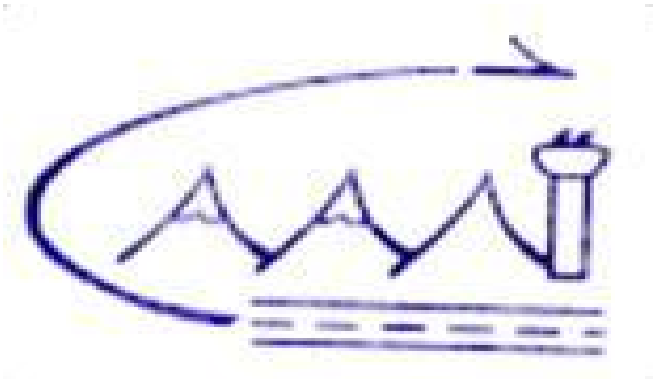
CIVIL AVIATION AUTHORITY OF NEPAL
ATM DEPARTMENT



Air Traffic Services Operations Manual
Pokhara Civil Aviation Office
(ATSOM, PKCAO)

First Edition

FEBRUARY 2017

Submitted By
Shrestha Consultancy Services
Email: birendrars@ntc.net.np

CIVIL AVIATION AUTHORITY OF NEPAL
ATM DEPARTMENT

Air Traffic Services Operations Manual

Pokhara Civil Aviation Office

(ATSOM, PKCAO)

First Edition

FEBRUARY 2017

FOREWORD

Pursuant to the Chapter1 Para (i) Introduction of Manual of Standard Air Traffic Services (MATS) Nepal2014, this Air Traffic Services Operations Manual referred herein after ATSOM, PKCAO has been developed by ATM Department, CAAN in coordination with Pokhara Civil Aviation Office (PKCAO). This ATSOM incorporates the provisions of MATS Nepal2014, relevant Civil Aviation Requirements, and provision of related ICAO Annexes and Documents.

This ATSOM prescribes the detail processes and procedures for Air Traffic Services under the jurisdiction of Pokhara Tower for the safety, regularity and efficiency of air navigation applicable for Pokhara Airport. ATS personnel are required to comply with the provisions of this manual to perform their operational responsibilities.

This manual is approved by Director General of Civil Aviation Authority of Nepal and issued under his authority which comes into effect from.....

Director General
Civil Aviation Authority of Nepal
Babar Mahal, Kathmandu

Amendment Record

Amendments and Corrigenda to this "Air Traffic Services Operations Manual, PKCAO" are regularly issued by Director General of CAAN, Nepal. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

AMENDMENT			
No.	DATE APPLICABLE	DATE ENTERED	ENTERED BY

CORRIGENDA			
No.	DATE APPLICABLE	DATE ENTERED	ENTERED BY

FOREWORD

Pursuant to the Chapter1 Para (i) Introduction of Manual of Standard Air Traffic Services (MATS) Nepal2014, this Air Traffic Services Operations Manual referred herein after ATSOM, PKCAO has been developed by ATM Department, CAAN in coordination with Pokhara Civil Aviation Office (PKCAO). This ATSOM incorporates the provisions of MATS Nepal2014, relevant Civil Aviation Requirements, and provision of related ICAO Annexes and Documents.

This ATSOM prescribes the detail processes and procedures for Air Traffic Services under the jurisdiction of Pokhara Tower for the safety, regularity and efficiency of air navigation applicable for Pokhara Airport. ATS personnel are required to comply with the provisions of this manual to perform their operational responsibilities.

This manual is approved by Director General of Civil Aviation Authority of Nepal and issued under his authority which comes into effect from..10th Feb, 2017.

Director General
Civil Aviation Authority of Nepal
Babar Mahal, Kathmandu

TABLE OF CONTENTS

CHAPTER 1

1. INTRODUCTION

1.1 General

1.1.1 Background

1.1.1.1 This "Air Traffic Services (ATS) Operation Manual for Pokhara CAO 2017", made under the provision of Manual of Standard Air Traffic Services Nepal 2014 (MATS Nepal 2nd Edition) Chapter 1, Para A (i) Introduction of Manual of Standards- Air Traffic Services, refers to the Procedures and methods to be used in Pokhara Airport in providing ATS services. This document is referred as ATSOM, PKCAO in short.

1.1.1.2 Readers should understand that in the circumstance where there is any inconsistency between the provision of MATS Nepal and the ATSOM, PKCAO, the MATS Nepal prevails.

1.1.2 Related Documents

1.1.2.1 The provisions in this document should be read in conjunction with:

a) Civil Aviation Requirements (CAR-11) –Air traffic Services 2002

b) Civil Aviation Requirements (CAR-2) –Rules of the Air. 2002

c) MATS Nepal 2014

d) ICAO Air Traffic Services Planning Manual (Doc 9426)

e) ICAO Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) (Doc 4444)

f) ICAO Regional Supplementary Procedures (Doc 7030)

g) AIP Nepal, AICs, AIP Supplement, DGCA Directives and Advisory Circulars.

h) ICAO Annex 10 – Aeronautical Telecommunications, Volume II – Communications Procedures

i) ICAO Annex 15 – Aeronautical Information Services

j) ICAO Safety Management Manual Doc 9859

1.1.3 Differences Published in AIP

1.1.3.1 Differences from ICAO Standards, Recommended Practices and Procedures are published in AIP Nepal.

1.1.4 ATSOM, PKCAO Documentation Change Management

1.1.4.1 Pokhara Civil Aviation Office (PKCAO) has responsibility for the technical contents of this ATSOM which can be amended and issued after the endorsement by PKCAO and approval from the Director General, CAAN.

1.1.4.2 The need to change procedures in this ATSOM can arise for any of the following reasons:

a) to respond to changes in MATS, Nepal;

b) to respond to changes in other safety standards of CAAN;

c) to respond to ICAO prescription;

d) to accommodate proposed initiatives or new technologies.

CHAPTER 2

2. DEFINITIONS

When the following terms are used in the present document they have the following meanings:

Accepting unit/controller. Air traffic control unit/air traffic controller next to take control of an aircraft.

Note- See definition of "transferring unit/controller".

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Note.— The term "aerodrome" where used in the provisions relating to flight plans and ATS messages is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

Aerodrome control service. Air traffic control service for aerodrome traffic.

Aerodrome control tower. A unit established to provide air traffic control service to aerodrome traffic.

Aerodrome elevation. The elevation of the highest point of the landing area.

Aerodrome traffic. All traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Note.— An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrome traffic circuit.

Aerdrome traffic circuit. The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

Aeronautical fixed service (AFS). A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

Aeronautical ground light. Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

Aeronautical Information Publication (AIP). A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Aircraft observation. The evaluation of one or more meteorological elements made from an aircraft in flight.

Aircraft proximity. A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised. An aircraft proximity is classified as follows:

Risk of collision: The risk classification of an aircraft proximity in which serious risk of collision has existed.

Safety not assured: The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised.

No risk of collision: The risk classification of an aircraft proximity in which no risk of collision has existed.

Risk not determined: The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

Air-ground communication. Two-way communication between aircraft and stations or locations on the surface of the earth.

AIRMET information. Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

AIRPROX. The code word used in an air traffic incident report to designate aircraft proximity.

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Air-taxiing. Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

Note.— The actual height may vary, and some helicopters may require air-taxiing above 8 m (25 ft) AGL to reduce ground effect turbulence or provide clearance for cargo slingloads.

Air-to-ground communication. One-way communication from aircraft to stations or locations on the surface of the earth.

Air traffic. All aircraft in flight or operating on the manoeuvring area of an aerodrome.

Air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Note 1.— For convenience, the term "air traffic control clearance" is frequently abbreviated to "clearance" when used in appropriate contexts.

Note 2.— The abbreviated term "clearance" may be prefixed by the words "taxi", "take-off", "departure", "en-route", "approach" or "landing" to indicate the particular portion of flight to which the air traffic control clearance relates.

Air traffic control instruction. Directives issued by air traffic control for the purpose of requiring a pilot to take a specific action.

Air traffic control service. A service provided for the purpose of:

a) preventing collisions:
    1) between aircraft, and
    2) on the manoeuvring area between aircraft and obstructions; and
b) expediting and maintaining an orderly flow of air traffic.

Air traffic control unit.A generic term meaning variously, area control centre, approach control unit or aerodrome control tower.

Air traffic flow management (ATFM).A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilized to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority.

Air traffic management (ATM). The dynamic, integrated management of air traffic and airspace including air traffic services, airspace management and air traffic flow management — safely, economically and efficiently — through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

Air traffic management system. A system that provides ATM through the collaborative integration of humans, information, technology, facilities and services, supported by air and ground- and/or space-based communications, navigation and surveillance.

Air traffic service (ATS). A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Air traffic services airspaces. Airspaces of defined dimensions alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

Note.— ATS airspaces are classified as Class A to G as shown in Annex 11, Appendix 4.

Air traffic services reporting office. A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Note.— An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

Air traffic services unit. A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

Airway. A control area or portion thereof established in the form of a corridor.

ALERFA. The code word used to designate an alert phase.

Alerting service. A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

Alert phase. A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

Alternate aerodrome. An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following:

> **Take-off alternate:** An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.
>
> **En-route alternate:** An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route.

Destination alternate: An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note.— The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

Altitude. The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

Approach sequence. The order in which two or more aircraft are cleared to approach to land at the aerodrome.

Appropriate ATS authority. The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

Appropriate authority.

a) Regarding flight over the high seas: The relevant authority of the State of Registry.

b) Regarding flight other than over the high seas: The relevant authority of the State having sovereignty over the territory being overflown.

Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

ATIS. The symbol used to designate automatic terminal information service.

ATS route. A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

Note 1.— The term "ATS route" is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

Note 2.— An ATS route is defined by route specifications which include an ATS route designator, the track to or from significant points (waypoints), distance between significant points, reporting requirements and, as determined by the appropriate ATS authority, the lowest safe altitude.

Automatic terminal information service (ATIS). The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link.

Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Base turn. A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

Note.— Base turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

Blind transmission. A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.

Broadcast. A transmission of information relating to air navigation that is not addressed to a specific station or stations.

Ceiling. The height above the ground or water of the base of the lowest layer of cloud below 6000 m (20 000 ft) covering more than half the sky.

Clearance limit. The point to which an aircraft is granted an air traffic control clearance.

Common point. A point on the surface of the earth common to the paths of two aircraft, used as a basis for describing longitudinal separation minima (e.g. significant point, waypoint, navigation aid, fix).

Note.— Common point is not used for operational purposes or in pilot-controller communications.

Computer. A device which performs sequences of arithmetical and logical steps upon data without human intervention.

Note.— When the word "computer" is used in this document it may denote a computer complex, which includes one or more computers and peripheral equipment.

Control area. A controlled airspace extending upwards from a specified limit above the earth.

Controlled aerodrome. An aerodrome at which air traffic control service is provided to aerodrome traffic.

Note.— The term "controlled aerodrome" indicates that air traffic control service is provided to aerodrome traffic but does not necessarily imply that a control zone exists.

Controlled airspace. An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note.— Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in Annex 11, 2.6.

Controlled flight. Any flight which is subject to an air traffic control clearance.

Control zone. A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

Cruising level. A level maintained during a significant portion of a flight.

Current flight plan (CPL). The flight plan, including changes, if any, brought about by subsequent clearances.

Note.— When the word "message" is used as a suffix to this term, it denotes the content and format of the current flight plan data sent from one unit to another.

Decision altitude (DA) or decision height (DH). A specified altitude or height in the precision approach or approach with vertical guidance at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III

operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3.— For convenience where both expressions are used they may be written in the form "decision altitude/ height" and abbreviated "DA/H".

DETRESFA. The code word used to designate a distress phase.

Distress phase. A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

Elevation. The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

Emergency phase. A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

Estimated elapsed time. The estimated time required to proceed from one significant point to another.

Estimated off-block time. The estimated time at which the aircraft will commence movement associated with departure.

Estimated time of arrival. For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

Expected approach time. The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing.

Note.— The actual time of leaving the holding fix will depend upon the approach clearance.

Filed flight plan (FPL). The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

Note.— When the word "message" is used as a suffix to this term, it denotes the content and format of the filed flight plan data as transmitted.

Final approach. That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or

b) at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which:

1) a landing can be made; or

2) a missed approach procedure is initiated.

Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight information region (FIR). An airspace of defined dimensions within which flight information service and alerting service are provided.

Flight information service. A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Flight level. A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Note 1. — A pressure type altimeter calibrated in accordance with the Standard Atmosphere:

a) when set to a QNH altimeter setting, will indicate altitude;

b) when set to QFE altimeter setting, will indicate height above the QFE reference datum;

c) when set to a pressure of 1 013.2 hPa, may be used to indicate flight levels.

Note 2. — The terms "height" and "altitude", used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Note.— Specifications for flight plans are contained in Annex 2. A Model Flight Plan Form is contained in Appendix 2 to this document.

Flight visibility. The visibility forward from the cockpit of an aircraft in flight.

Flow control. Measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome, so as to ensure the most effective utilization of the airspace.

Forecast. A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

Ground effect. A condition of improved performance (lift) due to the interference of the surface with the airflow pattern of the rotor system when a helicopter or other VTOL aircraft is operating near the ground.

Note.— Rotor efficiency is increased by ground effect to a height of about one rotor diameter for most helicopters.

Ground visibility. The visibility at an aerodrome, as reported by an accredited observer or by automatic systems.

Heading. The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).

Height. The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

Holding fix. A geographical location that serves as a reference for a holding procedure.

Holding procedure. A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.

Hot spot. A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

IFR. The symbol used to designate the instrument flight rules.

IFR flight. A flight conducted in accordance with the instrument flight rules.

IMC. The symbol used to designate instrument meteorological conditions.

INCERFA. The code word used to designate an uncertainty phase.

Incident. An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Note.— The type of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies can be found at http://www.icao.int/anb/aig.

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Note 1. — The specified minima for visual meteorological conditions are contained in Chapter 3 of Annex 2.

Note 2.— In a control zone, a VFR flight may proceed under instrument meteorological conditions if and as authorized by air traffic control.

Landing area. That part of a movement area intended for the landing or take-off of aircraft.

Level. A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Location indicator. A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.

Manoeuvring area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Meteorological information. Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

Meteorological office. An office designated to provide meteorological service for international air navigation.

Meteorological report. A statement of observed meteorological conditions related to a specified time and location.

Minimum fuel. The term used to describe a situation in which an aircraft's fuel supply has reached a state where little or no delay can be accepted.

Note.— This is not an emergency situation but merely indicates that an emergency situation is possible, should any undue delay occur.

Missed approach procedure. The procedure to be followed if the approach cannot be continued.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

NOTAM. A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Obstacle clearance altitude (OCA) or obstacle clearance height (OCH). The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1.— Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2.— For convenience when both expressions are used they may be written in the form "obstacle clearance altitude/height" and abbreviated "OCA/H".

Operational control. The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Positive radio fix. (a)An NDB or locator site (when propagation is normal); or

(b) VOR, TACAN site or marker beacon.

Pressure-altitude. An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

Procedural control. Term used to indicate that information derived from an ATS surveillance system is not required for the provision of air traffic control service.

Procedural separation. The separation used when providing procedural control.

Procedure turn. A manoeuvre in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1.— Procedure turns are designated "left" or "right" according to the direction of the initial turn.

Note 2.— Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

Profile. The orthogonal projection of a flight path or portion thereof on the vertical surface containing the nominal track.

Receiving unit/controller. Air traffic services unit/air traffic controller to which a message is sent.

Note.— See definition of "sending unit/controller".

Repetitive flight plan (RPL). A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

Reporting point. A specified geographical location in relation to which the position of an aircraft can be reported.

Rescue coordination centre. A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Rescue unit. A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue.

Runway.A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position. A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note.— In radiotelephony phraseologies, the expression "holding point" is used to designate the runway-holding position.

Runway incursion. Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

Safety case. A safety case provides documented evidence and argument that a service or facility, or a proposed change to the design of a service or facility, meets safety objectives or levels for the service or facility.

Safety management system (SMS). A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Sending unit/controller. Air traffic services unit/air traffic controller transmitting a message.

Note.— See definition of "receiving unit/controller".

SIGMET information. Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

Significant point. A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Slush. Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note.— Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Special VFR flight. A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

Stopway. A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off..

Taxiing. Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

Taxiway. A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

a) **Aircraft stand taxilane**. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

b)**Apron taxiway**. A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

c) **Rapid exit taxiway**. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplane to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

Terminal control area (TMA).A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

Threshold. The beginning of that portion of the runway usable for landing.

Total estimated elapsed time. For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

Touchdown. The point where the nominal glide path intercepts the runway.

Note.— "Touchdown" as defined above is only a datum and is not necessarily the actual point at which the aircraft will touch the runway.

Track. The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

Traffic avoidance advice. Advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.

Traffic information. Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

Transfer of control point. A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

Transferring unit/controller. Air traffic control unit/air traffic controller in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit/air traffic controller along the route of flight.

Transition altitude. The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

Transition layer. The airspace between the transition altitude and the transition level.

Transition level. The lowest flight level available for use above the transition altitude.

Uncertainty phase.A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

Unmanned free balloon. A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

Note.— Unmanned free balloons are classified as heavy, medium or light in accordance with specifications contained in Annex 2, Appendix 4.

VFR. The symbol used to designate the visual flight rules.

VFR flight. A flight conducted in accordance with the visual flight rules.

Visibility. Visibility for aeronautical purposes is the greater of:

a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;

b) the greatest distance at which lights in the vicinity of 1000 candelas can be seen and identified against an unlit background.

Note 1.— The two distances have different values in air of a given extinction coefficient, and the latter b) varies with the background illumination. The former a) is represented by the meteorological optical range (MOR).

Note 2.— The definition applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

Visual approach. An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

Visual meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

Note.— The specified minima are contained in Annex 2, Chapter 4.

VMC. The symbol used to designate visual meteorological conditions.

CHAPTER 3

3. GENERAL

3.1 ORGANIZATIONAL STRUCTURE

3.1.1 POKHARA CIVIL AVIATION OFFICE (PKCAO)

3.1.1.1 Pokhara Civil Aviation Office (PKCAO) is an entity directly under Civil Aviation Authority of Nepal (CAAN). Its main goal is to ensure safe, efficient and orderly movement of air traffic operating in ATZ, Control zone and other airspace under its jurisdiction.

Organization structure of PKCAO is presented in **Appendix- I.**

3.1.2 Following air traffic control unit has been established to provide air traffic control service, flight information service and alerting service, within control zone and uncontrolled airspace under its responsibility.

3.1.2.1 **Aerodrome Control Tower**

Aerodrome control tower has been established at Pokhara Airport and is designated as Pokhara Tower.

The hours of operations of air traffic services or ATC units in Pokhara Airport as published in the AIP Nepal.

Months		Time (UTC)
Jan, Feb, Nov, Dec		0100-1215 UTC
Mar, Apr, Sept, Oct		0030-1245 UTC
May, June, July, Aug		0015-1300 UTC

Note: Any changes or amendments are notified by NOTAM and subsequently through AIP amendment.

3.1.3 The movement of persons or vehicles including towed aircraft on the maneuvering area of an aerodrome is controlled by the Pokhara Control tower as necessary to avoid hazard to them or to aircraft landing, taxiing or taking off.

CHAPTER 4

4. AIR TRAFFIC SERVICES

4.1 OBJECTIVES OF THE AIR TRAFFIC SERVICES

4.1.1 The objectives of the air traffic services will be to:

a) Prevent collisions between aircraft;

b) Prevent collisions between aircraft on the manoeuvring area and obstructions on that area;

c) Expedite and maintain an orderly flow of air traffic;

d) Provide advice and information useful for the safe and efficient conduct of flights;

e) Notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

4.2 DIVISIONS OF THE AIR TRAFFIC SERVICES

4.2.1 The air traffic services comprise of three services identified as follows:

4.2.1.1 Air traffic control service

4.2.1.1.1 The air traffic control service, to accomplish following objectives:

a) Prevent collisions between aircraft;

b) Prevent collisions between aircraft on the manoeuvring area and obstructions on that area;

c) Expedite and maintain an orderly flow of air traffic;

4.2.1.1.2 Air traffic control services have been divided in three parts as follows:

4.2.1.1.2.1 Area control service

The function of Area control is to establish the safe, orderly and expeditious flow of air traffic in control areas under its jurisdiction.

4.2.1.1.2.2 Approach control service

The function of approach control is to ensure the safe, orderly and expeditious flow of air traffic in the control zone and in those portions of controlled areas, which are under its jurisdiction.

4.2.1.1.2.3 Aerodrome control service

The function of aerodrome control is to:

a) to authorize aerodrome traffic to taxi, take-off or land, and

b) to ensure the safe, orderly and expeditious flow of aerodrome traffic.

4.2.1.1.2.4. Flight information service

The flight information service to provide advice and information useful for the safe and efficient conduct of flights.

4.2.1.1.2.5. Alerting service

The alerting service to notify appropriate organizations regarding aircraft in need of search and rescue aid and assist such organizations as required.

CHAPTER 5

5. APPLICATION OF AIR TRAFFIC CONTROL SERVICE AT POKHARA AIRPORT

5.1 Air traffic control service will be provided:

a) to all VFR flights in airspace Class C;
b) to all special VFR flights;
c) to all aerodrome traffic.

5.2 Provision of air traffic control service

Aerodrome control service is provided by Pokhara Aerodrome control tower hereafter designated asPokhara Tower.

Note: Pokhara Tower is responsible to provide aerodrome control service within its Control Zone and area of jurisdiction.

5.3 Classification of airspaces

5.3.1 ATS airspaces within jurisdiction of Pokhara Tower are classified and designated as following:

Class C: Control Zones and Aerodrome Traffic Zones have been classified and designated as Class C airspace.

VFR and Special VFR flights are permitted and are provided with air traffic control service.

Special VFR flights are provided separation from other Special VFR, VFR and VFR receive traffic information.

Class G: Rest of airspaces other than Class C airspaces have been classified and designated as Class G airspace and receive flight information service. The area of jurisdiction of Pokhara Tower other than CTR and ATZ has been delegated as per LOA between Pokhara Tower, Kathmandu APP and ACC.

5.3.2 Requirements for flights within each class of airspace will be as shown in Table1.

Table 1: ATS AIRSPACE CLASSES SERVICES PROVIDED AND FLIGHT REQUIREMENTS

Class	Type of flight	Separation provided	Services Provided	Speed limitation*	Radio communication requirement ATC	Subject to an ATC clearance
C	VFR	Nil	1. VFR/VFR traffic information (traffic avoidance advice on request) 2. Separation is provided between Special VFR.	250 Kts IAS below 10000 ft AMSL	Continuous two way	Yes
G	IFR	Nil	Flight information service	250 Kts IAS below 10000 ft AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	250 Kts IAS below 10000 ft AMSL	Continuous two-way	No

5.4. FLIGHT PLANNING

5.4.1. **Procedure for the submission of the flight plan**.

5.4.1.1 A flight plan shall be submitted to the Pokhara Tower in respect of the following flights,

a) All VFR flights operating from Pokhara Airport.
b) Any flight or portion thereof, to be provided with air traffic control service,

5.4.1.2. The flight plan submitted to Pokhara Tower should be signed and filed by the pilot-in-command or authorized representative at least sixty minutes prior to departure (the estimated off block time) using the ICAO flight plan form.

5.4.1.3 In the event of delay of 60 minutes for domestic fights in excess of EOBT, the flight plan should be amended or a new flight be submitted and old flight plan canceled, whichever is applicable.

5.4.1.4 Flights in compliance with VFR flights shall insert VFR (V) and if on en-route will operate in compliance with IFR flight shall insert VFR then IFR (Z) in the flight plan.

5.4.1.5 The total number of persons on board (passengers plus crew) should be stated in the flight plan.

5.4.1.6 In addition, pilots are required to pass the total number of persons (POB) to the concerned ATC unit when requesting engine start-up during departure.

5.4.1.7 No flight plans shall be filed for routes deviating from the published ATS route structure unless prior permission has been obtained from the appropriate ATS unit.

5.4.1.8 When a flight is planned to operate in aerodrome traffic circuit or local/ training flight, flight plan shall be submitted to ATS units.

5.4.1.9 Whenever a flight, for which a flight plan has been submitted, is cancelled, Pokhara Tower shall be informed immediately.

5.4.1.10 Changes to a current flight plan for a controlled flight during flight shall be reported or requested, subject to the provisions in CAR 2, 3.6.2 (Adherence to flight plan).

5.4.1.11. While conducting a flight of a military nature like a formation flight or Para-drop or dummy drop, the pilot in command should always file a flight plan to the appropriate ATS unit and obtain an ATC clearance before conducting the operation.

5.5. FLIGHT RULES

5.5.1. VFR Flights

5.5.1.1. VFR flights will not be authorized to take off or land at Pokhara controlled aerodrome or enter the aerodrome traffic zone or traffic pattern.

a) When the ceiling is less than 1500ft. (450m) or,
b) When the ground visibility is less than 5 Km

Note: For the purpose of permitting VFR flight, weather observations may be made over the entire horizon or only in the sector used by the flight.

5.5.1.2.WEATHER OBSERVATIONS

It should be noted that all the assessments of weather conditions made for the purpose of opening or closing aerodrome are the responsibility of the aerodrome controller and should be made as required by visual observation from the control tower.

5.6. PROVISION OF SEPARATION

5.6.1. RESPONSIBILITIES FOR SEPARATION

5.6.1.1. In Pokhara control zone:

5.6.1.1.1. ATC will provide separation between Special VFR flights as prescribed in 10.1.24.

Greater separation will be applied if considered necessary and specifically

a) For the avoidance of wake turbulence, or

b) Exceptional circumstances.

5.6.1.1.2. Separation minima (Spacing/sequencing) between VFR may be reduced in the vicinity of aerodromes if:

a) Adequate separation can be provided by the aerodrome controller when each aircraft is continuously visible to the controller, or

b) Each aircraft is continuously visible to pilot-in-command of the other aircraft concerned and the pilots report that they can maintain their own separation, or

c) In the case of one aircraft following another, the pilot-in-command of the succeeding aircraft reports that he has the other aircraft in sight and can maintain separation.

5.6.1.1.3. VFR traffic will be provided with traffic information of other VFR traffic and traffic avoidance advice on request.

5.6.1.1.4. A controller will issue traffic information when in his opinion, traffic proximity warrants it. The traffic information provided will contain sufficient of the following to assist the pilot in identifying the other aircraft.

a) Call sign of the aircraft

b) Type of the aircraft

c) Direction of flight

d) Cruising level of aircraft and estimated time over the reporting point nearest to where the level will be crossed.

5.6.1.1.5. Traffic sequencing and separation will be provided between all aircraft in the Traffic circuit, landing and taking off.

5.6.1.1.6. The separation of military aircraft will be maintained in the same manner as for civil aircraft, except that when required by relevant military authority, different standards as specified by that authority will be applied between military aircraft.

5.6.1.1.7. In Pokhara, there is no provision of Formation flight for Civil air traffic. However, Formation flights are occasionally conducted by Military flight operation, and when conducted, will be exempted from the separation with respect to each other aircraft of the same formation.

5.6.1.1.8. While conducting a flight of a military nature like a formation flight or para-drop or dummy drop, the pilot in command should always file a flight plan to the appropriate ATS unit and obtain an ATC clearance before conducting the operation.

5.7. Priority of handling traffic

5.7.1. In assessing priorities for the use of part of the manoeuvring area or airspace for which there are conflicting requirements, provided that safety is in no way jeopardized, traffic priorities will be applied in the following order:

a. An aircraft in emergency, including being subjected to unlawful interference will be given priority in all circumstances.
b. An aircraft which has suffered Radio communications failure will be granted priority for landing.
c. An aircraft which has declared a Mercy flight.
d. An aircraft which is participating in Search and rescue operation.
e. An aircraft classified as a VVIP flight.
f. A landing aircraft will have priority over a departing aircraft if the later cannot take off with prescribed separation standards.
g. An aircraft landing or taking off will be given priority over taxiing aircraft.

h. An aircraft able to use the landing area or desired airspace, at first in the normal course of its operation will be given priority except significant economic benefit would result for other aircraft by deferring this priority.

The following guidelines should be observed when allocating priorities.

i. When a clearance for a turbo-jet aircraft has been pre-arranged.

ii. Where significant economic benefit would result for a number of the aircraft by deferring this priority.

iii. Flight desiring to operate in other than the normal pattern for operational rather than training reasons, will be given the same priority as other flights unless it involves a short notice change to a clearance already issued to another aircraft. In this case, approval to operate will be deferred.

5.7.2. VVIP aircraft are normally required to adhere strictly to pre-arranged schedules. These schedules will be prepared following prior liaison with ATC to ensure choice of the most suitable route. Where the additional mileage is not great, it is expected that normal routes will be used, but in some cases direct flights will be required and approved accordingly.

5.8. AIR TRAFFIC CLEARANCES

5.8.1. A controller achieves Air traffic control by the issue of clearances to pilots desiring operation in controlled airspace. When practicable, the requirement for such clearances will be anticipated in order to eliminate delays to aircraft.

5.8.2. Clearances issued will contain the following items:

a) Aircraft identification

b) The route authorized

c) The level authorized

d) The geographical limit of authorization in respect of (b) or (c) i.e. the clearance limit; and

e) Any time limitation on authorization (b) or (c).

5.8.3. The whole or any part of a clearance may be extended or cancelled and replaced by a new clearance, but the controller will ensure at all times that the pilot is in no doubt as to any of the elements specified in para 5.9.2.

5.8.4. When a clearance limit is cancelled, the level and route to be flown from the point will be specified.

5.8.5 The contents of a clearance or revisions to it will apply only to those portions of the flight conducted within control zone.

5.8.6 If a pilot requests clearance to maneuver his aircraft in a manner different from that specified, a new clearance in accordance with the request will be issued if the traffic conditions permit.

5.8.7 Where an aircraft has flight planned for flight in and out of controlled airspace, clearances should be aimed primarily at keeping it in the control airspace.

5.8.8 A pilot-in-command is required to read back all contents of the ATC clearance and any item notified in the clearance as "AMMENDED". This will be checked, and if omitted by the pilot, should be requested by the controller. When a track of flight or level is changed, and the pilot is not offered an alternative clearance, attention will be drawn to the change by prefixing the amended item with the word "AMENDED" e.g. AMENDED LEVEL-CLERANCE CRUISE (AMENDED LEVEL)….etc. ATC will not give a reason for a change of flight plan if it is believed that the reason will be evident to the pilot-in-command.

5.8.9 Where a pilot is offered a choice of available levels or tracks, transmission by the pilot of the selected level or track is sufficient for its acknowledgement.

5.8.10 If it is necessary for a controller to issue a clearance to an intermediary for relay to an aircraft, he will do so in a clear and concise manner, using the exact phrases by which he requires the clearance to be passed to the pilot. When it is considered appropriate to give emphasis to any unusual elements, these elements should be repeated after the phrase – "I SAY AGAIN"

5.8.11 The intermediary responsible for the relay of clearance will acknowledge receipt by reading back the clearance in full to the issuing controller. The clearance will subsequently be transmitted to the pilot in exactly the same form.

5.8.12 When a request for a clearance “enter control zone” is received and a clearance is not immediately available, a controller will indicate this in the terms…(callsign) "CLEARANCE NOT AVAILABALE CALL AT….(time) REMAIN OUT SIDE CONTROL ZONE”

5.8.13 Unless otherwise specified for particular cases, a clearance issued through other than ATC frequencies, will be reissued on initial contact with the aircraft.

5.8.14 A request to a pilot to report at a specified position will not be regarded by the controller as imposing a clearance limit.

5.8.15 When a clearance is given for an aircraft to proceed on a local flight inside the control zone, it will include a description of the area in which the flight is to be conducted.

5.8.16 Clearance limits – a description of a holding path to be flown at the clearance limit may be omitted when

a) sight and follow procedure will not be utilized until the following aircraft confirms that the preceding traffic has been sighted, or

b) a clearance limit has been imposed temporary, and it is expected that the requirement to hold will have lapsed before the aircraft arrives at the designated holding point.

5.9 SIGHT AND FOLLOW PROCEDURE

5.9.1 Within control zone, in VMC, during the hours of daylight, ATC may instruct an arriving aircraft to sight and follow a preceding arriving aircraft maintaining visual separation with that aircraft.

5.9.2 To assist in the identification procedure, ATC will specify the type of aircraft to be followed, provide accurate information on its position and advise the aircraft concerned of their number in the landing sequence.

5.9.3 The Sight and follow procedure will not be utilized until the following aircraft confirms that the preceding traffic has been sighted and can be followed.

5.9.4 The controller will issue an alternative clearance if there is any doubt of the pilot's ability to keep the preceding traffic in sight or if there is a possibility of a traffic confliction resulting from the sight and follow procedure.

Note: For the Ultralight flights operating in Pokhara, follow their pre determined routes that may preclude the items given in 5.8 and 5. 9 . The procedure has been in practice on the basis of SOP developed as per the meeting minute with different stakeholders at Pokhara. However, the ATM Dept. CAAN has been undertaking its responsibility for the pending procedure approval by CAAN.

CHAPTER 6

6.1 GENERAL ALTIMETER SETTING PROCEDURES

6.1.1. An altimeter setting is pressure datum which, when set on the sub-scale of a sensitive altimeter, causes the altimeter to indicate vertical distance from that pressure datum. A pressure type altimeter calibrated in accordance with the international standard atmosphere (ISA) may be used to indicate altitude, flight level or height as follows:

a) When set to QNH it will indicate altitude. An altimeter set to QNH reads, within close limits, the vertical distance above mean sea level of the aircraft is on the ground at the aerodrome, the altimeter will register the elevation of the aerodrome above mean sea level.

b) When set to standard pressure (1013.2hpa) it may be used to indicate flight levels. An aircraft maintains flight level with the altimeter set to standard pressure flying along a surface of constant atmosphere pressure. The aircraft's vertical distance from mean sea level may vary while the aircraft maintains the flight level due to change in atmospheric pressure en route in the horizontal, for example, an aircraft flying toward a low pressure area will fly progressively lower while maintaining a flight level.

c) When set to QFE, it will indicate height above the QFE reference datum. Maximum variation in QNH values within Kathmandu FIR does not exceed 15hpa either side of the standard of setting 1013.2hpa representing the change of 450ft. on the altimeter from QNH to 1013.2hpa. To simplify ATC procedures, therefore, a transition level of FL150 has been established, thus provides a transition layer of 1500ft. and ensures at all times the 1000ft. vertical separation between aircraft.

6.1.2 The system of altimetry used in Kathmandu FIR (VNSM) makes use of a transition layer to separate aircraft using QNH from those using 1013.2hpa (hecto pascal)

6.1.3 A common transition altitude of 13500ft. has been established for the entire Kathmandu Flight Information Region.

6.1.4 A transition level of FL150 has been established for the entire Kathmandu Flight Information Region.

6.2 Altimeter setting procedures applicable at Pokhara airport

6.2.1. PROCEDURE

6.2.1.1. All aircraft at or below the transition altitude will use QNH supplied by Pokhara Tower.

6.2.1.2. For the flight at or above the transition level, the standard altimeter setting of 1013.2 hpa will be used.

6.2.1.3. Change from QNH to 1013.2hpa will be made on climbing through the transition altitude

6.2.1.4. Change from 1013.2hpa to QNH will be made on descending through the transition level

6.2.1.5. Cruising within the transition layer is not permitted.

6.2.1.6. Change from Pokhara QNH to Destination or Kathmandu QNH as appropriate when leaving Pokhara CTR.

6.2.1.7. Change from Departure aerodrome or Kathmandu QNH as appropriate to Pokhara QNH when entering Pokhara CTR.

6.2.1.8. Level of aircraft when at or below the transition altitude is expressed in terms of altitudes where as such level at or above transition level is expressed in terms of flight level. While passing through the transition layer, level is expressed in terms of altitude when descending and in terms of flight level when ascending.

6.3. TAKE-OFF AND CLIMB

6.3.1. A QNH altimeter setting will be made available to aircraft by Pokhara Tower in the routine take off and climb instructions.

6.3.2. Level of aircraft during climb will be effected by reference to altitude until reaching the transition altitude above which level will be effected by reference to flight level.

6.3.3. A QFE altimeter setting will be provided on request if available but reports to ATC are to be made in altitude.

6.4. VERTICAL SEPARATION EN-ROUTE

6.4.1. Aircraft en-route (irrespective of whether IFR or VFR) will be flown at flight levels or altitudes where appropriate.

6.4.2. It is the pilot's responsibility to select an appropriate level, which will give adequate terrain clearance using given pressure.

6.4.3. For the purposes of en-route vertical separation between IFR and VFR flights in controlled airspace and flights in uncontrolled airspace, reference should be made to the following:

a) Quadrantal system of cruising levels at or below 13,500ft
b) Semi-circular system of cruising levels at or below FL150

6.5. APPROACH AND LANDING

6.5.1. A QNH altimeter setting will be made available in the routine approach and landing instructions.

6.5.2. A QFE altimeter setting will be provided on request if available but reports to ATC are to be made in altitude.

6.5.3. Level of aircraft during approach is effected by reference to flight level until reaching the transition level below which level is effected by reference to altitude.

6.6. PROCEDURES APPLICABLE TO OPERATORS AND PILOTS

6.6.1. FLIGHT PLANNING

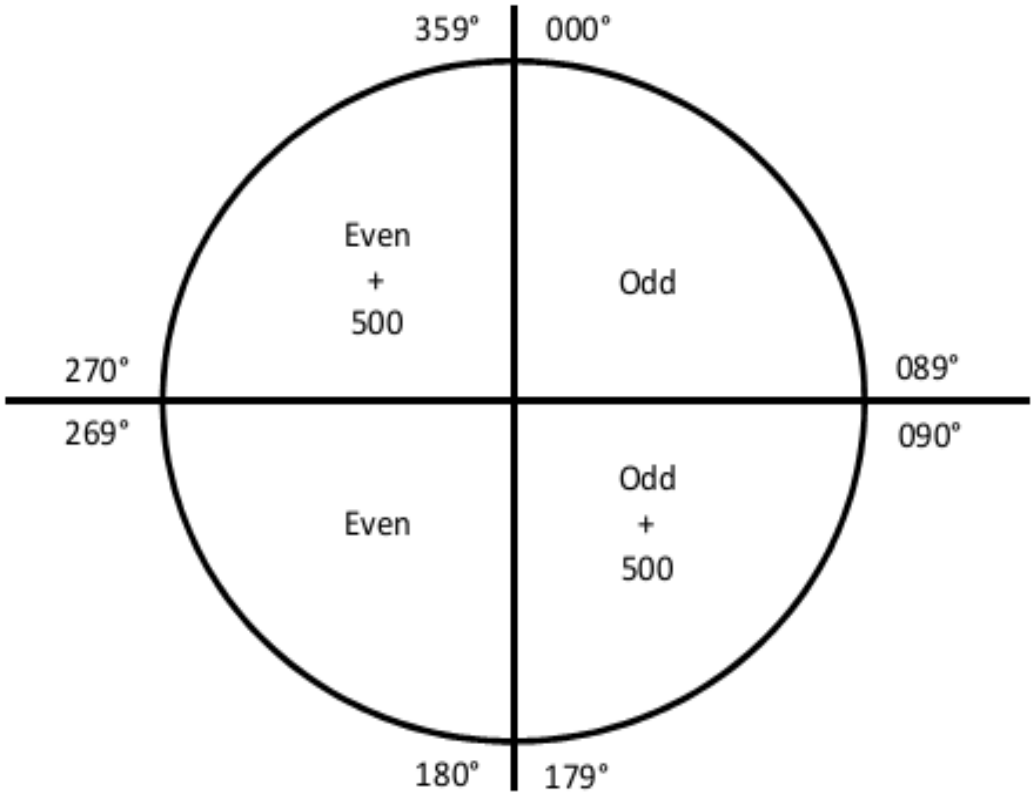
6.6.1.1. The level(s) at which a flight is to be conducted will be specified in a flight plan

a) in terms of flight level (s) if the flight is to be conducted at or above transition level, and

b) in terms of altitude (s) if the flight is to be conducted in the vicinity of an aerodrome and at or below the transition altitude.

6.7. CRUISING LEVELS

The semi circular system of cruising levels will be used at or above flight level 150. The quadrantal system of cruising levels will be applicable at or below 13500 feet.



Quadrantal System of Cruising Levels

CHAPTER 7

7.1 WAKE TURBULENCE

7.1.1. Wake Turbulence in General

Aerodrome controllers will, when applicable, apply the wake turbulence separation minima as specified in this chapter. Whenever the responsibility for wake turbulence avoidance rests with the pilot-in-command, aerodrome controllers will, to the extent practicable, advice aircraft of the expected occurrence of hazards caused by turbulent wake.

Note. — Occurrence of turbulent wake hazards cannot be accurately predicted and aerodrome controllers cannot assume responsibility for the issuance of advice on such hazards at all times, nor for its accuracy. Information on hazards due to wake vortices is contained in the Air Traffic Services Planning Manual (Doc 9426), Part II, Section 5.

7.1.2. Aircraft Category

Wake turbulence separation minima will be based on a group of aircraft types into three categories according to maximum certificated take-off mass as follows:

a) HEAVY (H)-all aircraft types of 136000 kg or more;

b) MEDIUM (M)-aircraft types less than 136000 kg but more than 7000 kg; and

c) LIGHT(L)-aircraft types of 7000 kg or less.

7.1.3. Non-radar wake turbulence longitudinal separation minima

7.1.3.1. Applicability

7.1.3.2. The ATC unit will, when deemed necessary, issue a caution of possible wake turbulence. The pilot-in-command of the aircraft concerned will be responsible for ensuring that the spacing from a preceding aircraft of a heavier wake turbulence category is acceptable. If it is determined that additional spacing is required, the flight crew will inform the ATC unit accordingly, stating their requirements.

7.1.3.3. Arriving aircraft

7.1.3.3.1. Following non radar separation minima will be applied to light aircraft landing behind a MEDIUM aircraft:

LIGHT aircraft behind a HEAVY or MEDIUM aircraft---3 minutes

7.1.3.3.2. Departing aircraft

7.1.3.3.2.1. A minimum separation of 2 minutes will be applied between a LIGHT aircraft taking off behind a MEDIUM aircraft when the aircraft are using the same runway.

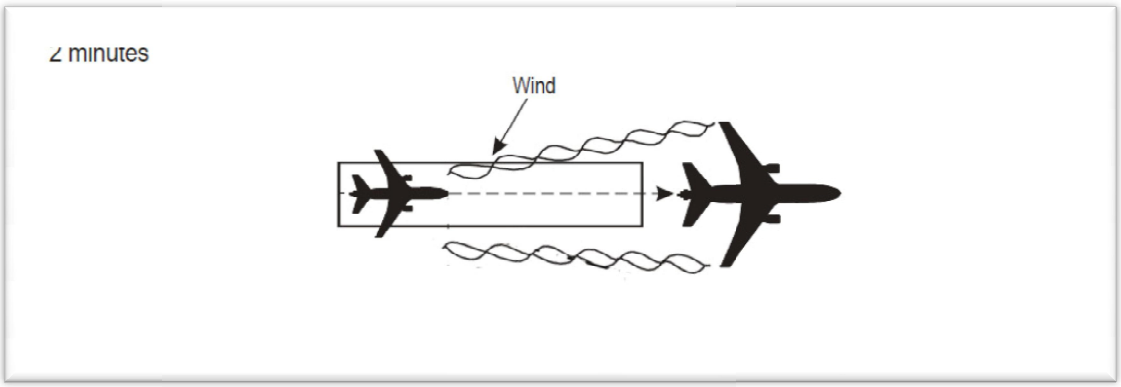


Figure 2.1 Two-minute separations for following aircraft

7.1.3.3.2.2. Separation minima of 3 minutes will be applied between a LIGHT aircraft when taking off behind a MEDIUM aircraft from an intermediate part of the runway.

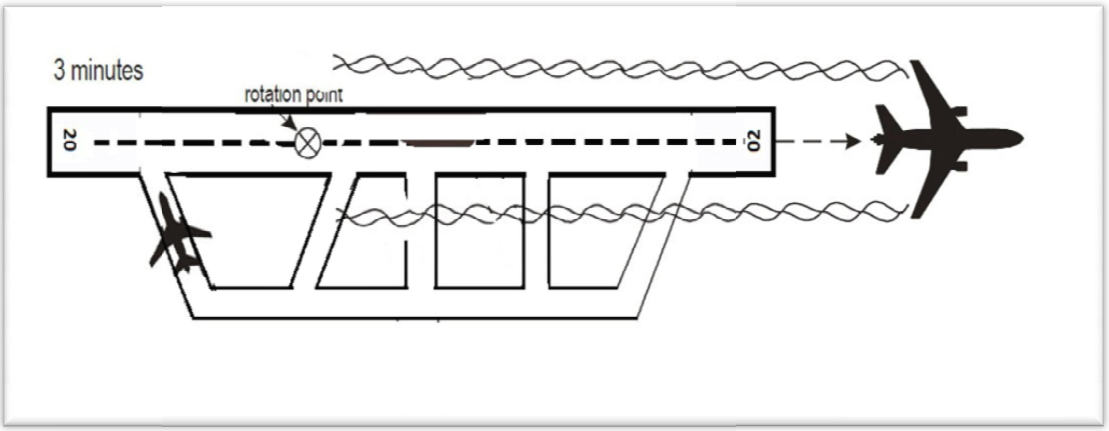


Figure 2.2 Three-minute wake turbulence separations for following aircraft

7.1.3.3.3. Displaced landing threshold

A separate minimum of 2 minute will be applied between a LIGHT aircraft and a MEDIUM aircraft when operating on a runway with a displaced landing threshold when :

a) A departing LIGHT aircraft follows a MEDIUM aircraft arrival; or

b) An arriving LIGHT aircraft follows a MEDIUM aircraft departure if the projected paths are expected to cross.

7.1.3.3.4. Opposite direction

A separation minimum of 2 minutes will be applied between a LIGHT aircraft and a medium aircraft when the heaver aircraft is making a low or missed approach and the lighter aircraft is:

a) Utilizing an opposite –direction runway for take –off; or

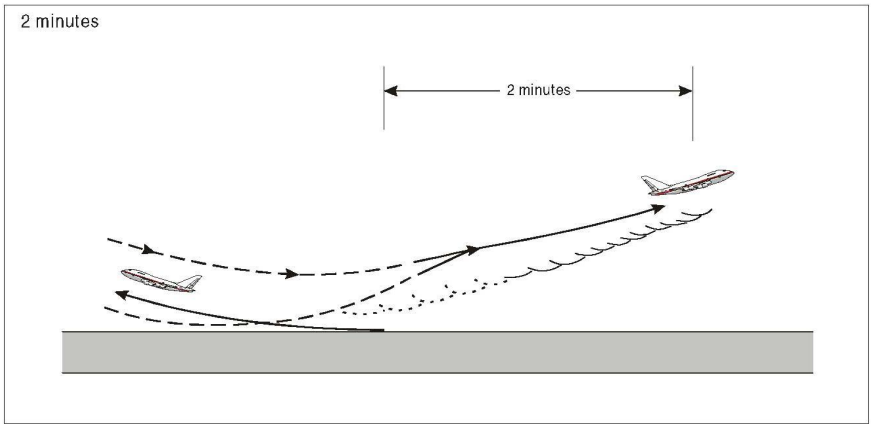


Figure 2.3 Two-minute wake turbulence separation for opposite direction take-off .

b) Landing on the same runway in the opposite direction.

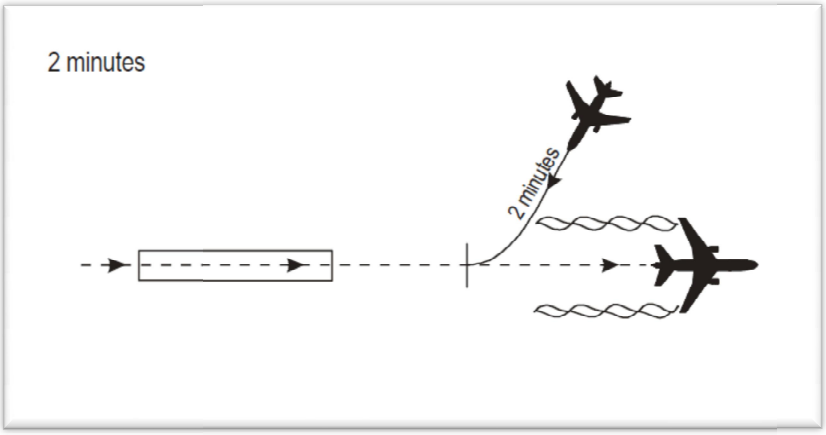


Figure 2.4 Two-minute wake turbulence separations for opposite direction landing

CHAPTER 8

8.1. GENERAL PROCEDURE OF FUEL DUMPING IN FLIGHT

8.1.1 An aircraft in emergency or other urgent situations may need to dump fuel so as to reduce its weight to maximum landing mass in order to affect a safe landing.

8.1.2 When an aircraft operating within controlled airspace needs to dump fuel, the flight crew will advise ATC at Pokhara Tower. Then PK Tower Controller should then coordinate with the flight crew the following:

a) the route to be flown, which, if possible, should be clear of cities and towns, preferably over water and away from areas where thunderstorms have been reported or are expected;

b) the level to be used, which should be not less than 1800 m (6000 ft); and

c) the duration of the fuel dumping.

8.2 SEPARATION

Other known traffic should be separated from the aircraft dumping fuel by:

a) at least 19 km (10 NM) horizontally, but not behind the aircraft dumping fuel;

b) vertical separation if behind the aircraft dumping fuel within 15 minutes flying time or a distance of 93 km (50 NM) by;

i. at least 300 m (1000 ft) if above the aircraft dumping fuel; and

ii. at least 900 m (3000 ft) if below the aircraft dumping fuel.

Note.— The horizontal boundaries of the area within which other traffic requires appropriate vertical separation extend for 19 km (6 NM) either side of the track flown by the aircraft which is dumping fuel, from 19 km (6 NM) ahead, to 93 km (50 NM) or 15 minutes along track behind it (including turns).

8.3 COMMUNICATIONS

If the aircraft will maintain radio silence during the fuel dumping operation, the frequency to be monitored by the flight crew and the time when radio silence will terminate should be agreed.

8.4 INFORMATION TO OTHER ATS UNITS AND NON-CONTROLLED TRAFFIC

8.4.1 A warning message will be broadcast on appropriate frequencies for non-controlled traffic to remain clear of the area concerned. Adjacent ATC units and control sectors should be informed of the fuel dumping taking place and requested to broadcast on applicable frequencies an appropriate warning message for other traffic to remain clear of the area concerned.

8.4.2 Upon completion of the fuel dumping, adjacent ATC units and control sectors should be advised that normal operations can be resumed.

Note: There is no pre-assigned segregated airspace for fuel dumping by aircraft in Pokhara. The area will be allocated depending on the need of the aircraft with respect to route and sector of the flight.

CHAPTER 9

9. VVIP MOVEMENT HANDLING PROCEDURE

9.1 GENERAL

9.1.1 In order to facilitate the movement of VVIP aircraft into and out of Pokhara Control Zone and to conform to the times shown in the Ceremonial Reception Schedule, Pokhara Tower is authorized to provide special priority for all VVIP fights over all other normal traffic within its areas of responsibility.

9.1.2 The term "VVIP FLIGHT" refers to the flight carrying on-board the under mentioned:

a) The President
b) The Vice President
c) The Prime Minister

9.1.3 Flights of other reigning sovereigns, Head of the States and the Prime Minister of foreign countries designated by the Government of Nepal to be VVIP may also be afforded "VVIP Flight" status.

9.1.4 The Chief of Pokhara Civil Aviation Office will inform all concerned relating to VVIP flight some or all of the following details:

a) Period and area of restrictions imposed on other fights.
b) Call sign and type of aircraft,
c) Point of departure/destination
d) Embarkation/disembarkation site
e) EOBT and ETA
f) Ceremonial details
g) Any other pertinent information

9.1.5 Message received from VVIP on-board will be kept highly confidential and reported to Chief of Pokhara Civil Aviation Office.

9.1.6 The following procedures will be enforced when a VVIP FLIGHT is notified.

9.1.6.1 A NOTAM based on the schedule of the VVIP flight movement will be issued in advance.

9.1.6.2 No aircraft except in emergency be allowed to land or depart from the aerodrome or operate in the aerodrome traffic circuit for the period specified in the NOTAM.

Note: The Chief of Pokhara Civil Aviation Office may adjust the timing to ensure that there is no disturbances during ceremonial period at the airport.

9.1.6.3 Control Zone: Inside Control zone, Vertical separation minimum will be 1000ft at all levels

9.1.6.4. Outside Control Zone: No other aircraft will be cleared to operate in the block of uncontrolled airspaces 1000ft below and above the cruising level and 10NM on either side of the intended route of the VVIP flight.

CHAPTER 10

10. PROVISIONS OF AIR TRAFFIC SERVICES

10.1 AERODROME CONTROL SERVICE

10.1.1FUNCTION OF POKHARA TOWER

10.1.1.1 Responsibility: Aerodrome control service is provided by Pokhara tower to all aerodrome traffic within ATZ, control zone and additional delegated airspace under its responsibility.

10.1.1.2 General : Pokhara tower will issue information and clearances to aircraft under its control to achieve a safe, orderly and expeditious flow of air traffic on and in the vicinity of an aerodrome with the objective of preventing collision(s) between:

a) aircraft flying within the designated area of its responsibility;

b) aircraft operating on the manoeuvring area;

c) aircraft landing and taking off;

d) aircraft , vehicles and personnel operating on the manoeuvring area;

e) aircraft on the manoeuvring area and obstructions on that area.

10.1.1.3 Pokhara Tower will maintain a continuous watch on all flight operations on and in the vicinity of the aerodrome as well as vehicles and personnel on the maneuvering area. Watch will be maintained by visual observation. Traffic will be controlled in accordance with the procedures set forth herein and all applicable traffic rules specified by the Civil Aviation Authority of Nepal.

10.1.1.4 Controllers will maintain a continuous watch on all appropriate radio frequencies and conduct all air-ground communications in accordance with these instructions and those contained in the AIP.

10.1.1.5 Company messages concerned with the safety of the aircraft will be accepted for transmission. The transmission of other company messages will be at the discretion of the controller. Messages unless concerned with the immediate safety of the aircraft will not be passed to the aircraft which has been cleared for take-off and has entered the runway. Transmission of these messages will be delayed until the aircraft is airborne.

10.1.1.6 An aircraft operating locally may be required to report at specified time or position at nominated reporting points.

10.1.1.7 Aerodrome controller will use visual signals as and when required. The meanings of the light or ground signals for use in aerodrome control are as per the TABLE-ATC LIGHT SIGNALS.

10.1.1.8 Aerodrome controllers will be familiar with the spread of the light signal lamp in use and will choose a time for the direction of a signal so that it is not received by aircraft other than the one for which it is intended.

10.1.1.9 Aerodrome controllers will use light signal from the table to control aircraft and movement of vehicles, equipment and personnel on the maneuvering area when radio communications cannot be employed.

TABLE-ATC LIGHT SIGNALS

COLOUR AND TYPEOF SIGNALS	AIRCRAFT ON		MOVEMENT OF VEHICLES.EQUIPMENT AND PERSONEL
	GROUND	FLIGHT	
Steady green…	Cleared for take off	Cleared to land	(Not applicable)
Flashing green….	Cleared to taxi	Return for Landing (to be followed by Steady green at the Proper time)	Cleared to cross or proceed.
Steady red….	Stop	Give way to other aircraft and continue circling	Stop
Flashing red…	Taxi clear of landing Area	Airport unsafe, do not land	Clear the taxiway/runway.
Flashing white	Return to starting Point on airport	Land at this Aerodrome & Proceed to apron	Return to starting point of airport.

TABLE- GROUND SIGNALS TO AIRCRAFT

GROUND SIGNAL	WHERE DISPLAYS	MEANINGS
Two white cross	Adjacent to windsock On maneuvering area	Aerodrome completely unserviceable An area marked by a cross or crosses with the limits delineated by markers, is unfit for use by aircraft

10.1.1.10 Alerting service provided by Pokhara tower

Pokhara tower is responsible for alerting the rescue and fire-fighting services whenever:

a) an aircraft accident has occurred on or in the vicinity of the aerodrome; or,

b) information is received that the safety of an aircraft which is or will come under the jurisdiction of the Pokhara tower may have or has been impaired; or

c) requested by the flight crew; or

d) when otherwise deemed necessary or desirable.

10.1.1.11. Procedures concerning the alerting of the rescue and fire fighting services will be contained in local instructions. Such instructions will specify the type of information to be provided to the rescue and fire fighting services, including type of aircraft and type of emergency and, when available, number of persons on board, and any dangerous goods carried on the aircraft.

10.1.1.12 Aircraft which fail to report after having been transferred to Pokhara tower, or, having once reported, cease radio contact and in either case fail to land five minutes after the expected landing time, will be reported to the Kathmandu ACC or to the Rescue Coordination Centre.

10.2 INFORMATION ON THE OPERATIONAL STATUS OF NAVIGATION SERVICES

10.2.1Pokhara Tower shall be kept currently informed of the operational status of radio navigation services and visual aids essential for takeoff, departure, approach and landing procedures within the area of responsibility.

10.2.2 FAILURE OR IRREGULARITY OF NAVIGATION AIDS AND EQUIPMENT

Pokhara tower will immediately report of any failure or irregularity of operation in any equipment, light or other device established at Pokhara aerodrome for the guidance of aerodrome traffic and flight crews or required for the provision of air traffic control servic**e.**

Same will be reported to Com/Nav-aid office PK and if required, Com and Nav-aid Department, Kathmandu depending on the severity of the problem.

Note.—Separate local instructions or SOP for Airport Rescue and Fire Fighting Service of PKCAO is yet to be developed. So, procedures concerning the alerting of the Rescue and Fire fighting services are done in accordance with the SOP for Airport Rescue and Fire Fighting Service, Domestic Airport 2011.

10.3 SELECTION OF RUNWAY-IN-USE

10.3.1 The term "runway-in-use" will be used to indicate the runway at a particular time is considered by the Pokhara tower to be the most suitable for maximum use by the types of aircraft expected to land or take- off at the aerodrome.

10.3.2 Normally, an aircraft will land and take off into the wind unless safety, the runway configuration, meteorological conditions and air traffic conditions determine that a different direction is preferable. In selecting the runway-in-use, however, Pokhara Tower will take into consideration, besides surface wind speed and direction, other relevant factors such as the aerodrome traffic circuits, the length of runways, and the approach and landing aids available.

10.3.3 If the runway-in-use is not considered suitable for the operation involved, the flight crew may request permission to use another runway and, if circumstances permit, should be cleared accordingly.

10.3.4 The Aerodrome controller will nominate for use, the runway which appears to be most suitable, taking into consideration:

a) Type of aircraft
b) Effective length of the runway
c) Wind velocity / downwind component
d) Weather phenomena including such things as wind gradients turbulence effects and position of sun
e) Disposition of the traffic
f) if work load and traffic conditions permit, local instructions on "preferred runways'' in particular wind conditions to avoid noise nuisance and runway deterioration.

10.3.5 A controller may authorize a departure from a runway intersection when requested by the pilot or may offer an intersection departure to assist traffic flow for those type of aircraft not exceeding STOL Type aircrafts. The pilot must be advised of the remaining runway length if such information is not readily available to the pilot.

10.4 SELECTION OF CIRCUIT DIRECTION

10.4.1 The turn and circuit direction will be specified by the aerodrome controller for particular traffic needs.

10.4.2 The pilot in command is responsible for advising the controller when a particular turn is essential to the safety of the aircraft due terrain or aircraft performance reasons. This does not necessarily preclude the issue of instructions in anticipation of a pilot's advice.

10.5 ENTRY OF TRAFFIC CIRCUIT

10.5.1 The clearance to enter the traffic circuit should be issued to an aircraft approaching the landing area in accordance with current traffic circuit but traffic conditions do not yet allow a landing clearance to be issued. Depending on the circumstances and traffic conditions, an aircraft may be cleared to join at any position in the traffic circuit.

10.6 INFORMATION TO AIRCRAFT BY POKHARA TOWER

10.6.1 FLIGHT INFORMATION SERVICE

Pokhara tower will provide Fight information service to all aircraft which are likely to be affected by the information and which are:

a) Provided with air traffic control service; or

b) Otherwise known to the relevant air traffic services units

10.6.2 Flight information service will include the provision of pertinent:

a) METAR and SPECI and information on Weather observation;

b) information on changes in the serviceability of navigation aids;

c) information on changes in condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow ice or significant depth of water;

d) weather conditions reported or forecast at departure, destination and alternate aerodromes;

e) any other information likely to affect safety.

10.7 AERODROME AND METEOROLOGICALINFORMATION

10.7.1 Prior to taxiing for take-off, aircraft will be advised of the following elements of information, in the order listed, with the exception of such elements which it is known the aircraft has already received:

a) the runway to be used;

b) the surface wind direction and speed, including significant variations;

c) the QNH altimeter setting

d) the air temperature

e) the correct time.

10.7.2 Prior to take-off aircraft will be advised of:

a) any significant changes in the surface wind direction and speed, the air temperature, and the visibility.

b) significant meteorological conditions in the take-off and climb-out area, except when it is known that the information has already been received by the aircraft.

Note.— Significant meteorological conditions in this context include the occurrence or expected occurrence of cumulonimbus or thunderstorm, moderate or severe turbulence, wind shear, hail, moderate or severe icing, severe squall line, freezing precipitation, sand storm, dust storm, blowing snow, tornado or waterspout in the take-off and climb-out area.

10.7.3 Prior to entering the traffic circuit or commencing its approach to land, an aircraft will be provided with the following elements of information, in the order listed, with the exception of such elements which it is known the aircraft has already received:

a) the runway to be used;

b) the surface wind direction and speed, including significant variations there from;

c) QNH altimeter setting

10.7.4 AERODROME WEATHER OBSERVATIONS

10.7.4.1 The Aerodrome Controller will be the sole authority responsible for opening or closing an aerodrome to arrivals and departures. Pilots will be advised of observed weather conditions necessary for the purpose of landing and take-off and of significant weather, i.e. any weather phenomenon which might affect flight visibility or presence of a hazard to an aircraft.

10.7.4.2 Aerodrome controller will use his own observations for determining whether the prevailing conditions are above or below the minima prescribed for aircraft operations. The aerodrome METAR will not be used for the purpose of opening or closing an aerodrome to aircraft operations.

10.7.4.3 When observing weather conditions, the aerodrome controller may either make his observations over the whole of the visual horizon (general observations) or restrict the area considerations to that enclosing the probable flight path of the aircraft (sector observations). Sector observations may be made in any direction in order to accommodate both fixed and rotary wing operations.

10.7.4.4 In the specific cases covered by the following subparagraphs the aerodrome controller will make either sector or general observations as specified.

10.7.4.4.1 Observations for the purpose of closing the aerodrome and for authorizing a flight will be sector observations.

10.7.4.4.2 Observations made in response to a request by another unit will be general observations.

10.7.4.5 Weather observation for departure and landing will include such of the following. Items as are significant to the circumstance:

a) Wind Velocity.

b) Altimeter setting.

c) Temperature.

d) Dew point subject to its availability.

e) Low cloud.

f) Visibility in meters.

g) Intensity of rain, reported or known wind shear, turbulence, etc.

10.7.5 *Sector visibility observation and procedure see Appendix E.*

Note: Final decision on weather analysis, closure and open of aerodrome rests on aerodrome controller on duty.

10.7.6 ESSENTIAL LOCAL TRAFFIC INFORMATION

10.7.6.1 Information on essential local traffic will be issued in a timely mannerin the judgment of the aerodrome controller, such information is necessary in the interests of safety, or when requested by aircraft, Ultra light, paraglide/hang-glider, vehicle or personnel on or near the maneuvering area or traffic operating in the vicinity of the aerodrome, which may constitute a hazard to the aircraft concerned.

10.7.6.2 Essential local traffic will be described so as to be easily identified.

10.7.7 RUNWAY INCURSION OR OBSTRUCTED RUNWAY

10.7.7.1 In the event the aerodrome controller, after a take-off clearance or a landing clearance has been issued, becomes aware of a runway incursion or the imminent occurrence thereof, or the existence of any obstruction on or in close proximity to the runway likely to impair the safety of an aircraft taking off or landing, appropriate action will be taken as follows:

a) cancel the take-off clearance for a departing aircraft;
b) instruct a landing aircraft to execute a go-around;
c) in all cases inform the aircraft of the runway incursion or obstruction and its location in relation to the runway.

Note. — Animals and flocks of birds may constitute an obstruction with regard to runway operations. In addition, an aborted take-off or a go-around executed after touchdown may expose the aeroplane to the risk of overrunning the runway. Moreover, a low altitude go-around may expose the aeroplane to the risk of a tail strike. Pilots may, therefore, have to exercise their judgment in accordance with CAAN CAR-2, Para 2.4 concerning the authority of the pilot-in-command of an aircraft.

10.7.7.2 Following any occurrence involving an obstruction on the runway or a runway incursion, pilots and controllers will complete an air traffic incident report in accordance with the ICAO model air traffic incident report form.

10.7.8 Helicopter Operation and Wake Turbulence

10.7.8.1 Helicopters operation and Wake Turbulence

Helicopters should be kept well clear of light aircraft when hovering or while air taxiing.

Note.—Helicopters produce vortices when in flight and there is some evidence that per kilogram of gross mass, their vortices are more intense than those of fixed-wing aircraft.

10.7.8.1 General Caution

In issuing clearances or instructions, air traffic controllers should take into account the hazards caused by propeller slipstream to taxiing aircraft, to aircraft taking off or landing, particularly when intersecting runways are being used, and to vehicles and personnel operating on the aerodrome.

Note.—the propeller slipstream can produce localized wind velocities of sufficient strength to cause damage to other aircraft, vehicles and personnel operating within the affected area.

10.7.9 ABNORMAL AIRCRAFT CONFIGURATION AND CONDITION

10.7.9.1 Whenever an abnormal configuration or condition of an aircraft, including conditions such as landing gear not extended or only partly extended, or unusual smoke emissions from any part of the aircraft, is observed by or reported to the aerodrome controller, the aircraft concerned will be advised without delay.

10.7.9.1 When requested by the flight crew of a departing aircraft suspecting damage to the aircraft, the departure runway used will be inspected without delay and the flight crew advised in the most expeditious manner as to whether any aircraft debris or bird or animal remains have been found or not.

10.7.10 ESSENTIAL INFORMATION ON AERODROME CONDITIONS

10.7.10.1 Essential information on aerodrome conditions is information necessary to safety in the operation of aircraft, which pertains to the movement area or any facilities usually associated therewith. For example, construction work on a taxi strip not connected to the runway-in-use would not be essential information to any aircraft except one that might be taxied in the vicinity of the construction work. As another example, if all traffic must be confined to runways, that fact should be considered as essential aerodrome information to any aircraft not familiar with the aerodrome.

10.7.10.2 Essential information on aerodrome conditions will include information relating to the following:

a) construction or maintenance work on, or immediately adjacent to the movement area;
b) rough or broken surfaces on a runway, a taxiway or an apron, whether marked or not;
c) water on a runway, a taxiway or an apron;
d) other temporary hazards, including parked aircraft and birds on the ground or in the air;
e) failure or irregular operation of part or all of the aerodrome lighting system;
f) any other pertinent information.

Note. — Up-to-date information on the conditions on aprons may not always be available to the Pokhara control tower. The responsibility of the Pokhara tower in relation to aprons is, with respect to the provisions of 10.1.12.1 and10.1.12.2,limited to the transmission to aircraft of the information which is provided to it by the authority responsible for the aprons.

10.7.10.3.Essential information on aerodrome conditions will be given to every aircraft, except when it is known that the aircraft already has received all or part of the information from other sources. The information will be given in sufficient time for the aircraft to make proper use of it, and the hazards will be identified as distinctly as possible.

Note.— "Other sources" include NOTAM and the display of suitable signals.

10.7.10.4 When a previously non-notified condition pertaining to the safe use by aircraft of the maneuvering area is reported to or observed by the controller, the appropriate Aerodrome Engineering authority will be informed and operations on that part of the maneuvering area terminated until otherwise advised by the appropriate aerodrome Engineering authority.

10.7.11 MESSAGES CONTAINING INFORMATION ON AERODROME CONDITIONS

10.7.11.1 Whenever information is provided on aerodrome conditions, this will be done in a clear and concise manner so as to facilitate appreciation by the pilot of the situation described. It will be issued whenever deemed necessary by the controller on duty in the interest of safety, or when requested by an aircraft. If the information is provided on the initiative of the controller, it will be transmitted to each aircraft concerned in sufficient time to enable the pilot to make proper use of the information.

10.7.11.2 Information that water is present on a runway will be transmitted to each aircraft concerned, on the initiative of the controller, using the following terms:

DAMP - the surface shows a change of color due to moisture.

WET - the surface is soaked but there is no standing water.

WATER PATCHES - patches of standing water are visible.

FLOODED - extensive standing water is visible.

10.7.12 CONTROL OF AERODROME TRAFFIC

10.7.12.1 General

As the view from the flight deck of an aircraft is normally restricted, the controller will ensure that instructions and information which require the flight crew to employ visual detection, recognition and observation are phrased in a clear, concise and complete manner.

10.7.12.2 Designated positions of aircraft in the aerodrome traffic and taxi circuits

The following positions of aircraft in the traffic and taxi circuits are the positions where the aircraft normally receive aerodrome control tower clearances. The aircraft should be watched closely as they approach these positions so that proper clearances may be issued without delay. Where practicable, all clearances should be issued without waiting for the aircraft to initiate the call.

Position1 Aircraft initiates call to taxi for departing flight. Runway-in-use information and taxi clearances are given.

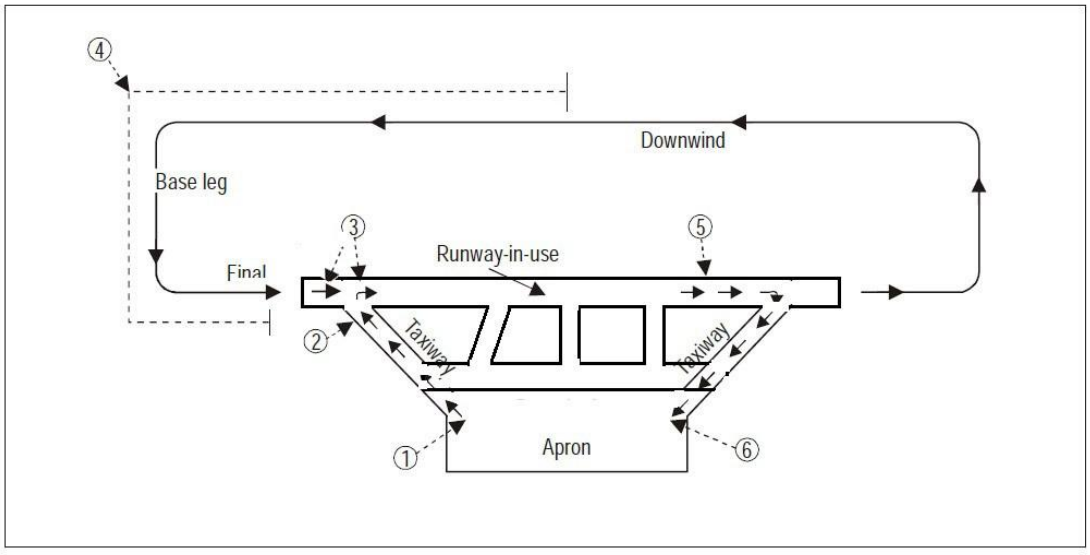
Position2 If there is conflicting traffic, the departing aircraft will be held at this position. Engine run-up will, when required, normally be performed here.

Position3 Take-off clearance is issued here, if not practicable at position 2.

Position4 Clearance to land is issued here as practicable.

Position5 Clearance to taxi to apron is issued here.

Position6 Parking information issued here, if necessary.



10.7.12.3 TRAFFIC ON THE MANOEUVRING AREA

10.1.13.3.1 CONTROL OF TAXIING AIRCRAFT

10.7.12.3.1.1 TAXI CLEARANCE

Prior to issuing a taxi clearance, the controller will determine where the aircraft concerned is parked. Taxi clearances will contain concise instructions and adequate information so as to assist the flight crew to follow the correct taxi routes with appropriate designators, to avoid collision with other aircraft or objects and to minimize the potential for the aircraft inadvertently entering an active runway.

10.7.12.3.1.2 When a taxi clearance contains a taxi limit beyond a runway, it will contain an explicit clearance to cross or an instruction to hold short of that runway.

10.7.12.3.1.3 TAXIING ON RUNWAY-IN-USE

For the purpose of expediting air traffic, aircraft may be permitted to taxi on the runway-in-use, provided no delay or risk to other aircraft will result.

10.7.12.3.1.4 If the control tower is unable to determine that a vacating or crossing aircraft has cleared the runway, the aircraft will be requested to report when it has vacated the runway. The report will be made when the entire aircraft is beyond the relevant runway-holding position.

10.7.12.3.1.5 USE OF RUNWAY-HOLDING POSITIONS

10.7.12.3.1.6 Aircraft will not be held closer to a runway-in-use than at a runway-holding position.

10.7.12.3.1.7 Aircraft will not be permitted to line up and hold on the approach end of a runway-in-use whenever another aircraft is affecting a landing, until the landing aircraft has passed the point of intended holding.

Note. — See Figure 2-6.

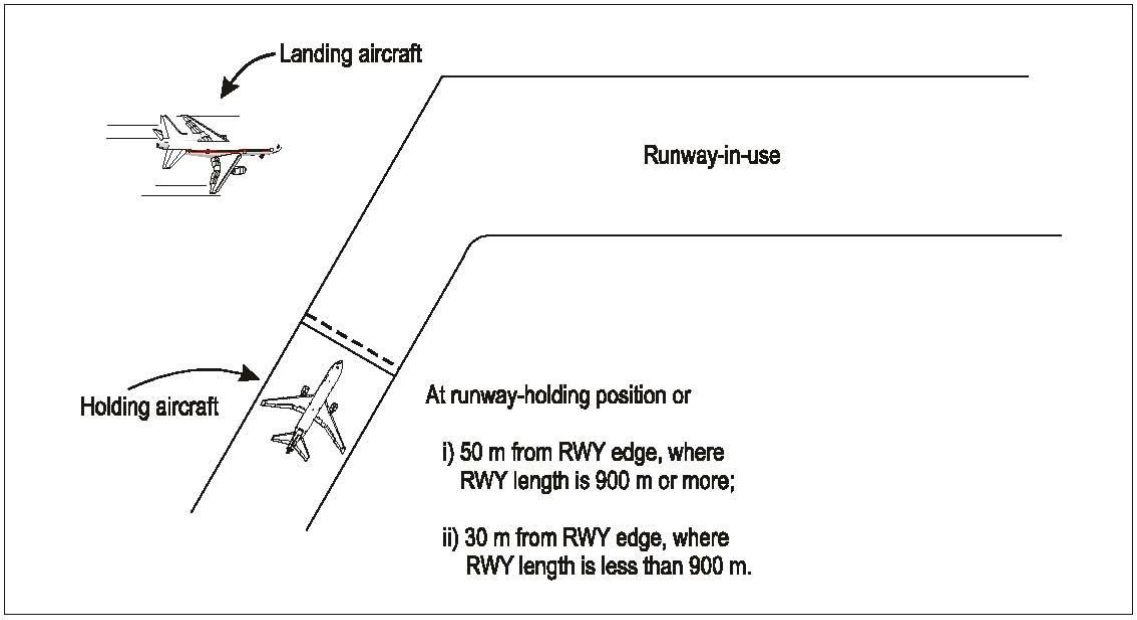


Figure 2-6 Method of holding aircraft

10.7.12.3.1.8 HELICOPTER TAXIING OPERATIONS

10.7.12.3.1.8.1 When necessary for a wheeled helicopter or vertical take-off and landing (VTOL) aircraft to taxi on the surface, the following provisions are applicable.

10.7.12.3.1.8.2 A frequency change should not be issued to single-pilot helicopters hovering or air taxiing. Whenever possible, control instructions from the next ATS unit should be relayed as necessary until the pilot is able to change frequency.

Note. — Ground taxiing uses less fuel than air-taxiing and minimizes air turbulence. However, under certain conditions, such as rough, soft or uneven terrain, it may become necessary to air-taxi for safety considerations. Helicopters with articulating rotors (usually designs with three or more main rotor blades) are subject to "ground resonance" and may, on rare occasions, suddenly lift off the ground to avoid severe damage or destruction.

10.7.12.13.1.8.3. When it is requested or necessary for a helicopter to proceed at a slow speed above the surface, normally below 37 km/h (20 kts) and in ground effect, air taxiing may be authorized except for the larger and heavier helicopters (e.g. S332, MI8).

Note. — Air-taxiing consumes fuel at a high burn rate, and helicopter downwash turbulence (produced in ground effect) increases significantly with larger and heavier helicopters.

10.7.12.13.1.8.4. Instructions which require small aircraft or helicopters to taxi in close proximity to taxiing helicopters should be avoided and consideration should be given to the effect of turbulence from taxiing helicopters on arriving and departing light aircraft.

Note. — Most light helicopters are flown by one pilot and require the constant use of both hands and feet to maintain control during low-altitude/low-level flight. Although flight control friction devices assist the pilot, changing frequency near the ground could result in inadvertent ground contact and consequent loss of control.

10.7.12.3.2 CONTROL OF OTHER THAN AIRCRAFT TRAFFIC

10.7.12.3.2.1 ENTRY TO THE MANOEUVRING AREA

The movement of pedestrians or vehicles on the maneuvering area will be subject to authorization by Pokhara control tower. Persons, including drivers of all vehicles, will be required to obtain authorization from the aerodrome control tower before entry to the maneuvering area. Notwithstanding such an authorization, entry to a runway or runway strip or change in the operation authorized will be subject to a further specific authorization by Pokhara control tower.

10.7.12.3.2.2 PRIORITY ON THE MANOEUVRING AREA

10.1.13.4.2.2.1 All vehicles and pedestrians will give way to aircraft which are landing, taxiing or taking off, except that emergency vehicles proceeding to the assistance of an aircraft in distress will be afforded priority over all other surface movement traffic. In the latter case, all movement of surface traffic should, to the extent practicable, be halted until it is determined that the progress of the emergency vehicles will not be impeded.

10.7.12.3.2.2.1 When an aircraft is landing or taking off, vehicles will not be permitted to hold closer to the runway-in-use than:

a) at a taxiway/runway intersection — at a runway holding position; and

b) at a location other than a taxiway/runway intersection — at a distance equal to the separation distance of the runway-holding position.

10.7.12.3.2.3 COMMUNICATION REQUIREMENTS AND VISUAL SIGNALS

10.7.12.3.2.3.1 All vehicles employed on the maneuvering area will be capable of maintaining two-way radio communication with the aerodrome control tower, except when the vehicle is only occasionally used on the maneuvering area and is:

a) accompanied by a vehicle with the required communications capability, or

b) employed in accordance with a pre-arranged plan established with the aerodrome control tower.

10.7.12.3.2.3.2 When communications by a system of visual signals is deemed to be adequate, or in the case of radio communication failure, the signals given hereunder will have the meaning indicated therein:

L***ight signal from Aerodrome Control***	***Meaning***
Green flashes	Permission to cross landing area or to move onto taxiway
Steady red	Stop
Red flashes	Move off the landing area or taxiway and watch out for aircraft
White flashes	Vacate maneuvering area in accordance with local instructions

10.7.12.3.2.3.3 In emergency conditions or if the signals in 10.7.12.3.2.3.2 are not observed, the signal given here under will be used for runways or taxiways equipped with a lighting system and will have the meaning indicated therein.

Light signal	***Meaning***
Flashing runway or taxiway lights	Vacate the runway and observe thetower for light signal

10.7.12.3.2.3.4When employed in accordance with a plan pre-arranged with the aerodrome control tower, constructional and maintenance personnel should not normally be required to be capable of maintaining two-way radio communication with the aerodrome control tower.

10.7.13 PRIORITY FOR LANDING

10.7.13.1 Priority shall be given to:

a) An aircraft which anticipates being compelled to land because of factors affecting the safe operation of the aircraft (engine failure, shortage of fuel, etc);
b) Hospital aircraft or aircraft carrying any sick or seriously injured person requiring urgent medical attention;
c) Aircraft engaged in search and rescue operations; and
d) Other aircraft as may be determined by ANSP.

10.7.13.2 If an aircraft enters an aerodrome traffic circuit without proper authorization, it will be permitted to land if its actions indicate that it so desires. If circumstances warrant, aircraft which are in contact with the controller may be instructed to give way so as to remove the hazard introduced by such unauthorized operation as soon as possible. In no case will permission to land be withheld indefinitely.

10.7.13.3 In cases of emergency it may be necessary, in the interests of safety, for an aircraft to enter a traffic circuit and affect a landing without proper authorization. Controllers should recognize the possibilities of emergency action and render all assistance possible.

10.7.14 ORDER OF PRIORITY FOR ARRIVING AND DEPARTING AIRCRAFT

An aircraft landing or in the final stages of an approach to land will normally have priority over an aircraft intending to depart from the same or an intersecting runway.

10.1.15.1 CONTROL OF DEPARTING AIRCRAFT

10.1.15.1.1Departure sequence

10.1.15.1.1.1 Departures will normally be cleared in the order in which they are ready for take-off, except that deviations may be made from this order of priority to facilitate the maximum number of departures with the least average delay. Factors which should be considered in relation to the departure sequence include, inter alias:

a) types of aircraft and their relative performance;
b) routes to be followed after take-off;
c) any specified minimum departure interval between take-offs;
d) need to apply wake turbulence separation minima;
e) aircraft which should be afforded priority;
f) aircraft subject to slot requirements.

10.1.15.1.1.2 Departing aircraft may be expedited by suggesting a take-off direction which is not into the wind. It is the responsibility of the pilot-in-command of an aircraft to make a take-off or wait for take-off in a preferred direction.

10.1.15.1.2 General Procedures for Departing Aircraft

Clearances for departing aircraft will specify, when necessary for the separation of aircraft, direction of takeoff and turn after take-off, heading or track to be made good before taking up the cleared departure track, level to maintain before continuing climb to assigned level, time, point and/or rate at which a level change will be made, and any other necessary manoeuver consistent with safe operation of the aircraft.

10.1.15.1.3 Standard clearances for departing aircraft

10.1.15.1.3.1Clearance

Issuance of the standard clearances and the transfer of control of departing aircraft between the ATC units will be according to the standardized procedures as established in this manual and AIP.

10.1.15.1.4 Contents of standard clearances

Standard clearances for departing aircraft will contain the following items:

a) aircraft identification;
b) clearance limit, normally destination aerodrome;
c) track authorized
d) initial level;
e) any other necessary instructions or information, e.g. turn after departure, instructions relating to change of frequency and the time of expiry of the clearance.

10.1.15.1.5 Read-back of clearances and safety-related information

10.1.15.1.5.1 The flight crew will read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items will always be read back:

a) ATC route clearances;

b) clearances and instructions to enter, land on, take off from, hold short of, cross and backtrack on any runway; and

c) runway-in-use, altimeter settings,level instructions, heading and speed instructions.

10.1.15.1.5.2 Other clearances or instructions, including conditional clearances, will be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

10.1.15.1.5.3 The controller will listen to the read-back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and will take immediate action to correct any discrepancies revealed by the read back.

10.1.15.2 Separation of departing aircraft

A departing aircraft will not normally be permitted to commence take-off until the preceding departing aircraft has crossed the end of the runway-in-use or has started a turn or until all preceding landing aircraft are clear of the runway-in-use (*Note . — See Figure 2-7).*

Position limits to be reached by a landed aircraft (A) or a departing aircraft (B or C) before an arriving aircraft may be cleared to cross the threshold of the runway-in-use or a departing aircraft may be cleared to take off, unless otherwise prescribed by the appropriate ATS authority.

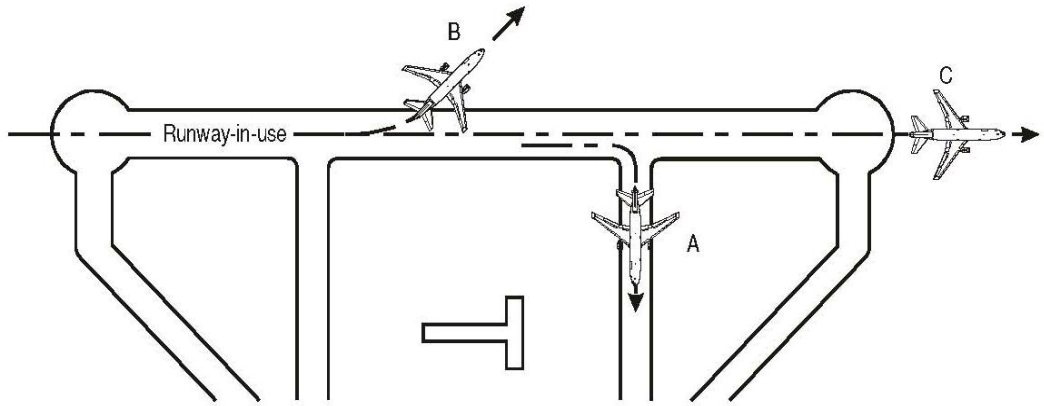


Figure 2-7 Separation between departing and arriving aircraft (See 10.1.15.5)

10.1.15.3 Engine starting procedures

10.1.15.3.1 In order to maintain an orderly flow of traffic, it is necessary that pilots of departing aircraft request a startup clearance. When requesting a startup clearance, a pilot will indicate the runway he/she requires to use if limited to a particular runway and name of destination airport.

10.1.15.3.2 If it is anticipated that traffic conditions may cause a delay before issuance of a taxi clearances of more than 6 minutes, pilots should be issued with a recommended startup time.

10.1.15.3.3 Clearance delivery

ADC will deliver standard ATC clearance to all departing aircraft prior to issue taxi clearance.

10.1.15.4 Taxi clearance and provision of information

10.1.15.4.1 Clearance

Taxi clearance will be issued for the purpose of

a) providing the pilot with guidance to the appropriate runway.
b) providing routes which will involve the minimum of conflict with other traffic.
c) protecting other aircraft from the jet blast of heavy jets, helicopter downwash.

10.1.15.4.1.1 Taxi information

10.1.15.4.1.2 Prior to taxi for takeoff aircraft will be advised of the elements in the order listed in Para 10.1.15.7.1, with the exception of such elements which it is known that the aircraft has already received.

10.1.15.4.1.3 At the discretion of the aerodrome controller, pilots in command of aircraft requesting permission to run up on the runway in use may be permitted. However when a suitable alternate is available, aircraft will normally be required to use this area, and will only be permitted to run up on the runway if it is certain that this will not delay arriving or other departing aircraft.

10.1.15.4.1.4 An aircraft operating on the ground will be warned of jet blast or downwash of helicopters.

10.1.15.4.2 Take off information

10.1.15.4.2.1 The aerodrome controller will provide to each aircraft under his/her control, the following information for take-off purposes as required:

a) The mean and maximum crosswind components;
   i. when the mean component equals or exceeds 8 knots for single-engine aircraft and 12 knots for multi-engine aircraft; orwhen requested by the pilot.
b) The cross wind component may be interpolated by use of the following table:

10.1.15.4.2.2 Cross wind components should be calculated as shown in below:

Divergence from Take-off/Landing Direction	Fraction of Wind Speed
15 degrees	3/10
30 degrees	5/10
45 degrees	7/10
60 degrees	9/10
75 degrees	1

10.1.15.4.3 Taxiing Aircraft

10.1.15.4.3.1 Controllers will not issue conditional taxi instructions that are dependent upon the movement of an arriving aircraft on or approaching the runway or a departing aircraft established on a take-off roll, e.g., do not say "cleared to line up and hold behind the landing traffic or line up and hold after departing traffic except when the aircraft or vehicles concerned are seen by the appropriate controller and pilot. The aircraft or vehicle causing the condition in the clearance issued will be the first aircraft/vehicle to pass in front of the other aircraft concerned.

10.1.15.4.4 Intersection Departure

10.1.15.4.4.1 An intersection departure is a departure from a point of intersection of a runway or taxiway with the active runway.

10.1.15.4.4.2 A pilot wishing to use less than the available full length of the runway will intimate his/her intentions whilst taxiing. Intersection departure may be initiated by the controller to expedite traffic for those type of aircraft not exceeding STOL type of aircrafts keeping in mind the runway length available and wind condition etc. While approving any intersection departure, the controller will advise the pilot of the remaining length available before issuing take-off clearance. The responsibility for accepting an intersection departure remains with the pilot in command.

10.1.15.4.4.3 **Phraseology** will be as follows:

(Aircraft identification) RUNWAY (runway designator) INTERSECTION DEPARTURE FROM TAXIWAY INTERSECTION (taxiway designator) AVAILABLE or APPROVED, REMAINING LENGTH (feet) AVAILABLE.

10.1.15.4.5 Take-off clearance

10.1.15.4.5.1 An aircraft will be cleared to enter the runway and take-off in accordance with the priorities and maintaining the separation specified in this manual.

10.1.15.4.5.2 The take-off clearance will be issued when the aircraft is ready for take-off and at or approaching the departure runway and the traffic situation permits. To reduce the potential for misunderstanding, the take-off clearance will include the designator of the departure runway.However, the provision of omitting RWY designator will be considered, in case the controller ascertain the designator is not necessary.

10.1.15.4.5.3 In the interest of expediting traffic, a clearance for immediate take-off may be issued to an aircraft before it enters the runway. On acceptance of such clearance, the aircraft will taxi out to the runway and take off in one continuous movement.

10.1.15.4.5.4 Any requirement after departure will be communicated to the pilot before takeoff.

10.1.15.4.5.5 When a taxing aircraft of heavier weight is followed by an aircraft of lesser weight the aerodrome controller will not issue a line up for immediate departure clearance that will require the aircraft of heavier weight to use more than normal taxing power to enter the runway.

10.1.15.4.5.6 Before clearing an aircraft for take-off, and immediately before it commences to take-off the aerodrome controller will make a visual check from the control tower to determine, as far as practicable, whether obstructions exist on or near the take-off area (runway/strip). If there is any obstruction in respect of which continued operation has not been authorized or is not possible, the controller will withhold or cancel the clearance until the obstruction is removed.

10.1.15.4.5.7 When departure separation is based on the position of a preceding landing aircraft and conditions preclude the aerodrome controller from clearly observing that the landing aircraft vacated and is taxing away from the runway, conformation of this manoeuver will be obtained from the pilot in command prior to issuance of the take-off clearance.

10.1.15.4.5.8 Operation will normally be confined to the runway most suitable for the majority of the current traffic.

10.1.15.4.5.9 The word “TAKE-OFF” will be used in clearing an aircraft for take-off or canceling a take-off clearance; they will be used as the last word of the take-off clearance except that an instruction specifying a turn or circuit direction to be made after departure will be placed after the words “TAKE-OFF”.

10.1.15.4.5.10 Before Authorizing a Take-off, the aerodrome controller will, by his/her own visual observations, be reasonably satisfied that the weather conditions in the sector of airspace enclosing the normal path of a civil aircraft's take-off and initial climb are not below the minima applicable to the particular flight. Assessment of weather conditions for the purpose of authorizing take-off will be the responsibility of the aerodrome controller and should be made immediately prior to the aircraft departure.

10.1.15.4.5.11 An aircraft will not be cleared for take-off when weather conditions do not meet the requirement or when in the opinion of the aerodrome controller, the cumulative effects of small amounts of cloud at various levels below the minimum ceiling constitute a hazard in regard to obstructions in the take-off and initial climb area.

10.1.15.4.5.12 An aircraft will also not be cleared for take-off when hazardous weather conditions are expected to exist. Such conditions might be a violent wind change, a heavy rain storm, or known sever convective turbulence moving over the runway during take-off or affecting the flight path after airborne.

10.1.16 CONTROL OF ARRIVING AIRCRAFT

10.1.16.1 Determining of aircraft position

10.1.16.1.1 As necessary, aircraft will be requested to report their positions by reference to navigation aids, by a distance and direction (e.g. 5 miles NE) from the aerodrome, or by reference to one of the legs of a traffic circuit. Locally known place names will not be used unless they are readily discernible on the appropriate aeronautical chart. Where established, Visualfix points may be used for position reporting purposes.

10.1.16.1.2 In addition to a radio watch, the aerodrome controller will maintain, as far as practicable, a continuous watch with the unaided eye and, if necessary with binoculars, for the purpose of determining the position and ensuring the safety of aircraft. In particular, attention will be paid to an aircraft suffering radio failure.

10.1.16.1.3 A controller's visual determination of the relative distance of aircraft close to each other can be seriously in error, even to the extent of reversing the position of the two aircraft. This is particularly so when two aircraft of similar sizes are being considered.

10.1.16.1.3.1 In providing visual separation, controllers will rely primarily on separation in azimuth, and not by distance or height. Visual separation by judgment of relative distance or height will be used only when the margins are so wide that there is no possibility of the aircraft being close to each other. Corroborative evidence from the pilot of one aircraft of the relative position of another aircraft will be obtained whenever possible before the application of visual separation.

10.1.16.1.4 Visual determination of position is not complete until aircraft identity has been established to the extent required for the adequate provision of traffic information or visual separation. Positive identifying action will be taken by the controller before providing visual separation between arriving aircraft during the hours of daylight as follows:

a) Identification by type, or distinguished markings if the same type; or

b) Change the heading of one the aircraft concerned.

10.1.16.1.5 The controller may instruct a following aircraft to sight-and-follow a preceding aircraft. In exercising such control, it is essential that the pilot of the following aircraft correctly identifies the aircraft he/she is to follow. To assist pilot in proper identification, the controller will;

a. Specify the type if the aircraft to be followed and if an unfamiliar type, a brief description of the aircraft;
b. Provide accurate position information on the preceding aircraft using direction and distance or position in the circuit; geographical features should only be used if depicted on relevant charts or the feature is regularly used in the control of locally operating aircraft; and
c. Advise the pilot of the following aircraft of his number in the landing sequence.

10.1.16.1.6 In the case of formation flights by Ultra light flight in Pokhara, the controller will advise only the leader of the formation, and the individual aircraft will be responsible for landing.

10.1.16.1.7 Before issuing any control clearance requiring that the pilot of one aircraft keep another

a. in sight, the aerodrome controller will bear in mind the following limitations to the pilot's ability to do this:
b. the field view from the cockpit:
c. the contrast formed by an aircraft with its background;
d. glare from the sun;
e. restriction on visibility which may not be currently apparent to the pilot e.g. loss of forward visibility following descent into a haze layer.

10.1.16.1.8 The aerodrome controller will issue an alternative clearance if there is any doubt about the ability of the pilot to see the position of the other aircraft for the duration of the originally proposed clearance.

10.1.16.2 REGULATION OF CIRCUIT TRAFFIC

10.1.16.2.1 Arriving aircraft will enter the traffic circuit as per landing sequence established by aerodrome controller.

10.1.16.2.2 For each type of aircraft engaged in airline operation, there is a normal circuit pattern which is largely dictated by the operating characteristics of the particular type. Thus, in spacing arriving aircraft during a landing sequence, controllers should pay due regard to these different circuit patterns. Nevertheless, to prevent cumulative delays to following aircraft, a pilot may be requested to make a short approach. Circuit diagram is mentioned in AIP Nepal.

10.1.16.2.3 If an aircraft suffering radio failure enters the traffic circuits in such a manner that the aerodrome controller is doubtful whether sufficient spacing from another aircraft can be maintained, he/she will request the radio equipped aircraft who is in contact to give way.

10.1.16.3 LANDING INFORMATION AND LANDING CLEARANCES

10.1.16.3.1 Landing information

10.1.16.3.1.1 Aerodrome controller will provide each aircraft under his/her control the following information as applicable for landing purposes with the exception of such elements, which it is known, the aircraft have already received:

a) runway;

b) wind velocity, QNH and temperature;

c) known significant weather information;

d) aerodrome surface conditions and the presence of birds;

e) the mean and maximum crosswind components:

i) when the mean component equals or exceeds 8 knots for single-engine aircraft or 12 knots for multi-engine aircraft; or

ii) when requested by the pilot;

f) any discernible downwind component;

g) possibility of wake turbulence.

10.1.16.3.1.2 Calculation of cross-wind component. See table (10.1.15.7.2.2)

10.1.16.3.1.3 Aircraft flying at low speed, especially near the point of take-off and landing, create turbulence in their wake. The severity of the turbulence created is proportional to the weight of the aircraft, and the degree to which a following aircraft will be affected is proportional to the difference in weights involved. This turbulence may have very serious effects upon succeeding aircraft, particularly those of significantly lesser weight. Whenever practicable, the aerodrome controller will advise aircraft of the expected occurrence of hazards caused by turbulence wake, by use of the phrase "CAUTION- WAKE TURBULANCE" however, as the occurrence and persistence of turbulent wake hazards cannot be predicated accurately it may not be possible to issue advice on such hazards at all times. Nevertheless, the prescribed separation standards for wake turbulence avoidance must always be applied as per this manual.

10.1.16.3.2 Landing Clearance

10.1.16.3.2.1 Except as provided in Para 10.1.16.3.2.3, clearance to land will be issued to a pilot when the separation required has been established but not before either of the following conditions:

a. The aircraft has been sighted by the aerodrome controller, either approaching the end of the downwind leg, on base leg, or on the final leg of the circuit pattern, alternatively;

b. if a circling approach has been made, in an approximately equivalent position to the foregoing.

10.1.17.3.2.2. Before clearing aircraft to land, and before the aircraft committed to a landing, the Aerodrome controller will make a visual check from the control tower to determine as far as practicable whether obstruction exist on the landing area(runway/strip). If there is any obstruction, the controller will withhold the clearance until it is removed.

10.1.17.2.2.3 An aircraft will also not be cleared to land when hazardous weather conditions are expected to exist.

10.1.17.2.2.4 Aerodrome controller in his discretion, will advise aircraft of any discernible downwind. This will be done at a time, which permits the pilot in command to nominate and land on another runway.

10.1.17.2.2.5 When the landing area is occupied by another aircraft, or is obstructed, the pilot of the approaching aircraft will be instructed as follows:

a) if it is assessed that the landing area will become available but a landing clearance cannot be issued immediately-CONTINUE APPROACH (follow later with the appropriate clearance) ; or

b) a landing aircraft will not be permitted to cross the beginning of the RWY on its final approach until the preceding departing aircraft crosses the end of the runway-in-use or has started a turn or until a preceding landing aircraft is clear of the runway in use; or

c) an aircraft may be cleared to land when there is reasonable assurance that the separation in (10.1.16.3.2.4.b) will exist. The landing clearance will include the designator of landing runway.

d) if it is apparent that the landing area will not be available GO ROUND or, if in a position to do so, -ORBIT. (Instructions to commence a second approach or hold should follow).

10.1.17.2.2.6 When separation is based on the position of a preceding landing aircraft and conditions preclude the Aerodrome controller from clearly observing that the landing aircraft has vacated and is taxing away from the runway, conformation of this manoeuver will be obtained from the pilot in command prior to issuance of the clearance to land.

10.1.17.2.2.7 Any special clearance or information relating to vacating off the runway after landing should, if practicable, be given with the landing clearance. The phraseology should be followed by “if feasible vacate the RWY via Taxiway A”.

10.1.17.3 TAXIING AFTER LANDING

10.1.17.3.2 Taxi clearance and provision of information

10.1.17.3.2.3 Taxi clearance will be issued governing entry to and movement on the taxiway for the purpose of:

a) applying priorities as laid down in this manual;

b) providing the pilot with guidance to the apron area;

c) providing routes which would involve the minimum of conflict with other traffic;

d) protecting other aircraft from the jet blast of heavy jets and downwash of helicopters;

10.1.17.3.3 An aircraft known or believed to be the subject of unlawful interference or which for other reasons needs isolation from normal aerodrome activities will be cleared to designated isolated parking position.Such an isolated parking position has been assigned, the aircraft will be cleared to the position in Northern part of Taxiway A or areas advised by the Chief of Pokhara Civil Aviation Office or in his absence by Designated Senior Duty Officer. The taxi clearance will specify the taxi route to be followed to the parking position. This route will be selected with a view to minimizing any security risks to the public, other aircraft and installations at the aerodrome.

10.1.17.3.4 A pilot-in-command who is unfamiliar with the aerodrome may request "GUIDANCE TO TERMINAL". In providing this guidance, the controllers will issue specific instructions relating to taxiing of the aircraft. The taxi route to be followed will be progressively described, each section being specified in sufficient time for the pilot to recognize turning points etc., and to take action. Taxiway letters, numbers or local designator, e.g. "Southern taxiway" should not be used.

10.1.17.3.5 Taxi clearances will not relate to movement on the apron areas, nevertheless, available essential information referring to her aircraft entering or leaving the same apron area will be given to an aircraft approaching the apron area.

10.1.17.3.6 An aircraft operating on the ground will be warned of jet blast and helicopter downwash as appropriate.

10.1.17.3.7 Clearance that require the use of greater than normal taxing power by a jet, when other aircraft may be affected by the jet aircraft blast, will be avoided. Every endeavor will be made to avoid stopping a jet while it is taxing.

10.1.17.4 Landing and roll-out maneuvers

10.1.17.4.2 When necessary or desirable in order to expedite traffic, a landing aircraft may be requested to:

a. land beyond the touchdown zone of the runway;
b. vacate the runway at a specified exit taxiway;
c. expedite vacating the runway.

10.1.17.4.3 In requesting a landing aircraft to perform a specific landing and/or roll-out maneuver, the type of aircraft, runway length, location of exit taxiways, reported braking action on runway and taxiway, and prevailing meteorological conditions will be considered.

10.1.17.4.4 If the pilot-in-command considers that he/she is unable to comply with the requested operation, the controller will be advised without delay.

10.1.17.4.5 When necessary or desirable, e.g. due to low visibility conditions, a landing or a taxiing aircraft may be instructed to report when a runway has been vacated. The report will be made when the aircraft is well clear of the runway.

10.1.18 RUNWAY CLOSURE

10.1.18.2 If the effect of any conditions (e.g. weather, navigation aids availability, airspace restrictions, etc.) creates the situation where no approach system can be used, then the Runway will be closed for landing.

10.1.18.3 Similarly, when special circumstance exist which in the opinion of the aerodrome controller on duty, would make a landing or take-off hazardous, the controller will close the Runway for landing, take-off or all operations as appropriate.

10.1.18.4 The decisions to make a landing or take- off in cross wind or down wind conditions, wet runway due water or slush or when the presence of birds has been notified, rest solely with the pilot–in–command.

10.1.18.5 When the Runway is closed to aircraft for landing, take-off or all operations, the aerodrome controller will notify all aircraft which are affected and which are listening on the appropriate tower frequency.

10.1.19 USE OF CLOSED RUNWAY IN EMERGENCY

10.1.19.1 When the Runway is closed, if a pilot declares an emergency or after advice from the aerodrome controller of any known alternatives courses of action, states that it will be safer to land than to adopt alternative action, all assistance to land at the aerodrome will be afforded to him and the incident will be reported as an Incident Report.

10.1.19.2 In the situation as mentioned in 10.1.19.1 ATC phraseology that can be used are: RUNWAY (runway number) CLOSED/UNSAFE. UNABLE TO ISSUE LANDING CLEARANCE. LANDING WILL BE AT YOUR OWN RISK.

10.1.20 SUSPENSION OF VISUAL FLIGHT RULES OPERATIONS

10.1.20.1 Any or all VFR operations on and in the vicinity of the aerodrome may be suspended by Pokhara Control Tower or as instructed by Chief of Pokhara Airport whenever safety requires such action.

10.1.20.2 All such suspensions of VFR operations will be accomplished through Pokhara Tower.

10.1.20.3 The following procedures will be observed by Pokhara tower whenever VFR operations are suspended:

a) hold all VFR departures;
b) recall all local flights operating under VFR or obtain/process for approval of special VFR operations;
c) notify all concerned ATS units as appropriate of the action taken;
d) notify all operators, or their designated representatives, of the reason for taking such action, if necessary or requested.

10.1.21 SPECIAL VFR FLIGHT

10.1.21.1SPECIAL VFR FLIGHT PROCEDURE

Special VFR fights is a VFR flights cleared by ATC to operate within Pokhara control zone in meterological conditions below VMC provided:

a) traffic conditions permit.
b) the ground visibility is not less than:
i. 1000 meters for rotary wing aircraft
ii. 2500 meters for fixed-wing aircraft.
c) between sunrise to sunset at the request of the pilot
d) the aircraft will be flown clear of cloud and in-sight of surface.

10.1.21.2 AUTHORIZATION OF SPECIAL VFR FLIGHTS

10.1.21.2.1 The request for Special VFR flights will be approved by Pokhara Tower. Request for such authorization will be handled individually.

10.1.21.2.2 Separation will be effected between Special VFR flights in accordance with prescribed separation minima.

10.1.21.2.3 Special VFR flight will not be authorized if there is any doubt to the ATC that an aircraft may not be able to fly clear of clouds and in sight of surface.

10.1.21.2.4 Weather observations made for the purpose of authorizing a flight to be conducted under special VFR will be general observations.

10.1.21.2.5 Only one SVFR flight will be authorized to operate within a specified sector (east sector and west sector)

Note: The topographical feature of the kingdom of Nepal is mainly mountainous. During the monsoon season clouds are developed mostly in those hills & mountains. Controllers, during the monsoon season, will consider the monsoon factor before clearing the flight in special VFR conditions.

10.1.22 AERONAUTICAL GROUND LIGHTS

PAPI light has been decommissioned

10.1.23 Strip Marking

Strip marking will be accomplished in accordance with the procedures detailed in Appendix A "Strip Marking Procedures".

10.1.24 SECTOR VISIBILITY PROCEDURES

See. Appendix- E

CHAPTER 11

SEPARATION METHODS AND MINIMA

IN POKHARA AIRPORT, STANDARD SEPARATION CRITERIA ARE NOT APPLICABLE EXCEPT THE CRITERIA AS MENTIONED BEFORE IN CHAPTER 5, PARA 5.6

CHAPTER 12

COORDINATION PROCEDURES

12.1 COORDINATION IN GENERAL

12.1.1 Coordination will be accomplished by all air traffic control units in accordance with procedures detailed in the appropriate letter of agreement attached in D. This part of the instructions sets out the basic guidelines in establishing required co-ordination between units providing air traffic control service to aircraft.

12.1.2 Thorough and concise coordination between ATC units is as important as giving information or instructions to pilot. The best way of ensuring this complete coordination is to

UNDERSTAND the other ATC's job

BE ALERT for changes to a situation which another ATC must know about.

DEVELOP SOUND HABITS for scanning your information records to ensure that all relevant information is given.

The above is essential in all positions, but absolutely vital in situations where two aircraft operating under different controllers could come into conflict..

12.1.3 The transfer of responsibility for providing necessary services to aircraft normally occurs at the crossing of the vertical or lateral boundary between the two areas, transfer of the responsibility might take place at any point as agreed upon after prior coordination;

12.1.4 Where there is a position report on or within 10 miles of the boundary, the transfer will normally be affected at that position.

12.2 CHANGES OF FREQUENCY

12.2.1 In coordination with the adjacent unit the normal frequency change point may be varied to permit the use of a preferred frequency for a particular service. However the transferring unit will ensure that the change of frequency will take place not later than the aircraft reaching the specified transfer of control point.

12.2.2 Irrespective of whether a frequency change is involved, the transferring unit will inform the accepting unit of any difficulties with communications or equipment.

12.3 INTERCOMMUNICATION COORDINATION

12.3.1 Calls over the intercommunication systems should be answered promptly. Both from the point of view of efficiency and human relations, the aim should be either to deal with the call at once or to give an interim reply such as STAND BY or CALL YOU BACK.

12.3.2 Coordination should normally be effected on intercom or liaison channels. When these are not available, public telephone channels should be used in preference to the AFTN.

CHAPTER 13

PHRASEOLOGIES

13.1 COMMUNICATIONS PROCEDURES

The communications procedures will be in accordance with Volume II of Annex 10 — *Aeronautical Telecommunications*, and pilots, ATS personnel and other ground personnel will be thoroughly familiar with the radiotelephony procedures contained therein.

13.2. GENERAL

13.2.1 Most phraseologies contained in Section 9.3 of this Chapter show the text of a complete message without call signs. They are not intended to be exhaustive, and when circumstances differ, pilots, ATS personnel and other ground personnel will be expected to use plain language, which should be as clear and concise as possible, to the level specified in the ICAO language proficiency requirements contained in Annex 1 — *Personnel Licensing*, in order to avoid possible confusion by those persons using a language other than one of their national languages.

13.2.2. The phraseologies are grouped according to types of air traffic service for convenience of reference. However, users will be familiar with, and use as necessary, phraseologies from groups other than those referring specifically to the type of air traffic service being provided. All phraseologies will be used in conjunction with call signs (aircraft, ground vehicle, ATC or other) as appropriate. In order that the phraseologies listed should be readily discernible in Section 9.3, call signs have been omitted. Provisions for the compilation of RTF messages, call signs and procedures are contained in Annex 10, Volume II, Chapter 5.

13.2.3. Section 13.3 includes phrases for use by pilots, ATS personnel and other ground personnel.

13.2.4. Phraseologies for the movement of vehicles, other than tow-tractors, on the manoeuvring area will be the same as those used for the movement of aircraft, with the exception of taxi instructions, in which case the word “PROCEED” will be substituted for the word “TAXI” when communicating with vehicles.

13.2.5. Conditional phrases, such as “behind landing aircraft” or “after departing aircraft”, will not be used for movements affecting the active runway(s), except when the aircraft or vehicles concerned are seen by the appropriate controller and pilot. In all cases a conditional clearance will be given in the following order and consist of:

a) Identification;

b) the condition;

c) The clearance; and

d) brief reiteration of the condition,

for example: “BHA501, BEHIND AT43 ON SHORT FINAL, LINE UP BEHIND”.

Note.— This implies the need for the aircraft receiving the conditional clearance to identify the aircraft or vehicle causing the conditional clearance.

13.2.6. The phraseology in Section 9.3 does not include phrases and regular radiotelephony procedure words contained in Annex 10, Volume II.

13.2.7. Words in parentheses indicate that specific information, such as a level, a place or a time, etc., must be inserted to complete the phrase, or alternatively that optional phrases may be used. Words in square parentheses indicate optional additional words or information that may be necessary in specific instances.

13.2.8. Examples of the application of the phraseologies may be found in the *Manual of Radiotelephony* (Doc 9432).

13.3. ATC PHRASEOLOGIES

13.3.1 General

Circumstances	Phraseologies
13.3.1.1 DESCRIPTION OF LEVELS (SUBSEQUENTLY REFERRED TO AS "(LEVEL)")	a) FLIGHT LEVEL (number); or b) (number) FEET
13.3.1.2. LEVEL CHANGES, REPORTS AND RATES	a) CLIMB (or DESCENT)
	followed as necessary by :
….instruction that a climb (or descent) to a level within the vertical range defined is to commence	1) TO (level)
	2) TO REACH (level) AT (or BY) (time or significant point)
	3) REPORT LEAVING (or REACHING, or PASSING) (level)
	4) AT (number) FEET PER MINUTE [OR GREATER (or OR LESS)]
	b) MAINTAIN AT LEAST (number) FEET ABOVE (or BELOW) (aircraft call sign)
	c) REQUEST LEVEL (or FLIGHT LEVEL or ALTITUDE) CHANGE FROM (name of unit) [AT (time or significant point)
	d) STOP CLIMB (or DESCENT) AT (level)
	e) CONTINUE CLIMB (or DESCENT) TO (level)
	f) EXPEDITE CLIMB (or DESCNET) [UNTIL PASSING (level)]
	g) WHEN READY CLIMB (or DESCEND) TO (level)
	h) EXPECT CLIMB (or DESCENT) AT (time or significant point)
	i) REQUEST DESCENT AT (time)
…..to require action at a specifi3 time or place	j) IMMEDIATELY
	k) AFTER PASSING (significant point)
	l) AT (time or significant point)
…..to require action when convenient	m) WHEN READY (instruction)

..when there is doubt that an aircraft can comply with a clearance or instruction	p) IF UNABLE (alternative instructions) AND ADVISE
..when a pilot is unable to comply with a clearance or instruction	q) UNABLE
13.3.1.3 TRANSFER OF CONTROL AND/OR FREQUENCY CHANGE *Note.— An aircraft may be requested to "STAND BY" on a frequency when it is intended that the ATS unit will initiate communications soon and to "MONITOR" a frequency when information is being broadcast thereon.*	a) CONTACT (unit call sign) (frequency) [NOW]; b) AT (or OVER) (time or place) [or WHEN] [PASSING/LEAVING/REACHING (level)] CONTACT (unit call sign) (frequency); c) IF NO CONTACT (instructions); d) STAND BY FOR (unit call sign) (frequency); *e) REQUEST CHANGE TO (frequency); f) FREQUENCY CHANGE APPROVED; g) MONITOR (unit call sign) (frequency); *h) MONITORING (frequency); i) WHEN READY CONTACT (unit call sign) (frequency); j) REMAIN THIS FREQUENCY. * Denotes pilot transmission.
13.3.1.4 CHANGE OF CALL SIGN	
... to instruct an aircraft to change its type of call sign	a) CHANGE YOUR CALL SIGN TO *(new call sign)* [UNTIL FURTHER ADVISED];
... to advise an aircraft to revert to the call sign indicated in the flight plan	b) REVERT TO FLIGHT PLAN CALL SIGN *(call sign)* [AT *(significant point)*].
13.3.1.5. TRAFFIC INFORMATION	
... to pass traffic information	a) TRAFFIC *(information)*; b) NO REPORTED TRAFFIC;
... to acknowledge traffic information	*c) LOOKING OUT; *d) TRAFFIC IN SIGHT;. *e) NEGATIVE CONTACT *[reasons]*; f) [ADDITIONAL] TRAFFIC *(direction)* BOUND *(type of aircraft) (level)* ESTIMATED (*or* OVER) *(significant point)* AT *(time)*; g) TRAFFIC IS *(classification)* UNMANNED FREE BALLOON(S) WAS [*or* ESTIMATED] OVER *(place)* AT *(time)* REPORTED *(level(s))* [*or* LEVEL UNKNOWN] MOVING *(direction) (other pertinent information, if any)*. * Denotes pilot transmission

13.3.1.6 METEOROLOGICAL CONDITIONS	a) [SURFACE] WIND *(number)* DEGREES *(speed) (units)*; b) WIND AT *(level) (number)* DEGREES *(number)* KILOMETRES PER HOUR (*or* KNOTS); *Note.— Wind is always expressed by giving the mean direction and speed and any significant variations thereof.* c) VISIBILITY *(distance) (units) [direction]*; d) PRESENT WEATHER *(details)*; e) CLOUD *(amount, [(type)] and height of base) (units)* (*or* SKY CLEAR); *Note.— Details of the means to describe the amount and type of cloud are in Chapter 11, 11.4.3.2.3.* f) CAVOK; *Note.— CAVOK pronounced CAV-O-KAY.* g) TEMPERATURE [MINUS] *(number)* (*and/or* DEWPOINT [MINUS] *(number)*); h) QNH *(number) [units]*; i) QFE *(number) [(units)]*; j) *(aircraft type)* REPORTED *(description)* ICING (*or* TURBULENCE) [IN CLOUD] *(area) (time)*; k) REPORT FLIGHT CONDITION
13.3.1.7 POSITION REPORTING	a) NEXT REPORT AT *(significant point)*;
... to omit position reports until a specified position	b) OMIT POSITION REPORTS [UNTIL *(specify)*]; c) RESUME POSITION REPORTING.
13.3.1.8 ADDITIONAL REPORTS	a) REPORT PASSING *(significant point)*;
... to request a report at a specified place or distance	b) REPORT *(distance)* MILES (GNSS *or* DME) FROM *(name of DME station) (or significant point)*;
..to report a specified place or distance	*c) *(distance)* MILES (GNSS *or* DME) FROM *(name of DME station) (or significant point)*;
… to request a report of present position	d) REPORT PASSING *(three digits)* RADIAL *(name of VOR)* VOR; e) REPORT (GNSS *or* DME) DISTANCE FROM *(significant point) or (name of DME station)*; *f) *(distance)* MILES (GNSS *or* DME) FROM *(name of DME station) (or significant point)*. * Denotes pilot transmission.

13.3.1.9. AERODROME INFORMATION	a) [*(location)*] RUNWAY SURFACE CONDITION RUNWAY *(number) (condition)*; b) [*(location)*] RUNWAY SURFACE CONDITION RUNWAY *(number)* NOT CURRENT; c) LANDING SURFACE *(condition)*; d) CAUTION CONSTRUCTION WORK *(location)*; e) CAUTION *(specify reasons)* RIGHT (*or* LEFT), (*or* BOTH SIDES) OF RUNWAY *[number]*; f) CAUTION WORK IN PROGRESS (*or* OBSTRUCTION) *(position and any necessary advice)*; g) RUNWAY REPORT AT *(observation time)* RUNWAY *(number) (type of precipitant)* UP TO *(depth of deposit)* MILLIMETRES. BRAKING ACTION GOOD (*or* MEDIUM TO GOOD, *or* MEDIUM, *or* MEDIUM TO POOR, *or* POOR *or* UNRELIABLE) [*and/or* BRAKING COEFFICIENT *(equipment and number)*]; h) BRAKING ACTION REPORTED BY *(aircraft type)* AT *(time)* GOOD (*or* MEDIUM, *or* POOR); i) BRAKING ACTION [*(location)*] *(measuring equipment used)*, RUNWAY *(number)*, TEMPERATURE [MINUS] *(number)*, WAS *(reading)* AT *(time)*; j) RUNWAY (*or* TAXIWAY) *(number)* WET [*or* DAMP, WATER PATCHES, FLOODED *(depth)*, *or* SNOW REMOVED *(length and width as applicable), or* TREATED, *or* COVERED WITH PATCHES OF DRY SNOW (*or* WET SNOW, *or* COMPACTED SNOW, *or* SLUSH, *or* FROZEN SLUSH, *or* ICE, *or* ICE UNDERNEATH, *or* ICE AND SNOW, *or* SNOWDRIFTS, *or* FROZEN RUTS AND RIDGES)]; k) TOWER OBSERVES *(weather information)*; l) PILOT REPORTS (weather information);
13.3.1.10 OPERATIONAL STATUS OF VISUAL AND NON-VISUAL AIDS	*a) (specify visual or non-visual aid)* RUNWAY *(number) (description of deficiency)*; *b) (type)* LIGHTING *(unserviceability)*; b) TAXIWAY LIGHTING *(description of deficiency)*;
Circumstances	Phraseologies
13.3.1.11.DEPARTURE INSTRUCTIONS	a) [AFTER DEPARTURE] TURN RIGHT (or LEFT) HEADING (three digits) (or CONTINUE RUNWAY HEADING) (or TRACK EXTENDED CENTRE LINE) TO (level or significant point) [(other instructions as required)]; b) AFTER REACHING (or PASSING) (level or significant point) (instructions);

	c) TURN RIGHT (or LEFT) HEADING (three digits) TO (level) [TO INTERCEPT (track, route, airway, etc.)]; d) (standard departure name and number) DEPARTURE; e) TRACK (three digits) DEGREES [MAGNETIC (or TRUE)] TO (or FROM) (significant point) UNTIL (time, or REACHING (fix or significant point or level)) [BEFORE PROCEEDING ON COURSE]; f) CLEARED VIA (designation). Note.— Conditions associated with the use of this phrase are in Chapter 4, 4.5.7.2.
13.3.1.12. HOLDING CLEARANCES .. visual	a) HOLD VISUAL [OVER] (position), (or BETWEEN (two prominent landmarks));
... published holding procedure over a facility or fix	b) CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] AS PUBLISHED EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time);

13.3.2. Phraseologies for use on and in the vicinity of the aerodrome

Circumstances	Phraseologies
13.3.2.1. .IDENTIFICATIONOF AIRCRAFT	SHOW LANDING LIGHTS.
13.3.2.2. ACKNOWLEDGEMENT BY VISUAL MEANS	a)ACKNOWLEDGE BY MOVING AILERONS (*or* RUDDER); b) ACKNOWLEDGE BY ROCKING WINGS; c) ACKNOWLEDGE BY FLASHING LANDING LIGHTS.
13.3.2.3 STARTING PROCEDURES	
... to request permissionto start engines	*a) *[aircraft location]* REQUEST START UP; *b) *[aircraft location]* REQUEST START UP,
... ATC replies	c) START UP APPROVED; d) START UP AT *(time)*; e) EXPECT START UP AT *(time)*; f) START UP AT OWN DISCRETION; g) EXPECT DEPARTURE *(time)* START UP AT OWN DISCRETION. ..* Denotes pilot transmission

13.3.2.4 TO REQUEST TIME CHECK AND/OR AERODROME DATA FOR DEPARTURE	*a) REQUEST TIME CHECK; b) TIME *(time)*;
... whenNo ATIS broadcast is available	*c) REQUEST DEPARTURE INFORMATION; d) RUNWAY (*number*), WIND *(direction and speed) (units)* QNH (*or* QFE) *(number) [(units)]* TEMPERATURE [MINUS] *(number)*, [VISIBILITY *(distance) (units)*] [TIME *(time)*]. * Denotes pilot transmission.
13.3.2.5.. TAXI PROCEDURES	
... for departure	*a) *[aircraft type] [wake turbulence category if "heavy"] [aircraft location]* REQUEST TAXI *[intentions]*; *b) *[aircraft type] [wake turbulence category if "heavy"] [aircraft location] (flight rules)* TO *(aerodrome of destination)* REQUEST TAXI *[intentions]*; c) TAXI TO HOLDING POINT *[number]* [RUNWAY *(number)*] [HOLD SHORT OF RUNWAY *(number)* (*or* CROSS RUNWAY *(number)*)] [TIME *(time)*];
... where detailed taxi instructions are required	*d) *[aircraft type] [wake turbulence category if "heavy"]* REQUEST DETAILED TAXI INSTRUCTIONS; e) TAXI TO HOLDING POINT *[number]* [RUNWAY *(number)*] VIA *(specific route to be followed)* [TIME *(time)*] [HOLD SHORT OF RUNWAY *(number)* (*or* CROSS RUNWAY *(number)*)]; f) TAXI TO HOLDING POINT *[number] (followed by aerodrome information as applicable)* [TIME *(time)*];
13.3.2.6. where aerodrome information is not available from an alternative source such as ATIS	g) TAKE (*or* TURN) FIRST (*or* SECOND) LEFT (*or* RIGHT); h) TAXI VIA *(identification of taxiway)*; i) TAXI VIA RUNWAY *(number)*; j) TAXI TO TERMINAL (*or other location, e.g.* GENERAL AVIATION AREA) [STAND *(number)*];

... for helicopter operations	*k) REQUEST AIR-TAXIING FROM (*or* VIA) TO *(location or routing as appropriate)*; l) AIR-TAXI TO (*or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)*]; m) AIR TAXI VIA *(direct, as requested, or specified route)* TO *(location, heliport, operating or movement area, active or inactive runway)*. AVOID *(aircraft or vehicles or personnel)*;
... after landing	*n) REQUEST BACKTRACK; o) BACKTRACK APPROVED; p) BACKTRACK RUNWAY *(number)*;
... general	*q) [*(aircraft location)*] REQUEST TAXI TO *(destination on aerodrome)*; r) TAXI STRAIGHT AHEAD; s) TAXI WITH CAUTION; t) GIVE WAY TO *(description and position of other aircraft)*; *u) GIVING WAY TO *(traffic)*; *v) TRAFFIC *(or type of aircraft)* IN SIGHT; w) TAXI INTO HOLDING BAY; x) FOLLOW *(description of other aircraft or vehicle)*; y) VACATE RUNWAY; *z) RUNWAY VACATED; aa) EXPEDITE TAXI *[(reason)]*; *bb) EXPEDITING; cc) [CAUTION] TAXI SLOWER *[reason]*; *dd) SLOWING DOWN. * Denotes pilot transmission.

13.3.2.7. HOLDING	‡a) HOLD *(direction)* OF *(position, runway number, etc.)*;
	‡b) HOLD POSITION;
	‡c) HOLD *(distance)* FROM *(position)*;
	‡d) HOLD SHORT OF *(position)*;
... to hold not closer to a runway than specified in Chapter 6, .6.1.15.3.1.3	*e) HOLDING;
	*f) HOLDING SHORT.
	‡ Requires specific acknowledgement from the pilot.
	* Denotes pilot transmission.
	The procedure words ROGER and WILCO are insufficient acknowledgement of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case the acknowledgement will be by the phraseology HOLDING or HOLDING SHORT, as appropriate.
13.3..2.8. TO REPORT RUNWAY CLEAR	*e) RUNWAY VACATED
Note :-- The pilot will, when requested, report "RUNWAY VACATED" when the entire aircraft s beyond the relevant runway-holding position	*denotes pilot transmission
13.3.2.9. PREPARATION FOR TAKE-OFF	a) UNABLE TO ISSUE (designator) DEPARTURE (reason);
	b) REPORT WHEN READY [FOR DEPARTURE];
	c) ARE YOU READY[FOR DEPARTURE]?;
	d) ARE YOU READY FOR IMMEDIATE DEPARTURE?;
	*e) READY;
…clearance to enter runway and Await take-off clearance	f) LINE UP (AND WAIT);
	†g) LINE UP RUNWAY(number);
	h) LINE UP. BE READY FOR IMMEDIATE DEPARTURE;
…conditional clearances	‡i)condition) LINE UP (brief reiteration of the condition);
…acknowledgement of a conditional clearance	*j) (condition) LINING UP (brief reiteration of the condition);

…confirmation or otherwise of the readback of conditional clearance	k) [THAT IS] CORRECT (or NEGATIVE) [I SAY AGAIN]..(as appropriate) *denotes pilot transmission † When there is the possibility of confusion during multiple runway operation ‡ Provisions concerning the use of conditional clearances are contained in 9.2.7
13.3.2.10. TAKE-OFF CLEARANCE	a) RUNWAY (number) CLEARED FOR TAKE-OFF (REPORT AIRBORNE);
... when take-off clearance has not been complied with	b) TAKE OFF IMMEDIATELY OR VACATE RUNWAY *[(instructions)]*; c) TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY;
... to cancel a take-off clearance	d) HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF *(reasons)*; *e) HOLDING;
... to stop a take-off after an aircraft has commenced take-off roll	f) STOP IMMEDIATELY [*(repeat aircraft call sign)* STOP IMMEDIATELY]; *g) STOPPING;
... for helicopter operations	h) CLEARED FOR TAKE-OFF [FROM *(location)*] *(present position, taxiway, final approach and take-off area, runway and number)*; *i) REQUEST DEPARTURE INSTRUCTIONS; j) AFTER DEPARTURE TURN RIGHT (*or* LEFT,*or*CLIMB) *(instructions as appropriate)*. * Denotes pilot transmission. HOLDING and STOPPING are the procedural responses to e) and g) respectively.
13.3.2.11 .TURN OR CLIMB INSTRUCTIONS AFTER TAKE-OFF	*a) REQUEST RIGHT (*or* LEFT) TURN; b) RIGHT (*or* LEFT) TURN APPROVED; c) WILL ADVISE LATER FOR RIGHT (*or* LEFT) TURN; d) REPORT AIRBORNE;
…to request airborne time	e) AIRBORNE *(time)*; f) AFTER PASSING *(level) (instructions)*;

…heading to be followed	g) CONTINUE RUNWAY HEADING *(instructions)*;
…when a specific track is to be followed	h) TRACK EXTENDED CENTRE LINE *(instructions)*;
	i) CLIMB STRAIGHT AHEAD *(instructions)*.
	* Denotes pilot transmission.
13.3.2.12 ENTERING AN AERODROME TRAFFIC CIRCUIT	*a) *[aircraft type] (position) (level)* FOR LANDING;
	b) JOIN *[(direction of circuit)] (position in circuit) (runway number)* [SURFACE] WIND *(direction and speed) (units)* [TEMPERATURE [MINUS] *(number)*] QNH (*or* QFE) *(number) [(units)]* [TRAFFIC *(detail)*];
	c) MAKE STRAIGHT-IN APPROACH, RUNWAY *(number)* [SURFACE] WIND *(direction and speed) (units)* [TEMPERATURE [MINUS] *(number)*] QNH (*or* QFE) *(number) [(units)]* [TRAFFIC *(detail)*];
13.3.2.13 IN THE CIRCUIT	*a) (*position in circuit, e.g.* DOWNWIND/FINAL);
	b) NUMBER ... FOLLOW*(aircraft type and position) [additional instructions if required]*.
	* Denotes pilot transmission
13.3.2.14 APPROACH INSTRUCTIONS	a)MAKE SHORT APPROACH;
Note.— The report "LONG FINAL" is made when aircraft turn on to final approach at a distance greater than 7 km (4 NM) from touchdown or when an aircraft on a straight-in approach is 15 km (8 NM) from touchdown. In both cases a report "FINAL" is required at 7 km (4 NM) from touchdown.	b) MAKE LONG APPROACH (*or* EXTEND DOWNWIND);
	c) REPORT BASE (*or* FINAL, *or* LONG FINAL);
	d) CONTINUE APPROACH [PREPARE FOR POSSIBLE GO AROUND].
13.3.2.15. LANDING CLEARANCE	a) RUNWAY *(number)* CLEARED TO LAND;
... special operations	b) CLEARED TOUCH AND GO;
	c) MAKE FULL STOP;
.. to make an approach along, or parallel to a runway, descending to an agreed minimum level	*d) REQUEST LOW APPROACH *(reasons)*;
	e) CLEARED LOW APPROACH [RUNWAY *(number)*] *[(altitude restriction if required) (go around instructions)]*;
... to fly past the control tower or other observation point for the	*f) REQUEST LOW PASS *(reasons)*;
purpose of visual inspection by	
persons on the ground	g) CLEARED LOW PASS *[as in f)]*;

... for helicopter operations	*h) REQUEST STRAIGHT-IN (*or* CIRCLING APPROACH, LEFT (*or* RIGHT) TURN TO *(location)*);
	i) MAKE STRAIGHT-IN (*or* CIRCLING APPROACH, LEFT (*or* RIGHT) TURN TO *(location, runway, taxiway, final approach and take-off area)*) [ARRIVAL (*or* ARRIVAL ROUTE) *(number, name, or code)*]. [HOLD SHORT OF *(active runway, extended runway centre line, other)*]. [REMAIN *(direction or distance)* FROM *(runway, runway centre line, other helicopter or aircraft)*]. [CAUTION *(power lines, unlighted obstructions, wake turbulence, etc.)*]. CLEARED TO LAND.
	* Denotes pilot transmission.
13.3.2.16. DELAYING AIRCRAFT	a) CIRCLE THE AERODROME;
	b) ORBIT (RIGHT, *or* LEFT) [FROM PRESENT POSITION];
	c) MAKE ANOTHER CIRCUIT.
13.3.2.17.GOING AROUND IF UNABLE TO LAND	a) GO AROUND;
	*b) GOING AROUND.
	* Denotes pilot transmission.
13.3.2.18. INFORMATION TO AIRCRAFT	a) LANDING GEAR APPEARS DOWN;
	b) RIGHT (*or* LEFT, *or* NOSE) WHEEL APPEARS UP (*or* DOWN);
... when pilot requested visual inspection of landing gear	c) WHEELS APPEAR UP;
	d) RIGHT (*or* LEFT, *or* NOSE) WHEEL DOES NOT APPEAR UP (*or* DOWN);
... wake turbulence	e) CAUTION WAKE TURBULENCE [FROM ARRIVING (*or* DEPARTING) *(type of aircraft)*] *[additional information as required]*;
... jet blast on apron or taxiway	f) CAUTION JET BLAST;
... propeller-driven aircraft slipstream	g) CAUTION SLIPSTREAM.
13.3.2.19. RUNWAY VACATING AND COMMUNICATIONS AFTER LANDING	a) CONTACT GROUND *(frequency)*;
	b) WHEN VACATED CONTACT GROUND *(frequency)*;
	c) EXPEDITE VACATING;
	d) YOUR STAND (*or* GATE) *(designation)*;

….. for helicopter operations	e) TAKE (*or* TURN) FIRST (*or* SECOND, *or* CONVENIENT) LEFT (*or* RIGHT) AND CONTACT GROUND *(frequency)*; f) AIR-TAXI TO HELICOPTER STAND *(or)* HELICOPTER PARKING POSITION *(area)*; g) AIR-TAXI TO (*or* VIA) *(location or routing as appropriate)* [CAUTION *(dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)*]; h) AIR-TAXI VIA *(direct, as requested, or specified route)* TO *(location, heliport, operating or movement area, active or inactive runway)*. AVOID *(aircraft or vehicles or personnel)*.

CHAPTER 14

14 AIR TRAFFIC CONTROLLER LICENSE, TRAINING AND RATING

14.1. The provisions for ATC license and rating are prescribed in Personnel Licensing Requirements (PELR) and Manual of Standards: Licensing/Rating of ATC Personnel.

14.2 Air Traffic Control Training Programme will be conducted by OJTI for the trainees for the positions to which they are to be rated. They shall be trained and continuously monitored during their OJT period. Following parts should be covered by OJTI during the training of Trainee controllers.

14.3 AERODROME CONTROL

i. Aerodrome layout, dimensions, directions of runways, details of obstructions, taxi routes and parking areas.

ii. Dimensions of Aerodrome Traffic Zone, Control Zone, Control Area, Route structures and area of responsibility.

iii. Local ATS procedures.

iv. Characteristics of local traffic.

v. Terrain and prominent landmarks.

vi. Procedures for alerting emergency services

vii. VHF radio and Nav-Aid facilities..

viii. Layout and operation of airport lighting.

ix. Means of assessing wind velocity, cloud base and visibility.

x. Meteorological conditions under which various operations are permitted.

xi. Closure of aerodrome due to weather or other conditions.

xii. Runway inspection procedure.

xiii. Selection of runway in use.

xiv. Transfer of control and coordination procedures between each units.

xv. Regulation of circuit traffic to provide separation and landing sequence.

xvi. Visual separation and control of traffic to assist in establishing lateral separation or departure separation standards.

xvii. Application of separation standards.

xviii. Use of flight progress strips and Tower Console.Understanding of NOTAM format and content.

xix. Analysis and interpretation of weather patterns and data.

xx. Knowledge of wake turbulence standards including heavy helicopter down-wash

xxi. Understanding of Airport Emergency Plan (AEP), procedures and declaration of SAR phase.

xxii. Removal of disable Aircraft (RODA), Handling of VVIP aircraft.

xxiii. Reporting procedure for accidents and incidents.

xxiv. Knowledge of dangerous goods legislation.

14.1.3. On Job Training Instructor (OJTI)

14.1.4.1 The OJTI is responsible for the quality of training undertaken at operational ATC units, for the initial rating of controllers and for ensuring that the provision of Air Traffic Control is delivered in a safe, efficient and standard manner.

14.1.4.2 The PKCAO will prepare the Unit Training Plan (UTP) in accordance with the provision of MATS Nepal 2014 and submit for the approval from licensing authority.

14.1.4.3 The detail description about OJTI are mentioned in PELR, 2nd edition, 2010 (Para10.27 & 10.28) and also in MOS Licensing/Rating of ATC Personnel, Third Edition, August-2015 (para 5.1 & appendix G),

14.1.4.4 Interested ATCs who meet the requirements as per 14.3.1 and 14.3.2 has to submit an application letter to the ANS directorate for the post of OJTI .

14.1.4.5 Presentation will be evaluated by the OJTI selection team in the presence of Chief of ATS or a representative designated by him/her. Team will be constituted by ATM Department, CAAN.

CHAPTER 15

ATS SAFETY MANAGEMENT

15.1 GENERAL

15.1.1. PKCAO will ensure that the level of air traffic services (ATS) and communications, navigation and surveillance, as well as the ATS procedures applicable to the airspace of Pokhara aerodrome are appropriate and adequate for maintaining an acceptable level of safety in the provision of ATS.

15.1.2. PKCAO will implement Safety Management System for the air traffic services under its jurisdiction to ensure that safety in the provision of ATS is maintained.

15.1.3. Pokhara Civil Aviation shall develop and implement ATS Safety Management System separately in accordance with CAR 19.

15.2 OBJECTIVES

15.2.1 The objectives of ATS safety management are to ensure that:

a) the established level of safety applicable to the provision of ATS within an airspace or at an aerodrome is met; and

b) safety-related enhancements are implemented whenever necessary.

15.3 ATS SAFETY MANAGEMENT ACTIVITIES

15.3.1 An ATS SMS will include the following with respect to the provision of air traffic services:

a) monitoring of overall safety levels and detection of any adverse trend;

b) safety reviews of ATS units;

c) safety assessments in respect of the planned implementation of airspace reorganizations, the introduction of new equipment systems or facilities, and new or changed ATS procedures; and

d) a mechanism for identifying the need for safety enhancing measures.

15.3.2 All activities undertaken in an ATS SMS will be fully documented. All documentation will be retained for such period of time as is specified by the ANS Directorate.

15.4 MONITORING OF SAFETY LEVELS.

15.4.1 Collection and evaluation of safety-related data

15.4.1.1 Data for use in safety monitoring programmes will be collected from as wide range of sources as possible

15.4.1.2 PKCAO establish a formal incident reporting system for ATS personnel to facilitate the collection of information on actual or potential safety hazards or deficiencies related to the provision of ATS, including route structures, procedures, communications, navigation and surveillance systems and other safety significant systems and equipment as well as controller workloads.

15.4.1.3 Review of incident and other safety-related reports

15.4.1.4 Safety-related reports concerning the operation of air traffic services, the serviceability of ATS facilities and systems, including air traffic incident reports, will be systematically reviewed in order to detect any trend in the operation of such systems which may have an adverse effect on safety.

15.5 SAFETY REVIEWS

15.5.1 General requirements

Safety reviews of ATS units will be conducted on a regular and systematic basis by personnel qualified through training, experience and expertise and having a full understanding of relevant civil aviation requirements (CARs), safe operating practices and Human Factors principles.

15.5.2 Scope

The scope of ATS unit safety reviews will include at least the following issues:

15.5.2.1 Regulatory issues to ensure that:

a) ATS operations manuals, ATS unit instructions and air traffic control (ATC) coordination procedures are complete, concise and up-to-date;

b) the ATS route structure, where applicable, provides for:

i. adequate route spacing; and

ii. crossing points for ATS routes located so as to reduce the need for controller intervention and for inter- and intra-unit coordination;

c) the separation minima used in the airspace or at the aerodrome are appropriate and all the provisions applicable to those minima are being complied with;

d) where applicable, provision is made for adequate observation of the manoeuvring area, and procedures and measures aimed at minimizing the potential for inadvertent runway incursions are in place. This observation may be performed visually or by means of an ATS surveillance system;

e) appropriate procedures for low visibility aerodrome operations are in place;

f) traffic volumes and associated controller workloads do not exceed defined, safe levels and that procedures are in place for regulating traffic volumes whenever necessary;

g) procedures to be applied in the event of failures or degradations of ATS systems, including communications, navigation and surveillance systems, are practicable and will provide for an acceptable level of safety; and

h) procedures for the reporting of incidents and other safety-related occurrences are implemented, that the reporting of incidents is encouraged and that such reports are reviewed to identify the need for any remedial action.

15.5.2.2 Operational and Technical issues to ensure that:

a) the environmental working conditions meet established levels for temperature, humidity, ventilation, noise and ambient lighting, and do not adversely affect controller performance;

b) automation systems generate and display flight plan, control and coordination data in a timely, accurate and easily recognizable manner and in accordance with Human Factors principles;

c) equipment, including input/output devices for automation systems, are designed and positioned in the working position in accordance with ergonomic principles;

d) communications, navigation, surveillance and other safety significant systems and equipment:

i. are tested for normal operations on a routine basis;

ii. meet the required level of reliability and availability as defined;

iii. provide for the timely and appropriate detection and warning of system failures and degradations;

iv. include documentation on the consequences of system, subsystem and equipment failures and degradationsinclude measures to control the probability of failures and degradations; and

v. include adequate backup facilities and/or procedures in the event of a system failure or degradation; and

e) detailed records of systems and equipment serviceability are kept and periodically reviewed.

Note- In the context above, the terms reliability and availability have the following meanings:

Reliability. The probability that a device or system will function without failure over a specified time period or amount of usage; and

Availability. The ratio of percentage of the time that a system is operating correctly to the total time in that period.

15.5.2.3 Licensing and Training issues to ensure that:

a) controllers are adequately trained and properly licensed with valid ratings;

b) controller competency is maintained by adequate and appropriate refresher training, including the handling of aircraft emergencies and operations under conditions with failed and degraded facilities and systems;

c) controllers, where the ATC unit/control sector is staffed by teams, are provided relevant and adequate training in order to ensure efficient teamwork;

d) the implementation of new or amended procedures, and new or updated communications, surveillance and other safety significant systems and equipment is preceded by appropriate training and instruction;

e) controller competency in the English language is satisfactory in relation to providing ATS to international air traffic as well as domestic traffic; and

f) standard phraseology is used.

15.6 SAFETY ASSESSMENTS

15.6.1 Need for safety assessments:

15.6.1.1 A safety assessment will be carried out in respect of proposals for significant airspace reorganizations, for significant changes in the provision of ATS procedures applicable to an airspace or an aerodrome, and for the introduction of new equipment, systems or facilities, such as:

a) a reduced separation minimum to be applied within an airspace or at an aerodrome;

b) a new operating procedure, including departure and arrival procedures, to be applied within an airspace or at an aerodrome;

c) a reorganization of the ATS route structure;

d) areasectorization of an airspace;

e) physical changes to the layout of runways and/or taxiways at an aerodrome; andimplementation of new communications, surveillance or other safety-significant systems and equipment, including those providing new functionality and/or capabilities.

Note 1.— A reduced separation minimum may refer to the reduction of a horizontal separation minimum, including a minimum based on required navigation performance (RNP), a reduced vertical separation minimum of 300 m (1 000 ft) between FL 290 and FL 410 inclusive (RVSM), the reduction of a separation minimum based on the use of an ATS surveillance system or a wake turbulence separation minimum or reduction of minima between landing and/or departing aircraft.

Note 2.— When, due to the nature of the change, the acceptable level of safety cannot be expressed in quantitative terms, the safety assessments may rely on operational judgments.

15.6.1.2 Proposals will be implemented only when the assessment has shown that an acceptable level of safety will be met.

15.6.2 Safety-significant factors

The safety assessment will consider relevant all factors determined to be safety-significant, including:

a) types of aircraft and their performance characteristics, including aircraft navigation capabilities and navigation performance;

b) traffic density and distribution;

c) airspace complexity, ATS route structure and classification of the airspace;

d) aerodrome layout, including runway configurations, runway lengths and taxiway configurations;

e) type of air-ground communications and time parameters for communication dialogues, including controller intervention capability;

f) type and capabilities of surveillance system, and the availability of systems providing controller support and alert functions.

g) any significant local or regional weather phenomena.

Note 1.— Guidance material on methods of expressing and assessing a safety level and on safety monitoring programmes is contained in CAR-11, Attachment B, the Air Traffic Services Planning Manual (Doc 9426), the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574), the Performance-based Navigation Manual (Doc 9613) and the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689).

15.7 SAFETY-ENHANCING MEASURES

15.7.1 Any actual or potential hazard related to the provision of ATS within an airspace or at an aerodrome, whether identified through an ATS safety management activity or by any other means, will be assessed and classified for its risk acceptability.

15.7.2 Except when the risk can be classified as acceptable, PKCAO, as a matter of priority and as far as practicable, implement appropriate measures to eliminate the risk or reduce the risk to a level that is acceptable.

15.7.3 If it becomes apparent that the level of safety applicable to an airspace or an aerodrome is not, or may not be achieved, the PKCAO will, as a matter of priority and as far as practicable, implement appropriate remedial measures.

15.7.4 Implementation of any remedial measure will be followed by an evaluation of the effectiveness of the measure in eliminating or mitigating a risk.

CHAPTER 16

CONTINGENCY PROCEDURE

16.1 COMMUNICATION AND NAVIGATION

16.1.1 Application: a. During VHF problem

b. During problem in airfield lighting

c. During ATC frequency being blocked

d. During unauthorized use of ATC frequency

16.1.2 Purpose: To avoid confusion and enable duty controller to perform his/her duty efficiently.

16.1.3 Conditions: When 123.8 MHz (ADC freq.) and 122.7 MHz are U/S, then

- 121.5 MHz (EMERGENCY freq.) will provide aerodrome control service.
- Provide priority to ARRIVALS
- Local flights will be permitted based on traffic situation.
- Increase separation minima as required.

16.1.4 When both ADC and EMERGENCY frequencies are U/S, then

- Provide priority to ARRIVALS
- Tower will maintain communication on VHF walkie-talkie
- Landing and take-off clearance will be issued by using walkie-talkie

OR

- IF HF is available at tower, landing and take-off clearance will be issued through HF frequency.

OR

- Whenever feasible use Light gun for landing and take-off clearance and for surface movement.
- Increase separation minima as required.

- Advise other stations to release departure for Pokhara subject to prior approval of Pokhara Tower.

16.1.5 Blocked Frequency

In the event that the control frequency is inadvertently blocked by an aircraft transmitter, the following additional steps should be taken:

a) attempt to identify the aircraft concerned;

b) if the aircraft blocking the frequency is identified, attempts should be made to establish communication with that aircraft, e.g. on the emergency frequency 121.5 MHz, by SELCAL, through the aircraft operator's company frequency if applicable, on any VHF frequency designated for air-to-air use by flight crews or any other communication means or, if the aircraft is on the ground, by direct contact;

c) if communication is established with the aircraft concerned, the flight crew will be instructed to take immediate action to stop inadvertent transmissions on the affected control frequency.

16.1.6 Unauthorized Use of ATC Frequency

16.1.6.1 Instances of false and deceptive transmissions on ATC frequencies which may impair the safety of aircraft can occasionally occur. In the event of such occurrences, the ATC unit concerned should:

a) correct any false or deceptive instructions or clearances which have been transmitted;

b) advise all aircraft on the affected frequency(-ies) that false and deceptive instructions or clearances are being transmitted;

c) instruct all aircraft on the affected frequency(-ies) to verify instructions and clearances before taking action to comply;

d) if practical, instruct aircraft to change to another frequency; and

e) if possible, advise all aircraft affected when the false and deceptive instructions or clearances are no longer being transmitted.

16.1.6.2 Flights crews will challenge or verify with the ATC unit concerned any instruction or clearance issued to them which they suspect may be false or deceptive.

16.1.6.3 When the transmission of false or deceptive instructions and clearances is detected, the appropriate authority will take all necessary action to have the transmitter located and the transmission terminated.

16.2 OTHERATC CONTINGENCIES

The various circumstances surrounding each contingency situation preclude the establishment of exact detailed procedures to be followed. The procedures outlined below are intended as a general guide to air traffic services personnel.

16.2.1 Emergency separation

16.2.1.1 If, during an emergency situation, it is not possible to ensure that the applicable horizontal separation can be maintained, emergency separation of half the applicable vertical separation minimum may be used, i.e. 150 m (500 ft) between aircraft in airspace where a vertical separation minimum of 300m (1 000 ft) is applied.

16.2.1.2 When emergency separation is applied the flight crews concerned shall be advised that emergency separation is being applied and informed of the actual minimum used. Additionally, all flight crews concerned shall be provided with essential traffic information.

16.2.2 Procedures in regard to aircraft equipped with airborne collision avoidance systems (ACAS)

16.2.2.1 The procedures to be applied for the provision of air traffic services to aircraft equipped with ACAS shall be identical to those applicable to non-ACAS equipped aircraft. In particular, the prevention of collisions, the establishment of appropriate separation and the information which might be provided in relation to conflicting traffic and to possible avoiding action shall conform with the normal ATS procedures and shall exclude consideration of aircraft capabilities dependent on ACAS equipment.

16.2.2.2 When a pilot reports an ACAS resolution advisory (RA), the controller shall not attempt to modify the aircraft flight path until the pilot reports “Clear of Conflict”.

16.2.2.3 Once an aircraft departs from its ATC clearance or instruction in compliance with an RA, or a pilot reports an RA, the controller ceases to be responsible for providing separation between that aircraft and any other aircraft affected as a direct consequence of the manoeuvre induced by the RA. The controller shall resume responsibility for providing separation for all the affected aircraft when:

a) the controller acknowledges a report from the flight crew that the aircraft has resumed the current clearance; or

b) the controller acknowledges a report from the flight crew that the aircraft is resuming the current clearance and issues an alternative clearance which is acknowledged by the flight crew.

16.2.2.4 ACAS can have a significant effect on ATC. Therefore, the performance of ACAS in the ATC environment should be monitored.

16.2.2.5 Following a significant ACAS event, pilots and controllers shall complete an air traffic incident report.

16.2.3 Change of radiotelephony call sign for aircraft

16.2.3.1 An ATC unit may instruct an aircraft to change its type of RTF call sign, in the interests of safety, when similarity between two or more aircraft RTF call signs are such that confusion is likely to occur.

16.2.3.2 Any such change to the type of call sign shall be temporary and shall be applicable only within the airspace(s) where the confusion is likely to occur.

16.2.3.3 To avoid confusion, the ATC unit should, if appropriate, identify the aircraft which will be instructed to change its call sign by referring to its position and/or level.

16.2.3.4 When an ATC unit changes the type of call sign of an aircraft, that unit shall ensure that the aircraft reverts to the call sign indicated by the flight plan when the aircraft is transferred to another ATC unit, except when the call sign change has been coordinated between the two ATC units concerned.

16.2.3.5 The appropriate ATC unit shall advise the aircraft concerned when it is to revert to the call sign indicated by the flight plan.

16.2.4 Strayed or unidentified aircraft

Note1: The terms "strayed aircraft" and Unidentified aircraft" in this paragraph have the following meanings:

Strayed aircraft: An aircraft which has deviated significantly from its intended track or which reports that it is lost.

Unidentified aircraft:An aircraft which has been observed or reported to be operating in a given area but whose identity has not been established.

Note 2: An aircraft may be considered, at the same time, as a "strayed aircraft" by one unit and as an "unidentified aircraft" by another unit.

Note 3: A strayed or unidentified aircraft may be suspected as being the subject of unlawful interference. See CAR 11 2.24.1.3.

16.2.4.1 As soon as an air traffic services unit becomes aware of a strayed aircraft, it shall take all necessary steps as outlined in 16.9.4.1.1 and 16.9.4.1.2 to assist the aircraft and to safeguard its flight.

Note: Navigational assistance by an air traffic services unit is particularly important if the unit becomes aware of an aircraft straying, or about to stray, into an area where there is a risk of interception or other hazard to its safety.

16.2.4.1.1 If the aircraft's position is not known, the air traffic services unit shall:

a) attempt to establish two-way communication with the aircraft, unless such communication already exists;

b) use all available means to determine its position;

c) inform other ATS units into whose area the aircraft may have strayed or may stray, taking into account all the factors which may have affected the navigation of the aircraft in the circumstances;

d) inform, in accordance with locally agreed procedures, appropriate military units and provide them with pertinent flight plan and other data concerning the strayed aircraft;

e) request from the units referred to in c) and d) and from other aircraft in flight every assistance in establishing communication with the aircraft and determining its position.

Note.—The requirements in d) and e) apply also to ATS units informed in accordance with c).

16.2.4.1.2 When the aircraft's position is established, the air traffic services unit shall:

a) advise the aircraft of its position and corrective action to be taken; and

b) provide, as necessary, other ATS units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft.

Note: The requirements in d) and e) apply also to ATS units informed in accordance with c).

16.2.4.1.3 When the aircraft's position is established, the air traffic services unit shall:

a) advise the aircraft of its position and corrective action to be taken; and

b) provide, as necessary, other ATS units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft.

16.2.4.2 As soon as an air traffic services unit becomes aware of an unidentified aircraft in its area, it shall endeavour to establish the identity of the aircraft whenever this is necessary for the provision of air traffic services or required by the appropriate military authorities in accordance with locally agreed procedures. To this end, the air traffic services unit shall take such of the following steps as are appropriate in the circumstances:

a) attempt to establish two-way communication with the aircraft;

b) inquire of other air traffic services units within the FIR about the flight and request their assistance in establishing two-way communication with the aircraft;

c) inquire of air traffic services units serving the adjacent FIRs about the flight and request their assistance in establishing two-way communication with the aircraft;

d) attempt to obtain information from other aircraft in the area.

16.2.4.2.1 The air traffic services unit shall, as necessary, inform the appropriate military unit as soon as the identity of the aircraft has been established.

16.2.4.3 Should the ATS unit consider that a strayed or unidentified aircraft may be the subject of unlawful interference, the appropriate authority designated by the State shall immediately be informed, in accordance with locally agreed procedures.

CHAPTER 17

DOCUMENTS AND RECORDS

17.1 RECORDS TO BE KEPT

17.1.1 Automatic recordings.

The following items used for the provision of air traffic services must be recorded automatically and retained for the period shown:

a) direct pilot-controller two-way radiotelephony—30 days;

b) direct-speech or data link between air traffic services units—30 days;

17.1.2 Document records.

The following items must be kept for a minimum of 90 days (ICAO Air Traffic Services Planning Manual):

a) ATS messages, including flight plans;

b) flight progress strips or documents of a similar nature used for the recording of flight data and the issue of clearances, instructions and directions;

c) log books;

17.2 Maintaining Records

17.2.1 Deletions from communications records are not permitted. All entries must be written in non-erasable ink, and must be legible.

17.2.2 Non-active forms or strips on which an error is noted may be replaced. Active forms or strips, fault reports, records and Log Books must be changed, or errors corrected by:

a) drawing a line through the incorrect data and writing the correct data adjacent thereto;

or

b) cancelling the old and rewriting the record, retaining both the old and the new for later reference purposes.

17.3 Maintaining Operational Log Books

17.3.1 All significant occurrences and actions relating to operations, facilities, and equipment at an ATS unit shall be recorded on the Log book.

17.3.2 A working record or Log Book entry shall not be inserted between earlier entries. In the event of an out of sequence entry being necessary, it must be entered as soon as possible, and annotated that it is out of sequence with an explanatory note as to why it is out of sequence.

17.3.3 All Log Book entries must be recorded against the times of the occurrence, or time of the Log Book entry.

17.3.4 Minimum information to be recorded.

17.3.4.1. The minimum information to be recorded is shown in the following table.

Occasion	Information
At the commencement of each day's operation	• UTC date and time; • Where required, identification of the unit and/or the operating position.
On assuming responsibility for a position	• The UTC date and time of assuming responsibility for a position and the signature of the officer commencing duty (see also voice recordings);
During operation of the unit	•Air Safety Incidents, including accidents and breaches of the Regulations such as noncompliance with ATC instructions; [Note: This is in addition to the completion of incident reporting actions.] • Actions taken in relation to any SAR activity including distress communications; • General notes concerning essential aerodrome information, such as the results of aerodrome inspections, closure of sections of the manoeuvring area caused by works or natural phenomena, etc.; • Times of aerodrome closure and reopening, with reasons for the closure; • Change in status of facilities, service or procedure including communication difficulties and tests; • Status of navigation aids.

CHAPTER 18

18.1 AERODROME DIMENSIONS AND RELATEDINFORMATION

VNPK AD 18.1.1 AERODROME LOCATION INDICATORS AND NAMEVNPK – POKHARA /Domestic

VNPK AD 18.1.2 AERODROME GEOGRAPHICAL ANDADMINISTRATIVE DATA

1.	ARP Coordinates and site at AD	28 12 00 N 083 58 54 E *
2.	Direction and Distance from (city)	Adjoining to the South of the City
3.	Elevation/Reference Temperature	822m /2696 ft., 35°C (June)
4.	MAG VAR/Annual Change	0 ° E
5.	AD Administration, address Telephone, Telefax, Telex AFS	Civil Aviation Authority of Nepal Pokhara Airport , Kaski Te1- 977-061-465725, 535725 Fax - 977-061-465725 AFS – VNPKYDYX
6.	Types of traffic permitted (IFR/VFR)	VFR
7.	Remarks	-

VNPK AD 18.1.3 OPERATIONAL HOURS

1.	AD Administration	SUN-THU 10:00 -17:00 LT (SUMMER), 10:00-1600 LT (WINTER), FRI 10:00-1500 LT
2.	Customs and immigration	NIL
3.	Health and sanitation	NIL
4.	AIS Briefing Office	AS ATS
5.	ATS Reporting Office (ARO)	AS ATS
6.	MET Briefing	Hourly METAR provided during Operation Hours
7.	ATS	*Jan, Feb, Nov, Dec 0100-1215 UTC* *Mar, Apr, Sept, Oct 0030-1245 UTC* *May, June, July, Aug 0015-1300 UTC* **
8.	Fuelling	Jet A1 during Operation Hours
9.	Handling (Cargo)	NIL
10.	Security	H-24
11.	Remarks	Any change will be notified by NOTAM

* *WGS 84 Coordinates*

** *For operations other than above, Prior Co-ordination is required*

VNPK AD 18.1.4 RESCUE AND FIRE FIGHTING SERVICE

1.	AD Category for firefighting (V)	Category V RFF service available
2.	Rescue equipment	Available as per category
3.	Capability for removal of disabled aircraft	NIL
4.	Remarks	-

VNPK AD 18.1.5 SEASONAL AVAILABILITY

Aerodrome is available throughout the year.

VNPK AD 18.1.6 APRONS, TAXIWAYS AND CHECK LOCATION DATA

1.	Apron surface and strength	Surface - Asphalt Concrete, Strength - …
2.	Taxiwaywidth, surface and Strength	Width - 23 m, Surface – Bitumen, Strength - …
2.1	Loop Taxiway	-Designation C and D
3.	ACL location and elevation	Location: - At Apron Elevation :- 2723 ft.
4.	VOR/INS checkpoints	--
5.	Remarks	Isolated parking 65× 60m Gravel, ATR 42 Type

VNPK AD 18.1.7 SURFACE MOVEMENT GUIDANCE AND CONTROLSYSTEM AND MARKINGS

1.	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at intersections with TWY and RWY and at holding positions. Guide lines at apron.
2.	RWY and TWY markings and LGT	RWY: 04/22, THR, TDZ, Center line, RWY edge marked. TWY: Center line, holding positions at all TWY/RWY intersections marked.
3.	Stop bars	……
4.	Remarks	-

VNPK AD 18.1.8 AERODROME OBSTACLES

OBST ID/ Designation	Obstacle type	Obst. Position	ELEV/HGT (mt)	Markings/Type color	Remarks
a	b	c	d	e	f
VNPKOB001	Radio Nepal Antenna	28 13 15 N 083 58 50 E	968 /30	Marked/LGTD	
VNPK OB002	Hill top View TWR	28 14 23 N 084 00 39 E	1431/20	Marked	
VNPK OB003	Trees South west	28 09 55 N 083 57 41 E	1223/20	--	

VNPK AD 18.1.9 METEOROLOGICAL INFORMATION PROVIDED

1.	Associated MET Office	MET office, Pokhara Airport
2.	Hours of service MET office outside hours	As ATS
3.	Office responsible for TAF preparation periods of validity	NIL
4.	Type of landing forecast interval of issuance	NIL
5.	Briefing/Consultation provided	METAR
6.	Flight documentation language(s) used	Charts or Tabular forms Text English
7.	Charts and other information available for briefing or consultation	NIL
8.	Supplementary equipment available for providing information	Self- briefing terminal
9.	ATS units provided with information	Pokhara TWR
10.	Additional information (limitation of service, etc.)	--

* *WGS 84 Coordinates*

VNPK AD 18.1.10 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	TRUE & MAG BRG	Dimensions of RWY (M)	Strength(PCN)and surface of RWY and SWY	THR Coordinates	THR elevation and Highest elevation of TDZ of Precision APP RWY
1	2	3	4	5	6
04	040	1444 x 30	Bitumen	28 11 47 N 083 58 37 E	810 m AMSL
22	220	1444 x 30	Bitumen	28 12 19 N* 083 59 08 E	822 m AMSL
Slope of RWY-SWY	SWY Dimensions (M)	CWY Dimensions (M)	Strip Dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
…….	…….	…….	.....	…….	…….

VNPK AD 18.1.11 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
04	1444	1444	1444	1444	
22	1444	1444	1444	1444	

VNPK AD 18.1.12 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT color WBAR	VASIS PAPI	TDZ LGT LEN	RWY Center Line LGT Length, spacing color, INTST	RWY edge LGT LEN, spacing color INTST	RWY End LGT color	SWY LGT LEN (M) color	Remarks
1	2	3	4	5	6	7	8	9	10
04	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	
22	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	

* *WGS 84 Coordinates*

VNPK AD 18.1.13 OTHER LIGHTING, SECONDARY POWER SUPPLY

1.	ABN /IBN Location, characteristics and hours of operation	ABN: at Tower Building, G ALTN with WEV 2 SEC/IBN: NIL H12
2.	LDI Location and LGT Anemometer Location and LGT	NIL
3.	TWY edge and Centre line lighting	Edge: All TWY Centre Line: NIL
4.	Secondary power supply / switch over Time	Secondary power supply to all lighting at AD Switch over -time: manually
5.	Remarks	NIL

VNPK AD 18.1.14 HELICOPTER LANDING AREA

Not specified

VNPK AD 18.1.15 ATS AIRSPACE

1. Designation and lateral limits	Pokhara CTR: An area of a circle 10NM in radius centered at 'ARP' (281200N, 0835854E*) Pokhara ATZ: An area of a circle of radius 5 NM centered at ARP	
2. Vertical Limits	CTR:	ATZ
	8000' AMSL GND	2000' AGL GND
3. Airspace classification	C	
4. ATS units call sign/languages(s)	POKHARA TWR/English	
5. Transition Altitude	13500' AMSL	
6. Remarks	-	

VNPK AD 18.1.15 ATS COMMUNICATION FACILITIES

Service Designation	Call Sign	Frequency	Hours of Operation**	Remarks
1	2	3	4	5
TWR	Pokhara Tower	123.8 MHZ	*Jan, Feb, Nov, Dec 0100-1215 UTC* *Mar, ,Apr, Sept, Oct 0030-1245 UTC* *May, June, July, Aug 0015-1300 UTC*	

* *WGS 84 Coordinates*

** *For operations other than above, Prior Co-ordination is required*

VNPK AD 18.1.16 RADIO NAVIGATION AND LANDING AID

Type of Aid MAG VAR Type of supported OP (for VOR/ILS/MLS give declinations)	ID	Frequency	OPR Hours	Position of Transmitting Antenna Coordinates	Elevation of DME Transmitting Antenna	Remarks
1	2	3	4	5	6	7
DME 0° E		CHN 75 X	H24	281203 N* 0835905 E	829 m	

VNPK AD 18.1.17 LOCAL TRAFFIC REGULATIONS

BTN 0445-0945 Daily, Paragliding activities takes place at Sarangkot, Toripani, Mahendradhunga at Pokhara area. Pilots to exercise caution while flying over that area.
Airspace: 7000 ft AMSL
GND

BTN 0415-1115 Daily, Paragliding activities takes place at Bandipur area, near W41 route (26 NM South East of Pokhara airport). Pilots to exercise caution while flying over that area.
Airscpace: 5000 ft AMSL
GND

BTN 0015 - 1115 Daily, Ultra Light Training Flight zone has been established at 5.6 DME from Pokhara Airport at Laurek, Kaski District within 1NM circle From the mid point of Laurek Air Strip. Ultra light Training flight shall strictly remain to the west of HarpanKhola bridge to separate from the Paragliding Flights. Pilots to exercise caution while flying over that area. Airspace: 4500 ft AMSL
GND

Note.- Any changes will be notified by NOTAM

`

* *WGS 84 Coordinates*

18.2 Access to the Aerodrome Movement Area

18.2.1 Purpose

The aim of these procedures is to assist the safety of aircraft operations by only permitting access onto the movement area to authorized persons, vehicles, equipment, plant or animals.

18.2.2 Responsibilities

The **AirportDirector** has overall responsibility for ensuring that procedures are established and resources are provided for aviation security and for the control of airside access to the airport.

Pokhara Control Tower has the responsibility for control of vehicles on the maneuvering area. No person or vehicle may enter this area without ATC approval.

CHAPTER 19

19. EMERGENCY PROCEDURE

19.1 AIRCRAFT EMERGENCIES

19.1.1. INTRODUCTION

19.1.1.1. The circumstances of each aircraft emergency can vary to such an extent that detailed instructions cannot be given for every situation. The procedures outlined in this section are intended as a general guide and controllers must use their own judgment when handling a particular emergency.

19.1.1.2. The procedures described in the preceding sections and the appropriate standard phraseology may also be varied to meet an emergency situation but any reduction in separation, necessary to cope with the emergency, should be restored as soon as possible. Special arrangements, made locally for handling aircraft emergencies, are detailed in DAEP of concerned airport.

19.1.2. Controller's Responsibility

19.1.2.1. Controllers must always be alert to the possibility of an aircraft emergency. Speed may be necessary in certain circumstances but calm co-ordinated actions are essential in all situations.

19.1.2.2. Controllers shall offer as much assistance as possible to any aircraft that is considered to be in an emergency situation. Assistance to the aircraft can include the provision of information on the availability of aerodromes and their associated approach aids, weather information and details of terrain clearance. An emergency may require alerting action to be taken immediately or it may develop to that point later.

19.1.2.3. The supervisor, if available, should be informed as soon as practicable and where more than one ATSU is involved complete co-ordination must be maintained between units.

19.1.3. Recognizing an Emergency Situation

19.1.3.1. A controller may suspect that an aircraft is in an emergency situation or has suffered unlawful interference when:

a) radio contact is not established at the time it is expected to be established;

b) radio contact is lost;

c) a pilot makes a report about the malfunctioning of his aircraft or the unusual behaviour of persons on-board;

d) the erratic behaviour of an aircraft or position symbol is observed;

e) it is overdue at an aerodrome; or

f) the pilot reports that the aircraft is short of fuel.

19.1.3.2. If the controller is in radio contact with the aircraft he should ask the pilot if he wishes to declare an emergency and, if not specified by the pilot, the class of emergency being declared.

19.1.3.3. More positive indications that an aircraft is in an emergency are described in the following paragraphs.

19.1.4. Distress and Urgency Messages

19.1.4.1. Pilots have been advised that, in the event of an emergency situation, an ATSU can only provide the necessary priority and handling if the controller is made aware of the emergency by the crew's formal declaration on the RTF. Pilots have also been advised that the extent to which an ATSU will be able to offer assistance will depend on the amount of information provided and on its being transmitted at the earliest opportunity. Furthermore, it is preferable that if pilots believe that they are facing an emergency situation, to declare it as early as possible and cancel it later if they decide that the situation allows.

19.1.4.2. There are two classes of emergency message:

Distress: A condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

Urgency: A condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

19.1.4.3. The message will contain as many as possible of the following items:

MAYDAY, MAYDAY, MAYDAY (for distress messages) or

PAN PAN, PAN PAN, PAN PAN (for urgency messages) and
Name of the station addressed (time and circumstances permitting)
Identification of the aircraft

Nature of the emergency
Intention of the pilot in command
Present position, level and heading
Qualification of the pilot (e.g. student, full instrument rated, etc)
As much other information as time permits.

19.1.4.4. When a pilot has given certain items of information normally associated with an emergency message but has not prefixed the transmission with 'MAYDAY' or 'PAN', the controller is to ask the pilot if he wishes to declare an emergency. If the pilot declines to do so, the controller may, if he thinks it appropriate, carry out the necessary actions as if the pilot had declared an emergency.

19.1.4.5. If a controller considers that another ATSU may be able to give more assistance and, in the circumstances, it is reasonable to do so, the pilot should be asked to change frequency.

19.1.5. ACTION ON RECEIVING URGENCY CALLS

The controller shall take the following action at an aerodrome on receiving an urgency call:

a) If the pilot elects to land at the aerodrome receiving the call. Rearrange traffic as necessary to enable him to make an uninterrupted approach;

b) alert local safety services, and initiate local emergency action as necessary and appropriate;

c) Inform the Kathmandu ACC giving full details;

d) If any doubt exists that the aircraft can reach an aerodrome, request Kathmandu, ACC to alert RCC stating that the Alert phase exists;

e) Inform the aircraft's owners or representatives if possible.

19.1.6. ACTION ON RECEIVING DISTRESS CALLS

a) The controllers shall take the following action at an aerodrome on receiving a Distress Call;

b) Plot aircraft's position on map;'

c) Assist pilot in every way possible to make a safe landing;

d) Advise pilot of nearest aerodrome if aircraft position is known;

e) Inform the Kathmandu ACC/Radio giving full details (ACC/Radio will alert RCC) and give all possible assistance in warning airfields adjacent to the aircraft track and in warning the local rescue services in the area in which the aircraft may crash-land.

f) Alert aerodrome and local safety services;

g) Inform aircraft's owner or representative if possible.

19.1.7. Emergency Aircraft – Selection of Controlling Agency

19.1.7.1. Transfer of Control

On receipt of information that indicates that an aircraft is in an emergency, the controller must decide whether or not to transfer the aircraft to another agency. The choice of agency will depend upon the circumstances and no hard and fast rules apply. The following guidance material will help controllers to make this decision.

19.1.7.2. Retaining Control

19.1.7.2.1. If the controller can offer immediate assistance the aircraft should normally be retained on the frequency. If necessary, impose a radio silence on other aircraft or transfer them to another frequency.

19.1.7.2.2. Alternatively it may be more expedient to transfer the emergency aircraft to a discrete frequency, particularly if a radio silence would endanger other traffic.

19.1.7.2.3. The aircraft should be retained on the original frequency if it is unreasonable to ask the pilot, or if he is not prepared, to change frequency. The controller may be able to relay instructions and information from other units to the pilot.

19.1.7.3. Transferring Control

19.1.7.3.1. If a controller considers that another unit may be able to give more assistance than he can himself and in the circumstances it is reasonable to ask the pilot to change frequency, he shall either:

a) consult the ACC supervisor and transfer the aircraft according to his instructions; or

b) alert the nearest suitable unit and transfer the aircraft to a common frequency, giving assistance to that unit as required.

19.1.7.3.2. Before transferring aircraft, controllers should obtain sufficient information from the pilot to be convinced that the aircraft will receive more assistance from another unit. If a change of frequency is desirable the pilot must be instructed to revert immediately if there is no reply on the new frequency. Controllers should then listen out on the original frequency until the aircraft is known to be in two-way communication with the other unit.

19.2. Overdue Aircraft

19.2.1. Introduction

19.2.1.1. Overdue action should not be considered in isolation and the emergency actions described in other chapters, in particular radio failure procedures should be applied if they are appropriate. For example, if a radio equipped aircraft fails to make an expected report, continued attempts should be made to re-establish communication while at the same time commencing overdue action.

19.2.1.2. Overdue action is not related solely to the filing of a flight plan. If, at any stage of a flight the pilot has made his intentions clear and subsequently does not arrive or report when expected, controllers should seriously consider taking overdue action.

19.2.2. Radio Equipped Aircraft – Preliminary Action

If an aircraft fails to make a position report when expected, the following preliminary action shall be commenced not later than the estimated time for the reporting point plus 30 minutes:

- Advise the ACC supervisor that the aircraft is overdue;
- Confirm ATD from departure aerodrome by quickest possible means;
- Ensure that an RQS message is sent.

19.2.3. Radio Equipped Aircraft – Full Overdue Action

If, after the action above, no news is received or 1 hour has elapsed since a scheduled position report should have been received, or the fuel carried by the aircraft is considered to be exhausted, whichever is the sooner; the controller at the destination aerodrome shall inform the ACC supervisor that the aircraft is fully overdue.

19.2.4. Non-Appearance of Aircraft

19.2.4.1. If an aircraft, which has been cleared to commence approach, after completing any necessary holding fails to land within 5 minutes of the estimated time of landing and communication cannot be established, the following action shall be taken:

- Alert Approach Radar Control where available;
- Request other aircraft flying in the vicinity of the aircraft's last known position to be on the lookout;
- Exercise caution when authorizing the movement of aerodrome traffic;
- Alert the emergency services in accordance with AEP;
- Check with other aerodromes in vicinity;
- Advise the ACC supervisor.

19.2.4.2. Alerting service shall be provided:

a) for all aircraft provided with air traffic control service;

b) in so far as practicable, to all other aircraft having filed a flight plan or otherwise known to the air traffic services; and

c) to any aircraft known or believed to be the subject of unlawful interference.

19.2.4.3. Kathmandu Area control centres shall serve as the central point for collecting all information relevant to a state of emergency of an aircraft operating within the flight information region or control area concerned and for forwarding such information to the appropriate Rescue coordination centre.

19.2.4.4. In the event of a state of emergency arising to an aircraft while it is under the control of an aerodrome control tower or approach control unit, such unit shall notify immediately the concerned Area control centre responsible which shall in turn notify the Rescue coordination centre, except that notification of the area control centre,, or rescue coordination centre shall not be required when the nature of the emergency is such that the notification would be superfluous.

19.2.4.4.1. Nevertheless, whenever the urgency of the situation so requires, the aerodrome control tower or approach control unit responsible shall first alert and take other necessary steps to set in motion all appropriate local rescue and emergency organizations which can give the immediate assistance required.

19.2.5. Notification of Rescue Coordination Centre

19.2.5.1. Without prejudice to any other circumstances that may render such notification advisable, air traffic services units shall, except as prescribed in 15.2.8.1, notify rescue coordination centres immediately an aircraft is considered to be in a state of emergency in accordance with the following:

a) Uncertainty phase when:

1. no communication has been received from an aircraft within a period of thirty minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aircraft was first made, whichever is the earlier, or when

2. an aircraft fails to arrive within thirty minutes of the estimated time of arrival last notified to or estimated by air traffic services units, whichever is the later, except when no doubt exists as to the safety of the aircraft and its occupants.

b) Alert phase when:

1. following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft, or when

2. an aircraft has been cleared to land and fails to land within five minutes of the estimated time of landing and communication has not been re-established with the aircraft, or when

3. information has been received which indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is likely, except when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants, or when

4. an aircraft is known or believed to be the subject of unlawful interference.

c) Distress phase when:

1. following the alert phase, further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the probability that the aircraft is in distress, or when

2. the fuel on board is considered to be exhausted, or to be insufficient to enable the aircraft to reach safety, or when

3. information is received which indicates that the operating efficiency of the aircraft has been impaired to the extent that a forced landing is likely, or when

4. information is received or it is reasonably certain that the aircraft is about to make or has made a forced landing, except when there is reasonable certainty that the aircraft and its occupants are not threatened by grave and imminent danger and do not require immediate assistance.

19.2.5.2. The notification shall contain such of the following information as is available in the order listed:

a) INCERFA, ALERFA or DETRESFA, as appropriate to the phase of the emergency;
b) agency and person calling;
c) nature of the emergency;
d) significant information from the flight plan;
e) unit which made last contact, time and means used;
f) last position report and how determined;
g) colour and distinctive marks of aircraft;
h) dangerous goods carried as cargo;
i) any action taken by reporting office; and
j) other pertinent remarks.

19.2.5.2.1. Such part of the information specified in 19.2.5.2, which is not available at the time notification is made to a rescue coordination centre, should be sought by an air traffic services unit prior to the declaration of a distress phase, if there is reasonable certainty that this phase will eventuate.

19.2.5.2.2. Further to the notification in 19.2.5.1, the rescue coordination centre shall, without delay, be furnished with:

a) any useful additional information, especially on the development of the state of emergency through subsequent phases; or

b) information that the emergency situation no longer exists.

Note. — The cancellation of action initiated by the rescue coordination centre is the responsibility of that centre.

19.2.6. Use of communication facilities

Air traffic services units shall, as necessary, use all available communication facilities to endeavor to establish and maintain communication with an aircraft in a state of emergency, and to request news of the aircraft.

19.2.7. Plotting aircraft in a state of emergency

When a state of emergency is considered to exist, the flight of the aircraft involved shall be plotted on a chart in order to determine the probable future position of the aircraft and its maximum range of action from its last known position. The flights of other aircraft known to be operating in the vicinity of the aircraft involved shall also be plotted in order to determine their probable future positions and maximum endurance.

19.2.8. Information to the operator

19.2.8.1. When an area control decides that an aircraft is in the uncertainty or the alert phase, it shall, when practicable, advise the operator prior to notifying the rescue coordination centre.

Note.— If an aircraft is in the distress phase, the rescue coordination centre has to be notified immediately in accordance with 15.2.5.1.

19.2.8.2. All information notified to the rescue coordination centre by an area control shall, whenever practicable, also be communicated, without delay, to the operator.

19.2.9. Information to aircraft operating in the vicinity of an aircraft in a state of emergency

19.2.9.1.1. When it has been established by an air traffic services unit that an aircraft is in a state of emergency, other aircraft known to be in the vicinity of the aircraft involved shall, except as provided in 15.2.9.2, be informed of the nature of the emergency as soon as practicable.

19.2.9.1.2. When an air traffic services unit knows or believes that an aircraft is being subjected to unlawful interference, no reference shall be made in ATS air-ground communications to the nature of the emergency unless it has first been referred to in communications from the aircraft involved and it is certain that such reference will not aggravate the situation.

19.3. CLASSIFICATION OF EMERGENCIES

Aircraft emergencies are classified into ten categories as follows:

19.3.1. "ALERT 1" - AIRCRAFT ACCIDENT (on-airport)

When an aircraft accident has occurred on the airport or in the immediate vicinity of the airport (within 4 kilometers of the airport boundary).

19.3.2. "ALERT 2" - AIRCRAFT ACCIDENT (off-airport)

When an aircraft accident has occurred - but not in the immediate vicinity of the Airport (more than 4 kilometers from the airport boundary).

19.3.3. "ALERT 3 " - FULL EMERGENCY (Airborne Aircraft)

When an aircraft approaching the airport has declared an emergency if it is known to have problem or defect which will cause or is likely to cause an aircraft accident.

19.3.4. "ALERT 4" - UNLAWFUL INTERFERENCE

When it is known or suspected that an aircraft has been subjected to a threat of sabotage or unlawful seizure (hi-jacking) - or any act has been committed which would affect the normal operation of that aircraft or safety of its occupants.

19.3.5. "ALERT 5" - BOMB THREAT - TO AIRCRAFT

When information is received that an explosive device has been located (or suspected) on an aircraft either in the air or on the ground.

19.3.6. "ALERT 6" - BOB THREAT - TO BUILDING

When information is received that an explosive device has been located (or suspected) in, or around, airport building, facilities or equipment.

19.3.7. "ALERT 7" -AIRCRAFT GROUND INCIDENT

When an incident occurs involving an aircraft on the ground which will affect the safety of that aircraft.

19.3.8. "ALERT 8"- STRUCTURAL FIRE

When a fire occurs on the airport buildings, facilities, equipment or vehicles, and which does not directly involve an aircraft. Fires in Navigational or other auxiliary service station or complex or facilities located off-airport are also included in this category.

19.3.9. "ALERT 9" - LOCAL STANDBY

When an aircraft approaching the airport has developed - or suspected to have developed – some defect, but this defect should not create any difficulty in effecting a safe landing. Crash vehicles may standby in the station, or at position on the movement area, as the situation warrants.

19.3.10. "ALERT 10" - WEATHER STANDBY

When severe storms or other expected adverse weather conditions can affect the safety of aircraft, or adversely affect the safety of persons, buildings, facilities, or equipment at the Airport.

NOTE: The above classification - by ALERT number - shall be used for initial notification of emergency situations. If the emergency condition changes, complete additional notifications must be made for the new condition - Example: an Alert 9 (Local Standby) may escalate to an alert 3 (Full Emergency) condition.

19.4. Some major aircraft emergencies:

1) Pressurization Failure
2) Unlawful Interference – aircraft hijack
3) Brake Problem
4) Communication Failure
5) Hydraulic Failure
6) Engine Failure
7) Bird Strike
8) Fuel Dumping
9) Landing Gear Problem
10) Urgency Message

19.4.1. Pressurization Failure

(a) General

i) Pressurization problem may arise due to the result of one or more of the following:

a. malfunction of pressurization system

b. damage to a door or window

c. physical leak in the system

ii) Depressurization may cause severe medical problems for crews as well as passengers with heart or respiratory disease.

iii) The time of useful consciousness is very short and can vary depending on:

a. the altitude

b. the size of the leak

c. the size of the fuselage

iv) Rate of descent could be very high.

(b) Effects/Consequences will be as follows:

i) Loss of oxygen, loosing consciousness, ultimately hypoxia

ii) Increased gas pressure in the human body

iii) Temperature drop

iv) Wind sucks items towards the hole

v) Acft will stop climb

vi) Request for immediate descent

vii) Emergency descent without warning

viii) Turn off track

ix) Poor R/T quality (as pilot using cabin oxygen mask)

x) Chances of separation infringement

(c) ATC shall act in the following manner

i) Assist the pilots as follows:

a. **A**cknowledge

b. **S**eparate

c. **S**ilence

d. **I**nform

e. **S**upport

f. **T**ime

ii) Broadcast of emergency descent.

iii) Clear the airspace directly beneath the aircraft.

iv) Inform supervisor/shift-in-charge

v) Inform pilot about MEA or MSA if needed.

(d) Phraseology

(i)When pilot has sufficient time

9NAAA CONTROL, 9NAAA MAINTAINING FL250 REQ EMERGENCY DESCENT TO 12500' DUE PRESSURIZATION FAILURE

ACC 9NAAA DESCEND TO 12500' [QNH -------] REPORT REACHING

(ii)When pilot doesn't have sufficient time

9NAAA CONTROL, 9NAAA POSITION SMR EMERGENCY DESCENT TO 11500' DUE DECOMPRESSION NOW PASSING FL150 TURNING TO THE RIGHT [or LEFT] OF TRACK

ACC 9NAAA [QNH -------] REPORT REACHING 11500'

(iii)ATC phraseology with other aircraft

ACC ATTENTION ALL AIRCRAFT IN THE VICINITY OF [or AT] ---------- (significant point or location) EMERGENCY DESCENT IN PROGRESS FROM -------- (level) TO 11500' ALL AIRCRAFT BELOW -------- (level) AND ABOVE 11500' LEAVE THE FLIGHT PATH [or AIRSPACE] IMMEDIATELY AND ACKNOWLEDGE.

19.4.2. Unlawful Interference – aircraft hijack

(a) Air Traffic Controllers should remember the following during an aircraft hijack:

i) Countermeasures against hijacking in the aircraft are limited.

ii) Concentrated calmness of crew and ATC is necessary to avoid additional risk and provocation to hijackers.

iii) Planning for all eventualities by ATC is an important task.

iv) Acquire permission from central security committee through command post to allow the aircraft to enter into Kathmandu FIR or land at Nepalese aerodrome.

(b) Effects and consequences of a hijack could be as follows:

i) Crew under high stress

ii) Every possible dangerous situation apparent to aircraft and its occupants

iii) R/T problem, crew may communicate in code

iv) May squawk 7500 in radar environment

v) Non-compliance with ATC instructions

(c) ATC responsibility will be to assist as follows:

i) Do not initiate any further RTF unless confirmed by pilot.

ii) If 7500 code observed in radar, check transponder setting with phraseology "CONFIRM SQUAWKING 7500"-- no reply here shall also considered as aircraft is hijacked.

iii) Immediately after it is confirmed that aircraft is hijacked, inform it to supervisor/shift-in-charge/chief ATC and proceed as per local procedure.

iv) Convey the message of designated authority to hijacker, and vice-versa.

v) Comply with pilot's request as for as possible.

vi) Transmit pertinent information without expecting a reply.

vii) Monitor and plot all flight manoeuvres and coordinate transfer of control without requiring the response from the aircraft.

viii) Collect any necessary information e.g. Destination aerodrome, WX situation at destination, routing, etc.

ix) If aircraft lands, direct it to the specified isolated parking position or to the location as designated by command post.

(d) Brakes Problem

Following factors should be kept in mind during brakes problem in aircraft.

(a) Air Traffic controllers should remember that:

i) Hydraulic failure may cause problems with brakes.

ii) Aircraft with brakes problem doesn't get priority unless it commences approach.

(b) Some possible effects and consequences are as follows:

i) Overrunning RWY threshold. Landing distance may increase by up to approximately 50%.

ii) Increase the probability of tyre-brust.

iii) Aircraft may swerve off RWY.

iv) Chances of RWY blockage.

v) Following traffic may not land and chances of diversion.

vi) Priority could be given to following traffic.

(c) ATC responsibility will be to assist, such as;

i) Inform supervisor/shift-incharge.

ii) Keep airport fire on alert position.

iii) Inform pilot about the RWY length/condition.

iv) Keep runway strip and associated area clear.

v) Check for towing vehicle stand-by.

vi) Check if technical personnel required.

(d) Phraseology

9NAHY, 9NAHY DIVERTING TO KATHMANDU DUE BRAKE PROBLEM WILL HOLD INITIALLY OVER NOPEN FOR THE INSTRUMENT CHECK

APP 9NAHY CLEARED TO NOPEN VIA 20DME ARC DESCEND TO ------- (level) REPORT WHEN READY TO COMMENCE APPROACH.

(Initially clear the other succeeding aircraft below it for the approach then ask its intention; and decide the further priority.)

(If aircraft ready to commence approach)

APP 9NAHY DO YOU NEED ANY GROUND ASSISTANCE?

19.4.3. Communication Failure

(a) Introduction

i) Communication failure may be due to the result of either electrical/electronic and hardware problems.

ii) Causes of communication failure may be simple (i.e. earphone and microphone problems) or complex (i.e. broken wire, power failure and malfunctioning radio).

iii) Communication problems may originate with Pilots or ATCs.

iv) Communication failure in one of the following cases:

v) receiver failure

vi) transmitter failure

vii) total failure

viii) An aircraft is considered to have a radio communication failure if a message is missing for a period of 5 minutes or more.

ix) Recognize that this is considered to be an emergency, andwith urgency, try to find out the cause of the emergency.

(b)Effects and consequences of communication failure

- Pilots' action (VMC):
  - Continue fly in VMC.
  - Land at the nearest suitable aerodrome, and
  - Report its arrival by the most expeditious means to appropriate ATC unit.

(c) ATC responsibility will be to assist in following manner:

i) Inform supervisor/shift-in-charge.

ii) Serial ATC actions:

iii) Separate RCF aircraft with other aircraft.

iv) Transmit blind the pertinent information on the available frequencies.

v) Other aircraft in the vicinity are to be informed about the RCF aircraft, and requested to establish two way communications with the aircraft.

vi) Inform all ATS units concerned along the route of the flight and are requested to attempt to establish communication with the aircraft.

vii) Inform all alternate aerodromes about possible diversion of the RCF aircraft.

viii) By agreement with operator, when weather at intended aerodrome is bad, transmit blind clearing the aircraft to suitable alternate aerodrome.

ix) If communication re-established or aircraft has landed, inform all previously notified regarding termination of RCF situation.

x) If aircraft unable to land within 30 minutes of ETA or EAT whichever is later, after prior consultation with airline operators or their designated representative and PIC of other aircraft, normal control can be resumed if they desire.

(d) Phraseology

ATC	RNA203 DO YOU READ ME
RNA203	(no response)
ATC	RNA203 IF YOU READ ME (any suitable instruction or information considering that aircraft receiver operating normal.)

19.4.4. Hydraulic Failure

(a) General

i) Hydraulic system is usually distributed throughout the aircraft body and affects multiple systems.

ii) Hydraulic system may be affected by technical problems or outside damage.

iii) Problems with hydraulics may affect various parts of the aircraft resulting in complete or partial failure of flaps, ailerons, elevators, rudder, lift and roll spoilers, brakes and nose wheel steering.

iv) Any or all of these may lead to control difficulties.

v) Hydraulic problems may lead to:

- Fuel Dumping
- Gear Problems
- Brake Problems

vi) Relatively High-speed Approach and Landing

vii) The crew needs time to check alternate systems and all other related functions.

viii) The crew may also need more time for actions such as manual gear extension.

(b) Effects and Consequences of hydraulic failure are as follows:

i) Problems with aircraft control and limited maneuverability (bank angle/turns).

ii) Limited or no flap setting

iii) Limited bank angle (15 degrees)

iv) Manual gear extension (no retraction possible)

v) Holding pattern for necessary checks (may need extended hold due to lack of maneuverability)

vi) Extended final

vii) Higher approach speed on final

viii) Limited braking capability

ix) Possible overrun

x) RWY blocked after landing

(c) ATC responsibility should be to assist as follows:

i) Inform supervisor/ shift- in-charge.

ii) Keep airport fire on alert position.

iii) Increase vertical and lateral separation.

iv) Ask if dangerous goods on board.

v) Ask for POB and FOB if feasible.

vi) Avoid ATC-caused GO AROUND.

vii) Clear RWY according to local instructions.

viii) Keep runway strip and associated area clear.

ix) Towing equipment and other emergency vehicles on stand-by as appropriate.

x) If needed, inform pilot about:

xi) Next suitable aerodrome

xii) Aerodrome details as soon as possible

xiii) WX information of landing aerodrome

xiv) Fire or smoke from brakes

(d) Phraseology

BHA601 PK Tower, BHA601 WE HAVE GOT HYDRAULIC PROBLEM REQUEST PRIORITY LANDING

PK Tower BHA601 YOU ARE NUMBER ONE IN APPROACH SEQUENCE. DO YOU NEED ANY GROUND ASSISTANCE?

19.4.5. Engine Failure

(a) General

i) Engine failure may be caused by:

1. hydraulic or electric problems
2. bird-strike
3. engine on fire
4. fuel problems
5. low oil pressure
6. icing
7. intake of debris, or
8. pilot error

ii) Loss of engine reduces its power and ability of normal flying.

iii) May result in:

1. abandoned take-off
2. pressurization problems
3. fuel dumping
4. precautionary approach

(b) Effects and consequences of engine failure are as follows:

i) Heavy workload in the cockpit

ii) Deviation from SID

iii) Descent

iv) Prefer flying straight and level and in a larger turning radius (especially in multiple engine aircraft)

v) Course deviation

vi) Take-off abort

vii) Pressurization problems

viii) Fuel dumping

ix) Diversionary or forced landing

x) Blocked RWY after landing

(c) ATC responsibility are to assist as follows:

i) Inform supervisor/shift-in-charge.

ii) Keep airport fire on alert position.

iii) Request for POB and FOB if feasible.

iv) Inform landing aerodrome.

v) Clear RWY according to local procedures.

vi) Keep safety strip clear.

vii) Offer pilot extended final.

viii) Towing equipment and other emergency vehicles on stand-by as appropriate.

ix) Monitor and mark the aircraft position in radar environment.

x) In case of forced landing, record last known position and time for SAR purposes.

xi) If needed, inform pilot about:
- next suitable aerodrome
- alternate aerodrome details ASAP
- WX information of landing aerodrome

(d) Phraseology

(i) Standard Phraseology

NYT 463 PK Tower, NYT463, RIGHT ENGINE ON FIRE DECLARING FULL EMERGENCY REQUEST PRIORITY LANDING

PK Tower NYT463 REQ FUEL REMAINING AND PERSON ON BOARD

NYT463 --------- HOURS OF FUEL REMAINING AND ----- (no. of persons) PERSONS ON BOARD

PK Tower NYT463 EMERGENCY SERVICES ALERTED ------- (other pertinent instructions)

NYT463 MAYDAY, MAYDAY, MAYDAY. PK Tower, NYT463, BOTH ENGINES FAILURE. 7 MILES ON APPROACH PASSING 8000'FT

PK Tower NYT 463 PK Tower ROGER MAYDAY. WIND 022 DEGREES 10 KNOTS QNH ----- YOU ARE NUMBER ONE CLEARED TO LAND.

PK Tower EMERGENCY TO ALL CONCERNED. EMERGENCY

(OtherA/C) EXIST AT POKHARA AIRPORT. DELAY NOT DETERMINED DUE AIRCRAFT IN DISTRESS.

(ii) Imposition of radio silence during emergency

PK Tower ALL STATIONS POKHARA TOWER. STOP TRANSMITTING, MAYDAY.

Other A/C 9NAGQ POKHARA TOWER. STOP TRANSMITTING, MAYDAY.

(iii) Termination of radio silence

PK Tower ALL STATIONS,POKHARA TOWER, DISTRESS TRAFFIC ENDED

19.4.6. Bird Strike

(a) General

i) Bird strike may result in:

1. Broken Windshield / Canopy
2. Engine Failure (Multi-engine)
3. Engine Failure (Single-engine)
4. Hydraulic Problems
5. Precautionary Approach
6. Handling Difficulties
7. Electrical Problems
8. Gear Problems

ii) The seriousness of this emergency depends on:

- Thesize of the bird
- Thespeed of the aircraft at impact
- where it hits the aircraft

iii) Its effects may be very severe.

iv) The most dangerous strikes are to the windshield and engine.

- A strike of this nature may lead to the ultimate loss of the aircraft.

v) Strikes especially on the windshield or on the engine may impair the flying characteristics of the aircraft, making levels and headings difficult to maintain and safe landings difficult. They may ultimately lead to loss of control, or even structural failure.

vi) The likelihood of bird-strike varies depending on the level, the location and the time of year.

vii) The greatest risk of bird-strike is at lower level with decreasing risk with increasing level.

viii) The risk is also higher in spring and autumn.

ix) Highest risk over:

1. garbage dumps

2. rivers
3. breeding grounds
4. wintering places

(b) Effects and consequences of bird strike

i) Shutdown of engine

ii) Aborted take-off

iii) Immediate return to aerodrome

iv) Reduced/loss of visibility if windscreen broken

v) IFR operation (instrument flight rules)

vi) The pilot may have to land at the nearest suitable aerodrome

vii) Landing next suitable aerodrome

viii) Hydraulic problems

(c) ATC responsibility is to assist as follows:

i) Inform supervisor/shift-in-charge.

ii) Keep airport fire on alert position when required.

iii) Find out if the pilot can still control the aircraft. If control problem, allow increased separation.

iv) Arrange technical assistance as necessary by appropriate specialists.

v) If aircraft intends to land at nearest suitable aerodrome, recommend it one or more landing options with all the aerodrome details with weather details ASAP.

vi) Allow a LONG FINAL if requested.

vii) Avoid chances of possible miss approach.

viii) Check RWY, if bird-strike is during or after take-off.

(d) Phraseology

9NABU PK TOWER9NABU DIVERTING TO POKHARA DUE BIRD HIT AT RIGHT WING

ATC 9NABU DO YOU NEED ANY GROUND ASSISTANCE

9NABU RQ FIRE ON ST BY. AND ONE AMBULENCE ON ARRIVAL

ATC (successive instructions as per the aircraft request)

19.4.7. Fuel Dumping

(a) General

i) In emergency, aircraft may need to dump fuel to reduce landing mass so as to effect a safe landing.

ii) Avoid the crowded or congested area and the area where TS is reported or expected.

iii) Dumping level should not be less than 1800 m (6000 ft).

(b) Effects and consequences of fuel dumping could be as follows:

i) Dumping at lower altitudes may create the chances of developing flammable mist near the ground which may produce toxic effects to all human being, animals and plants.

ii) Aircraft may dump fuel in emergency without adequate warning.

iii) Need of greater separation.

(c) ATC responsibility when emergency dumping will be to assist as follows:

i) Inform supervisor/ shift-in-charge.

ii) Recommend minimum altitude from which the fuel should be dumped.

iii) Advise most suitable airspace for fuel dumping.

iv) Make every effort to keep other aircraft clear of the vapor zone.

v) Separate other aircraft from it:

1. Horizontally by keeping them:
   - at least 10 nm beyond either sides.
   - at least 15 mins flying time or 50 nm beyond at back side.
2. Vertically by keeping them:
   - at least 1000 ft above.
   - at least 3000 ft below.

vi) In case of emergency fuel dumping, broadcast this warning information so that other aircraft flying in the vicinity may avoid the affected airspace.

vii) Inform adjacent ATC units about fuel dump operation.

viii) Inform all previously notified if fuel dumping is complete.

(d) Phraseology for

(i) Non-emergency fuel dumping

BHA205 PK TOWER, BHA205, REQ FUEL DUMP ALONG W41 BETWEEN PHR AND DHORPATAN AT FL ------ (level).

PK Tower BHA205 OPERATE IN BETWEEN 10DME WEST OF PK AND DR (or any suitable area, not crowded city or town area and preferably over water) AT ---------- (level, not below 6000' from GND).

(iii) Instruction to other aircraft

PK Tower ALL STATION THIS IS POKHARA TOWER, BA46 DUMPING FUEL ---------- (description of fuel dumping area) AT -------- (level) AVIOD FLIGHT BETWEEN ------- (level) and -------- (level) WITHIN 50 MILES BEHIND, 10 MILES AHEAD OF AIRCRAFT AND WITHIN 10 MILES TO THE SIDES OF FUEL DUMPING TRACK.

(iv) Fuel dumping outside controlled airspace

ATC ALL STATIONS THIS IS KATHMANDU -------- (name of unit), FUEL DUMPING IN PROGRESS OVER -------- (description of dumping area) RECOMMEND REMAIN CLEAR THIS AREA UNTIL ADVISED

(v) Completion of fuel dumping

PK TOWER ALL STATIONS THIS IS POKHARA TOWER, FUEL DUMPING COMPLETED.

19.4.8. LANDING GEAR PROBLEM

(a) General

i) Gear extension problem, either partially or fully, is to be considered as an emergency.

ii) The landing gear is held up by a hook system and when the hook is released the gear falls down. A hydraulic or an electrical system supports this movement.

iii) Mechanical or electrical malfunction may cause gear extension problem.

iv) When gear extension problem occurs, the pilot may ask for a low pass in order to inspect the position of the landing gear visually by ATCs and concerned technicians.

v) Foam carpeting over the runway is required to reduce the runway friction.

(b) Expectations and Consequences of landing gear problem

i) GO AROUND

ii) Low pass for gear check by ATCs and concerned technical experts.

iii) Request for foam carpet

iv) Possible fuel dumping to reduce aircraft weight

v) Manual gear extension

vi) RWY blocked after landing

vii) Skidding off RWY

viii) Taxiway may be blocked after clearing runway

(c) ATC responsibilities will be to assist as follows:

i) Inform supervisor/ shift-in-charge.

ii) Keep airport fire on alert position.

iii) Inform pilot about landing gears position by carefully observing low pass manoeuvre, and seek specialists' advice in this regard.

iv) Clear the runway strip and associated area clear.

v) Keep towing vehicle on stand-by position.

(d) Phraseology

BHA406 TWR BHA406, GOING AROUND DUE GEAR EXTENSION PROBLEM

TWR BHA406 CARRY OUT STANDARD MISAPPROACH CONTACT APP ON 120.6 [or --------- (any suitable instruction)]

BHA406 APP BHA406 CARRYING OUT STANDARD MISAPPROACH DUE GEAR EXTENSION PROBLEM PASSING ------- (level) FOR -------- (level) WILL CHECK THE PROBLEM OVER DHARKE

BHA406 APP BHA406, INBOUND TO DHARKE MAINTAINING 12500' UNABLE TO RECTIFY THE PROBLEM. WE ARE VMC CANCELING IFR REQUEST LOW PASS FOR VISUAL INSPECTION FROM TWR

(For low pass visibility should be preferably at least VMC.)

APP BHA406 CANCELLED IFR AT------- (time). DESCEND TO ----- (level) CLEARED LOW PASS FOR VISUAL INSPECTION REPORT 10 MILES

(Advise TWR about the intention of aircraft and get the required clearance. TWR vacates the traffic circuits in order to separate aircraft with landing gear extension problem.)

BHA406 TWR BHA406, PASSING LOW FROM YOUR ---------- (side/direction) CONFIRM LANDING GEARS DOWN

TWR BHA406, LANDING GEAR APPEARS DOWN

or

BHA406, RIGHT [or LEFT or NOSE] WHEEL APPEARS DOWN [or UP]

or

BHA406, RIGHT [or LEFT or NOSE] WHEEL DOES NOT APPEAR DOWN [or UP]

(If landing gears not extended or partially extended)

BHA406 APP BHA406, REQUIRE FUEL DUMP REQ INSTRUCTION

BHA406 APP BHA406, WILL MAKE BELLY LANDING REQ RWY FOAMING FROM RWY TH --- TO TXY INTERSECTION ------.

APP BHA406, RWY FOAMING COMPLETE FROM RWY TH --- TO TXY INTERSECTION ------.

19.4.9. URGENCY MESSAGE

(a) General

i) An urgency message should contain as many of the following elements as for as possible:
   - Name of the station addressed
   - Identification of the aircraft
   - Nature of urgency
   - Intention of PIC
   - Position, level and heading of the aircraft in urgency, and
   - Any other useful information.

ii) Urgency call should me made on the frequency in use at the time.

iii) Urgency message should be addressed to the station in shoes area of responsibility the urgency aircraft is operating.

(B) PHRASEOLOGY

BHA409 PAN PAN, PAN PAN, PAN PAN CONTROL BHA409, PASSENGER WITH SUSPECTED HEART ATTACK REQUIRING IMMEDIATE MEDICAL ASSISTANCE, REQUEST PRIORITY LANDING.

PK TWR BHA409 ROGER YOU ARE NUMBER ONE IN APPROACH SEQUENCE AMBULANCE ALERTED

BHA401 PAN PAN, PAN PAN, PAN PANPK TWR BHA401 INTERCEPTED URGENCY CALL FROM 9NAEW HAVING GEAR PROBLEM REQUESTING PRIORITY LANDING. HER POSITION 13 MILES WEST AT 6500'.

PK TOWER BHA401 ROGER.

PK TWR 9NAEW PK TWR, WIND 250 DEGREES 5 KNOTS QNH ------ NO TRAFFIC.REPORT --------.

CHAPTER 20

ADMINISTRATIVE INSTRUCTIONS

Before proceeding with the actual work of ATC it is necessary to know the administrative procedures associated with the provision of ATC. When prior instructions have not been issued, the administrative rules included in this manual are applicable.

20.1 DUTIES AND RESPONSIBILITIES

20.1.1. UNIT INCHARGE TOWER CONTROLLER

The control tower Unit In-charge, shall be responsible for the safety and standard in the provision of Air Traffic Control by all the staffs of control tower. Following are the duties and responsibilities of Unit In-charge.

i) ATC services are conducted in accordance with ATS Operations Manual.

ii) All equipment and activities of the control tower are closely watched and the proficiency of personnel in their respective duties is assessed.

iii) The work- load is distributed evenly so that no one controller is over taxed at any time, however in doing this he should assign personnel to the positions of operation commensurate with the individual capabilities.

iv) All facility documents and fault reporting registers are up to date.

v) During the watch period notification of any fault is made to the concerned units for any necessary action.

vi) Any unusual circumstances are to be briefed to the Unit In-charge responsible for the next shift. This can be done either by face to face hand over or by making an entry in the appropriate logbook .

vii) The console is kept neat and unlittered at all times;

viii) Action to be taken to initiate any necessary NOTAMS.

ix) Sufficient staff is manned in the all ATC position as per the published roster. It is the duty of the Unit Incharge to notify the Shift-in–charge of any absences and to request extra or replacement staff in the event of sickness, emergency situations, etc;

x) Initiate action for search and rescue in accordance with prescribed procedure if required;

xi) Co-ordinate and cooperate with the concerned units as and when required for the efficient and smooth operation;

xii) Responsible for resolving any conflicts of opinion relating to aircraft safety or expedition of aircraft movement.

20.1.2. AERODROME CONTROLLER

Aerodrome Controller shall perform traffic separation and coordination tasks in accordance with the ATSOM and letters of agreement and instructions and in particular;

i) Ensure the safe, orderly and expeditious flow of air traffic in its area of jurisdiction;

ii) Maintain separation standards in respect of all aircraft operations;

iii) Integrate arriving aircraft into an orderly landing sequence;

iv) Exercise judgment in the provision of landing and take-off clearances to aircraft.

v) Exercise control of aircraft making missed approach.

vi) Close or reopen a runway, the airport or any specific approach landing area.

vii) Determine the use of sector weather observations to permit aircraft operations as applicable.

viii) Initiate search and rescue or airport emergency action in accordance with AEP;

20.1.3. TOWER FLIGHT DATA

Following are the duties and responsibilities of the Tower Flight Data ;

i) Collect flight data and post the information directly on the appropriate flight progress strips;

ii) Calculate estimates on each strip and to pass on to TWR Coordinator.

iii) Relay flight data to appropriate ATS Units;

iv) Assist the tower controllers as directed;

v) Bring to the attention of the tower controllers any significant irregularities encountered when processing flight data.

vi) To up-date the data in ATIS recorder and to control and monitor the ATIS transmission.

20.1.4. TOWER CORDINATION POSITION

Following are the duties and responsibilities of Tower Coordination Position

i) Coordinate airways clearances for departing aircraft.

ii) Coordinate with the approach controller the extent to which visual separation can be applied by the control tower.

iii) Coordinate with the aerodrome/approach controller the minimum time interval between landings;

iv) Coordinate the activities of the aerodrome control unit with technical maintenance authorities, emergency services and department officers.

v) Initiate search and rescue or airport emergency action in accordance with prescribed procedures.

vi) Coordinate with appropriate ATS units for exchange of operational datas.

vii) Coordinate in between SMC and ADC/APP controllers.

20.1.5. ON JOB TRAINING INSTRUCTOR (OJTI)

The OJTI is responsible for the quality of training undertaken at operational ATC units, for the initial rating of controllers and for ensuring that the provision of Air Traffic Control is delivered in a safe, efficient and standard manner. The detail duties are listed below:

a) The OJTI will train the OJT trainees, to the position for which they are to be rated.

b) Maintain a register of Trainees Roster and period of duty performed on job training for each position.

c) Make frequent inspection of all ATC units to check the performance of the trainees on OJT.

CHAPTER 21

21.1. CONTROL ROOM DISCIPLINE

21.1.1. VISITORS

No unauthorized person shall be allowed access to an ATS Operational Room. Allowing such visitors to the control Room is the explicit authority of the watch Unit In-charge and before bringing in authorized visitors a check shall be made with the watch Unit In-charge or the Duty ATCO as to whether the traffic situation permits such a visit. At no time shall visitors be allowed to interfere with the smooth running of the watch.

21.1.2. CLEANLINESS

1. The watch Unit In-charge or the Duty ATCO depending on the ATS unit, shall ensure that the ATS Unit Room is kept in a clean and tidy condition at all times .

2. All equipment will be ensured in serviceable condition and stowed away when not in use.

21.1.3. SUPERVISION

The watch Unit In-charge or Shift In-Charge, depending on the ATS Unit will be responsible for the supervision of all staff and the maintaining of a generally high standard.

21.2. PROCEDURES FOR TAKING OVER AND HANDING OVER WATCH

21.2.1. TAKING OVER WATCH

21.2.1.1. Prior to taking over watch ATCOs shall:

Ensure that they are fully conversant with the latest promulgated orders, instructions, notices and signals with particular reference where appropriate to the serviceability of the aerodrome and its facilities.

21.2.1.2. Obtain full information and briefing from the MET office regarding the weather position and tendencies for the period of their watch whenever necessary as justified by the general weather condition.

21.2.1.3. Ensure that they have a full understanding of the air traffic situation prevailing with particular reference to separation standards.

21.2.1.4. Familiarize themselves with the serviceability of all equipment under their charge and likely t be used during the period of their watch.

21.2.1.5. Ensure that they are acquainted with any special movements or maneuvers likely to occur during their watch.

21.2.1.6. Having completed the above procedure ATCOs shall sign the ATC watch log as having taken over watch. This signature shall imply that items 1 to 5 inclusive have been complied with and that the ATCO taking over watch has assumed all the defined responsibilities of the ATCO handing over watch, including the safe custody of equipment and any secret or confidential document within the place of duty.

21.2.2. HANDING OVER WATCH

21.2.2.1. ATCOs handing over watch shall ensure that they provide their successors with the fullest possible information regarding the current situation including any items of specific interest or urgency which have influenced the development of the situation and which may have a bearing on the progress of the ensuing watch.

21.2.2.2. Should any situation have developed during the watch such as action in the event of distress, emergency or accident whereby in the interests of safety oR efficiency it is considered beneficial for the Duty ATCO to complete such actions and subsequent reports and records rather than to transfer the responsibility for completion to another officer. Notwithstanding the fact that watch roster defines the appointed time to hand over, the ATCO handing over watch shall remain on until such time as this responsibility has been discharged.

21.2.2.3. When the ATCO taking over is fully conversant with the air traffic situation and is prepared to assume full responsibility for the watch the ATCO handing over shall sign the ATC watch log as having handed over watch.

21.3. TRANSFER OF RESPONSIBILITY TO HIGHER AUTHORITY

21.3.1. Should a situation arise where by the Duty ATCO/ Unit In-charge considers it necessary to seek the advice of higher authority he should call upon the Shift-In-charge/Supervisor. If either of these ATCOs should consider it advisable to act in other than an advisory capacity whether by direction, supervision or the assumption of command, the watch shall be handed over to him and he shall make an entry in the log book as having taken over the watch there by assuming the responsibilities of the Duty ATCO as defined in the above instructions.

In general when Duty ATCOs take action on the advice or directives of higher authority this fact should be recorded in the watch log in order that the reasons for such action and respective responsibilities may be defined.

21.4 ATC WATCH LOG

An aerodrome surface inspection log shall be maintained and entries shall be made after a surface inspection has been carried out. Arrangement shall be make to ensure that information on unserviceability recorded, is forwarded as soon as possible to the authorities concerned.

21.4.1. AERODROME LIGHTING INSPECTION LOG

An aerodrome lighting inspection log shall be maintained and similar arrangements to those outlined in the above paragraph for distribution of information on unserviceability recorded.

21.5 PROCEDURES FOR MAINTAINING ATC WATCH LOG

21.5.1 The ATC watch log shall be maintained at all times. Entries shall be made in ink and no erasures shall be made.

21.5.2 In no circumstances shall pages be removed from the log book.

21.5.3 Entries shall be made in chronological order and as far as possible concurrently with the incident being recorded.

21.5.4 When during emergencies or rush periods it is impossible to make detailed entries at the time of the occurrence, rough notes shall be kept with exact times and a detailed entry made as soon as possible. The rough notes should be attached to the log book for future reference, should it appear at all likely that they may be required.

21.5.5 Entries shall be in sufficient detail to enable anyone investigating an incident to have a complete understanding of all actions taken during the watch period.

21.5.6 Items to be logged shall include changes in the serviceability of radio aids, other essential aerodrome information, reports of incorrect procedures by aircraft, technical failures in aircraft, runway changes, visits of VIPs, clock synchronization checks and any unusual occurrence.

Note: The accident investigation branch have full authority to impound any ATC log book if they consider that its contents throw any light on a particular accident. When such action is taken the log book shall be withdrawn as soon as possible after the request is made and handed over the AIB. In these circumstance a replacement log book shall be opened.

21.6 PROCEDURE FOR INCIDENT REPORTING AND AIRMISS REPORTING

21.6.1 INCIDENT REPORTING

An incident is an occurrence which might result in an accident. Generally speaking, it may be caused by:

- Ground Organization
- Equipment defects, faulty organization and procedure.
- Personnel error, incompetence, failure to comply with instruction etc.
- Aircraft
- Defects in the aircraft or its equipment, loss of control due to MET conditions, etc.
- Aircrew
- Negligence, incompetence, failure to comply with procedures and instructions, incorrect practices and errors of judgment etc.

21.6.2 DIVISION OF INCIDENTS

Categorized division of incidents would include:

a) Pilot Deviations

b) Operational Errors

c) Airmisses

d) Bomb Threat/Unlawful Interference Incidents

e) Emergencies

f) Miscellaneous any not covered by a through e.

21.6.3 DIVISION OF RESPONSIBILITY FOR ACTION

21.6.3.1 In the case of minor incidents involving installations or personnel on the aerodrome, or aircraft under Aerodrome Control, the Airport Manager will deal with the matter locally.

21.6.3.2 Those incidents which cannot be dealt with locally shall be reported to CAAN.

21.6.3.3 ATC personal shall use the form described in Appendix M for the submission of such report.

21.6.3.4 All incidents which call for a statement of weather conditions will be reported to the local MET office without delay.

21.6.4 AIRMISS REPORTING PROCEDURES

21.6.4.1 An "AIRMISS" report may be filed by a pilot when he considers that his aircraft has been endangered by the proximity of another aircraft during flight, to such an extent that an actual or potential risk of collision existed. In order that such an incident may be investigated as speedily as possible as standard system and form of report been devised. (Refer to Appendix L for format of the form)

21.6.4.2 The majority of AIRMISS REPORTS will be made by radio or by telephone shortly after the pilot has landed, which be confirmed in due time.

21.6.5 ACTION BY PILOT

21.6.5.1 The pilot will make his initial report to an ATS Unit as soon as after the incident has occurred. If the report is made by R/T the message will include the following:

AIRMISS REPORT

POSITION

TIME OF INCIDENT

LEVEL (climbing, descending or cruising)

HEADING

WEATHER CONDITIONS

BRIEF DETAILS OF INCIDENT INCLUDING DISTANCES INVOLVED.

Note: Should a pilot omit the prefix while reporting on R/T, the ATCO should ask him if it is his intention to file an AIRMISS REPORT.

21.6.5.2 If the initial report is made by radio or telephone, the pilot will confirm by submitting direct to CAAN H.O. within 7 days of the incident. If this confirmatory form is received by the ATS Unit, it shall be forwarded to CAAN H.O.

Note: The purpose of following such incidents with immediate proper reporting is to facilitate investigation with the objective of preventing another of similar nature.

21.7 DUTY ROSTER

21.7.1 ATCOs shall adhere to the time and periods of watch-keeping duties details in this roster and shall arrive at their place of duty in time to carry out the procedures detailed in para 3 (procedures for taking over handing over watch)

21.7.2 No alterations are to be made to the watch rosters without reference to, and approval by the ATCO shift-in-Charge.

21.8 LOCAL NOTICES TO STAFF

Local notices to staff shall be displayed on a board placed preferable in the ATS Reporting office hung specifically for this purpose.

21.9 SUGGESTIONS

ATCOS are encouraged to put forward suggestions for improving the general operating efficiency of the services, such suggestions should be put forward through the normal channels for onward transmission to DCA as necessary.

21.10 RELATIONS WITH PRESS AND GENERAL PUBLIC

21.10.1 Discussions on matters to ATC policy and the operation of control should be avoided with persons other than officials of the ATS services.

21.10.2 Reports on accidents, breaches of regulations, reprimands to pilots, or other personnel, etc. shall be treated as confidential matters and shall not be discussed in public or passed to the media.

21.10.3 During normal working hours, request for information by representatives of the press should be referred to CAAN, H.O. Outside normal hour these requests will be referred to the CAAN Representative.

21.10.4 ATS Units will not normally conduct correspondence direct with operating companies or individuals, except when and where authority to do so has been expressly given by Director General of Civil Aviation. Complaints received regarding specific incidents shall be submitted to CAAN after acknowledgement has been made to the originator.

21.10.5 The movement of VVIPs and other special Flights and their position reports shall be treated as confidential. On request from the public such information shall not be given out except to the appropriate bodies.

21.11 DESCRIPTION OF DOCUMENTS AND RECORD KEEPING SYSTEM OF POKHARA TOWER

a. Pokhara tower have compiled the sets of available documents in the manual record keeping system and digital system.
b. It includes identifying, classifying, and storing the records for the specific period or on long term basis.
c. Related documents available in Pokhara tower are AIP, ATS Manual, Domestic Airport Emergency Plan (DAEP), SOP for Airport Rescue and Fire Fighting Service, AIS Standard Operating Procedure, Manual of Standards for Licensing/ Rating Of Air Traffic Control Personnel as hard copy whereas ICAO ANNEXES (1 to 19) and ICAO Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) (Doc 4444) in a digital system;
d. Similarly, the related folders available in VNPK Tower are,
    i. VNPK tower related Maps and Charts.
    ii. VNPK tower Incoming files.
    iii. VNPK tower Outgoing files.
    iv. VNPK tower related LOA and other coordination files.
    v. VNPK tower Incident Report submitted File.
    vi. VNPK tower Bird Strike Report submitted file.
    vii. VNPK tower aircrafts technical reports file.
    viii. Airlines schedule related files.
    ix. VNPK tower records of rating and licensing of ATCOs.
    x. Folder containing documents of Avia Club Nepal.
    xi. Folder containing documents of PokharaUltralight Pvt. Ltd.
    xii. Folder containing documents of Fishtail Ultraflight Pvt. Ltd.
    xiii. Folder related to the permission of flights into restricted area from ministry and CAAN head office.

CHAPTER 22

ATS FACILITIES AND EQUIPMENT

22.1. INTRODUCTION

22.1.1 This chapter provides the guidelines for the design, sitting, construction, equipping and maintenance of ATC facilities where applicable.

22.1.2. Each control unit must always have documents and other needful log-books.

22.2. CONTROL TOWERS

22.2.1. Visibility. The control tower will have:

a) adequate visibility to all the maneuvering area and airspace which are under the controllers' area of responsibility;

b) a view of all runway ends and taxiways, with suitable depth perception;

c) maximum visibility of airborne traffic patterns with primary consideration given to the view from the aerodrome control position;

d) unobstructed lines of sight from the control tower eye level to: the maneuvering area of the aerodrome;

e) sufficient visual resolution of all aerodrome movement areas for which has a responsibility;

f) ability to detect movement of a departing aircraft as soon as possible after it has commenced its take-off run;

22.2.2. Communication. Control tower will have

a) an appropriate power supply to service the facilities identified in this Section;

b) facilities capable of two-way communications with aircraft, vehicles and persons within its area of responsibility;

c) facilities capable of providing two-way communications:
   i) between operational positions within the control tower;
   ii) with adjacent ATS units;
   iii) with aerodrome rescue and fire fighting services;

d) a means of alerting emergency services;

e) a means of recording air/ground/air and ground/ground communications;

f) AMHS terminal or other means to provide information normally conveyed by AMHS;

g) binoculars;

h) signal lamp, with white, red and green functions.

22.2.3. Displays. The control tower must have the following displays:

a) Meteorological displays which meet the accuracy criteria specified in Annex 3 and which provide at least the following information:

i. wind velocity;

ii. barometric pressure;

iii. temperature

b) operational data displays for:

(i) relevant maps and charts;

c) a time display at each operational position.

22.2.4. Monitors and controls for aerodrome equipment.

A control tower will have appropriate monitors, and controls for aerodrome lighting equipment for which the control tower has responsibility, including:

a) Obstruction lighting;

b) Illuminated wind indicator; and

22.2.5. The control tower will have a means to readily recognize the failure of any terrestrial navigation aid being used for the control of aircraft.

CHAPTER 23

MISCELLANEOUS PROCEDURES

23.1. RESPONSIBILITY IN REGARD TO MILITARY TRAFFIC

23.1.1. It is recognized that some military aeronautical operations necessitate non-compliance with certain air traffic procedures. In order to ensure the safety of flight operations the appropriate military authorities will be asked, whenever practicable, to notify the proper aerodrome control tower prior to undertaking such maneuvers.

23.1.2. A reduction of separation minima required by military necessity or other extraordinary circumstances will only be accepted by aerodrome control tower when a specific request in some recorded form has been obtained from the authority having jurisdiction over the aircraft concerned and the lower minima then to be observed will apply only between those aircraft. Some recorded form of instruction fully covering this reduction of separation minima will be issued by the aerodrome control tower.

23.2. RESPONSIBILITY IN REGARD TO UNMANNED FREE BALLOONS

23.2.1. On receipt of notification of the intended flight of a medium or heavy unmanned free balloon, the aerodrome control tower will arrange for the information to be disseminated to all concerned. The information will include:

a) the balloon flight identification or project code name;

b) balloon classification and description;

c) Nav aids frequency as applicable;

d) the launch site;

e) the estimated time of the commencement of the launch or the planned period of the launches;

f) the expected direction of ascent;

g) the cruising level(s) (pressure-altitude); and

h) the estimated elapsed time to pass 18 000 m (60 000 ft) pressure-altitude, or to reach cruising level if at or below 18 000 m (60 000 ft), together with the estimated location.

23.2.2. On receipt of notification that a medium or heavy unmanned free balloon has been launched, aerodrome control tower will arrange for the information to be disseminated to all concerned. The information will include:

a) the balloon flight identification or project code name;
b) balloon classification and description;
c) Nav aids frequency as applicable;
d) the launch site;
e) the time of launch(es);
f) the estimated time at which 18 000 m (60 000 ft) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 18 000 m (60 000 ft), and the estimated location;
g) the estimated date and time of termination of the flight; and
h) the planned location of ground contact, when applicable.

23.3. NOTIFICATION OF SUSPECTED COMMUNICABLE DISEASES, OR OTHER PUBLIC HEALTH RISK, ON BOARD AN AIRCRAFT

23.3.1. The flight crew of an en-route aircraft will, upon identifying a suspected case(s) of communicable disease, or other public health risk, on board the aircraft, promptly notify the aerodrome control tower with which the pilot is communicating, the information listed below:

a) aircraft identification;

b) departure aerodrome;

c) destination aerodrome;

d) estimated time of arrival;

e) number of persons on board;

f) number of suspected case(s) on board; and

g) nature of the public health risk, if known.

23.3.2. The PK TWR, upon receipt of information from a pilot regarding suspected case(s) of communicable disease, or other public health risk, on board the aircraft, will forward a message as soon as possible to the ATS unit serving the destination/departure aerodrome.

23.3.3. When a report of a suspected case(s) of communicable disease, or other public health risk, on board an aircraft is landing in Pokhara Airport, the PK TWR will notify the Airport Director/ Air Navigation Service Directorate, CAAN and TIACAO and the aircraft operator or its designated representative.

Note .— The information to be provided to the departure aerodrome will prevent the potential spread of communicable disease, or other public health risk, through other aircraft departing from the same aerodrome.

23.4. PROVISIONS FOR AIRPORT OPERATION

23.4.1. The Air Traffic Service to be provided under the jurisdiction of Pokhara aerodrome control tower will be as per the standards specified in the Civil Aviation Requirements.

23.4.2. The responsibility of ensuring the service as per the standard pursuant to will be that of the Airport Director

23.4.3. All pilots, during flight, will follow the instruction of the Air Traffic Controller.

23.4.4. If any situation arises for not being able to comply with the instruction given by the Air Traffic Controller pursuant to 23.4.3 in a view of the flight safety, the pilot will inform the same to the Air Traffic Controller.

23.4.5. Any information on incident, event or occurrence relating to the air navigation services that affects or may affect the safety of air navigation will be reported by Aerodrome Control Tower to Airport Director which in turn would be reported to Civil Aviation Safety Regulation Directorate without delay through Air Navigation Directorate of Civil Aviation Authority of Nepal. Such reports may be made available through telephone, cell phone, email in initial report however the report will be submitted through the prescribed format (refer : appendix L.M.N) .

23.4.6. The Airport Director will have the responsibility to install, operate and maintain the communication and navigation equipment to support smooth operation of Air Traffic Services. However, in case of unavailability of resource he will have the only option to coordinate with Air Navigation Service Directorate, CAAN and its concerned Departments.

23.5. ACCESS TO THE AERODROME MANOEUVERING AREA

i. **The Chief of the Airport/Airport Director** has overall responsibility for ensuring that procedures are established and resources are provided for aviation security and for the control of airside access to the airport and is responsible for developing an Airport Security Program.

ii. **Airport security personnel** has the responsibility to check restricted area pass and other valid document and make search of person so that no unauthorized person can enter the airside area of the airport.

iii. The **Aerodrome Control Tower** has the responsibility for control of vehicles on the maneuvering area. No person or vehicle may enter this area without ATC approval. Any person entering the maneuvering area will also hold, or be escorted by a person who holds, a valid airport pass having access.

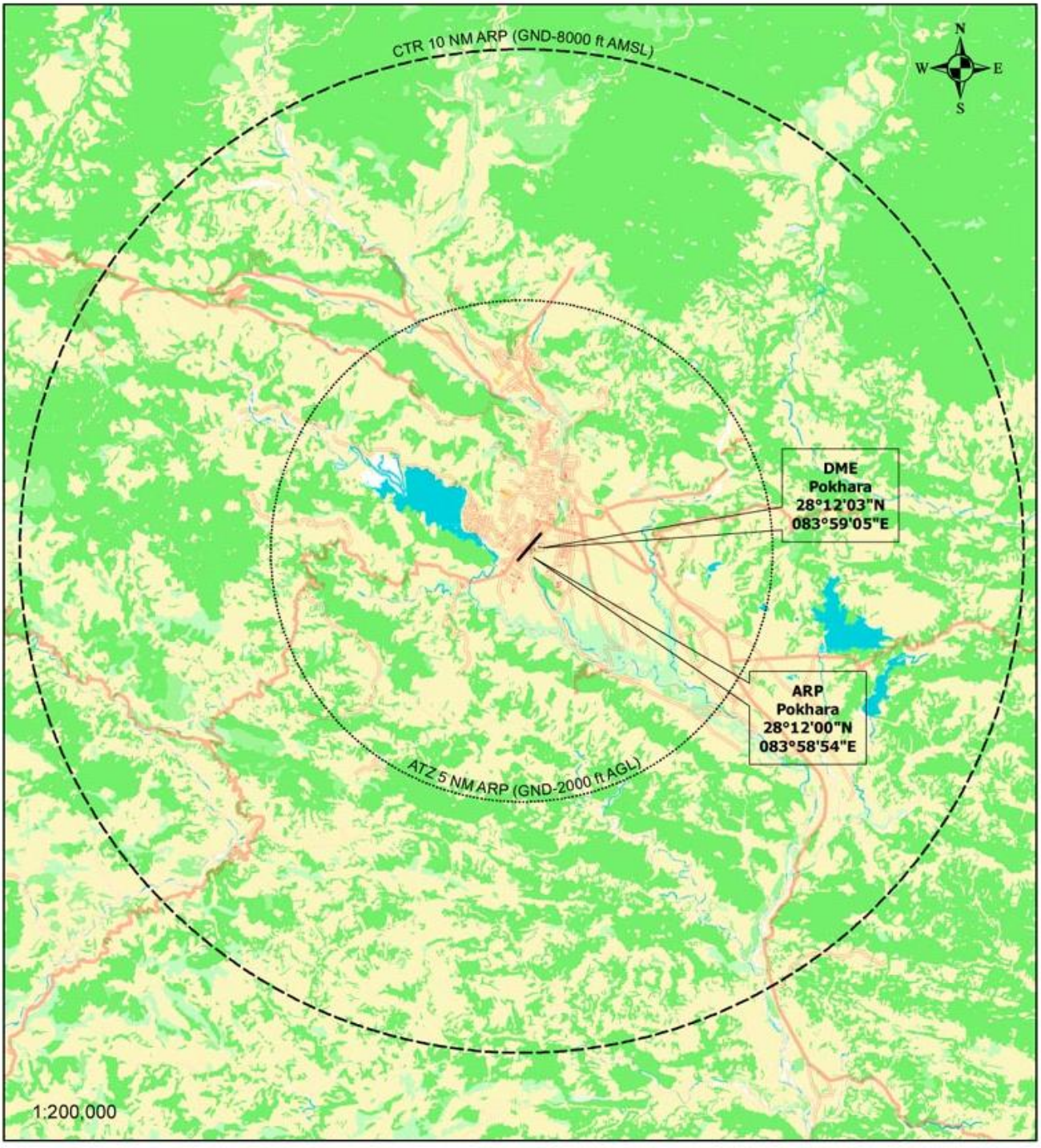
CHAPTER 24

MAPS AND CHARTS

LIST OF MAPS AND CHARTS:

I. POKHARA CONTROL ZONE
II. AIRPORT VISIBILITY REFERENCE CHART
III. VFR HOLDING CHARTS
IV. ULTRA LIGHT FLIGHT ROUTE CHART

Pokhara CTR and ATZ



Airspace	Lateral Dimension	Vertical Limit
Aerodrome Traffic Zone (ATZ)	5 NM Radius centered at ARP Pokhara	2000 ft AGL GND
Control Zone (CTR)	10 NM Radius centered at ARP Pokhara	8000 ft AGL GND

Visibility Reference Chart
Pokhara Airport

S.N.	Visibility Check Points	Distance from ATC Tower
1	Threshold 04	414 m
2	Threshold 22	1059 m
3	Ncell Tower	4795 m
4	Bindeasini Temple	4274 m
5	Hotel Himalaya Frontier	5018 m
6	Astha Restaurent - Gothadi, Saronkot	5233 m
7	Radio Nepal Tower	2274 m
8	Water Tank - Western Regional Hospital	2513 m
9	Kaun-danda View Tower	5617 m
10	Kalika School	5096 m
11	Matepani Gumba	3365 m
12	Foresty Campus Hill-Second Range	2009 m
13	Mobile Antenna - Ram Bazar	1533 m
14	Amar Jyoti Ma. Vi. - Tiger Hill	6357 m
15	Rithhepani Danda	6357 m
16	Shanti Udaya School - Thuma Danda	8889 m
17	High Tension Antenna - South	2217 m
18	Stupa	3293 m
19	Pundi Danda	4592 m
20	Pundi Tower	4765 m
21	Spice Nepal Telcom Tower	4025 m
22	NTC Tower	531 m
23	Antenna South-east	1272 m

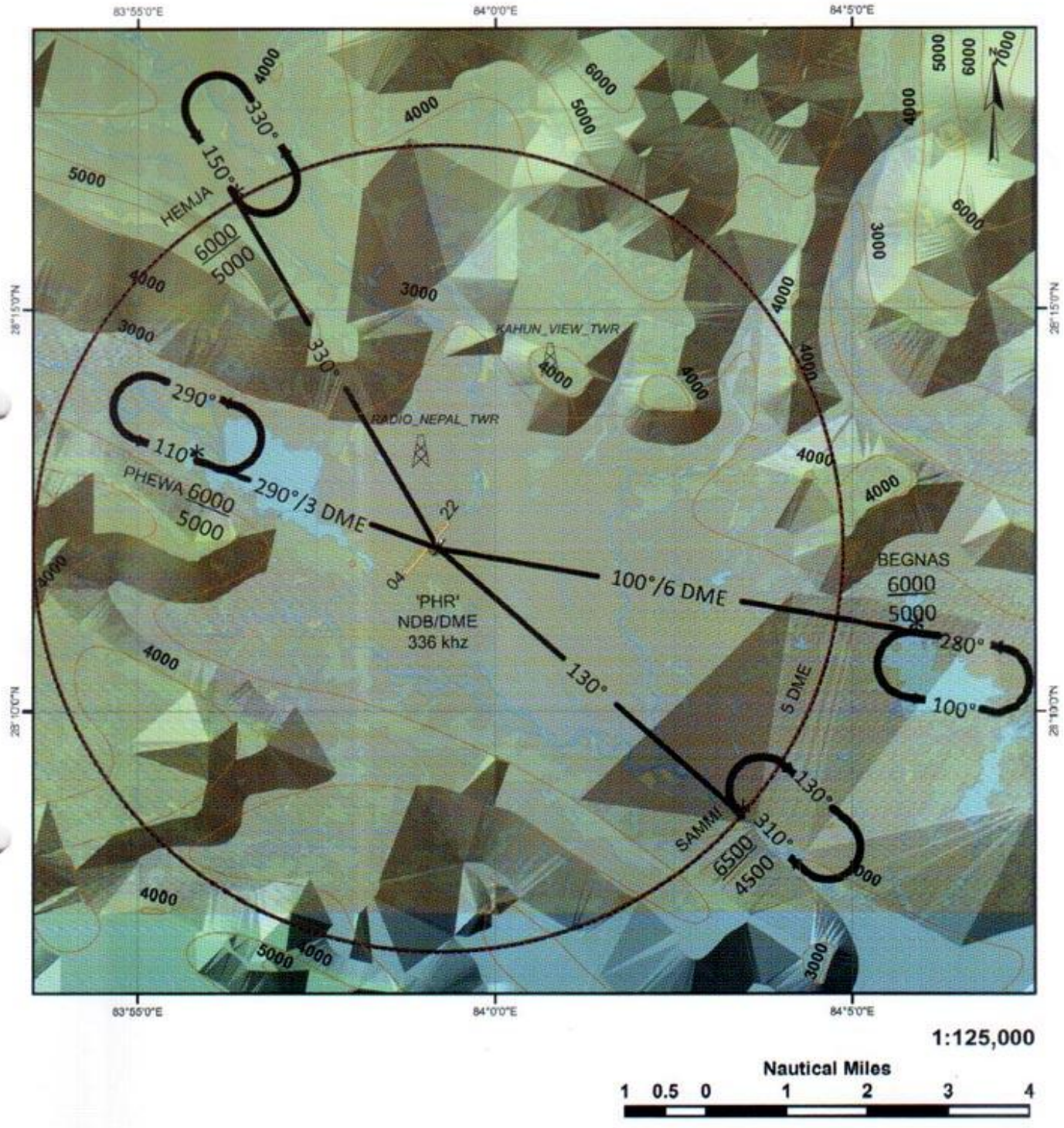
Scale - 1:75,000

0 2,500 5,000
Meters

Note : -

All visibility check points is referenced from the Pokhara Control Tower (28°11'58"N; 083°58'42"E).

VFR HOLDINGS AT POKHARA



ULTRALIGHT FLIGHT ROUTES

TO BE DEVELOPED

APPENDICES

APPENDIX A

STRIP MARKING PROCEDURES

INTRODUCTION

1.1 The following sections specify the procedures and standards application to the processing of flight data by Air Traffic Controllers. Data concerning the current and planned progress of flight to be provided with ATS are normally displayed on flight progress strips to facilitate the prediction and resolution/ conflicts between aircraft. The strips are coded by color to indicate general direction of flight and the flight category and rules under which the flight is operating.

1.2 DEFINITIONS

1.2.1 **THE FLIGHT PROGRESS BOARD** shall comprise one or more bays to accommodate flight progress strip holder on which are displayed necessary for control of air traffic or the provision of a flight information service.

A bay is a division on a flight progress board on which strip holders are arranged.

Bay dividers are used to sub-divide bays as required to denote airspace boundaries or position reporting points or transfer of control points.

Bay dividers are labeled to indicate their purpose.

Suspense bays shall be used to accommodate strips prior to their being required for control purposed.

Active bay is a bay or bays shall be used to accommodate being actively used for Air Traffic Control purposes.

Strip holders shall be used to hold flight progress strips.

Flight progress strips consist of paper strips; color coded for particular purposes to record and displays all data necessary for the control of air traffic.

A box is sub-divided area on a flight progress strips used to segregate particular information.

A Departure strip is a strip used to display essential details of a departing flight.

An arrival strip is a strip used to display essential details of an arriving flight.

En-route strip is used to display essential details of flight at each displayed reporting points over which the flight will pass.

Entry strip is an en-route strip used at the first reporting points within the area of responsibility.

Exit strip is en-route strip used at the reporting point on the route of the flight within the area of responsibility.

1.3 STRIP MARKING AND OPERATION OF THE FLIGHT PROGRESS BOARD

Only such data as are required for the efficient operation of a particular operating position need to be encoded on a flight progress strip. However, it must be borne in mind that in addition to being aide-memories, the data should be sufficient to enable a change of watch to be effected with the minimum of verbal briefing on the current traffic situation.

Strips shall be maintained on all flights within the Kathmandu FIR.

A flight progress strip shall be reared whenever information is received that a flight is scheduled to take place or is already in flight.

Strips of different colors shall be used as follows:

a) CONTROL TOWER
   - i) Buff for departures
   - ii) Blue for arrivals
   - iii) Pink for local flights
   - iv) Buff for Enroute East
   - v) Blue for Enroute west

Unless otherwise noted all markings in the strip shall be written in black pen do not eraser or overwrite any item. Draw horizontal line through it and write the new item immediately adjacent to it and within same space

Letters should be in printed capitals

Arabic numerals should be use to record figures and time should be recorded in 4 digits.

Hours and Minutes

Time changes

When the hour changes, line through all four digits and place new time beneath the original time.

Example: ~~1402~~

1355

When the minute changes, line through last two digits and place new time beneath the original time.

Example: 13 ~~59~~
55

Altitude and level changes should be tabulated downwards as they occur.

Levels to be checked in climb of descent should be shown separately alongside the climb/descent symbol.

Estimated time of arrivals (ETAs) should be tabulated downward in order of occurrence.

Any item of an aircraft report not in accordance with a previously issued clearance, should be recorded alongside the correct data and circled. and such incorrect data should be immediately checked with the aircraft.

2. AERODROME CONTROL

2.1 General

a) Do not erase or overwrite any item. Draw a horizontal line through it and write the new item immediately adjacent to it and within the same space.

b) Revised altitude
To correct and amend an altitude, draw a horizontal line through the altitude to be corrected or amended and write the new altitude to the right of the old.

Example : ~~70~~ 50

c) The absence of an airway or route number between two fixes in the route of flight indicates " DIRECT" no sysmbol or abbreviation is required.

2.1 Departure strip marking

a) The departure strip is of standard format.

b) "Buff" color shall be used.

c) Data required for aerodrome control puropose shall be recorded position as specified below.

1	3a 3b	B 4	5	6a 6b	7a 7b	8	9 C T A B
La 2		c d e/f	10	11	12	13a 13b	

(1) The estimated time of departure.

(1a) Calculated time of departure passed to APP

(2) Time setting course (if required).

(3a) Planned cruising level.

(3b) Level cleared by ATC

Note: In case aircraft reports level other than asigned level, note the level and circle it.

(4) Aircraft identification.

(4b) Type of aircraft

(4c) Symbol of flight rule if other than IFR.

(4d) Beacon code.

(4e) True airspeed.

(4f) Speed during climb (if available).

(5) RWY –in-use.

(6a) Time start up clearance issued.

(6b) Time taxi clearance issued.

(7a) Time of release and ATC clearance requested to APP.

(7b) Time Airways/ TMA clearance issued to aircraft.

(8) Time-take off.

(9) Miscellaneous items such as:

- All control data and coordination
- Airways clearance etc.

(10) Aerodrome of departure

(11) Route of flight

(12) Destination or aerodrome of first intended landing

(13a) Point of release to other control unit (fix, time, r altitude).

(13b) Actual time aircraft is instructed to contact the unit.

2.1.1 Departure strip handling

(a) Time shall be entered immediately after actions being taken.

(b) A departure strip shall be placed under the "TAXYING" designator immediately as taxing commences and shall be placed under the RUNWAY Designator when entered the runway.

(c) The departure strip shall be displayed 5 minutes after traffic has been handed over to the Approach control.

2.3 Arrival strip marking

a) The arrived strip utilized of standard format.

b) blue color shall be used.

d) Data required for aerodrome control purpose shall be recorded in position as specified below.

<table>
<tr><td>1

2</td><td>3</td><td>a b
4
c d/e</td><td>5
10a
10b</td><td>6

11</td><td>7

12</td><td>8
13a
13b</td><td>9 C
T
A
B</td></tr>
</table>

(1) Estimated of arrival.

(2) The actual time the fix serving the aerodrome when aircraft requires holding.

(3) Latest Cruising level or level descending to subsequently level reported by pilot.

(4) Aircraft identification.

(4a) Point of departure.

(4b) Type of airspeed.

(4c) Type of aircraft if other than IFR.

(4d) True airspeed.

(4e) Speed during descend (if available)

(5) RWY-in-use

(6) Time over the LTH or base leg of the traffic circuit if landing clearance is not issued at that time.

(7) Blank

(8) Previous fix/time

(9) Miscellaneous items such as:

- ATC clearance and other instructions supplied by APP;
- Control data etc.

(10a) Release point (fix, time or altitude) from APP

(10b) Time of first contact.

(10) Expected Onward clearance time. (EOC)

(13a) Time clearance to land.

(13b) Landing time.

APPENDIX B

ATS Operational Letter of agreement (LOA) between Kathmandu Area Control Center/Kathmandu Approach Unit and Pokhara Tower

1. General

1.1 Purpose

The purpose of this letter of agreement is to define the agreed procedure applied between Kathmandu Area Control Center (KT ACC)/Kathmandu Approach Unit (KT APP) and Pokhara Tower for the safe and efficient conduct of Air Traffic Services within their jurisdictions.

1.2 Scopes

The procedure contained in this document shall be applied in the jurisdiction of KT APP/ACC and Pokhara Tower.

2. Air Space

Within Kathmandu FIR the airspace is classified as follows:

i) Class C - Airways, Airspace in Terminal Areas, Control Areas, Control Zones and Aerodrome traffic Zones.

ii) Class G - Airspace other than in class C

3. Jurisdictions and Area of the Responsibility for the provision of ATS.

3.1 Sectors of VNSM

i) Kathmandu Sector

Kathmandu sector includes all Kathmandu FIR airspace to the East of 83ºE longitude from ground level to unlimited.

ii) Nepalgunj Sector

Nepalgunj sector includes all Kathmandu FIR airspace to the West of 83ºE Longitude from ground level to unlimited.

3.2 Jurisdictions

i) Jurisdiction of Kathmandu ACC shall be the whole airspace within the Kathmandu FIR excluding control Zones, jurisdictions of KT APP, NG TWR and AFIS aerodromes.

ii) Jurisdiction of Pokhara Tower shall be the control zone area of Pokhara Tower.

3.3 **Areas of Responsibility of ATS**

i) Besides its Control zone, Pokhara Tower shall be responsible for providing Air Traffic services in the area between 84º30'00"E longitudes and 83º30'30"E longitudes including W41 route and North of this route inside VNSM at or below transition altitude (13500ft) excluding the area of responsibility of AFIS aerodromes. (Area to be discussed for revision)

ii) Besides its jurisdiction, KT APP shall also be responsible for providing air traffic services to all air traffics in Kathmandu - Pokhara sector beyond TMA from F150 to F200.

iii) KT ACC shall be responsible for providing air traffic services itself in the area other than the responsibility of Pokhara Tower, KT APP as mentioned in 3.2 (I) and 3.2 (II) and in the area of responsibility of AFIS aerodromes.

4. Altimeter setting procedure

i) All aircraft operating in the area of responsibility of Pokhara Tower 3.2 (I) shall use Pokhara QNH supplied by Pokhara Tower.

ii) Change of altimeter setting from Pokhara QNH to 1013.2 hpa during climb shall be in the transition layer.

iii) Change of altimeter setting from 1013.2 HPA to Pokhara QNH during descend shall be in the transition layer beyond Kathmandu TMA.

iv) Flights Operating at or below transition altitude shall change KT QNH to PK QNH and vice versa at KT TMA boundary point in the East i.e "MANKA" and along 83º40'00" E longitude in the West of Pokhara.

5. Separation

Separation shall be applied as per the ATC Manual and procedures for Air Navigation Services **Air Traffic Management** (DOC 4444)

6. Transfer of control and co-ordination procedure

6.1 Transfer of control point

i) Pokhara TWR shall transfer of control to KT APP at KT TMA boundary (MANKA) along W41 route or passing 13500 ft during climbing phase in the East whichever is earlier and to KT ACC at 83º30'30"E longitude or passing 13500 ft during climbing phase in the west whichever is earlier.

ii) KT APP shall transfer of control to PK TWR at KT TMA boundary (MANKA) along W41 route and or at transition level (F150) during descending phase whichever is later.

iii) KT ACC shall transfer of control to PK TWR at 83º30'30"E longitude along W41 route or at transition level F150 East of 83º30'30"E longitude during descending phase whichever is later.

iv) Rest side transfer of control point (TCP) shall be at Pokhara Control Zone boundary from KT ACC to Pokhara TWR and vice versa.

6.3 Co-ordination procedure

i) Transferring unit shall supply all necessary information to accepting unit such as :

- A/C Call sign
- Type of A/C
- Departure point
- Route
- Level of A/C and changes of level there to
- ETA as and when required
- Destination
- Any other pertinent information.

ii) Coordination shall be effected at the earliest after the departure of A/C but not later than 5 minutes of the departure time of A/C.

iii) The accepting unit shall immediately confirm and notify any specific requirements for flights upon receipt of co-ordination notice.

iv) In case of climb or descent requested by the A/C to the level other than previously co-coordinated, co-ordinate it at the earliest to the accepting unit.

v) In case of emergency, allow all to perform the requested manoeuvre and coordinate it to the accepting unit as early as possible. If possible, advise A/C to coordinate its manoeuver to the accepting unit at the earliest.

vi) If any estimates varies by 3 minutes or, more from that previously coordinated, coordination shall be re-made.

vii) If the accepting ATS unit cannot accept a flight offered in accordance with the conditions specified above, it shall clearly indicate its inability and specify the conditions under which the flight will be accepted.

viii) For any proposed deviation from route or level the transferring unit shall initiate an approval request.

ix) The accepting ATS unit shall not notify the transferring ATS unit that it has established ground air communications with the transferred aircraft unless specifically requested to do so. The accepting shall notify the transferring unit in the event that communication with the aircraft is not established as expected.

7. Communication system for co-ordination

i) Direct Hotline or AMSS

ii) HF/RT

iii) ISDN dedicated telephone

8. Revisions

8.1 This agreement shall be subject to revision when ever

i) An amendment to applicable Civil Aviation requirements (CAR) manuals and operating procedures or instructions which might affect the procedures contained in this agreement occurs,

ii) New communication facilities or Air Traffic services systems which might affect these procedures are commissioned,

iii) For any other reason, which might make it advisable to change this agreement, the interested ATS unit shall propose the pertinent revision through Air Traffic management department CAAN, Head office. The revision requires the mutual written consent at the respective units. However, the chief of the concerned ATS units may introduce by mutual agreement and for specified time of period, temporary modification to the procedures laid down in this agreement.

8.2 Incidental deviations

Instances may arise where incidental deviations from the procedures specified in this LOA may become necessary. Under these circumstances, air traffic controllers are expected to exercise their best judgment to ensure the safety and efficiency of air traffic.

9. Cancellation/ modification

Cancellation/modification of this present LOA by mutual agreement of the respective approving authorities with the consent of CAAN Head Office may take place at any time, provided that the cancelling unit declares its intention to cancel the LOA with a minimum of 30 days pre-notification before the date the cancellation is to take effect.

10. Interpretation and settlement of disputes

i) Should any doubt or diverging views arise regarding the interpretation of any provisions of the present LOA or in case of dispute regarding its application, the units shall endeavor to reach a solution acceptable to both of them.

ii) Should no agreement be reached, each of the units shall refer to CAAN Head office, to which the dispute shall be submitted for settlement.

11. Validity

This letter of agreement becomes effective from 8 August 2010 and supersedes the previous letter of agreement done between KT ACC/KT APP and Pokhara Tower.

Signed by	Signed by
…….	..……..…….
Director	Deputy Director
Flight Operation Department, TIACAO	Pokhara Civil Aviation Office
Date:	Date:

Note: This LOA draft is developed for Pokhara and should be implemented in mutual consent with stake holders with prior approval from CAAN.

APPENDIX C

MOU between Ultra light operation ultralight companies and Pokhara Tower

1. During start up clearance only provide Runway in use and altimeter settings to all ultralights flight, provide other information only if requested by pilots.(During early morning provide time check for first flight of every aircraft).

2.During start up, following a/c shall strictly monitor the start up clearance passed to leading a/c and read back the field information with call sign or simple phraseologies "copied" for confirmation of radio check example:9DV(copied).

3.The leading a/c only shall call for taxi clearance regarding herself and others will follow the leading a/c .

4. Landing and takeoff clearance shall be provided separately for each a/c. with wind and significant change in weather .

5. For 15 minutes flight , shall report Phewa after takeoff during inbound.

6. For 30 minutes flight, instead of reporting arwa or sarangkot,can report from 7m Nw via Arba or direct route from Phewa.

7.For 60 minutes flight initial reporting from Sarangkot and than after Machhapuchre area and on return leg as per local practice. (Refer to Appendix M for the route detail)

8. If any aircrafts intend to stay on same area more than 25 minutes shall reort operation in every 20 minutes or as prescribed by ATC.

9. On inbound from Phewa, landing sequence shall be provided based upon scheduled departing and landing traffic positions and estimate. in such case, tower will instruct ultralights specified level to hold or required information for inbound depending upon the scenario.

10.In normal condition arriving aircraft shall have the first priority than departing aircraft. the arrival sequence based on their departure sequence. sometimes sequence can be changed on their request only before joining circuit.

11Overtaking shall not be permitted after joining circuit

12. All ultralights shall strictly monitor the Pk-JS-PK traffic and all westbound traffic ,shall report twr after clearing track about traffic position.

13 traffic information between ultralight to ultralight will not be provided and strictly monitor the VHF about the other ultralight as well as other domestic traffic.

14 Regarding the operation of group of flight each group shall maintain 10 mins separation before commencing next flight of each companies.

15. Separation with aircraft within group flight and separation with the terrain or any other obstacle shall be the responsibility pilot.

16.Training flight shall not be permitted during busy hour and shall operate before beginning of KT-PK-KT traffic and completion of Traffic and after completion of schedule flight depending upon the traffic scenario and Wx. condition.

17. .Because of lack of alternate landing site except Avia the flight shall not be permitted in marginal Wx. condition.

18. VHF discipline should be maintain for safe operation by Pk Tower and all Ultralight companies.

Flight Plan

1. **F**light plan shall be submitted before 30 minute by the representative of respective Ultralight companies.

2.Any change in the content of flight plan and cancellation should be inform via appropriate means of communication.

APPENDIX D

MODEL COORDINATION PHRASEOLOGY

Among PK ADC,KT APP and KT ACC

Domestic Arrival and Departure

CASE	CONDITION	FROM	TO	PHRASEOLOGY
9NAHY VNKT/ VNPK VFR Alt. 125	PK TWR has received the position from domestic fixed communication on available channel or aircraft in contact.	APP	PK TWR	Inbound, 9NAHY from VNKT ETA VNPK at 0702
		PK TWR	APP	Release 9NAHY at MANKA descend to 7500ft
Inbound from BW/BP/SI VFR Alt. 075/095/065	PK TWR has received the position from domestic fixed communication on available channel or aircraft in contact.	ACC/APP/Dep Station	PK TWR	Inbound, 9NAHY from BW/BP/SI ETA VNPK at 0702
BHA651 VNKT/VNPK	In case unable to land at VNPK.	BP TWR	APP	BHA651 going around due runway blocked by disabled aircraft climbing initially 065ft request. 115 ftdiverting to VNKT, transfer to you now.
BHA410 VNNG/ VNKT IFR F210	Descending to 7500 ft diverting to PK due KT airport closed.	ACC	BP TWR	.Inbound, BHA410 from VNNGdiverting to PK ETA VNPK at 1015.
		PK TWR	ACC	BHA410Enter CTZ at 7500 ft.

BHAXXX BW/BP/NG to PK VFR Alt. 065/095/105	PK TWR has received the position from domestic fixed communication on available channel or aircraft in contact, the a/c required to hold for their landing sequence.	BW/PK/KT	PK TWR	Inbound estimate, BHAXXX from BW/BP/KT to PK estimates PK at 0220
		PK TWR	ACC/APP	BHAXXX from BW, Enter ctz at 7500 ft release at 15 NM.
		PK TWR	ACC/APP	BHAXXX from NG, Enter ctz at 7500 ft release at 15 NM expected to hold over XXX at 3000 ft for landing sequence.
		PK TWR	APP	BHAXXX from KT, release at MANKA descent to 6500ft expected to hold over XXX at 5500ft for landing sequence.
9NABU VNKT/ VNPK A085	Requesting SVFR due weather.	APP	PK	Inbound, 9NABU from VNKT ETA VNPK at 0320,requesting SVFR
		PK TWR	KT APP	Roger, visibility now 2500m.,SVFR approved for 9NABU interctz at or below 6500 ft release at MANKA.
9NAHV VNPK/VNKT Alt. 115	9NAHV starting for KT	PK TWR	APP	Request clearance and release for 9NAHV to KT Alt 115
	In case of no traffic	APP	PK TWR	(Clearance for 9NAHV) 9NAHV clear to KT FPL route climb to 115 release now.
	In case of traffic required to hold and delay departure	APP	PK TWR	For 9NAHV initial altitude 9500ft expect higher after in contact with APP release at or after…….

	9NAHV departed.	PK TWR	KT APP	Departure, 9NAHV 0122 for KT.
9NAEV PK to BP/BW/SI A085/ 075	9NAEV starting for PK/BW/SI	PP TWR	ACC/APP	Request clearance and release for 9NAEV (VNPK) to BP/BW/SI A085/075
	In case of no traffic	ACC/APP	BP TWR	9NAEV is cleared to BP/BW/SIclimb to A085/075, release now.
	In case of traffic	ACC/APP	PK TWR	9NAEVrelease at or after ……(UTC), initially at 065/055 75ft due traffic expect higher after contact with ACC/APP.
9NAHS VNPK/ VNKT A095	9NAHS requesting start up for VNKT on SVFR	PK TWR	APP	Request clearance and release for 9NAHS (VNPK) to VNKT expect departure after 0645 on SVFR departure
		APP	PK TWR	9NAHS clear to KT FPL route climb to 9500ft , departafter 0645 only.
	9NAHS departed	PK TWR	APP	Departure 9NAHS at 0950 for VNKT

Phraseology used for in bound traffic from VNKT

Pilot	PK- 9NAGI 54 miles toPkr Maintaining 125ft ETA 0900
PK TOWER	9NAGI RWY INUSE Wind (….◦KTS) QNH , TEMP Report Manka
Pilot	Readback
Pilot	PK- 9NAGI Manka 125ft
PK TOWER	9NAGI Enter Control Zone descending 6500ft report entering
Pilot	Readback
Pilot	PK- 9NAGI Entering control zone maintaining 6500feet

Pk TOWER	9NAGI Descend to Circuit Altitude Join right base Runway04 report joining
Pilot	Readback
Pilot	PK- 9NAGI on rightbaseRwy 04
Pk TOWER	9NAGI wind (270◦05Kts) rwy 04 cleared to land
Pilot	Readback
Pk Tower	9NAGI Back Track Vacate Rwy Via Taxiway NO.or Via Vacate Rwy LOOP Taxiway when Vacated follow marshal.
Pilot	Readback

Phraselogy used for inbound traffic from JS

Pilot	PK- 9NAHH ghodepani Maintaining 11500ft ETA 0200
PK TOWER	9NAHH RWY INUSE Wind (….◦KTS) QNH , TEMP Report xxxxxx
Pilot	Readback
Pilot	PK- 9NAHH Ghodepani 115ft
PK TOWER	9NAHHEnter Control Zone descending 7500ft report entering
Pilot	Readback
Pilot	PK- 9NAHH Entering control zone maintaining 7500feet
PK Tower	Join basr R/y 04 report joining
Pilot	Readback
Pk TOWER	9NAHHDescend to Circuit Altitude Join base Runway 04 report joining
Pilot	Read back
Pilot	PK- 9NAHH on base Rwy 04
Pk TOWER	9NAHHwind (270◦05Kts) Rwy 04 cleared to land
Pilot	Read back
Pk Tower	(9NAHH Back Track Vacate Rwy Via Taxiway NO.or Via Vacate Rwy LOOP Taxiway when Vacated follow marshal.
Pilot	Readback

APPENDIX E

SECTOR VISIBILITY PROCEDURES IN VNPK

Likewise in TIA, the controllers and pilots face several flight delays and traffic congestion due to the fog during winter season in Pokhara. Introduction of sector visibility confirms the CAAN's Concern improving the safety and promoting flight operations. As no set of rules is comprehensive enough to dictate easily in the application of the controller's judgment the contents of this memorandum are the best possible compromise safeguarding the interest of both controllers & pilots.

1. **NOTE:**
   The procedures outlined below in the form of Instructions are intended to act as guidelines but nothing in them precludes the CONTROLER from exercising his own discretion and initiative under any particular circumstances if by so doing traffic will be expedited without undue reduction of safety.

2. **INSTRUCTIONS:**

   1. SECTOR VISIBILITY: By this term a Controller shall understand that (slant) visibility within the limits of that airspace above the ground which encompasses the climb-out & approach path of an aircraft.

   The visibility that is evaluated in each sector is the sector visibility.

3. **ILLUSTRATION**

Plane view

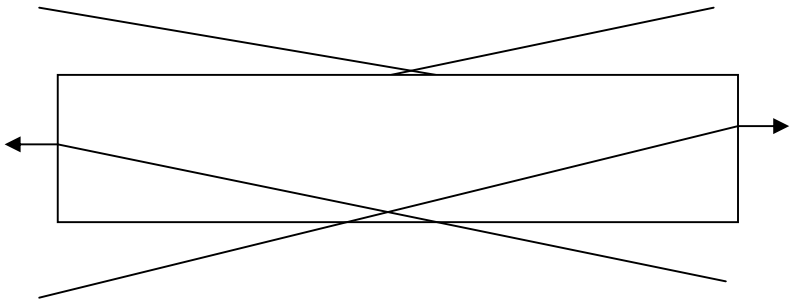


Fig. the sector view through runway.

In pokhara, Traffic are generally east bound and west bound. Aircraft shall be cleared for take-off if the duty controller, in his opinion, feels that the climb-out path along the relevant sector is clear although the prevailing visibility is below the prescribed minima of 5km. The final decision, as to any positive action lie closing or opening the R/Yetc, rests exclusively with the shift incharge.

a. <u>Blue sky and hills to the south and climb out area of SW or SE visible through thin fog layer or local patches of in and out clouds.</u>

The Controller keeping the above in mind and making his own observation can logically conclude that the visibility along the climb-out-path (falling wihtin the sector visibility_ of an aircraft departing from RWY 22 is acceptable, i.e. 5 km or

more, although there may be fog patches or low level local clouds present elsewhere, which are not relevant to the movement of the aircraft.

b. Blue sky and hills to the north and climb out area of NE or NW visible through thin fog layer or local patches of in and out clouds.

Same as above, when the visibility along the climb out path (falling within the sector visibility of aircraft departing from RWY 04 is acceptable, i.e. 5 km or more, although there may be fog or low level local cloud patches present elsewhere, which are not relevant to the movement of the aircraft.

c. When weather conditions warrant that sector visibility permits departures only due fog patches over the threshold or along the final approach the controller shall make the aircraft intending to depart aware of this situation. Phraseology in this context shall be DUE VISIBILITY RWY OPEN FOR DEPARTURES ONLY and asking for the TAKE-OFF ALTERNATE. If the airborne traffic insists on landing the controller shall use the phraseology LANDING SHALL BE AT YOUR RISK and initiate the appropriate emergency step immediately.

Note:.Ultralights from VNPK are operated locally and they do not possess any alternate aerodromes. So, they aren't warranted for take-offs when prevailing conditions sector visibility permits departures only. Whereas, for the arrival, controller keeping in the mind of weather pattern may assist them with the use of phraseology LANDING SHALL BE AT YOUR RISK and initiate the appropriate emergency step immediately.

All abnormalities, be it weather or other factors that affect traffic movement shall be entered in the appropriate log book. Irrespective of type, all aircraft movements shall be held or cleared according to the minimum.

i. With the best judgment, controller in duty may warrant the sector visibility advisable to STOL aircrafts only.

APPENDIX F

ABBREVIATIONS

Unless otherwise stated, abbreviations in this ATSOM have the meanings as follows or as given in AIP, Nepal:

A

AA	All after ……
A/A	Air-to-air
AAL	Above Aerodrome Level
AB	All before……
ABM	Abeam
ABT	About
AC	Altocumulus
ACCID	Initial Notification of Aircraft accident
ACFT	Aircraft
ACK	Acknowledge
ACP	Acceptance (message type designator)
ACPT	Accept or Accepted
ACT	Active or activated or activity
AD	Aerodrome
ADA	Advisory area
ADDN	Addition or additional
ADF	Automatic direction-finding equipment
ADJ	Adjacent
ADZ	Advise
AFIL	Flight Plan Filed in the Air
AFM	Yes, Affirm

AFS	Aeronautical Fixed Service
AFT	After ……. (time or place)
AFTN	Aeronautical Fixed Telecommunication Network
A/G	Air-to-ground aids
AGA	Aerodrome, air routes & ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIREP	Air-report
AIS	Aeronautical Information Service
ALA	Alighting Area
ALERFA	Alert Phase
ALM	Aircraft Landing Minima
ALR	Alerting (Message type designator)
ALS	Approach Lighting System
ALT	Altitude
ALTN	Alternate (aerodrome)
AMD	Amend or amended
AMS	Aeronautical Mobile Service
AMSL	Above Mean Sea Level
AP	Airport
APCH	Approach
APRX	Approximate or approximately
APV	Approved, approve
ARFOR	Area forecast (in aeronautical meteorological code)
ARMET	Forecast upper wind and temperature at specified points (in aeronautical

	meteorological code)
ARO	Air Traffic Services Reporting Office
ARP	Aerodrome Reference Point
ARQ	Automatic Error Correction
ARR	Arrival (message type designator)
ARR	Arrive or arrival
AS	Altostratus
ASC	Ascent to or ascending to
ASDA	Accelerate-stop distance available
ASPH	Asphalt
ATA	Actual time of arrival
ATC	Air Traffic Control (in general)
ATD	Actual Time of Departure
ATFM	Air Traffic Flow Management
ATP	At ….. (time or place)
ATS	Air Traffic Service(s)
ATTN	Attention
ATZ	Aerodrome Traffic Zone
AUG	August
AUX	Auxiliary
AVASIS	Abbreviated visual approach slope indicator system
AVBL	Available or availability
AVG	Average
AWK	Aerial work
AWY	Airway
AZM	Azimuth

B

BA	Braking Action

BASE	Cloud base
BCFG	Fog Patches
BCN	Beacon (aeronautical ground light)
BCST	Broadcast
BDRY	Boundary
BECMG	Becoming
BKN	Broken
BLDG	Building
BLSN	Blowing snow
BOMB	Bombing
BR	Mist
BRG	Bearing
BRKG	Braking
BS	Commercial broadcasting station
BTL	Between layers
BTN	Between

C

C	Degree Celsius (Centigrade)
CAT	Clear Air Turbulence
CAVOK	Visibility, cloud and present weather better than prescribed values or conditions
CB	Cumulonimbus
CC	Cirrocumulus
CD	Candela
CDN	Co-ordination (message type designator)
CFM	Confirm or I confirm
CHG	Modification (message type designator)
CI	Cirrus

CIT	Near or over large towns/city
CIV	Civil
CK	Check
CL	I am closing my station
CLA	Clear type of ice formation
CLBR	Calibration
CLD	Cloud
CLR	Clear or cleared to .. or clearance
CLSD	Closed
CM	Centimeter
CMB	Climb to, or Climbing to
CMPL	Completion or completed or complete
CNL	Flight plan cancellation (message type designator)
CNL	Cancel or cancelled
CNS	Communications, Navigation and Surveillance
COM	Communications
CON	Console
CONC	Concrete
CONST	Construction or constructed
CONT	Continue or continued
COP	Change Over Point
COR	Correct or corrected or correction
COV	Cover or covered or covering
CPL	Current flight plan (message type designator)
CS	Call sign (used to request a call sign)
CS	Cirrostratus
CTA	Control area
CTAM	Climb to and maintain

CTL	Control
CTN	Caution
CTR	Control zone
CU	Cumulus
CUF	Cumuliform
CW	Continuous wave
CWY	Clearway

D

D	Danger area (followed by identification)
DA	Decision altitude
DATIS	Data Link Automatic Terminal Information Service
DCKG	Docking
DCT	Direct (in relation to flight plan clearances and type of approach)
DEC	December
DEG	Degree
DEP	Depart or departure
DEP	Departure (message type designator)
DES	Descend to or descending to
DEST	Destination
DETRESFA	Distress phase
DFTI	Distance from touchdown indicator
DH	Decision height
DIF	Diffuse
DIST	Distance
DLA	Delay (message type designator)
DLA	Delay or delayed
DME	Distance measuring equipment
DNG	Danger or dangerous

DOC	Document
DOM	Domestic
DPT	Dew Point temperature
DR	Dead reckoning
DSB	Double side band
DTAM	Descend to and maintain
DTG	Date-time-group
DTRT	Deteriorate or deteriorating
DTW	Dual tandem wheels
DU	Dust
DUC	Dense upper cloud
DUPE	This is duplicate message
DUR	Duration
DW	Dual wheels
DZ	Drizzle

E

E	East or eastern longitude
EAT	Estimated approach time
EET	Estimated elapse time
EFC	Expected Further Clearance
EHF	Extremely high frequency 300000 KHz to 300000 MHz
ELBA	Emergency location beacon aircraft
ELEV	Elevation
ELR	Extra long range
ELT	Emergency locator transmitter
EM	Emission
EMBD	Embedded in a layer (to indicate cumulonimbus embedded in layers of other clouds)

EMERG	Emergency
ENE	East north east
ENRT	En-route
EOBT	Estimated off-block time
EQPT	Equipment
ESE	East south east
EST	Estimate or estimated or estimate (as message type designator)
ETA	Estimated time of arrival or estimating arrival
ETD	Estimated time departure or estimating departure
ETO	Estimated time over significant point
EV	Every
EXC	Except
EXER	Exercises or exercising or to exercise
EXP	Expect or expected or expecting
EXTD	Extend or extending

F

F	Fixed
F	Degree Fahrenheit
FAC	Facilities
FAF	Final approach fix
FAL	Facilitation
FAP	Final approach point
FAS	Final Approach Segment
FATO	Final approach and take-off area
FAX	Facsimile transmission
FBL	Light (used to qualify icing, turbulence, interference or static reports)
FC	Funnel cloud
FCST	Forecast

FEB	February
FG	Fog
FIC	Flight information center
FIR	Flight information region
FIS	Flight information service
FISA	Automatic flight information service
FL	Flight level
FLG	Flashing
FLR	Flare
FLT	Flight
FLTCK	Flight check
FLW	Follow(s) or Following
FLY	Fly or flying
FM	From
FMS	Flight Management System
FNA	Final approach
FPL	Filed flight plan (message type designator)
FPM	Feet per minute
FREQ	Frequency
FRI	Friday
FRNG	Firing
FRONT	Front (relating to weather)
FRQ	Frequent
FSL	Full stop landing
FSS	Flight service station
FST	First
FT	Feet (dimensional unit)
FU	Smoke

FZ	Freezing
FZDZ	Freezing drizzle
FZFG	Freezing fog
FZL	Freezing level
FZRA	Freezing rain

G

G/A	Ground-to-air
G/A/G	Ground-to-air and air-to-ground
GBAS	Ground Based Augmentation System
GCA	Ground control approach or ground controlled approach
GEN	General
GEO	Geographic or true
GLD	Glider
GMT	Greenwich mean time
GND	Ground
GNDCK	Ground check
GNSS	Global Navigation Satellite System
GP	Glide path
GPWS	Ground Proximity Warning System
GR	Hail
GRADU	Gradual or gradually
GRAS	Ground Based Regional Augmentation system
GRASS	Grass landing area
GRID	Processed meteorological data in the form of grid point values (in aeronautical meteorological office)
GRVL	Gravel
GS	Ground seed

H

H24	Continuous day and night service
HBN	Hazard beacon
HDG	Heading
HEL	Helicopter
HF	High frequency (3000 to 30000 kHz)
HGT	Height or height above
HJ	Sunrise to sunset
HLS	Helicopter landing site
HLDG	Holding
HN	Sunset to sunrise
HO	Service available to meet operational requirement
HOL	Holiday
HOSP	Hospital aircraft
HPA	Hectopascal
HR	Hours
HS	Service available during hours of scheduled operations
HURCN	Hurricane(s)
HX	No specific working hours
HZ	Hertz (cycles per second)
HZS	Horizontal surface

I

IAF	Initial approach fix
IAL	Instrument approach and landing
IAO	In and out of clouds
IAP	Instrument Approach Procedure
IAR	Intersection of air routes

IAS	Indicated air speed
IBN	Identification beacon
ICAO	International Civil Aviation Organization
ICE	Icing
IDENT	Identification
IAF	Intermediate approach fix
IFF	Identification friend/foe
IFR	Instrument flight rules
IGA	International general aviation
ILS	Instrument landing system
IM	Inner marker
IMC	Instrument meteorological condition
IMPR	Improve or improving
IMT	Immediate or immediately
INA	Initial approach
INBD	Inbound
INC	In cloud
INCERFA	Uncertainty phase
INFO	Information
INOP	Inoperative
INP	If not possible
INPR	In progress
INS	Inches (dimensional unit)
INS	Inertial navigation system
INSTL	Install or installed or installation
INSTR	Instrument
INT	Intersection
INTER	Intermittent

INTL	International
INTRG	Interrogator
INTRP	Interrupt, interrupted or interruption
INTSF	Intensify or intensifying
INTST	Intensity
IR	Ice on runway
IRS	Inertial Reference System
ISA	International standard atmosphere
ISOL	Isolated

J

JAN	January
JTST	Jet stream
JUL	July
JUN	June

K

KG	kilogram(s)
KHZ	Kilohertz
KM	Kilometer(s)
KMH	Kilometer per hour
KPA	Kilopascal
KT	Knots
KW	Kilowatt

L

L	Left (runway identification)
L	Locator (see LM, LO)
LAN	Inland
LAT	Latitude
LB	Pounds (weight)

LCN	Load classification number
LDA	Landing distance available
LDG	Landing
LDI	Landing direction indicator
LEN	Length
LF	Low frequency (30 to 300 KHz)
LGT	Light or lighting
LGTD	Lighted
LLZ	Localizer
LM	Locator, middle
LMT	Local mean time
LO	Locator, outer
LOC	Locally, location or located
LONG	Longitude
LR	The last message received by me was.
LRG	Long range
LS	The last message sent by me was….
LSQ	Line squall
LTD	Limited
LTH	Light-intensity high
LTL	Light-intensity low
LTM	Light-intensity medium
LV	Light and variable (relating to wind)
LYR	Layer or layered

M

M	Meter
M	Mach Number (Followed by figures)
MAG	Magnetic

MAINT	Maintenance
MAP	Aeronautical maps and charts
MAPT	Missed approach point
MAR	March
MATS	Manual of Standards Air Traffic Services
MAX	Maximum
MAY	May
MB	Millibar
MDA	Minimum descent altitude
MDH	Minimum descent height
MEA	Minimum en-route altitude
METAR	Aviation routine weather report (in aeronautical meteorological code)
MF	Medium frequency 300 to 3000 KHz
MHZ	Megahertz
MIFG	Shallow fog
MIL	Military
MIN	Minutes
MISC	Miscellaneous
MKR	Marker radio beacon
MNM	Minimum
MLS	Microwave landing system
MM	Middle marker
MNPS	Minimum Navigation Performance Specifications
MNPSA	Minimum Navigation Performance Specifications
MNT	Monitor or monitoring or monitored
MNTN	Maintain
MOC	Minimum obstacle clearance (required)
MOCA	Minimum obstacle clearance altitude

MOD	Moderate (used to qualify icing, turbulence, interference, or static reports)
MON	Above mountains
MON	Monday
MOV	Move or moving or movement
MPH	Statute miles per hour
MPS	Meters per second
MRG	Medium range
MRP	ATS/MET reporting points
MS	Minus
MSA	Minimum safe altitude
MSG	Message
MSL	Mean sea level
MT	Mountain
MTOF	Maximum Take-Off Weight
MTU	Metric units
MTW	Mountain waves
MWO	Meteorological watch office

N

N	North or northern latitude
NAV	Navigation
NB	North bound
NC	No change
NDB	Non-directional radio beacon
NE	North-east
NEG	Negative
NGT	Night
NIL	None or I have nothing to send
NM	Nautical miles

NML	Normal
NNNN	Connect to (……) stations (used in multiple transmission, followed by call sign of stations)
NNE	North North East
NNW	North North West
NOF	International NOTAM Office
NOSIG	No significant change (used in trend type landing forecast)
NOTAM	A notice to Airmen
NOV	November
NPA	Non Precision Approach
NR	Number
NS	Nimbostratus
NSC	Nil Significant Cloud
NW	North west
NXT	Next

O

OAS	Obstacle assessment surface
OBS	Observe or observed or observation
OBSC	Obscure or obscured or obscuring
OBST	Obstacle
OBSTR	Obstruction
OCA	Obstacle Clearance Altitude
OCC	Occulting (light)
OCH	Obstacle Clearance Height
OCNL	Occasional or occasionally
OCS	Obstacle clearance surface
OCT	October
OK	We agree or it is correct

OPA	Opaque, white type of ice formation
OPC	The control indicated is operational control
OPMA	Onboard Performance Monitoring and Alerting
OPMET	Operational meteorological (information)
OPN	Open or opened or opening
OPS	Operations
O/R	On request
ORD	Indication of an order
OTP	On top
OVC	Overcast

P

P	Prohibited area (followed by identification)
PANS	Procedures for air navigation services
PAPI	Precision approach Path indicator
PAR	Precision approach radar
PARL	Parallel
PAX	Passenger(s)
PBN	Performance Based Navigation
PCN	Pavement classification number
PER	Performance
PERM	Permanent
PJE	Parachute jumping exercise
PLA	Practice low approach
PN	Prior notice required
PNR	Point of no return
PO	Dust devils
POB	Person on board
PPI	Plan position indicator

PPR	Prior permission required
PRKG	Parking
PROB	Probability
PROC	Procedure
PROV	Provisional
PS	Plus
PSG	Passing
PSN	Position
PVT	Private
PWR	Power

Q

QDM	Magnetic heading (zero wind)
QDR	Magnetic Bearing
QFE	Atmospheric pressure at aerodrome elevation (or runway threshold)
QFU	Magnetic orientation of runway
QNH	Altimeter sub-scale setting to obtain elevation when on the ground
QTE	True bearing
QUAD	Quadrant

R

R	Restricted area (followed by identification)
R	Right (followed by runway identification)
RA	Rain
RA	Resolution Advisory
RAC	Rules of the air and Air Traffic Services
RAD	Radius
RAG	Ragged
RAI	Runway alignment indicator
RAPID	Rapid or rapidity

RASH	Rain and showers
RB	Read back
RB	Rescue boat
RCC	Rescue co-ordination center
RCF	Radio communication failure (message type designator)
RCL	Runway center line
RDO	Radio
RDL	Radial
RE	Recent (used to qualify weather phenomena such as rain),e.g. recent rain = RERA
REC	Receive or receiver
REF	Reference to ..or refer to ….
REG	Registration
REILS	Runway end illumination light system
REP	Report or reporting or reporting point
REQ	Request or requested
RG	Range (lights)
RIF	Re-clearance in flight
RITE	Right (direction or turn)
RLCE	Request level change en-route)
RMK	Remark
RNAV	Area navigation
RNG	Radio rang
RNP	Required Navigation Performance
RNP AR	Required Navigation Performance Authorization Required
RNP APCH	Required Navigation Performance Approach
ROBEX	Regional OPMET bulletin exchange (exchange)
ROC	Rate of climb

ROFOR	Route forecast (in aeronautical meteorological code)
RON	Received only
RPL	Repetitive flight plan
RPLC	Replace or replaced
RPS	Radar Position Symbol
RPT	Repeat or I repeat Indication of a request
RQMNTS	Requirements
RQP	Request flight plan (message type designator)
RR	Report reaching
RSC	Rescue Sub-Centre
RSP	Responder Beacon
RSR	En-route Surveillance Radar
RTE	Route
RTF	Radiotelephony
RTG	Radiotelegraph
RTN	Return OR Returned OR Returning
RV	Rescue vessel
RVR	Runway visual range
RWY	Runway

S

S	South or Southern Latitude
SA	Dust storm, sand storm, rising dust or rising sand
SALS	Simple Approach Lighting System
SAP	As soon as possible
SARPS	Standard and Recommended Practices (ICAO)
SAT	Saturday
SC	Stratocumulus
SCT	Scattered

STDBY	Stand by
SE	South East
SEC	Seconds
SELCAL	Selective calling system
SEP	September
SER	Service or Servicing or Serviced
SEV	Severe (use to qualify icing and turbulence reports)
SFC	Surface
SG	Snow Grains
SGL	Signal
SH	Showers
SHF	Super High Frequency (3000 to 30000 MHz)
SID	Standard Instrument Departure
SIF	Selective Identification Feature
SIGMET	Information concerning en-route weather phenomena which may affect the safety of aircraft operations
SIGWX	Significant weather
SIMUL	Simultaneous or Simultaneously
SIWL	Single Isolated Wheel Load
SKC	Sky Clear
SLW	Slow
SMC	Surface Movement Control
SMR	Surface Movement Radar
SN	Snow
SNOWTAM	A special series NOTAM notifying the presence or removal or hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format
SNSH	Snow Showers
SOC	Start of Climb

SPECI	Aviation selected special weather report (in aeronautical meteorological code
SPECIAL	Special meteorological report (in abbreviated plain language)
SPL	Supplementary flight plan (message type designator)
SPOT	Spot wind
SQ	Squall
SR	Sunrise
SRA	Surveillance Radar Approach
SRE	Surveillance Radar Element of precision approach radar system
SRG	Short range
SRR	Search and rescue region
SS	Sunset
SSB	Single side band
SSE	South South East
SSR	Secondary Surveillance Radar
SST	Supersonic transport
SSW	South South West
ST	Stratus
STA	Straight in approach
STAR	Standard (Instrument) Arrival
STN	Station
STNR	Stationary
STOL	Short Take-Off and Landing
STS	Status
SUBJ	Subject to
SUN	Sunday
SUP	Supplement (AIP Supplement)
SUPPS	Regional supplementary procedures

SVC	Service message
SVCBL	Serviceable
SVFR	Special Visual Flight Rules
SW	South West
SWY	Stop way

T

T	Temperature
TA	Transmission altitude
TACAN	UHF Tactical Air Navigation Aid
TAF	Aerodrome forecast
TAR	Terminal Area Surveillance Radar
TAS	True Airspeed
TAX	Taxi or taxiing
TC	Tropical Cyclone
TCAS	Traffic Alert and Collision Avoidance System
TCU	Towering Cumulus
TDO	Tornado
TDZ	Touch Down Zone
TECR	Technical Reason
TEMPO	Temporary or Temporarily
TFC	Traffic
TGL	Touch-and-Go Landing
TGS	Taxiing Guidance System
THR	Threshold
THRU	Through
THU	Thursday
TIL	Until
TKOF	Take-off

TMA	Terminal control area
TO	To …. (place)
TOC	Top of climb
TODA	Take-Off Distance Available
TOP	Top of Cloud
TORA	Take-Off Runway Available
TP	Turning Point
TR	Track
TRA	Temporary Reserved Airspace
TRANS	Transmit or Transmitter
TS	Thunderstorm
TSGR	Thunderstorm with hail
TSSA	Thunderstorm with dust storm or sandstorm
TT	Teletypewriter
TUE	Tuesday
TURB	Turbulence
TVOR	Terminal VOR
TWR	Aerodrome control tower
TWY	Taxiway
TWYL	Taxiway Link
TXT	Text
TYP	Type of aircraft
TYPH	Typhoon

U

UAB	Until Advised By …….
UAC	Upper Area Control Center
UAR	Upper Air Route
UDF	Ultra High Frequency Direction Finding System

UFN	Until Further Notice
UHF	Ultra High Frequency
ULR	Ultra Long Range
UNA	Unable
UNL	Unlimited
UNREL	Unreliable
U/S	Unserviceable
UTA	Upper Control Area
UTC	Co-ordinated Universal Time

V

V	Cleared over a reporting point
VAL	In valleys
VAR	Magnetic variation
VASIS	Visual Approach Slope Indicator System
VDF	Very High Frequency Direction Finding Station
VDP	Visual Descent Point
VER	Vertical
VFR	Visual Flight Rules
VHF	Very High Frequency (30 to 300 MHz)
VIP	Very Important Persons
VIS	Visibility
VLF	Very Low Frequency
VLR	Very Long Range
VMC	Visual Meteorological Conditions
VOLMET	Meteorological information for aircraft in flight
VOR	Very High Frequency Omni-directional Radio Range
VORTAC	VOR and TACAN combination
VOT	VOR airborne equipment test facility

VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTOL	Vertical Take-Off and Landing

W

W	West or Western longitude
WAC	World Aeronautical Chart ICAO 1:1000 000
WDI	Wind Direction Indicator
WDSPR	Widespread
WED	Wednesday
WEF	With Effect From or Effective From
WI	Within
WID	Width or Wide
WIE	With Immediate Effect or Effective Immediately
WIP	Work In Progress
WKN	Weaken or Weakening
WNW	West North West
WPT	Way-point
WRNG	Warning
WS	Wind Shear
WSW	West South West
WX	Weather

X

X	Cross
XBAR	Crossbar (of approach landing system)
XS	Atmospheric
XX	Heavy (used to quality weather phenomena such as rain, e.g. heavy rain – XXRA)

Y

YD	Yards
YES	Yes (affirmative)
YR	Your

Z

Z	Coordinated universal time

APPENDIX G

SYMBOLS AND CODES

1 It has been found in practice that message of routine nature can be taken by down at the same as that at which a clearly spoken transmission is made, by the use of approved abbreviation, contractions and symbols.

2 The abbreviations and symbols which follow are authorized for the use in making entries on flight progress strips in copying or writing traffic

3. Unauthorized abbreviations and symbols shall not be used.

Clearance limits

A = Cleared to aerodrome (point of first intended landing)

V = Cleared to reporting point

H = Holding instructions issued

MB = Cleared to Min Beacon

 = Cleared to leave control area

OM = Cleared to an Outer Marker

X = Cleared to cross the airway in the vicinity of reporting position

V = Cleared over a reporting point (over flight)

Clearance Instruction

C = ATC CLEARANCE ……

∧ = NO delay expected

RSYD = Release subject to your discretion with regard to …….

CE = Clearance expires…… (time)

…… = Release not before …….. (time)

RLCE = Request level change en-route

~~M~~> = Maintain ……. (Level) …….

↓ = Descend

– = To : (used to indicate "Form …….. to ……..)

( ) = Alternative instruction

— = Restriction written below this line

/ = After passing

0 = Aircraft has reported at an altitude other than that proposed

→ = Joining Flight

RL = Report Immediately on reaching (level)

RR = Report Immediately on Reacting (level)

TFC = Traffic is ……. (c/s of aircraft 0)

MA = Missed approach

SI = Straight-in approach

 = Left turnout

 = Right turnout

OTP = VFR conditions on top

RLS = Release

NDB = Non-directional Radio Beacon

 = Abeam

VR = VOR approach

CAF = Cleared a filed

DLA = Delay

EAC = Expect approach clearance (time)

EFC = Expect further clearance (time)

RP = Report passing

TCP = Transfer of Control point

UFN = Until Further Notice

 = For step climb followed by level information

 = For step descent followed by level information

Some other useful symbol and abbreviation frequently used in practice

 = Control Area

 = To enter control area

& = and

 = Pilot cancelled IFR Flight plan

O = Out of control zone

 = Enter Control Zone

@ = At

ABV = Above ……. ft =+ …….

BLO = Below ……. ft =+ …….

> = Before

< = After

TKOF = Take off

V< (TIME) = Clearance void after ……(time)

ADNL TFC = Additional traffic is ……..

RC = Reserve Course

UFA = Until further advise

INDEF = Delay indefinite

√ = Information forwarded

C→ = Coordination effected

↑

C = Climb coordinated

₵ = Descent coordinated

…....+ = At or above ……..... ft

…….– = At or below …… ft

↑CC = Climb cruise

Z = Delay not determined

APPENDIX H

ATC Training Syllabus for Rating/Licensing Purpose for POKHARA CAO

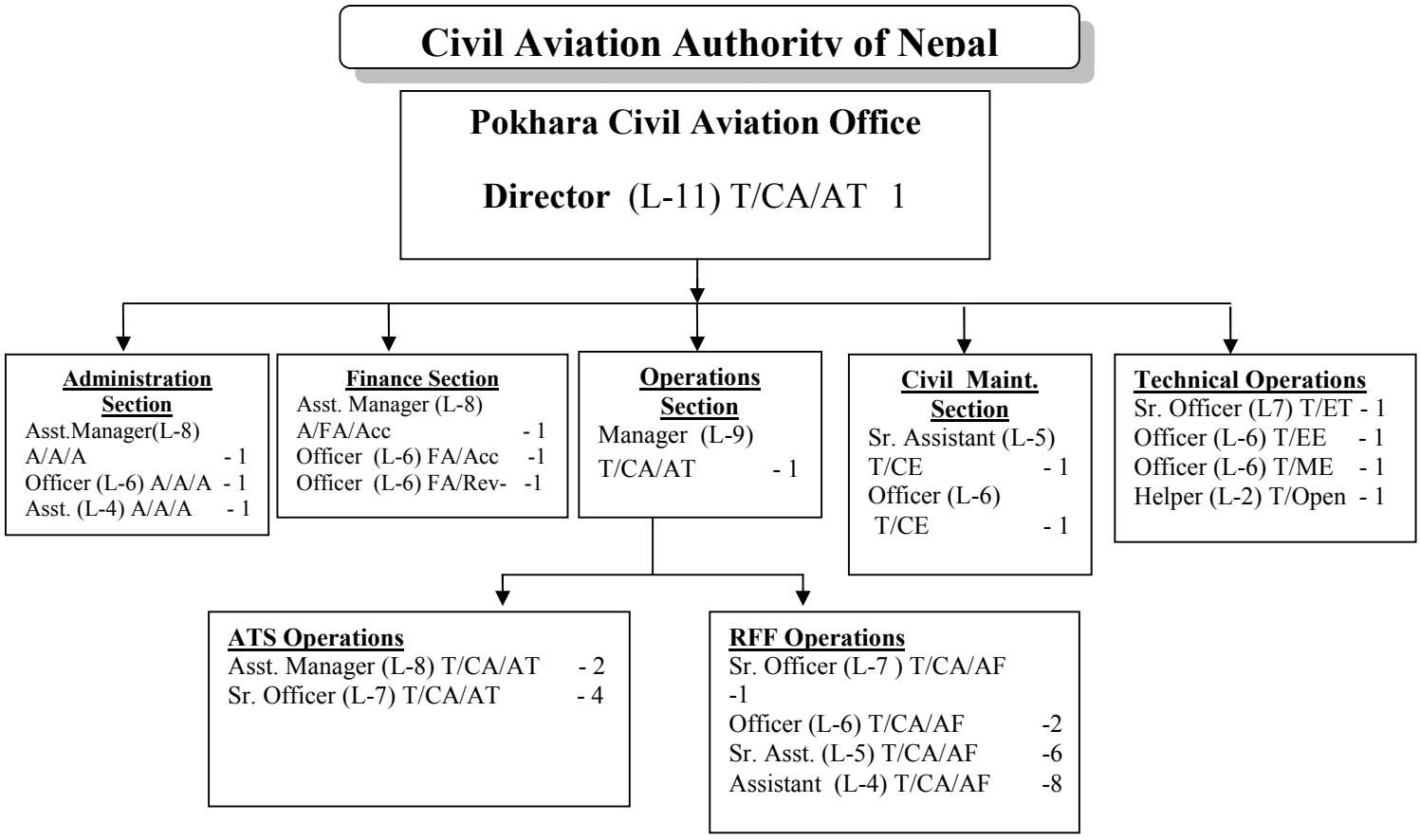
Paper	Subject	Questions	Time	Pass
ATC-SL ATC-L	annex 1,2,3,5,610,11,14,15 and ICAO doc. 4444 , civil aviation requirements ,and the subjects as required by 4.1.1.1f)/ 4.2.1 f) of MOS Licensing/Rating of ATC Personnel, Third Edition, August, 2015	100	3 hours	70%
ATC-1	ATC-L and practical aspects of aerodrome control and relate subjects from AIP Nepal ATSOM , MATS Nepal and local instructions	50	2hours	70%
ATC-2	ATC-L and practical aspects of approach control rating and relative subjects from AIP Nepal , ATSOM ,MATS Nepal and local instructions	50	2 hours	70%

Note-1 ATC-L - Air traffic controller license ATC-SL - Student air traffic controller license ATC-1 - Aerodrome control rating .

Note-2: For domestic controlled airports where approach control service is combined with aerodrome control service, ATC-1 and ATC-2 papers shall be combined with 50 questions.

APPENDIX I

PKCAO ORGANIZATION CHART



Total : 36

APPENDIX J

REMOVAL OF DISABLED AIRCRAFT

1 Purpose

The aim of the Disabled Aircraft Removal Plan is to provide for an efficient, coordinated response to quickly and safely remove an aircraft that has caused temporary closure of a runway, taxiway or affected the OLS.

These procedures are intended to deal solely with disabled aircraft within the aerodrome boundary only after the requirements of the DAEP relevant to the aircraft incident or accident have been completed.

2 Responsibilities

The **Airport Director** has overall responsibility for the Disabled Aircraft Removal Plan at the Pokhara Airport.

For minor incidents, Sr. ATS personnel are responsible for controlling and coordinating the response for removal of a disabled aircraft. This may require liaison with the airline or aircraft operator and the Aviation Safety Department of CAAN and/or Airport Security Police (if involved) to obtain a clearance to remove the aircraft. the event that the Airport Director is not available the designated Sr. ATS personnel will undertake these responsibilities.

For accidents of a more serious or protracted nature, the Airport Manager has responsibility for coordinating the removal of the aircraft and returning the aerodrome to full operational status.

The **Airport Director** is responsible for notifying ATC about disabled aircraft (if ATC are not already aware) and inform to KT INT'L Notam Office for issuing an appropriate NOTAM. He/she is also responsible for ensuring that any unserviceable portions of the maneuvering area are correctly marked, in accordance with Manual of Aerodrome Standards Nepal (MASN), to provide for safe aircraft operation on the remaining usable areas.

Aerodrome Tower Controller (ATC) will initiate activation of the Disable Aircraft Removal Plan if advised of an immobilized aircraft by the pilot.

RFF equipment (available fire extinguishers) may be required to remain on standby with trained airline personnel to assist with operations as required, especially when de-fuelling is required.

The **Aircraft Owner**, defined as the holder of the certificate of registration, is responsible for the aircraft removal and disposal of fuel and other hazardous materials that have been spilt as a result of the incident/accident. Prior

approval for aircraft removal may be required from either Aviation Safety Department/CAAN and/or from the Airport Manager for accidents of a more serious nature that require on-scene investigations.

The **Flight Safety Departmentof CAAN** is responsible for the initial investigation of all aircraft accidents and incidents involving civil aircraft operations. If the department elects to conduct an on-scene investigation, a disabled aircraft cannot be removed from the movement area until authorized by the CAAN Flight Safety Department.

The **Airport Security** (if involved through activation of the DAEP), in conjunction with the CAAN Aviation Safety Department, authorizes the removal of a disabled aircraft when their on-scene investigation has been completed.

If an emergency involves a Nepal Sainik Biman Sewa aircraft, the **Chief of No.11 Brigade** authorizes its removal including any dangerous cargo on the aircraft.

3 Legislation, Standards and Technical References

Regulation 20 of the CAAN Airport Certificate Regulation 2004 requires aerodrome operators to establish the procedures for the removal of disabled aircraft from the movement area.

International recommendations for the removal of disabled aircraft are described in the ICAO Airport Services Manual, Part 5.

4 Immediate Operational Considerations and Actions

The following criteria are to be used for determining the availability of runways affected by a disabled aircraft:

- If the aircraft is within 75 m of the runway centerline, revised declared distances must be provided.
- If the threshold requires displacement it will be marked in accordance with Manual of Aerodrome Standards Nepal (MASN) and revised declared distances calculated. Airport Director is responsible to coordinate with Aerodrome Engineering Directorate for displacement of Threshold as required.

Aerodrome Tower Controller will:

- Notify local city fire service if the RFFS is not in operation.
- Notify the Airport Director.
- Notify the concern operator.
- Determine estimated time of arrival (ETA) of all aircraft requiring use of the closed runway.
- Determine latest time for affected aircraft to divert.
- Notify CAAN Flight Safety Department of:

- Aircraft identification and type.
- Nature of aircraft unserviceability.
- Location of aircraft.
- Section of the maneuvering area affected.
- Person on Board (POB).
- Other aircraft likely to be affected by a prolonged unserviceability of the maneuvering area.

The Airport Director or Sr. ATS Personnel will:

- Complete DAEP duties before becoming involved with the removal.
- Inform the Aerodrome Control Tower of the location, nature and extent of the accident with emphasis on the operational viability of the maneuvering area.
- Arrange NOTAM action if applicable in accordance with the requirements of Section 2 of this RODA manual.

5 AIRCRAFT REMOVAL

When a disabled aircraft is removed from the aerodrome maneuvering area it shall be taken to a location, and by a route, approved by the Airport Director.

If removal is delayed or is progressing at an unacceptable rate, the Airport Director, as advised by ATC, will remove the disabled aircraft at the owner/operators expense and risk. Prior to doing so, the Airport Director will request the owner to complete the indemnity release at Section 6 below.

Aircraft Owner/Airlines Operator

When advised of a disabled aircraft, the Owner/Airlines Operator should:

- Liaise with the Airport Manager.
- Consider contingency planning for aircraft removal as soon as practicable following its release by the CAAN Aviation Safety Department.

Air Safety Requirements

All concerned agencies are required to cooperate with and provide all reasonable assistance to CAAN Flight Safety Department, should an on-scene investigation be necessary.

6 Indemnity and Release - Movement of Stationary Aircraft

TO: The Airport Manager, PKCAO

1. I, the undersigned, being the owner or the duly authorized representative of the owner of the aircraft described below hereby agree to provide this indemnity and release on the conditions set out below.

2. I agree and consent to Airport Manager, PKCAO, its agents, contractors and employees to move at any time required the aircraft at my sole cost and expense.
3. In consideration of the PKCAO moving the aircraft I agree to indemnity and keep indemnified the PKCAO against all and any loss damage cost charge expense or other liability however suffered paid or incurred by or threatened against the PKCAO in relation to or arising out of or in consequence of any action, proceeding, claim or demand which is or may be brought made or prosecuted or threatened against the PKCAO in respect of any loss of or damage to property, loss of life or personal injury or other loss that may arise in any way from the moving of the aircraft by the PKCAO.
4. I further agree to release the PKCAO from all claims actions, causes of actions, proceedings and demands which I and or the owner now has or but for this indemnity and release would or might at any time in the future have against the PKCAO and from all present and future liability of the PKCAO to me and or the owner however caused in relation to or arising out of or in consequence of the moving of the aircraft.
5. I confirm that it is the intention of this indemnity and release that each servant, agent, contractor and employee of the PKCAO obtain the benefits expressed in their favor under this indemnity and release and be entitled to enforce such benefits.
6. I confirm that I and the owner have abided and will abide by all applicable laws including without limitation acts, regulations, bylaws, directions and determinations relating to or made by the Civil Aviation Authority of Nepal, the CAAN Air Safety Department, the PKCAO and any other relevant authority or body which has authority in relation to interference with or movement of an aircraft.

Description of Aircraft:

Type of Aircraft:

Registration No:

Full name:

Signed by:

Date:

In the presence of:

APPENDIX K

SUNSET TIME AT POKHARA

TIME ON UTC												
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
DATE↓ HRS→	1100	1200	1200	1200	1200	1300	1300	1300	1200	1200	1100	1100
1	39	02	24	42	59	16	24	15	46	10	39	28
2	39	03	25	43	59	16	24	14	45	09	39	28
3	40	04	25	43	1300	17	24	14	44	08	38	28
4	41	05	26	44	00	17	24	13	43	06	37	29
5	41	06	27	44	01	18	24	12	41	05	37	29
6	42	06	27	45	02	18	24	11	40	04	36	29
7	43	07	28	45	02	19	24	11	39	03	35	29
8	43	08	29	46	03	19	24	10	38	02	35	29
9	44	09	29	46	03	19	24	09	37	01	34	29
10	45	10	30	47	04	20	24	08	35	1200	34	29
11	46	10	30	47	04	20	24	07	34	1159	33	30
12	46	11	31	48	05	21	24	06	33	57	33	30
13	47	12	32	49	06	21	23	06	32	56	32	30
14	48	13	32	49	06	21	23	05	31	55	32	31
15	49	13	33	50	07	22	23	04	29	54	32	31
16	50	14	33	50	07	22	22	03	28	53	31	31
17	50	15	34	51	08	22	22	02	27	52	31	32
18	51	16	34	51	08	22	22	01	26	51	30	32
19	52	16	35	52	09	23	21	00	24	50	30	32
20	53	17	36	52	10	23	21	1259	23	49	30	33
21	54	18	36	53	10	23	21	58	22	48	30	33
22	54	19	37	54	11	23	20	57	21	48	29	34
23	55	19	37	54	11	24	20	56	20	47	29	34
24	56	20	38	55	12	24	19	55	18	46	29	35
25	57	21	38	55	12	24	19	54	17	45	29	35
26	58	21	39	56	13	24	18	53	16	44	29	36
27	58	22	39	56	13	24	18	52	15	43	29	36
28	59	23	40	57	14	24	17	51	13	42	28	37
29	1200	23	40	57	14	24	17	49	12	42	28	38
30	01		41	58	15	24	16	48	11	41	28	38
31	02		42		15		16	47		40		39

OPERATION HOUR PK												
MONTH	NOV	DEC	JAN	FEB	MAR	APR	SEP	OCT	MAY	JUNE	JULY	AUG
HRS (UTC)	0100-1215				0030-1245				0015-1300			

APPENDIX L

AIR TRAFFIC INCIDENT REPORT FORM

(To be filled by Pilot or ATC on behalf of Pilot)

AIR TRAFFIC INCIDENT REPORT FORM

For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded items should be included.

A — AIRCRAFT IDENTIFICATION	**B — TYPE OF INCIDENT**
	AIRPROX / PROCEDURE / FACILITY*

C — THE INCIDENT

1. General

a) Date / time of incident UTC

b) Position

2. Own aircraft

a) Heading and route

b) True airspeed _____ measured in ( ) kt _____ ( ) km/h _____

c) Level and altimeter setting

d) Aircraft climbing or descending

( ) Level flight ( ) Climbing ( ) Descending

e) Aircraft bank angle

( ) Wings level ( ) Slight bank ( ) Moderate bank

( ) Steep bank ( ) Inverted ( ) Unknown

f) Aircraft direction of bank

( ) Left ( ) Right ( ) Unknown

g) Restrictions to visibility (select as many as required)

( ) Sunglare ( ) Windscreen pillar ( ) Dirty windscreen

( ) Other cockpit structure ( ) None

h) Use of aircraft lighting (select as many as required)

( ) Navigation lights ( ) Strobe lights ( ) Cabin lights

( ) Red anti-collision lights ( ) Landing / taxi lights ( ) Logo (tail fin) lights

( ) Other ( ) None

i) Traffic avoidance advice issued by ATS

( ) Yes, based on radar ( ) Yes, based on visual sighting ( ) Yes, based on other information

( ) No

j) Traffic information issued

( ) Yes, based on radar ( ) Yes, based on visual sighting ( ) Yes, based on other information

( ) No

k) Airborne collision avoidance system — ACAS

( ) Not carried ( ) Type ( ) Traffic advisory issued

( ) Resolution advisory issued ( ) Traffic advisory or resolution advisory not issued

l) Radar identification

( ) No radar available ( ) Radar identification ( ) No radar identification

m) Other aircraft sighted

( ) Yes ( ) No ( ) Wrong aircraft sighted

*Delete as appropriate

n)	Avoiding action taken			
	( ) Yes	( ) No		
o)	Type of flight plan	IFR / VFR / none*		
3.	**Other aircraft**			
a)	Type and call sign / registration (if known)			
b)	If a) above not known, describe below			
	( ) High wing	( ) Mid wing	( ) Low wing	
	( ) Rotorcraft			
	( ) 1 engine	( ) 2 engines	( ) 3 engines	
	( ) 4 engines	( ) More than 4 engines		
	Marking, colour or other available details			
c)	Aircraft climbing or descending			
	( ) Level flight	( ) Climbing	( ) Descending	
	( ) Unknown			
d)	Aircraft bank angle			
	( ) Wings level	( ) Slight bank	( ) Moderate bank	
	( ) Steep bank	( ) Inverted	( ) Unknown	
e)	Aircraft direction of bank			
	( ) Left	( ) Right	( ) Unknown	
f)	Lights displayed			
	( ) Navigation lights	( ) Strobe lights	( ) Cabin lights	
	( ) Red anti-collision lights	( ) Landing / taxi lights	( ) Logo (tail fin) lights	
	( ) Other	( ) None	( ) Unknown	
g)	Traffic avoidance advice issued by ATS			
	( ) Yes, based on radar	( ) Yes, based on visual sighting	( ) Yes, based on other information	
	( ) No	( ) Unknown		
h)	Traffic information issued			
	( ) Yes, based on radar	( ) Yes, based on visual sighting	( ) Yes, based on other information	
	( ) No	( ) Unknown		
i)	Avoiding action taken			
	( ) Yes	( ) No	( ) Unknown	

*Delete as appropriate

4. Distance

a) Closest horizontal distance

b) Closest vertical distance

5. Flight weather conditions

a) IMC / VMC*

b) Above / below* clouds / fog / haze or between layers*

c) Distance vertically from cloud _____ m / ft* below _____ m / ft* above

d) In cloud / rain / snow / sleet / fog / haze*

e) Flying into / out of* sun

f) Flight visibility _____ m / km*

6. Any other information considered important by the pilot-in-command

D — MISCELLANEOUS

1. Information regarding reporting aircraft

a) Aircraft registration

b) Aircraft type

c) Operator

d) Aerodrome of departure

e) Aerodrome of first landing _____ destination

f) Reported by radio or other means to _____ (name of ATS unit) at time UTC

g) Date / time / place of completion of form

2. Function, address and signature of person submitting report

a) Function

b) Address

c) Signature

d) Telephone number

3. Function and signature of person receiving report

a) Function _____ b) Signature _____

*Delete as appropriate

E — SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED

1. Receipt of report

a) Report received via AFTN / radio / telephone / other (specify)* _____

b) Report received by _____ (name of ATS unit)

2. Details of ATS action

Clearance, incident seen (radar/visually, warning given, result of local enquiry, etc.)

_____

_____

_____

_____

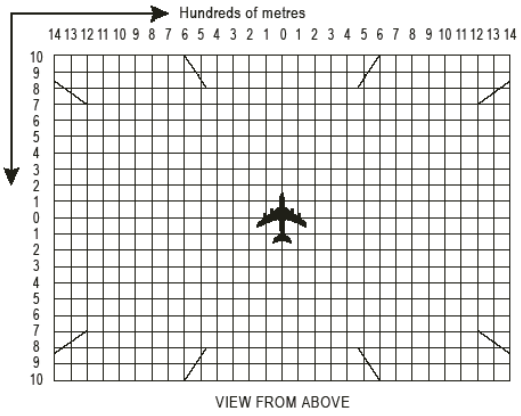
_____

_____

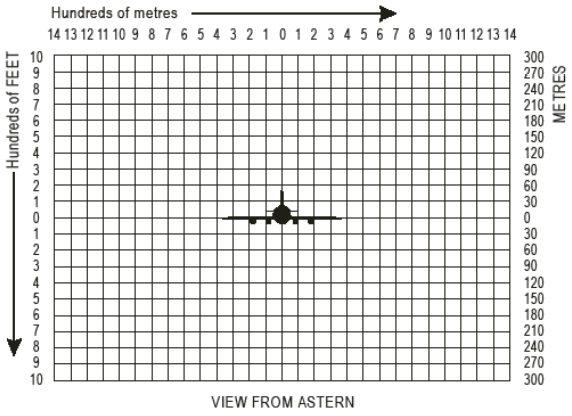
_____

DIAGRAMS OF AIRPROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the centre of each diagram. Include first sighting and passing distance.



VIEW FROM ABOVE



VIEW FROM ASTERN

*Delete as appropriate

Instructions for completion of the Air Traffic Incident Report Form	
Item	
A	Aircraft identification of the aircraft filing the report.
B	An AIRPROX report should be filed immediately by radio.
C1	Date / time UTC and position in bearing and distance from a navigation aid or in LAT / LONG.
C2	Information regarding aircraft filing the report, tick as necessary.
C2 c)	E.g. FL 350 / 1013 HPA or 2500 FT / QNH 1 007 HPA or 1200 FT / QFE 998 HPA.
C3	Information regarding the other aircraft involved.
C4	Passing distance - state units used.
C6	Attach additional papers as required. The diagrams may be used to show aircraft's positions.
D1 f)	State name of ATS unit and date / time in UTC.
D1 g)	Date and time in UTC.
E2	Include details of ATS unit such as service provided, radiotelephony frequency, SSR Codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.

APPENDIX M

ATS INCIDENT REPORT FORM

(To be filled by ATS personnel)

CATEGORIES OF OCCURRENCE

☐ ☐ ☐ ☐ ☐

1 ACCID AIRPORX INCID VIOLATION INFRINGEMENT

2 Occurrence Position	☐ ☐ 3 FL ALT/HT		4 Date (dd/mm/yyyy)		5 Time - UTC (HH:MM)		6 ☐ ☐ Day Night
OPERATOR	CALLSIGN/ REGN	TYPE	FROM	TO	SSR CODE	MODE C DISPLAYED	IFR/VFR/SVFR
7	8	9	10	11	12	13 ☐ YES ☐ NO	14
15	16	17	18	19	20	21 ☐ YES ☐ NO	22
23	24	25	26	27	28	29 ☐ YES ☐ NO	30
31 RTF Frequencies	32 Radar Equipment		33 Equipment unserviceability			34 QNH	35 Runway in use

36 Class & Type of Airspace		37 ATS PROVIDED	38 SID/STAR/ROUTE

39 Was prescribed Separation lost?	40 Min. Separation Horizontal …… nm Vertical ……. ft	41 Alert Activation Collision ☐ CA ☐ TCAS ☐ STCA ☐	42 Traffic info given by ATC? ☐ YES NO	43 Avoiding action given by ATC? YES ☐ ☐ NO

44 BRIEF TITLE Summary

45 NARRATIVE -use a diagram if necessary (Include NOTAM if necessary.) *Use additional sheet if necessary*

46 Name	47 On duty as	48 ATS Unit	49 Time since last break	50 Start time of shift (UTC)	51 Radar recordings held ☐ YES ☐ NO

52 RTF recordings held	53 List other agencies advised	54 Signature	55 Date (dd/mm/yyyy)
☐ YES ☐ NO	……..	……..	……..

56 Address

……

……Telephone ……

APPENDIX N

BIRD /OTHER WILDLIFE STRIKE REPORT FORM

(To be filled by Pilots, ATC, Airport operator, Airline, Safety personnel, etc.)

1. CATEGORIES OF OCCURRENCE
ACCID ☐ INCID ☐ HAZARD ☐ BIRDSTRIKE ☐ WILDLIFE STRIKE ☐

(Will fill one of first three boxes and one of the last two boxes.)

2. Name of Operator	3. Aircraft Make/Model	4. Engine Make/Model
5. Aircraft Registration	6. Date of Incident (dd/mm/yyyy)	7. Time of Incident (UTC)…… ☐Dawn ☐Dusk ☐Day ☐Night
8. Airport Name	9. Runway Used	10. Location if en-route (Nearest city, place, etc.)
11. FL/ALT/HT (ft)	12. Speed (IAS kts	

13. Phase of Flight

☐A. Parked
☐B. Taxi
☐C. Take-off Run
☐D. Climb
☐E. Enroute
☐F. Descend
☐G.Approach
☐H. Landing Roll

14. Parts of Aircraft Struck or Damaged

	Struck	Damaged		Struck	Damaged
A. Radome	☐	☐	H. Propeller	☐	☐
B. Windshield	☐	☐	I. Wing/Rotor	☐	☐
C. Nose	☐	☐	J. Fuselage	☐	☐
D. Engine No. 1	☐	☐	K. Landing Gear	☐	☐
E. Engine No. 2	☐	☐	L. Tail M. Lights	☐	☐
F. Engine No. 3	☐	☐	N. Other: (Specify)	☐	☐
G. Engine No. 4	☐	☐			

15 Effect on Flight	16. Sky Condition	17. Precipitation
☐ None ☐ Aborted Take-off ☐ Precautionary Landing ☐ Engine Shut Down ☐ Other: (Specify)	☐ No Cloud ☐ Some Cloud ☐ Overcast	☐ Fog ☐ Rain ☐ Snow ☐ None

18. Bird/Other Wildlife Species	19. Number of Bird(s)/Wildlife			20. Size of Bird(s)/Wildlife
	Number	Seen	Struck	☐ Small
	1	☐	☐	☐ Medium
	2-10	☐	☐	
	11-100	☐	☐	☐ Large
	More than 100	☐	☐	

21. Pilot warned of Birds	☐ Yes	☐ No

22	Detail Information *(Describe damage, injuries and other pertinent information)* *(Use additional sheet if necessary)*		
23	Reported by	24. Title	25. Date