure, and/or a RADAR capability, (2) Radio Aids to Navigation, and (3) Air Route Traffic Control Center (ARTCC) data.

A sample entry is provided to familiarize you with the format used to present the above data. You will note that the entry is broken down into three sub-groups: Aerodrome data; Communications; and, Radio Aids to Navigation (including RADAR). All data pertinent to the aerodrome is listed first, followed by any necessary aerodrome remarks.

Restrictions affecting the operational status of the aerodrome are normally the first entry and are shown in capital letters, e.g., CAUTION, OFFL BUS ONLY, etc., followed by a qualifying statement, when available. Remarks applicable to activities on the aerodrome are shown on separate lines preceded by the activity identification, e.g., (AF), (A), (N), (ANG), etc. Criteria for remarks is contained in the legend along with examples of remarks we normally DO NOT publish.



NOTAM file symbols are illustrated and explained below the sample entry in the Supplement. When an aerodrome is covered by USAF/USN NOTAMs, the symbol is placed to the left of the field name. Note that on joint civil/military aerodromes USAF/USN NOTAMs cover only military items and Civil NOTAMs must also be consulted to get the complete status of the field.

RUNWAY WEIGHT BEARING CAPACITY information is the best known available. Omission indicates information is unknown.

FUEL and AVOIL available at joint use and civil aerodromes are listed as GOVT for that available through into-plane-contract sources/military supply or as CIV for all other.

The COMMUNICATIONS listings within the Supplement are complete, including facility status and qualifying remarks. Frequencies are listed in order by frequency groups, i.e., UHF, VHF, HF, LF/MF, with primary frequencies listed first, followed by secondary in descending order. Standard emergency frequencies are shown by symbols for immediate recognition, i.e., (U) for 243.0, (V) for 121.5, and (E) for both. These are always positioned at the end of the individual facility listing.

Flight Service Stations are identified by the call "RADIO", followed by the frequencies available at the station. If the FSS is remoted, those frequencies are shown, with the controlling AREA FSS name in parentheses. When the navaid frequency is utilized for voice transmission, it too is included in the RADIO listing.

HF Aeronautical Stations with voice capability are identified by the term "A/G – VOICE" followed by the operator call sign and appropriate frequencies.

Pilot to Forecaster Service is shown by the abbreviation PFSV. The call sign and frequency is included plus hours of operation when other than continuous. USAF stations for which no frequency is listed communicate on the standard 344.6MC.

The availability of single frequency approach to the aerodrome (no frequency change during approach and landing) is denoted by the letters "SFA" shown immediately after the heading COMMUNICATIONS.

RADIO AIDS TO NAVIGATION with the same name as the aerodrome are listed under the aerodrome entry. In addition, those with different names are shown when the navaid is used as an initial approach fix in a published DOD instrument approach procedure serving that aerodrome. Such navaids are also listed separately in alphabetical order within the directory. Justification is required for listing different name navaids under an aerodrome when the requirement is other than the above. Coordinates to the nearest second are provided to update Doppler navigation equipment and to determine precise location and relative position when symbols are combined on Enroute charts.

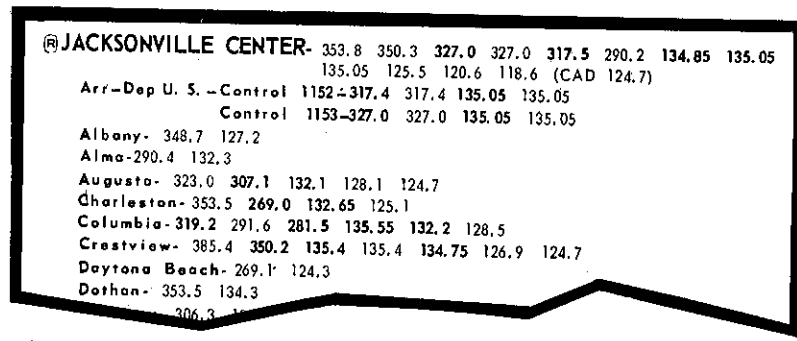
Magnetic bearing and distance is shown to the associated aerodrome. However, if the aerodrome is served by no specific navaid, bearing and distance is computed to the one that is considered most significant in the immediate vicinity.

The availability of Direction Finding (DF) Service and ILS, including pertinent remarks on status, is also shown under the heading Radio Aids to Navigation. A facility should be fully operational unless otherwise indicated by remarks or a NOTAM. Instrument Landing Systems that are used in an approved DOD and/or USAF/USN instrument approach procedure are identified by the letters "ILS" only. If the ILS is not used in an approved procedure, detailed data is provided including the bearing, identification, localizer and glide slope frequencies, glide slope angle, and outer marker identification and frequency.

RADAR (ASR/PAR) data applicable to an aerodrome is provided under the aerodrome listing. This includes the runway served, ceiling and visibility minimums, minimum descent altitude, and glide slope angle. A solid black square preceding a Radar entry denotes training status although the unit may be available for emergency use at the pilot's discretion.

RADIO/NAV REMARKS are shown, if required, at the conclusion of the aerodrome/facility entry.

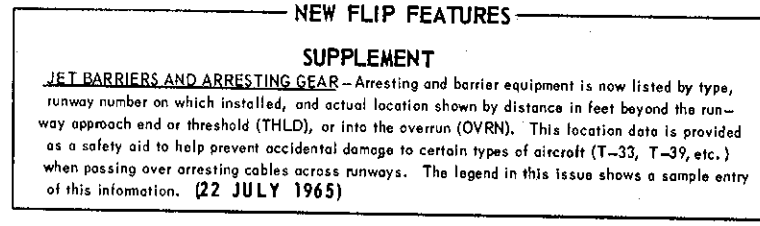
Air Route Traffic Control Center (ARTCC) frequency data is integrated within the directory in alphabetical sequence by CENTER name. The first line contains area frequencies, when designated, followed by discrete frequencies inclosed within parentheses. The succeeding lines indicate services provided by the Center and/or directions in which specific frequencies are used, e.g., Arr-Dep-, EAST, WEST, RADAR, etc. Below these are the ARTCC remoted transmitter sites followed by designated frequencies in numerical descending order. High Altitude frequencies are shown in bold type and Low Altitude in light type. Frequencies common to both are shown in both type styles.



®JACKSONVILLE CENTER- **353.8 350.3 327.0** 327.0 **317.5** 290.2 **134.85 135.05** 135.05 125.5 120.6 118.6 (CAD 124.7)
Arr-Dep U. S. - Control 1152-317.4 317.4 **135.05** 135.05
Control 1153-**327.0** 327.0 **135.05** 135.05
Albany- 348.7 127.2
Alma-290.4 132.3
Augusta- 323.0 **307.1** 132.1 128.1 124.7
Charleston- 353.5 **269.0** 132.65 125.1
Columbia- **319.2** 291.6 **281.5 135.55 132.2** 128.5
Crestview- 385.4 **350.2 135.4** 135.4 **134.75** 126.9 124.7
Daytona Beach- 269.1 124.3
Dothan- 353.5 134.3
306.3

A quick reference listing of USAF HF AERONAUTICAL STATIONS is provided immediately following the Aerodrome/Facility Directory, along with a brief write-up on services and reporting procedures. On the same page you will find a quick reference for CONSOLAN STATIONS. Complete information regarding frequencies, call signs, etc., can be found in the Directory.

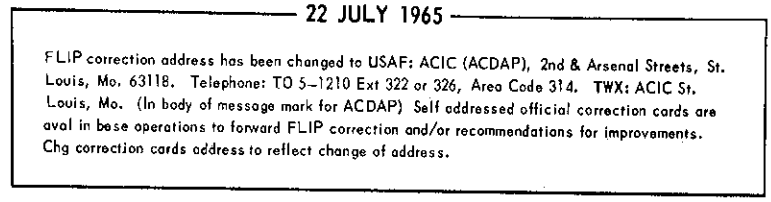
A SPECIAL NOTICES SECTION is provided to bring items of operational significance to your immediate attention. Information of a permanent nature normally will be carried for three issues and then incorporated in the appropriate section of the applicable FLIP product. Temporary notices are carried in this section for the life of the notice. A "NEW FLIP FEATURES" presentation appears at the beginning of the Special Notices Section and provides you with information on newly incorporated requirements or major modifications to FLIP Enroute products. Special Notices should be checked each issue. All new or modified notices are boxed and the date of initial issuance placed at the top. After three issues, the outline is eliminated and the issuance date is relocated at the end of the notice.



NEW FLIP FEATURES

SUPPLEMENT

JET BARRIERS AND ARRESTING GEAR – Arresting and barrier equipment is now listed by type, runway number on which installed, and actual location shown by distance in feet beyond the runway approach end or threshold (THLD), or into the overrun (OVRN). This location data is provided as a safety aid to help prevent accidental damage to certain types of aircraft (T-33, T-39, etc.) when passing over arresting cables across runways. The legend in this issue shows a sample entry of this information. **(22 JULY 1965)**



22 JULY 1965

FLIP correction address has been changed to USAF: ACIC (ACDAP), 2nd & Arsenal Streets, St. Louis, Mo. 63118. Telephone: TO 5-1210 Ext 322 or 326, Area Code 314. TWX: ACIC St. Louis, Mo. (In body of message mark for ACDAP) Self addressed official correction cards are aval in base operations to forward FLIP correction and/or recommendations for improvements. Chg correction cards address to reflect change of address.

The remainder of the Supplement is devoted to PROCEDURES. A variety of subjects are covered in this section, ranging from Weather/NOTAM Briefing to Emergency Procedures. Emphasis is placed on the pilot's responsibilities in instances such as operations into or within an ADIZ; during two-way radio failure; interception, etc. Emergency Procedures are located on the last two pages and the inside back cover in order to make them quickly accessible. Finally, the back cover is used to provide a convenient reference for position reports and change of flight plan.

VFR SUPPLEMENT

The format for the VFR Supplement is the same as the IFR book, however, the content is modified in keeping with the purpose of the book. The major subgroups are the Aerodrome Directory, Special Notices, and Air/Ground Emergency Procedures. Radio aids to navigation are used primarily for IFR operations, therefore, they are shown only in the IFR Supplement.

We propose, initially, to issue this document once every two months and to publish a Military Aviation Notice (MAN) between issues to take care of interim changes. These notices should be reviewed upon receipt and stapled to the inside front cover. The publication cycle may be extended to once every three or four months if the published data is found to be sufficiently stable.

AERODROMES required for military operations, not meeting the IFR Supplement criteria, will be published in this Supplement. These aerodromes, which we will refer to as "VFR aerodromes" will, in most instances, have only limited facilities. The VFR Aerodrome Directory will contain a listing of both IFR and VFR fields in alphabetic order by aerodrome name. IFR aerodromes, however, will be shown with only a cross reference to the IFR Supplement, e.g., ADAMS AFB, ILL (Hancock) . . . . . IFR-S.

If a Terminal Aerodrome Sketch is provided in the Aerodrome Sketch book, the word SKETCH will be shown to the right of the aerodrome name. Similarly, the Enroute Chart number will be shown if the aerodrome appears on a chart.

RADIO (Flight Service Station) is shown only when an aerodrome is not serviced by a control tower and an FSS station is located on the aerodrome.

A complete CITY/AERODROME CROSS REFERENCE LISTING is provided to facilitate locating an aerodrome when only the city name is known.

A SPECIAL NOTICES section is included, pertaining primarily to enroute VFR flight information such as: new air traffic control procedures, including non-standard traffic patterns, as appropriate; new services or facilities available; cautionary notes, etc. NEW FLIP FEATURES, as described for the IFR Supplement, are also provided in the VFR publication.

AIR/GROUND EMERGENCY PROCEDURES, including diagrams of Standard Aircraft Acknowledgements, Body Signals, International Ground/Air Emergency Code, and Paulin Signals, are provided in this publication. The IFR and VFR Supplements together provide complete Emergency Procedure data. Much of the information in the VFR Supplement also appears in Section III, FLIP Planning, however, it will be removed from the latter when the DOD program is implemented worldwide.

FLIP TERMINAL

The FLIP TERMINAL program will, ultimately, encompass Standard Instrument Departure Charts (SIDs), Instrument Approach Procedure Charts, and VFR Aerodrome Sketches. SIDs have not yet been standardized within DOD, however, brief mention of them is made in the following paragraphs.

STANDARD INSTRUMENT DEPARTURE CHARTS (SIDs)

The SID chart provides a graphic portrayal of the instrument departure route from a runway or aerodrome. It serves a pilot during the departure phase in much the same manner that the instrument approach chart does during an approach to a landing.

The SID chart includes a pictorial presentation of the departure route, courses, transitional fixes, altitudes when established, and prominent obstructions in the departure area. Aerodrome data pertaining to the departure phase of flight operations are also provided.

Each DOD agency is now individually responsible for the development, coordination, and publication of SIDs for its bases. Immediate plans include the development and publication of a standard DOD SID product. These plans provide for the preparation of a criteria to be used for the formulation and coordination of Standard Instrument Departures. When the DOD SID program is finalized, information and materials will be furnished for aircrew familiarization and evaluation.

INSTRUMENT APPROACH PROCEDURE CHARTS

The instrument approach places very stringent demands on the pilot due to the narrow tolerances encountered in its execution. A thorough understanding of the instrument approach procedures and the chart design concept is, therefore, essential.

A recent analysis of published instrument approach procedures by Operations elements of the USAF and USN revealed that procedures were unnecessarily complicated. In the interests of flight safety, DOD embarked on a vigorous two-fold program: first, to improve the criteria used by field units for procedure formulation; and second, to redesign the instrument approach chart in order to accentuate the basic procedure itself.

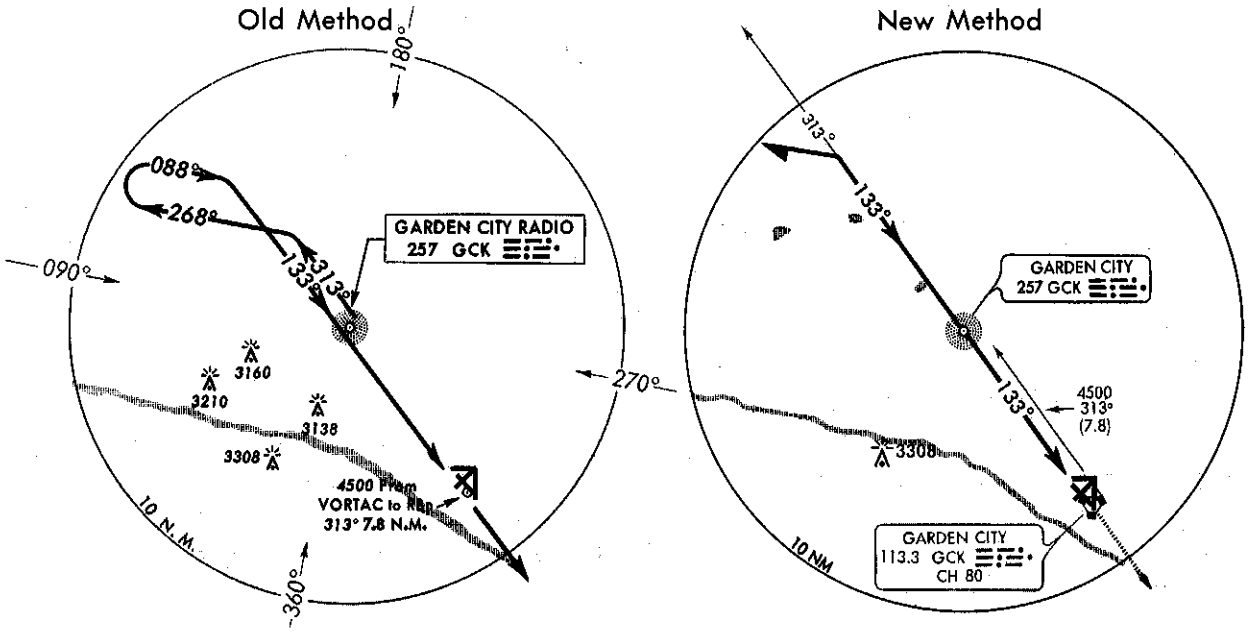
The many factors to be considered in preparing a new criteria for procedure design have delayed its completion. However, improved methods for the depiction of existing procedures have been developed and will be implemented prior to the completion of the updated criteria. These improved methods resulted from operational objections and were resolved through operational Test and Evaluation programs conducted to obtain aircrew reactions to the proposed changes. The T&E findings have led to the adoption of a policy to publish only that information absolutely essential to the pilot for transition from the enroute structure through the approach for a specific runway or airport. Chart conversion to the new concept is now taking place on a worldwide basis, and is scheduled for completion by July 1966.

Current Publication Features:

In the U.S., as in foreign areas, procedures are published in two series: one is identified as high altitude, to accommodate approaches generally from FL 200 or above; and the other, identified as low altitude, to accommodate approaches from minimum enroute altitudes generally from 18,000 feet and below.

Changes resulting from the USAF/USN T&E, plus others identified by service agencies, will be made to both high and low altitude instrument approach charts, and are identified in the Important Format Change Sheet which is issued as an integral part of each FLIP Terminal publication. The more significant changes that are now being incorporated are as follows:

A single barb type symbol will be used to denote the maneuvering side (direction of the procedure turn). This method of publication was recommended by Operational elements, since the degree of turn and the point at which the turn will be made is left to the discretion of the pilot. In foreign areas, host nations may require the depiction of the entire procedure. The tear-drop and holding pattern type configurations will continue to be shown in their entirety.



The landing minima portion of the instrument approach chart has been designed to show day and night minimums only when they are different. When a procedure is predicated on two types of navaids, e.g., ADF/ILS, VOR/PAR, etc., both serving the same runway, separate minima for each type of navaid may be published. Sliding scale (s/s) and runway visual range (RVR) data are being added where they are authorized. At the time of this writing, sliding scale and runway visual range minima data are utilized only by the US Army and certain civil carriers. Alternate airport minima information is not shown on the DOD instrument approach chart. For Army aviators, AR 95-2 method of alternate minima determination must be applied when using the new DOD FLIP. This condition will be resolved upon completion of DOD FLIP evaluation.

Examples of the minima data are shown below.

LOW ALTITUDE

LANDING MINIMA			
Str-in Rwy 24	537 MSL	400-1 s/s	or RVR 26
Circling	737 MSL	600-1	600-2
Circling Below 65 Kts	637 MSL	500-1	737 MSL 600-1

RNG to Missed Approach 0.0 N.M.

Knots	75	90	105	120	130	160
Min: Sec	3:15	2:36	2:20	2:03	1:54	1:32

HIGH ALTITUDE

LANDING MINIMA			
Str-in-ILS	337 MSL	200-½	
Circling	637 MSL	500-1	737 MSL 600-1
Str-in-TACAN	537 MSL	400-1	
W/O G/S	537 MSL	400-1	

LOM to Missed Approach 0.0 N M

Knots	120	140	160	180	200
Min : Sec	2:03	1:45	1:32	1:22	1:14

1. Night landing minima will only be provided when different from day minimums, when a single minimum only is provided, it is applicable to both day and night.

2. Pertinent notes affecting the landing minima will be published in the space below the landing minima data. When this location does not provide sufficient space because of the amount of information, publication of these notes in the plan view is authorized.

FOR U.S. ARMY ONLY (LOW ALTITUDE)

1. The Circling Minimum entry "Circling Below 65 Kts" will apply to U.S. Army only.

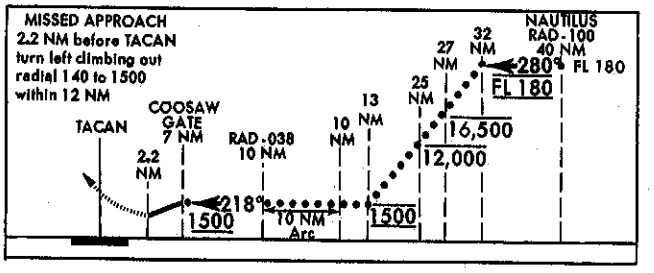
2. Sliding Scale:
Landing minimums, where the sliding scale is applicable, will be noted by an s/s symbol following the minimum, i.e., 300-1 s/s (the sliding scale allows the reduction of visibility by ¼ mile for each 100 foot increase in ceiling until visibility of ½ mile is reached).

3. Runway Visual Range:
Where the runway visual range (RVR) is an authorized minimum for landing, the RVR designation will be shown with RVR minimum in hundreds of feet. This designation will follow the ceiling and visibility, i.e., 300-1 s/s or RVR 26.

NOTE: Additional changes may need to be made to landing minimum information when the new criteria used for the formulation of procedures is approved by DOD/FAA.

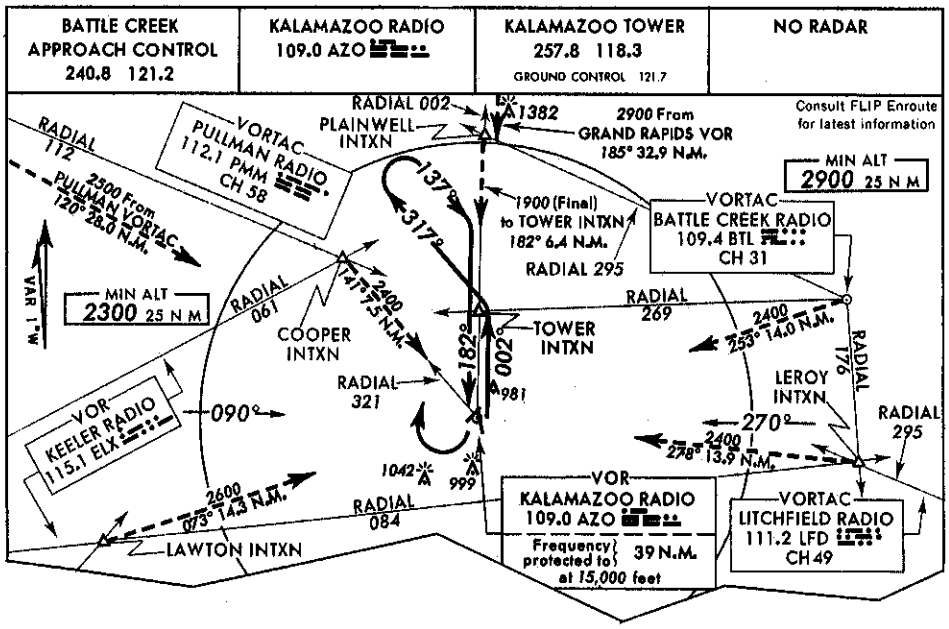
Altitudes shown in the profile track will be in a larger type size, and identified as minimum, maximum, mandatory, or ATC altitudes. (ATC altitudes are identified as those altitudes normally associated with a high altitude initial penetration and the penetration turn based on procedures contained in JAFM 55-9, OP NAV INST 3722.16, and TM 11-2557-26, or are ATC assigned altitudes.) The method of depicting these altitudes is illustrated below.

5000	2300	4800	8000
Mandatory Altitude	Minimum Altitude	Maximum Altitude	ATC Altitude

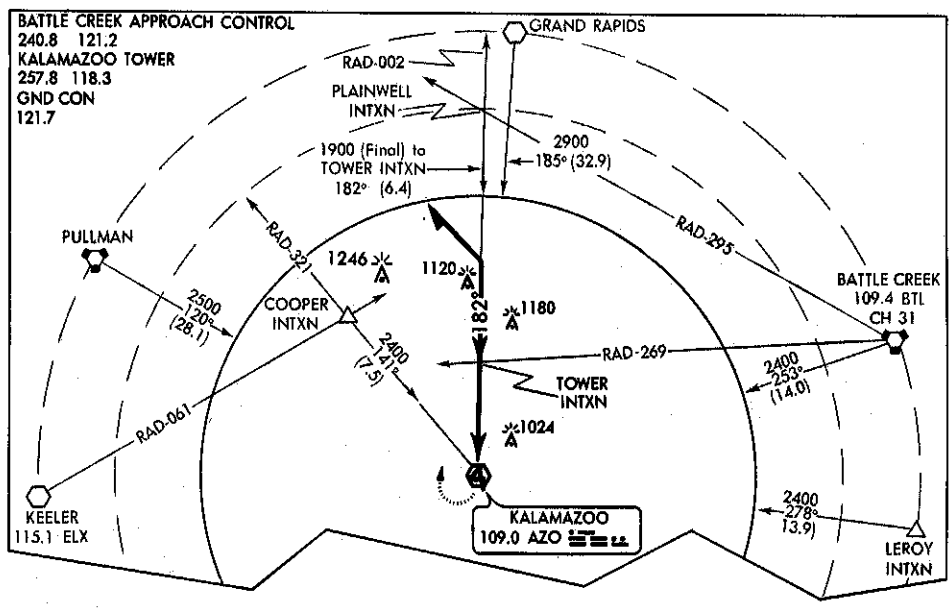


When appropriate, transitional routings from the enroute structure to the approach facility or fix will be adopted in the FLIP Terminal Low Altitude series. These transitional routings are provided for pilot convenience in planning and operational use. Routings published will reflect only those normally used and approved by ATC. A to-scale depiction cannot be used for the portrayal of this transitional routing information because of the distance involved. For those aircrews not familiar with the transitional routing information, you are reminded that a gap exists between the enroute structure and the facility or fix used for many of our approaches. The concentric ring concept being employed provides for this gap through depiction of filler type information in terms of facility/fixes and the associated bearings, distances, and MEA's to the approach facility. Examples of the old and new method are shown below.

Old Method



New Method



Information That Will No Longer Be Published On Instrument Approach Charts:

All reference to frequency protection will be removed. Frequency protection information is now published in the Enroute Supplement and a duplication of this information on the instrument approach chart was considered unnecessary. Frequency protection is a consideration prior to the approval of the instrument approach procedure.

The terms, "if not contact at authorized minimums" and "or as directed by ATC", will be removed from the missed approach notes. This information is a standard part of missed approach procedures and is an understood pilot procedure.

Restricted airspace and prohibited area notations will be removed with the exception of those procedures/charts where DOD agencies or the host country requires this information be shown.

Variation information will no longer be shown on instrument approach charts, with the exception of charts produced for areas north of 67° north latitude, south of 67° south latitude, and in areas of compass unreliability.

All transitional routings that are not realistic in terms of air traffic control procedures will be removed as requests to do so are received from the procedure approving agency.

The notation in the plan view, "consult FLIP Enroute for latest information", is SOP, and is included in the General Information section. Publication on each chart is not necessary.

The notation, "initial approach all directions MEA", will be removed since the absence of specific MEA minimum enroute information will require pilots to use ATC assigned or determine altitudes for the approach.

Additional information as listed on the Important Format Change Sheet is slated for removal.

Type Of Procedure/Charts That Can Be Expected In The FLIP Terminal Editions:

At present, the DOD concept for instrument approach procedures has identified radar as the primary system for IFR approaches. Navaid type instrument approach procedures, such as ILS, TACAN, VOR, and ADF, have been relegated to a back-up role for radar; however, where radar is non-existent, Navaid type approaches become the primary means of recovery.

This concept has changed publication practices in that you can expect a decrease in numbers of procedure/charts. The number of procedures for a military base will be consistent with the operational mission and transient aircraft requirements.

The number of procedure/charts for civil bases will essentially be the same with one exception; the military may choose not to publish all procedures established and approved by the FAA or host government. Therefore, on civil bases where the requirement for procedural coverage has been established, you can expect the Navaid type approach for the instrument runway only. Procedures for other than the instrument runway will be published by operational request only. In any event, with the availability of procedures for the instrument runway, and based on the operational requirement for secondary procedures, procedural coverage will be consistent with your operational needs.

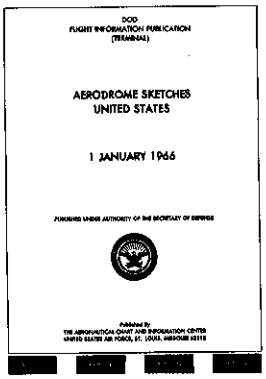
Production schedules for instrument approach procedure/charts have been aligned to provide aircrews with procedural data prior to the effective date, when the scheduling of changes is controlled. In the U.S., high altitude procedures are produced in a bound format with an effective date of the first of each month. Amendments are the exception rather than the rule, and corrections to the high altitude edition are normally disseminated by NOTAMs. In areas where the scheduling of these changes cannot be controlled and/or advanced information is not received, information is disseminated periodically as frequently as production schedules will allow. Revision schedules for each FLIP Terminal publication are published under General Information.

Low altitude instrument approach procedures in the U.S. are published in a loose leaf format with weekly amendment service. Amendments are distributed in advance for a weekly Saturday effective date. Future plans call for this publication to be published in a bound format. Frequency of publication is noted with each edition.

Future Considerations:

We can expect, as a result of the new criteria which will soon be adopted by the U.S. military services, further standardization in procedure design and a possible change in the charting standards. As the new criteria is implemented and changes are made to the individual procedure, the military services will get together to determine what changes will need to be made to the individual instrument approach charts.

In addition to the improvements now being reflected in our operational volumes, the DOD charting agencies are in the process of developing a 3-Dimensional method for displaying instrument approach procedures. Preliminary finding of this development reveals that a 3-D method of portrayal is realistic for FLIP Terminal application, and further Test and Evaluation will be conducted. Results of future DOD Evaluations will determine if the 3-D method of publication will be adopted.


DOD
FLIGHT INFORMATION PUBLICATION
(TERMINAL)

AERODROME SKETCHES
UNITED STATES

1 JANUARY 1966

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF DEFENSE

PUBLISHED BY
THE AERONAUTICAL CHART AND INFORMATION CENTER
UNITED STATES AIR FORCE, ST. LOUIS, MISSOURI 63118

AERODROME SKETCHES

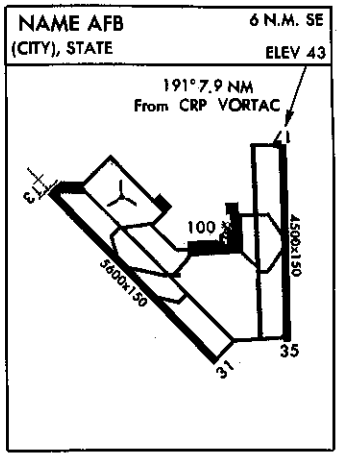
AERODROME SKETCHES are a new addition to the FLIP family. They are provided to help you locate and identify destination aerodromes for VFR operations. Certain compromises were necessary in determining what and how much detail could be shown on the individual sketches. Selection criteria vary somewhat between areas of coverage but basically each volume will contain all aerodrome sketches currently found in Instrument Approach Procedure (IAP) publications plus additional aerodromes requested by the DOD to satisfy VFR needs. Textual data concerning support facilities (tower, fuel, etc.) have been omitted to avoid duplication of more current information readily available in greater detail in the Supplements, and to prevent obscuration of base features. Current aerodrome sketches developed for IAP publications do not show landmark details other than significant obstacles since the physical

appearance of such aerodromes is generally distinctive and location can be accurately determined by radio aids. Aerodrome sketches developed for the added VFR requirement, on the other hand, include significant topographical and cultural features to assist in visual identification.

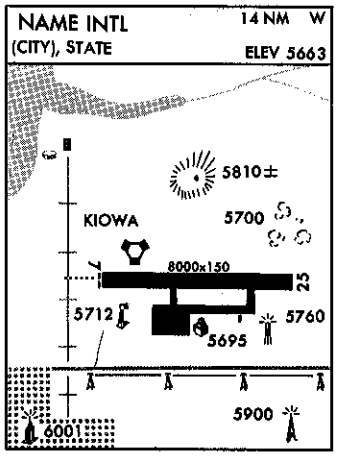
The sketches for the U.S. are published in a bound volume, 5½" x 8", with nine sketches per page. The sequence is alphabetical by aerodrome in consonance with the IFR/VFR Supplement entries. In overseas areas, aerodrome sketches may be added to the appropriate Supplement or published as a separate volume depending upon the number of aerodromes required. The U.S. volume which is the first to be introduced will be revised and reissued every three months. However, this three-month publication cycle may be changed at a later date to once every four to six months if stability of information will permit.

The examples below illustrate the essential difference between current IAP aerodrome sketches and those added to satisfy the VFR requirement. Complete sketch details may be found on the legend page of the Aerodrome Sketch booklet.

Current IAP
Aerodrome Sketch



Newly Developed VFR
Aerodrome Sketch



ONE LAST REMINDER

The FLIP features discussed in this brochure are subject to change in response to new or revised military requirements and refinement of the air traffic control system. It is to your advantage, therefore, to always review the NEW FLIP FEATURES sections in the Enroute Supplement and Section II, FLIP Planning.

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