AERODROME SKETCHES

LEGEND

Bearings/radials are magnetic unless otherwise indicated.

Distances are nautical miles.

Elevations are feet above/below Sea Level. Numerals in parentheses indicate height above ground.

RUNWAYS/LANDING AREAS

Hard Surfaced

PSP/AM-2

Sod, Gravel, etc.

Under Construction

Closed

Helicopter Landing Area Ⓗ

Sterilized/Displaced Threshold

Taxiway, Apron and Overrun

MISCELLANEOUS BASE AND CULTURAL FEATURES

Buildings (Obstruction Solid, Landmark Screen)

Power Lines (Obstruction Solid, Landmark Screen)

Towers (Obstruction Solid, Landmark Screen)

Tanks (Obstruction Solid, Landmark Screen)

Oil Well (Obstruction Solid, Landmark Screen)

Smoke Stack (Obstruction Solid, Landmark Screen)

Obstruction (Lighted) 5812 (70)

Spot Elevation ● 5812

Trees

Populated Places

Cuts and Fills

Cliffs and Depressions

Hachuring

RADIO AIDS TO NAVIGATION

VORTAC

VOR

LF RNG

NDB

TACAN

MISCELLANEOUS AERONAUTICAL FEATURES

Aerodrome Beacon (Coded)

Wind Cone

Landing Tee

Tetrahedron

Control Tower

APPROACH LIGHTING

CENTERLINE

U.S. CONFIGURATION

CHANGI DOUBLE CROSS

SINGLE ROW CENTERLINE

PORTABLE APPROACH STROBES

CALVERT (BRITISH)

TWO PARALLEL ROW

U.S. STANDARD (A) WITH ROLL GUIDANCE BARS

U.S. STANDARD (A) WITHOUT ROLL GUIDANCE BAR

VASI Ⓥ

FRESNEL LANDING SYSTEM Ⓥ½

U.S. NAVY OPTICAL LANDING SYSTEM

LEGEND

VFR TRAFFIC PATTERNS

1. Congested fixed wing and helicopter air traffic conditions at RVN airfields require that procedures be established to provide a safe and orderly flow. For this reason approximately 140 traffic pattern diagrams are being developed for inclusion in the TAD. In addition, general traffic rules are presented in this section.

2. Fixed wing and helicopter traffic pattern diagrams will be overprinted on airfield photographs when photograph quality permits. In other cases, diagrams will be depicted in the ''Procedures'' section of the TAD. Traffic rules established by the TAD are subject to alteration by pilots and controlling agencies when the situation requires.

3. General traffic rules are as follows:

a. Rectangular traffic patterns will be flown as depicted in the TAD or as advised by the tower. At uncontrolled airfields for which no pattern is published, rotary wing traffic will be right hand, fixed wing will be left hand.

b. Rotary wing traffic will be 500′ AGL maximum.

c. Fixed wing traffic will be 1000′ AGL minimum on downwind, 700′ minimum on base and until established, wings level, on final approach.

d. Departing fixed wing aircraft will maintain runway heading until reaching 1000′ AGL except to comply with control instructions or to avoid terrain, hostile fire or friendly artillery areas. Light fixed wing aircraft are exempt when above rotary wing pattern altitude.

e. Helicopters operating at uncontrolled airfields will not cross the runway or its extension unless flying below 200′ AGL at least two miles from the end of the runway.
This restriction applies only to the airspace below 1500′ AGL and within five statute miles of the field.

f. All aircraft approaching for landing will contact tower for instructions at least five miles out. At airfields with no tower or advisory service, aircraft will coordinate activities on frequencies 257.8 118.1 and 47.3.

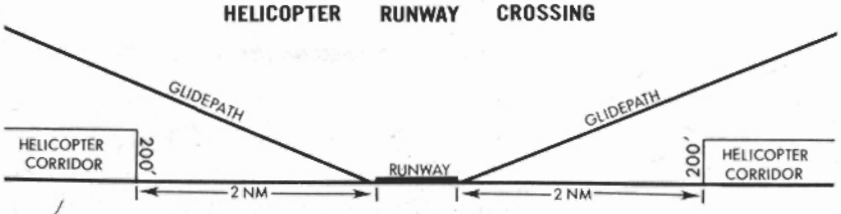
TRAFFIC PATTERN SYMBOLIZATION

R/W Entry Sector

R/W Traffic Pattern

F/W Traffic Pattern

HELICOPTER RUNWAY CROSSING



LEGEND

COUNTRY ABBREVIATION

VIETM – Vietnam

OPERATING AGENCY ABBREVIATIONS

A	US Army	MACV	Military Assistance Command Vietnam
(A)	US Army on Aerodrome	MIL	Military
AF	US Air Force	PVT	Private Air Field
(AF)	US Air Force on Aerodrome	ROKA	Republic of Korea Army
N	US Navy	VDCA	Vietnam Directorate of Civil Aviation
(N)	US Navy on Aerodrome	VNA	Vietnam Army
CG	US Coast Guard	VNAF	Vietnam Air Force
(CG)	US Coast Guard on Aerodrome	VNN	Vietnam Navy
MC	US Marine Corps	P	Civil aerodrome available to transient military aircraft
(MC)	US Marine Corps on Aerodrome		
CIV	Civil Agencies	1 RATF	1st Royal Australian Task Force
DAB	Director of Air Base	RF/PF	Regular Force/Popular Force
DMAC	Delta Military Assistance Command		

NOTE: Codes in parentheses indicate organization is tenant activity.

AERODROME ELEVATION

Aerodrome elevation is the highest point on the landing surface, expressed in feet above mean sea level. When elevation is sea level, elevation will be indicated as (00). When elevation is below sea level a minus (–) sign will precede the figure. When the elevation is unknown the abbreviation (UNK) shall be used.

LIGHTING

Specific lighting facilities available are indicated by the following code.

B – Rotating Light (Rotating beacon).
(Includes flashing white: green and white: split beam and other types).
(Omission of B indicates beacon is not available. At civil aerodromes, omission may indicate that beacon does not operate standard hours (sunset–sunrise).

L – By itself indicates temporary lighting such as flares, smudge pots, lanterns.

1 Portable lights (Electrical)
2 Boundary lights
3 Runway floods
4 Runway or strip
5 Approach lights
6 High intensity runway lights
7 High intensity approach lights (1)
8 Sequence flashing lights (3000 ft out unless otherwise stated)
9 Visual Approach Slope Indicator system (VASI)
10 Rwy End Identification Lights (REIL) (Threshold strobe lights)
11 Runway centerline lights

* An asterisk preceding an element indicates that it operates on prior request only (by phone call, telegram or letter). Where the asterisk is not shown the lights are in operation or available sunset to sunrise or by request (radio, or circling the field).

(1) Includes Portable Approach Strobes (BR lighting) SEA only.

NOTE: Obstructions are usually lighted in accordance with both civil air regulation and military regulations; therefore, these have not been included as a part of the above code. If, however, information indicates there are unlighted obstructions surrounding the aerodrome, this will be indicated in the remarks column.

When runway edge lights are positioned more than 10 feet from the edge of the usable runway surface, a CAUTION note will be included in the Aerodrome Remarks. This is applicable to Air Force, Air National Guard, and Air Force Reserve Bases, and those joint use airfields on which they are tenant.

RUNWAY DATA

GENERAL: Runway surface material is classified as either Hard or Other. A hard surface is considered to be permanent and requires little maintenance. The letter H precedes the length figure at aerodromes considered to have hard surface runways. Absence of an H means other than hard surface. The surface material is shown in parentheses following the runway length and is the visible material or composition of the major landing portion of the runway.

LENGTH: Runway length of the longest runway (pavement, end to end) including displaced thresholds, but excluding areas designated as overruns. The length is shown to the nearest 100 feet, using 70 as breaking point, e.g., 59 is used to indicate a runway of 5870 feet. Unknown rwy lengths are shown as (UNK). Variations in runway length for landing and takeoff shall be clarified in the Aerodrome Remorks Section.

SURFACE:

1. HARD – (ASP) Asphalt. Hot or cold laid plant mixes of asphalt cement with graded crushed aggregate. Includes crushed stone rolled to form a smooth hard surface and bound with a permament bitumen binder.

(BED ROCK)

(BRICK) Laid and mortared.

(CON) Concrete: Stone, sand, cement and water mixture.

2. OTHER – (BITUMEN): A coal tar or petroleum product binding, usually with sand and/or gravel. (Do not confuse with bitumen bound macadam.)

(MACADAM) Crushed stone rolled to form a smooth, hard surface and bound with a temporary binder such as clay, earth, etc.

(CINDERS)	(EARTH)	(GYPSUM)	(OIL)
(CLAY)	(GRASS)	(LATERITE)	(SAND)
(CORAL)	(GRAVEL)	(LIMESTONE)	(SOD)
			(TURF)

(AM–2)	Aluminum Matting
(DBST)	Double Bituminous Surface Treatment (ASP treated Crushed Rock)
(MX19)	Aluminum Matting
(M8A1)	Light-duty Steel Matting (Anti-skid treated unless otherwise noted in Aerodrome Remarks)
(PAP)	Pierced Aluminum Plank
(PSP)	Pierced Steel Plank
(RC–3)	Peneprime
(T–17)	Coated nylon membrane
(UNK)	Surface Material Unknown

AIRFIELD CLASSIFICATION

GENERAL: Airfields in South Vietnam have been typed IAW MACV DIR 415–9. 7AF Airlift aircraft will operate only into those South Vietnam airfields classified type 1, 2, 3 for appropriate aircraft.

TYPE 1 – (MINIMUM OPERATIONAL) The lowest standard of construction using the absolute minimum criteria. Operations will be marginal, inefficient, and limited to daylight and good weather conditions. Allowable cabin loads (ACL) will be reduced depending on runway surface and density altitude. Type 1 airfields are designed to be used as assault airfields and routine resupply airfields for small units (such as Special Forces camps) when time is not a critical factor. Type 1 airfields may be used as a drop zone (DZ) when the delivery of large loads is required or the combat environment requires aerial delivery modes. Type 1 airfields using one of the prescribed surfaces will sustain approximately 700 traffic cycles (take off and landing) without major repair.

TYPE 2 – (LIMITED OPERATIONAL) The minimum construction requirement for sustained operations with capability to expand to adverse weather and night operations with the addition of lighting and/or instrument approaches, surrounding terrain permitting. Type 2 airfields will have a ramp capability to handle at least three of the largest type aircraft for which the airfield is designed. ACL's may be reduced depending on runway surface and density altitude. Type 2 airfields will be capable of sustaining 4000 traffic cycles (take off and landing) without major repair.

TYPE 3 – (FULLY OPERATIONAL) The minimum construction requirement for 24 hour constant operations during adverse weather and night conditions. Type 3 airfields will be constructed in accordance with MACV Dir 415.9. Type 3 airfields must maintain the capability of providing full services including refueling, base operations, weather advice, transient alert, 24 hour messing, control tower, and transient ramp space for at least 3 aircraft of the largest size for which the airfield is designed. Type 3 airfields will be capable of sustaining 15,000 traffic cycles (take off and landing) without major repair.

	TYPE 1			TYPE 2			TYPE 3
RUNWAY	**C–130**	**C–123**	**C–7**	**C–130**	**C–123**	**C–7**	**(Applicable to all 3 aircraft types)**
Length	2500′	2000′	1000′	2900′	2300′	1500′	3500′
Width	60′	50′	50′	60′	60′	60′	60′
Shoulder	10′	10′	10′	10′	10′	10′	10′
Clear Area	35′	35′	35′	35′	35′	35′	35′
Lateral Safety Zone	60′	50′	40′	75′	75′	75′	75′
Lateral Safety Zone Slope	7:1	7:1	7:1	7:1	7:1	7:1	7:1
RUNWAY CLEAR ZONE							
Length	300′	300′	300′	500′	400′	400′	500′
Beginning width	150′	150′	150′	150′	150′	150′	150′
Flares to	225′	225′	225′	300′	300′	300′	500′
RUNWAY APPROACH ZONE							
Length	5280′	2000′	2000′	7920′	3000′	3000′	(1)
Beginning width	225′	225′	225′	300′	300′	300′	500′
Flares to	2000′	750′	750′	2000′	850′	850′	2500′
Slope	35:1	25:1	20:1	35:1	25:1	20:1	(1)
TURNAROUNDS							
Length	150′	150′	150′	150′	150′	150′	150′
Width	150′	150′	100′	150′	150′	150′	150′
Shoulder	10′	10′	10′	10′	10′	10′	10′
Clear Area	35′	35′	35′	35′	35′	35′	35′
Lateral Safety Zone	60′	50′	40′	35′	35′	35′	35′
Lateral Safety Zone Slope	7:1	7:1	7:1	7:1	7:1	7:1	7:1
OVERRUNS							
Length	100′	100′	100′	100′	100′	100′	300′
Width	60′	50′	50′	60′	60′	60′	60′
TAXIWAYS							
Length (2)	195′	195′	195′	245′	195′	195′	245′
Width	40′	40′	40′	40′	40′	40′	40′
Turn radius	70′	70′	70′	70′	70′	70′	70′
Clear area	65′	65′	65′	65′	65′	65′	65′
PARKING APRON AREA							
Length	210′	210′	150′	750′	450′	450′	900′
Width	210′	210′	150′	210′	210′	150′	210′
Shoulder	10′	10′	10′	10′	10′	10′	10′
Clear area	65′	50′	50′	65′	60′	50′	65′
Cargo area	45′	45′	45′	45′	45′	45′	45′

(1) The length and slope of Type 3 runway approach zones must meet criteria for the particular instrument approach planned for that aircraft. See U. S. Standards for Terminal Instrument Procedures (TM 11-2557-26, OPNAVINST 3722.16A, AFM 55–9).

(2) Runway to apron minimum distance.

WEIGHT BEARING CAPACITY

S – Runway weight bearing capacity for aircraft with single wheel type landing gear. (C–47), (F–100), etc.

T – Runway weight bearing capacity for aircraft with twin wheel type (includes single tandem) landing gear. (C–124), (C–130), etc.

TT – Runway weight bearing capacity for aircraft with twin tandem wheel type (includes quadricycle) landing gear. (B–52), (C–135), etc.

TDT – Runway weight bearing capacity for aircraft with twin delta tandem landing gear. (C–5)

AUW – All up weight. Maximum runway gross weight bearing capacity for any aircraft, irrespective of landing gear configuration.

SWL – Single wheel loading. (This includes information submitted in terms of Equivalent Single Wheel Loading and Single Isolated Wheel Loading). Tire inflation pressure given when available e.g. (SWL 00/T.P. 250 PSI.)

PSI – Pounds per square inch. PSI is the actual figure expressing maximum pounds per square inch runway will support, e.g. (PSI 535).

C–54 – Aircraft by type based on past usage when more specific information is not known.

NOTE: Runway weight bearing capacity (gross weight) is determined by adding 000 to figure following S, T, TT, TDT, SWL and AUW. A blank space following the letter designation is used to indicate the runway weight bearing capacity, sufficient to sustain aircraft with this type landing gear, although definite figures are not available, e.g. (T). Runway weight-bearing capacity given is for unlimited operations; aircraft weights higher than given require prior permission from the aerodrome controlling authority.

NOTE: Omission of weight bearing capacity indicates information unknown. Footnoted remarks are used to indicate a runway with a weight bearing capacity greater than the longest runway, or weight restriction of taxiways, aprons or other runways.

SERVICING

Specific services available are listed individually under each aerodrome listing, i.e., fuel, oil, JASU, etc. Times of transient alert service availability are given in the Aerodrome Remarks. Transient alert service is considered to include all services for TURN-AROUND, i.e., servicing (Fuel, oil, oxygen, etc), debriefing to determine requirements for maintenance, minor maintenance, inspection and parking assistance of transient aircraft. Drag chute repack, specialized maintenance, or extensive repairs will be provided within the capabilities and priorities of the base. Delays can be anticipated after normal duty hours/holidays/weekends regardless of the hours of transient maintenance operation. Pilots should not expect to be serviced for turn-arounds during time periods when servicing or maintenance manpower is not available. Prior permission is required for transient alert service outside normal hours. In case of aerodromes not operated exclusively by U. S. military, the servicing indicated by the remarks will not always be available for U. S. military aircraft. When transient alert services are not shown, facilities are unknown.

NO PRIORITY BASIS–Means that transient alert services will be provided only after all the requirements for mission/tactical assigned aircraft have been accomplished.

NOTE: BASES MAY BE USED AT ANY TIME AS WEATHER ALTERNATES OR IN CASE OF EMERGENCY.

JET AIRCRAFT STARTING UNITS (JASU)

The numeral preceding the type of unit indicates the number of units available. The absence of the numeral indicates ten or more units available. NOTE—Absence of JASU designation indicates non-availability.

I. USAF JASU (For variation in technical data, refer to T. O. 35-1-7)

A. ELECTRICAL STARTING UNITS:

A-1	-7.8 KW, 28 V, 280 amp
A-3, 3A	-22 KW, 28 V, 800-1200 amp.
A-7	-28 V DC, 1050 amp.
B-10, 10A, 10B	-28 V, 7.5 KW, 3 KW, 110 V; 115-200 V, 40 KVA at .75 P. F., 400 Hz, 3 phase, 4 Wire.
C-21	-28 V, 11 KW, 2 Wire; 115-200 V, 8 KW, 2 Wire, 380-900 Hz.
C-22, 22A, 22C	-28 V, 22 KW, 800-1200 amp; 115-200 V, 8 KW, 70 amp; 2 Wire, 380-900 Hz.
C-26	-28 V, 45 KW; 115-200 V, 15 KW, 380-800 Hz, 1 phase, 2 Wire.
C-26B	-28 V, 45 KW; Split Bus; 115-200 V, 15 KW, 380-800 Hz, 1 phase, 2 Wire.
ECU-9M	-28 V, 1000 amp; 220 V, 130 amp, 440 V, 64 amp.
MD-3	-28 V, 1500 amp, Split Bus; 115-200 V, 3 phase, 400 Hz, 60 KVA at .75 P. F., 4 Wire.
MD-3A	-28 V, 1500 amp, 45 KW, Split Bus; 115-200 V, 3 phase 60 KVA at .75 P. F. 400 Hz, 4 Wire, 45 KW.
MD-3M	-A. C. 400 Hz, 60 KVA, 200 V line to line, 115 V line to neutral, 3 phase, .75 P. F.; DC 15 KW rating, 500 amp 28 V.
M32A-10	-28 V, 15 KW, 500 amp; 115-200 V, 15 KW, 400 Hz, 3 phase, 20 KVA at .75 P. F., 4 Wire.
M32A-13	-28 V, 150 V., 300-140 V, 22 KVA, 115-200 V, 400 Hz, 3 phase.

B. AIR STARTING UNITS:

ACE-37A	-3600 psi, 18000 cu in. capacity.	MC-1A	-15 CFM, 3500 psi, 4-stages
MA-1	-150 Air HP, 115 Lb/Min 50 psia.	MC-2A	-15 CFM, 200 psia.
MA-1A	-150 Air HP, 82 Lb/Min 45 psia.	MC-11	-4000 psi, 8000 cu in., 15 CFM
MA-2	-250 Air HP, 150 Lb/Min 65 psia.	MJ-1	-3000-5000 psi, 30 GPM Flow, 110 HP.
MC-1	-15 CFM, 3500 psi.		
MC-1 Modified	-15 CFM, 3500 psia, 500 cu in.	502-7D or F-52372	-182 Lb/Min, 52.8 psia.

C. COMBINATION AIR AND ELECTRICAL STARTING UNITS:

MA-1 MPSU	-28 V, 500-1000 amp, Split Bus; 115-200 V, 25 KW, 3 phase, 400 Hz, 4 Wire, 30 KVA; 3500 psi; 45 psia, 150 Air HP, 117 Lb/Min, 13 CFM.
MA-2 MPSU	-28 V, 1000 amp and 28 V, 500 amp Split Bus; 115-200 V, 3 phase, 30 KVA, 400 Hz, 4 wire; 3500 psi; 13.5 CFM, 45 psia, 150 Air HP, 110 Lb/Min.
MA-3 MPSU	-28 V, 30 KW, 1000 amp, common or Split Bus; 115-200 V, 60 KVA at .75 P. F., 400 Hz, 3 phase and 115 V, 20 KVA at .75 P. F., 400 cycle, single phase; 3500 psi, 15 CFM; 150 Lb/Min, 60 psi.
M32A-60	-28 V, 15KW DC, 120V, 25KVA, 1 phase; 120/208V, 75 KVA, 3 phase 400 Hz AC pneumatic capability: 120 ± 4 Lbs @ 49 ± 2 psia.
M32A-60A	-60 KW, 3 phase, 400 Hz, 120/208 AC at 0.75 PF, 28 V DC 200 Amps – Pneumatic 150 Lb/Min ± 5, 51 psia ± 2. NOTE: During combined electrical and pneumatic loads, the pneumatic circuitry takes preference and will limit the amount of electrical power available.

D. STARTER CARTRIDGES:

MXU-4A-, P-1, STU-3A

II. USN JASU

A. ELECTRICAL STARTING UNITS:

MMG-2	-500 amp constant, 30 KVA, 60-40 Hz AC convert and 28 DC.
NB-2/3	-500 amp constant, 45KW, 400 Hz AC only.

NC–2A –500 amp constant, 1000 amp intermittent, 28V DC, AC 30 KVA, 400 Hz 3 phase 115/200V.
NC–5 –200/500 amp constant, 1000 amp intermittent, 28–35V DC, 15/35 KW. 115/200V, 3 phase, 400 Hz AC, 30/45 KVA
NC–6 –200 amp constant, 28.5V DC, 32/45 KW. 120/208V, 3 phase, 400 Hz AC, 30 KVA.
NC–6A –400 amp, 28.5V DC, 30 KW. 115/200V, 400 Hz AC, 30 KVA.
NC–7/7A/7B/7C –750 amp constant, 1000 amp intermittent, 28.5V DC, 45 KW. 115/200V, 3 phase, 400 Hz AC, 30 KVA.
NC–8A –750 amp, 28V DC. 120/208V, 400 Hz AC, 60 KVA.
NC–10/10B –750 amp constant, 1000 amp intermittent, 28V DC. 115/200V, 400 Hz AC, 90 KVA.
NC–12/12A –750 amp constant, 1000 amp intermittent, 28V DC. 115/200V, 400 Hz AC, 125 KVA.

B. AIR STARTING UNITS:
GTC–85 –120 lbs per min at 45 psi.
WELLS AIR
START SYSTEM –180 lbs per min at 75 psi or 120 lbs per min at 45 psi. Simultaneous multiple start capability.

C. COMBINED AIR AND ELECTRICAL STARTING UNITS:
NCPP/RCPT-105–180 lbs per min at 75 psi or 120 lbs per min at 45 psi. 700 amp, 28V DC. 120/208V, 400 Hz AC, 30 KVA.

D. STARTER PROBES
Starter probes for A4 and F8 aircraft are available at most, but not all USN/USMC jet air stations. Probe availability is indicated on JASU line, e.g., (A4, F8 probes), (A4 probe). Absence of information indicates non-availability.

III. USA JASU

59B2–1B –28V, 7.5 KW, 280 amp.

FUEL

Bold type in the directory listing denotes US military base supply at joint use aerodromes. Into-Plane Contract fuel is shown in normal type. Listings preceded by NC indicates military base supply, Into-Plane Contract nor reciprocal agreement supply is available for fuel listed.

I. U. S. AVIATION FUELS (MIL SPECS)

FLIP Code	Grade	NATO CODE
A+	115/145	F–22
A	100/130	F–18
C	80/87	F–12
J4	JP–4	F–40
J5	JP–5	F–44
J	Jet Fuel, Type Unknown	- - -

NOTE: MIL JP–4 fuel contains icing inhibitor unless indicated otherwise in Aerodrome Remarks.

II. COMMERCIAL AVIATION FUELS

FLIP Code	Grade	NATO CODE
D	73 NL (Non Leaded)	None
E	80 NL (Non Leaded)	None
C1	80/87	F – 12
B1	91/96	None
A1	100/130	F – 18

G	108/135	None
A + 1	115/145	F – 22
TA	Jet Fuel ASTM Type A	None
TA1	Jet Fuel ASTM Type A–1 with FS II (See Note 3)	F–34
TA2	Jet Fuel ASTM Type A–1 wo FS II (See Note 3)	F–35
TB	Jet Fuel ASTM Type B (See Note 2)	F – 45
TX	Jet Fuel, Type Unknown	---

(Commercial jet fuels conform to specifications established by the American Society for Testing Materials (ASTM).

NOTE:

1. To determine usability and interchangeability of fuels (including fuels not listed), check the brand name designation of the product available and refer to USAF TO 42B1–1–14 or USN current NAVAIR Inst 10341.1 and current NAVAIR Inst 10300.1.

2. Commerical Jet Fuel similar in many respects to MIL–JP–4, however, does not contain icing inhibitor. Freeze Point–60°F.

3. FS II is icing inhibitor.

III. U.S. AVIATION OILS (MIL SPECS)

FLIP/NATO Code	Grade, Type
O– 113	1065, Reciprocating Engine Oil (MIL–L–6082)
O– 117	1100, Reciprocating Engine Oil (MIL–L–6082)
O– 117 +	1100, O–117 plus Cyclohexanone (MIL–L–6082)
O– 123	D–1080 (Dispersant), Reciprocating Engine Oil (MIL–L–22851 Type III)
O– 128	D–1120 (Dispersant), Reciprocating Engine Oil (MIL–L–22851 Type II)
O– 132	1005, Jet Engine Oil (MIL–O–6081)
O– 133	1010, Jet Engine Oil (MIL–O–6081)
O– 148	None, MIL–L–7808 (Synthetic Base), Turbine Engine Oil
O– 156	None, MIL–L–23699 (Synthetic Base), Turboprop and Turboshaft Engines

IV. SUPPORTING FLUIDS AND SYSTEMS

FLIP Code	
ADI	Anti-Detonation Injection Fluid – Reciprocating Engine Aircraft
W	Water, Thrust Augmentation – Jet Aircraft
WAI	Water–Alcohol Injection Type, Thrust Augmentation – Jet Aircraft
SP	Single Point Refueling
PRESAIR	Air Compressors rated 3000 PSI or More
De–Ice	T–33 De–Icing Fluid (MIL–A–6091)

V. OXYGEN

LPOX–low pressure oxygen servicing
HPOX–High pressure oxygen servicing.
LHOX–Low and High pressure oxygen servicing.
LOX–Liquid oxygen servicing.

OXRB–Oxygen replacement bottles. (Maintained primarily at Naval stations for use in aircraft where oxygen can be replenished only by replacement of cylinders.)

NOTE: Combination of above terms is used to indicate complete oxygen servicing available, i.e., LHOX and RB–Low and High pressure oxygen servicing and replacement bottles. LPOX-RB only–Low pressure oxygen replacement bottles only, etc.

NOTE: Aircraft will be serviced with oxygen procured under military specifications only. Aircraft will not be serviced with medical oxygen.

JET BARRIER/ARRESTING GEAR

Although the Air Force and Navy arresting systems are listed on the same line, this does not mean that the systems' operational characteristics are identical. REFER TO CURRENT AIRCRAFT OPERATING MANUALS FOR SPECIFIC ENGAGEMENT WEIGHT AND SPEED CRITERIA BASED ON AIRCRAFT STRUCTURAL RESTRICTIONS AND ARRESTING SYSTEMS LIMITATIONS.

NOTE: Aerodrome listings may show availability of other than U.S. military arresting systems. This information is provided for emergency requirements only.

I. A-GEAR

The following list identifies current operational tail hook systems identified by both Air Force and Navy Terminology:

Bi-Directional (B)

AIR FORCE	NAVY	
BAK-6	E-14	Water Squeezer
———	M-2	Morest-Mobile Arrestment Gear (2 hydraulic units) may be installed on permanent basis
BAK-9	E-27	Rotary Friction Brake
———	E-15	Two E-27 A-Gear
BAK-12	———	Rotary Friction Brake
———	M-21	Rotary hydraulic operational arrestor, short runout
———	E-28	Rotary hydraulic
BAK-13	———	Rotary hydraulic

Uni-Directional

———	E-5/E 5-1	Chain Type

II. J-BAR

Current barrier systems for aircraft with or without tail hook capability are as follows:

Uni-Directional

MA-1A	Nylon webb barrier between stanchions attached to chain type arresting gear.
Safe Bar	Safeland barrier. Non-US nylon net barrier system used in Europe and Asia (Engage with closed canopy).

III. COMBINED J-BAR/A-GEAR

Uni-Directional

MA-1A MODIFIED MA-1A/E-5	Nylon webb barrier between stanchions combined with pendant type cable and attached to chain type arresting gear.
MA-1A/BAK-9, BAK-12, or E-27	Nylon webb barrier between stanchions attached to arresting gear and with hook pendant (may be converted to bi-directional on request).
BAK 11	Pop up engaging device with any type energy absorber (BAK-9, BAK-12, or E-27) to engage main landing gear.

Location of Gear: The arresting gear is depicted as it is located on the runway and the information should be read left or right, depending on the runway in use or landing direction. The middle portion of the runway is indicated by a dash ———, and the distance of the arresting gear from the end of the runway (or into the overrun) on the end on which the gear is located is indicated in parenthesis under the applicable gear. Arresting gear which has a bi-directional capability and can be utilized for emergency approach end engagement is indicated by the symbol (B). See example A. CAUTION–Up to 15 minutes advance notice may be required for rigging A–Gear for approach end engagement. MA–1A gear may not be used for approach end engagements. Direction of engagement of E5/E5–1 chain type gear is indicated by an arrow, i.e., ←E5–1. See example B.

J-BAR/A-GEAR (Example A)

RWY 18	MA–1A (150′ OVRN)	BAK–6(B) (600′)	BAK–12(B) (1000′)	———	BAK–12(B) (1200′)	BAK–6(B) (600′)	MA–1A (150′ OVRN)	RWY 36

(Example B)

RWY 3	←E5–1 (1465′)	E5–1→ (2148′)	←E5–1 (3260′)	———	E5–1→ (957′)	RWY 21

AERODROME REMARKS

I. GENERAL: Pertinent Aerodrome Remarks have been grouped in order of applicability. The first group of remarks is applicable to the primary operator of the aerodrome. Remarks applicable to an activity or activities on the aerodrome are shown on separate lines, i.e., (AF)(N), etc. Restrictions affecting the operational status of the aerodromes are the first entry within each group.

II. Offl Bus Only: Indicates the aerodrome is closed to all transient military aircraft except on official business at or near that installation or in an emergency. USAF aircraft require written orders. Official business within the meaning of AFM 55–48 and current OPNAVINST 3710.7 is further defined as the necessity for personnel aboard an aircraft to contact personnel, units, or organizations (including civilian) at or near the aerodrome most conveniently located for landing for the purpose of conducting transactions in the service of and in the interest of the United States Government. This definition does not provide for the use of an aerodrome by transient aircraft for the purpose of obtaining clearance, service, or other items attendant to itinerant operations. ''Prior Permission Required'' (PPR): Indicates the aerodrome is closed to all transient acft unless prior permission is obtained from approving authority. Prior permission must be requested and confirmation received before the flight departure for the base concerned. Base restrictions do not preclude the use of the base in an emergency for military acft.

A. AF Offl Bus Only or Navy Offl Bus Only indicates applicability of restriction to service indicated only.

RADIO NAVIGATIONAL DATA

I. VOICE CALLS: Pilots should use facility or aerodrome name as listed in this directory with designations as given in following examples when calling air/ground facilities.

Control Towers	''PLEIKU TOWER''
Approach Control	''SPEEDY APPROACH CONTROL''
Center	''SAIGON CENTER''
Departure Control	''TUY HOA DEPARTURE CONTROL''
Ground Control	''VUNG TAU GROUND CONTROL''
Pilot to Forecaster	''TUY HOA METRO''
Communication Station	''AN KHE RADIO''
VFR Advisory Service	''DANANG VFR ADVISORY SERVICE''
Airlift Command Post	''TAN SON NHUT AIRLIFT COMMAND POST''
Base Operations (PTD)	''TAN SON NHUT OPERATIONS''

II. COMMUNICATION FREQUENCIES: Within this supplement are listed gradationally in groups following the Call Sign, i.e., UHF, VHF, HF, LF/MF, with primary frequencies listed first, followed by secondary in descending order. Frequencies published are those indicated by the base and/or traffic control facilities which are required to be made known to the operational user to conduct necessary flying/ground operations.

Frequencies published are transmitted and received and are monitored unless otherwise indicated by the letter ''X'' following the applicable frequency. This means that a frequency with an ''X'' can be requested through the control agency under which it is listed. If there are other limitations placed upon availability of frequencies, these will be indicated in a footnote.

Frequencies published followed by the letter ''T'' or ''R'', indicate that the facility will only transmit or receive respectively on that frequency. All radio aids to navigation frequencies are transmit only.

III. SCHEDULED WEATHER BROADCAST: NAVAIDs providing scheduled weather broadcasts are indicated by Radio Class Code B. FAA and Navy stations broadcast at 15 and 45 minutes past the hour. Exceptions to this will be noted in the Radio/Nav Remarks. Those NAVAIDs providing continuous automatic transcribed weather broadcasts are indicated by Radio Class Code AB.

IV. RADIO BEACON EMISSIONS: Type of emission of radio beacons is shown on the data pages and should be used in accordance with the table below when tuning and identifying these facilities.

V. POSITION OF VOICE/CW SWITCH ON RADIO COMPASS

TYPE STATION	TO HEAR TONE FOR TUNING USE (1)	TO HEAR IDENTIFIER USE
A1	CW Position	CW Position
A0/A2	CW Position	VOICE Position
A2&A3	VOICE Position	VOICE Position

(1) **NOTE:** Always use CW position to check interference first.

VI. RADIO CLASS CODE

AB – Continuous automatic transcribed weather broadcast service.
B – Scheduled Weather Broadcast.
GCA – Ground Control Approach system.
H – Non-directional radio beacon (homing), power 50 watts to less than 2,000 watts.
(H) ⓕ – Normal anticipated interference-free service below 18,000' 40 NM; (14,500' - 17,999' 100 NM contiguous 48 states only) 18,000' to FL450 130 NM; above FL450 100 NM.
HH – Non-directional radio beacon (homing), power 2,000 watts or more.
ILS – Instrument Landing System.
L – Compass Locator. (May be component of ILS system.)
(L) ⓕ – Normal anticipated interference-free service 40 NM up to 18,000 ft MSL.
LMM – Compass locator station when installed at middle marker site.
LOM – Compass locator station when installed at outer marker site.
MA – Range (Adcock, vertical radiators), power less than 50 watts.
MH – Non-directional radio beacon (homing), less than 50 watts.
ML – Range (Loop radiators), power less than 50 watts.
MM – Middle Marker of ILS.
MRA – Range (Adcock, vertical radiators), power 50 to 150 watts.
MRL – Range (Loop radiators), power 50 to 150 watts.
OM – Outer Marker of ILS.
RA – Range (Adcock, vertical radiators), power 150 watts or greater.
RL – Range (Loop radiators), power 150 watts or greater.
S – Simultaneously range, homing and voice signals available.
(T) ⓕ – Normal anticipated interference-free service 25 NM up to 12,000 ft MSL. (Not to be confused with TVOR equipment category).
TACAN – (Tactical Air Navigation) UHF pulse type Omni Range and Distance Measuring Equipment (DME).
TVOR – Low power terminal VOR.
UHF – Ultra High Frequency.
VAR – Visual-aural VHF range.
VHF – Very High Frequency.
VOR – VHF omni-directional range.
VORTAC – Combination VOR and TACAN.
W – Without voice facilities.
Z – VHF station location marker.

ⓕ Applicable only to TACAN's, VOR's and VORTAC's and preceed the listing. (See legend sample).

GROUND CONTROLLED APPROACH FACILITIES AND PROCEDURES

RADAR

1. TERMINAL RADAR CONTROL SYSTEM: An instrument approach and departure system employing surveillance radar (ASR) and precision radar (PAR) equipment. Acquisition of radar data is the basis for all procedures used in the system.

A. Radar Approach Control: A service provided to increase and expedite aircraft movement rate in a terminal area by application of radar separation standards.

1. Surveillance Radar (ASR): Area radar used to vector aircraft from outer fixes, sequence and position aircraft at the final approach gate for completion of approach by the continued use of ASR or PAR, ILS, VOR, TACAN or NDB.

NOTE: ASR, as used to control an aircraft on final approach, provides azimuth and range until reaching one mile from the end of the runway. Recommended altitudes are furnished each mile on final approach at FAA, US Navy and US Army facilities only if requested by the pilot. USAF controllers do not provide recommended altitudes on final approach.

2. Precision Radar (PAR): Final approach radar used to furnish extremely accurate azimuth, elevation and range guidance until on aircraft is over the end of the runway.

NOTE: After decision height (DH), the precision final controller will provide advisories only. The controller will provide advisory course and glide path information until aircraft is over runway threshold.

B. Final Approach Monitor: The use of PAR to monitor approaches other than radar is normally provided when the PAR is operational, the PAR final approach course coincides with the NAVAID final approach course from the final approach fix to the runway, and one of the following conditions exist:

1. The reported weather is below basic VFR minima.
2. At night.
3. Upon the request of the pilot.

C. Radar Controlled Departure: The use of ASR to issue radar vectors to establish an aircraft on the enroute track and to expedite the departure by use of radar separation standards.

D. Radar Monitored Departure: The use of ASR to monitor departing aircraft for the purpose of issuing advisories concerning other radar observed air traffic which may conflict with the departing aircraft.

II. HOURS OF OPERATION: Precision approach radar (PAR) equipment and airport surveillance radar (ASR) equipment operates continuously during IFR conditions unless otherwise indicated under ''RADIO/NAV REMARKS''. During VFR, contact Tower or Approach Control for availability, as VFR hours of operation are not included in ''RADIO/NAV REMARKS''.

A. Contact Under IFR: Pilots desiring GCA assistance during IFR conditions should call the nearest Air Traffic Control facility (Radio, Tower, Center, Approach Control, etc.) requesting GCA assistance.

B. Contact Under VFR: VFR check out or training flights should be arranged locally through Base Operations or the Control Tower.

III. WEATHER MINIMA: Radar weather minima will be specified in the Aerodrome/Facility Directory of this Directory for precision and surveillance approaches only where the procedures and minima comply with established criteria. These minima are applicable to jets, turbo–prop and conventional type aircraft unless otherwise specified. Where different, jet minima will be published in bold type (Navy pilots should consult current OPNAVINST 3710.7 series for minima restrictions by aircraft type). Radar controllers will advise the pilot when the aircraft reaches the published decision height. The weather minima listed are ceiling and visibility minima which have been established to provide an adequate margin of safety for an aircraft making a radar approach. These minima should not be construed as an indication of the capability of the radar unit to assist an aircraft in executing an approach.

IV. ■ NO MINIMA: Radar facilities prefixed by a solid box symbol are those which have no approved minima due to training of radar personnel, lack of equipment, or incomplete operational procedures. Facilities may be used in emergency with EXTREME CAUTION.

V. IFF/SIF CAPABILITY: IFF/SIF Service is considered to be an integral part of the radar system. Where this capability does not exist at an individual installation, the remarks, ''IFF/SIF svc not aval'', are included in RADIO/NAV REMARKS.

VI. EMERGENCIES: Terminal radar systems use all available means to assist aircraft in emergencies. This system normally has access to enroute radar systems, ADC (GCI) radar, Direction Finding Net, IFF/SIF and primary terminal radar.

TERPs–RADAR MINIMA

GENERAL

The United States Standard for Terminal Instrument Procedures (TERPs) is the approved criteria for formulating instrument approach procedures.
All instrument approach procedures are being revised to comply with the TERPs criteria. When revised, several changes in the depiction of landing minima are necessary.

The following changes are the most significant and must be thoroughly understood for proper use.

LANDING MINIMA

Landing minima are established for five aircraft approach categories (A, B, C, D and E). Categories of U.S. military aircraft are published in Section I FLIP Planning. Where instrument approach procedures are published in accordance with TERPs criteria, the standard format for portrayal of landing minima is as follows:

ASR	**RWY**	**CATEGORY**	**MDA**	**RVR**	**HAT**	**CEIL–VIS**
	28	A, B, C, D, E	**440/**	40	278	(300–¾)
	10	A, B, C, D, E	**540/**	40	378	(400–¾)
PAR	**RWY**	**CATEGORY**	**DH**	**RVR**	**HAT**	**CEIL–VIS**
	28	A, B, C, D, E	**262/**	16	100	(100–¼) GS 2.5°
	10	A, B, C, D, E	**262/**	24	100	(100–½) GS 3.0°
CIRCLING	**RWY**	**CATEGORY**	**MDA**	**VIS**	**HAA**	**CEIL–VIS**
	28, 10	A	**540–**	1	370	(400–1)
	28, 10	B	**620–**	1	450	(500–1)
	28	C	**620–**	1½	450	(500–1½)
	10	C	①**680–**	1½	510	(600–1½)
	28, 10	D, E	**720–**	2	550	(600–2)

NOTE:

1. Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives of their respective services for aircraft model/command restrictions.

2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown – not the landing runway. In the above example, a category C aircraft flying a radar approach to runway 10 , circling to land on runway 28 , must use an MDA of 680 feet ① with weather minima of 600–1½.

3. The following symbols may be applied for selected users:

a. ▼ – Indicates other than standard take-off minimums or departure procedures apply for civil users. Civil users refer to tabulation. DOD users refer to service directives and tabulation in the P&SEA DOD FLIP Terminals.
b. ⚠ – Indicates other than standard alternate minimums apply for U.S. Army and Civil users. Refer to tabulation in appropriate FLIP Terminal Low Altitude.
c. ⚠NA – Indicates alternate minimums not authorized.

EXPLANATION OF TERMS

Decision Height (DH) and Minimum Descent Altitude (MDA)

The term minimum altitude, associated with landing minima, has been replaced by the terms Decision Height (DH) and Minimum Descent Altitude (MDA):

DH – An altitude, specified in feet above MSL, at which a missed approach shall be initiated when either visual reference has not been established with the runway environment or the aircraft is not in a position to execute a normal landing. Decision heights apply only to precision approaches (e.g. ILS and PAR).

MDA – An altitude, specified in feet above MSL, below which descent will not be made until visual reference has been established with the runway environment and the aircraft is in a position to execute a normal landing. Minimum descent altitudes apply to non–precision straight–in and circling approaches.

LEGEND

Height Above Touchdown (HAT)

Height Above Touchdown indicates the height of the DH or MDA above the highest runway elevation in the touchdown zone. HAT will be published in conjunction with all straight–in minima.

Height Above Airport (HAA)

Height Above Airport indicates the height of the MDA above the published airport elevation. HAA will be published in conjunction with all circling minima.

Ceilings

Ceiling values shown in parenthesis are for U.S. military use in accordance with applicable service directives. A ceiling is expressed in feet above the published airport elevation, and is equal to or greater than the height of the associated DH or MDA.

Visibility

Visibility values are expressed as Runway Visual Range (RVR), Runway Visibility (RV), or Prevailing Visibility (PV). The visibility value published following the DH or MDA is the prescribed visibility for the approach. For example, the DH or MDA and prescribed visibility will be depicted as 440/40 (40 =4000 RVR) or 400–¾ (¾=¾ statute mile RV or PV, as applicable). For straight–in approaches the visibility value may be either RVR, RV or PV. For circling approaches, the visibility value will always be PV. The visibility value published in parenthesis with the celing value (i.e. 300–¾) is to apply for flight planning. It also applies as the prescribed visibility in the event RVR or RV is not available. This value will always be PV.

APPLICATION

Instrument approach procedures, including landing minima published in accordance with previous criteria, will continue to apply as published until revised to conform to TERPs criteria.

ABBREVIATIONS

THE FOLLOWING LIST OF ABBREVIATIONS ARE THOSE COMMONLY USED WITHIN THIS DIRECTORY. A COMPLETE LIST OF ABBREVIATIONS INCLUDING THOSE AUTHORIZED FOR USAF USN NOTAM USAGE IS LOCATED IN FLIP PLANNING– SEC. 1.

AAF ..... Army Air Field
AASW..... Artillery and Air Strike Warning
AB ..... Airbase
abm ..... abeam
ACC ..... Area Control Center
acft ..... aircraft
ACP ..... Airlift Command Post
A/D ..... Aerodrome
ADA ..... Advisory Area
ADIZ..... Air Defense Identification Zone
adj ..... adjacent
ADR ..... Advisory Route
advs ..... advise, advised
advsy ..... advisory
afld ..... airfield
AFR ..... Air Force Regulation
A/G ..... air/ground
A–Gear..... Arresting Gear
AGL ..... above ground level
ALCC ..... Air Lift Control Center
ALCE ..... Air Lift Control Element
ALOREP ..... Air Lift Operational Reporting System
ALS ..... Approach Light System
alt ..... altitude
altn ..... alternate
ant ..... antenna
apch ..... approach
APP CON ... Approach Control
aprx ..... approximate(ly)
apv ..... approve, approval
arng ..... arrange, arrangement, arranging
arpt ..... airport
arr ..... arrive, arrival
ARTCC ..... Air Route Traffic Control Center
AS ..... Air Station
ASAP..... as soon as possible
ATC ..... Air Traffic Control
ATIS ..... Automatic Terminal Information Service
ATRC ..... Air Traffic Regulation Center
attn ..... attention
auth ..... authorized, authority
avbl ..... available

bcn ..... beacon
bcst ..... broadcast
bdry ..... boundary
bldg ..... building(s)
brg ..... bearing
btn ..... between
bus ..... business

cat ..... category
CCW ..... counterclockwise
CH ..... channel
Chan ..... Channel
chg ..... change
circ ..... circling
civ ..... civil, civilian
ck ..... check, checked
clnc ..... clearance
clsd ..... closed
cntr ..... center
CO ..... Commanding Officer
Co ..... Company, County
com ..... communication(s)
coml ..... commercial
comsn ..... commission, commissioned
cond..... condition(s)
const ..... construction
cont ..... continue, continued, continuous
convl..... conventional
copter ..... helicopter
crs ..... course
CSTMS ..... customs
CTA ..... Control Area
ctc ..... contact
ctl ..... control
CTLZ ..... Control Zone
CW ..... Clockwise, Continuous Wave, Carrier Wave

DAB ..... Director of Air Base
DASC ..... Direct Air Support Center
daylt ..... daylight
decom ..... decommission(ed)
dep ..... departure, depart
DEP CON.... Departure Control
destn..... destination
DH ..... Decision Height
direc ..... directional
dist ..... distance, district
div..... division
dly..... daily
DRAC..... Delta Regional Assistance Command
dur ..... during

E..... East, Eastern
ea..... each
eff ..... effect, effected, effective

ABBREVIATIONS

elev ..... elevate, elevation
emerg ..... emergency
eng ..... engine
eqpt ..... equipment
ev ..... every
exc ..... except
excld ..... exclude, excludes
extv ..... extensive

fac ..... facility, facilities
FCST ..... Forecast
FIR ..... Flight Information Region
FL ..... Flight Level
fld ..... field
FLIP ..... Flight Information Publication
flt ..... flight (s)
FLT CON .... Flight Control
FOC ..... Flight Operations Center
FOD ..... Foreign Object Damage
fone ..... telephone
fr ..... from
FRAC ..... First Regional Assistance Command
freq ..... frequency, frequent, frequently
FSS ..... Flight Service Station
F/W ..... Fixed Wing

gnd ..... ground
GND CON ... Ground Control
GS ..... glide slope

HAA ..... Height Above Airport
HAT ..... Height Above Touchdown
hdg ..... heading
hi ..... high
hol ..... holiday
HQ ..... Headquarters
hr ..... hour (s)
hvy ..... heavy
Hz ..... Hertz (cycles per second)

IFF ..... Identification Friend or Foe
IFSS ..... International Flight Service Station
inbd ..... inbound
info ..... information
inop ..... inoperative
inst ..... instrument
int ..... intersection, intersections
intl ..... international
ints ..... intense, intensity, intensive

J-BAR ..... Jet Barrier

kHz ..... kiloHertz

lcl ..... local
lctd ..... located
lczr ..... localizer beacon
ldg ..... landing
lgt ..... light, lights, lighted
lgtd ..... lighted
ltd ..... limited

maint ..... maintain, maintenance

M ..... meters, magnetic (after a bearing)
max ..... maximum
MDA ..... Minimum Descent Altitude
METAR ..... Aviation Routine Weather Report
MHz ..... MegaHertz
mil ..... military
min ..... minimum, minutes
mkr ..... marker
MP ..... Maintenance Period
M.R. ..... Military Regions
mrk ..... mark(s), marked, marking
mt ..... mountain(s), mount
mtr, M or m ... meters

N ..... North, Northern
navaid ..... navigation aid
NDB ..... Non Directional Beacon
ngt ..... night
NM ..... nautical miles
Nr or No ..... number
ntc ..... notice

obsn ..... observation
obst ..... obstruction (s)
opr ..... operate, operator, operated, operates
OPS ..... Operations
O/R ..... On Request
O/S ..... Out of Service
OT ..... Other Times
ovrn ..... overrun

pat ..... pattern
perm ..... permanent
perms ..... permission
pers ..... personnel
PFSV ..... Pilot to Forecaster Service
PN ..... Prior Notice Required
PPR ..... Prior Permission Required
prk ..... park, parking
proh ..... prohibited
pt ..... point(s)

qtrs ..... quarters
quad ..... quadrant(s)

ABBREVIATIONS

rad ..... radius, radial
RAPCON ..... Radar Approach Control (USAF)
RBn ..... Radio Beacon
rcvr ..... receiver
rdo ..... radio
req ..... request
rgt ..... right
RON ..... Remain Overnight
rpt ..... report, reporting
rqr ..... require, required
RSDU ..... Radar Storm Detection Unit
rstd ..... restricted
ruf ..... rough
RVR ..... Runway Visual Range
R/W ..... Rotary Wing
rwy ..... runway

S ..... South, Southern
secd ..... secondary
SELCAL ..... Selective Calling System
sfc ..... surface
SIF ..... Selective Identification Feature
sked ..... schedule
SM ..... statute mile
SOI ..... Signal Operations Instructions
SR ..... Sunrise
SRAG ..... Second Regional Assistance Group
SS ..... Sunset
SSB ..... Single Side Band
std ..... standard
STOL ..... Short Take-Off and Landing
sur ..... surround (ing)
svcg ..... servicing

TALO ..... Tactical Airlift Liasion Officer
tfc ..... traffic
thld ..... threshold
thru ..... through
til ..... until
tkof ..... take-off
TOC ..... Tactical Operations Center
trng ..... training
TRAC ..... Third Regional Assistance Command
tran ..... transient
trans ..... transport, transmit, transmitted, transmitter, transmitting, transmits
twr ..... tower
twy ..... taxiway

UFN ..... Until Further Notice
unk ..... unknown
unlgtd ..... unlighted
unmrk ..... unmarked
unrel ..... unreliable
unsvc ..... unserviceable
USB ..... Upper Side Band

vcnty ..... vicinity
vert ..... vertical
VFR ..... Visual Flight Rules
vis ..... visibility

W ..... West, Western
wk ..... week, weeks
wkd ..... weekday, weekdays
wng ..... warning
wt ..... weight
wx ..... weather

Z ..... Greenwich Mean Time When Preceded by a Figure Group