ENR 1 总则和程序

ENR 1.1 总则

ENR 1. GENERAL RULES AND PROCEDURES

ENR 1.1 GENERAL RULES

1. 总则

1.1 航空器在中华人民共和国飞行情报区内飞行，应遵守国际民用航空公约附件 2、附件 11 和 4444 文件中的有关规定和程序。
注：具体差异详见 GEN1.7

1.2 航空器在中华人民共和国飞行情报区内飞行，还必须遵守《中华人民共和国民用航空法》、《中华人民共和国飞行基本规则》，以及《中国民用航空空中交通管理规则》等法规。

1.3 一般规定

1.3.1 航空器进、出中华人民共和国飞行情报区，必须按照规定向中华人民共和国有关机关提出申请，经批准后方可执行。

1.3.2 未经批准擅自进、出中华人民共和国领空的航空器，中华人民共和国有关机关有权采取必要措施，令其在指定的机场降落。

1.3.3 航空器在中华人民共和国飞行情报区内的航路飞行时，由中国民用航空局负责提供空中交通管制服务、飞行情报服务和告警服务。

1.3.4 航空器进、出中华人民共和国飞行情报区违反 ENR 1.1 第 1.1 和 1.2 款规定的，中华人民共和国有关空中交通管制部门有权采取措施，令其纠正。情节严重的，有关部门可以采取必要措施，直至迫使其在指定机场降落。

1.4 空中交通管制运行管理

1.4.1 一般规定
a. 在中华人民共和国飞行情报区内飞行，航空器必须按 照批准的航路、机场飞行。
b. 航空器必须在指定的无线电频率上与中华人民共和国有关空中交通管制部门联络并接受管制。
如需改变规定的航行诸元，必须向空中交通管制部门提出申请，经批准后方可执行。

1.4.2 位置报告

1. General rules

1.1 All aircraft operating within the FIRs of the People's Republic of China shall follow the rules and procedures of ICAO Annex 2, Annex 11 and Doc 4444.
Note: Please refer to subsection GEN1.7 for specific differences.

1.2 All aircraft operating within the FIRs of the People's Republic of China shall also abide by the Civil Aviation Law of the People's Republic of China, the General Flight Rules of the People's Republic of China, and the Rules Governing the Air Traffic Management of China Civil Aviation etc.

1.3 General regulations

1.3.1 All aircraft shall be subject to approval in accordance with the relevant provisions of the People's Republic of China for entry into or exit from the FIRs of the People's Republic of China.

1.3.2 The relevant authority of the People's Republic of China has the right to take necessary actions against any aircraft if it flies into or out of the territorial airspace of the People's Republic of China without authorization and order it to land at a designated aerodrome.

1.3.3 When aircraft fly along airways within the FIRs of the People's Republic of China, the Civil Aviation Administration of China shall provide the aircraft with the air traffic control service, flight information service and alerting service.

1.3.4 Where an aircraft in entry into or exit from the FIRs of the People's Republic of China is found in violation of the provisions of subsection ENR 1.1, item 1.1 and item 1.2, the relevant air traffic control department of the People's Republic of China has the right to take actions and order it to make remedial action and, in serious case, to take necessary measures to the extent of forcing it to land at a designated aerodrome.

1.4 ATC operational management

1.4.1 General regulations
a. All aircraft flying within the FIRs of the People's Republic of China are required to operate along the approved airways and at the designated airports.
b. All aircraft shall establish contact with the relevant ATC department of the People's Republic of China on the assigned radio frequencies and accept its control.
Any change in the specified parameters of air navigation shall be filed with the ATC and subject to its approval prior to implementation.

1.4.2 Position reporting

1.4.2.1 航空器飞入或者飞出中华人民共和国飞行情报区必须按照规定的航路飞入或者飞出。飞入或者飞出前 20 至 15 分钟，其机组必须向中华人民共和国有关空中交通管制部门报告，并取得飞入或者飞出领空的许可；未经许可，不得飞入或者飞出。

1.4.2.1 When an aircraft flies into or out of the FIRs of the People's Republic of China, it shall fly on the specified airways. Within a time limit of 15 - 20 minutes before entry or exit, the aircrew of the aircraft shall report to the relevant air traffic control department of the People's Republic of China, and obtain a clearance to fly across the the FIRs boundaries in entry or exit. Without such clearance no aircraft is permitted to make entry into or exit from the FIRs boundaries.

1.4.2.2 航空器飞越规定的位置报告点，应当立即向有关的空中交通管制部门作位置报告。位置报告的内容:
a. 航空器呼号;
b. 位置;
c. 时间;
d. 飞行高度（飞行高度层）和飞行条件;
e. 预计飞越下一位置的时间或者预计到达降落机场的时间;
f. 空中交通管制部门要求的或者机组认为需要报告的其他事项。

1.4.2.2 Aircraft flying over a specified reporting point shall immediately make a position report to the relevant ATC unit. A position report shall contain:
a. Aircraft call sign;
b. Position;
c. Time in hours and minutes;
d. Flight altitude (or flight level) and flight conditions;
e. Estimated time of flying over the next reporting point or estimated time of arrival at the aerodrome of landing;
f. Any other particulars requested by the ATC unit or deemed necessary to be reported by the aircrew.

1.4.2.3 航空器飞越管制区边界前，应向前方管制室报告预计进入时间、飞行高度（飞行高度层）和飞行条件。飞越管制区边界时，应分别向飞离和飞入的区域管制室作位置报告。

1.4.2.3 An aircraft shall report to the next ATC unit prior to crossing the boundaries of controlled areas such information as the expected crossing time, flight altitude (or flight level) and flight conditions. While crossing the boundaries of controlled areas, the aircrew shall make position reports respectively to the controlled ACCs they are entering and leaving.

1.4.3 机场塔台管制区域内的飞行

1.4.3 Flight within aerodrome tower control areas

1.4.3.1 机组自起飞前开车至飞离机场塔台管制区域止，或者自进入机场塔台管制区域起到着陆后关车止，必须同机场塔台空中交通管制员保持无线电通信联络，并严格遵守通信规定。

1.4.3.1 The flight crew shall maintain radio communication with the air traffic controller of the control tower and strictly observe the prescribed communication procedures, from the time of starting aircraft engines for take-off up to the time of leaving the aerodrome tower control area, or from the time of entering the aerodrome tower control area up to the time of stopping aircraft engines after landing.

1.4.3.2 航空器开车，必须经过机场塔台空中交通管制员许可。航空器驾驶员应当在得到开车许可后五分钟内开车；如果不能按时开车，则原开车许可失效，应当重新请求开车许可。

1.4.3.2 Start-up of aircraft engines shall be subject to clearance from the air traffic controller of the control tower. The pilot shall start engines within five minutes after receipt of such clearance. In case he fails to do so, such clearance will become invalid and he shall request anew.

1.4.3.3 航空器滑行（牵引），必须经过机场塔台空中交通管制员许可。滑行或者牵引时，应当遵守下列规定：
a. 按照规定的或者空中交通管制员指定的路线滑行或者牵引；
b. 滑行速度应当按照相应航空器的飞行手册或者飞行员驾驶守则执行；在障碍物附近滑行，速度不得超过每小时 15 千米；
c. 航空器对头相遇，应当各自靠右侧滑行，并且保持必要的安全间隔；航空器交叉相遇，航空器驾驶员从座舱左侧看到另一架航空器时应当停止滑行，主动避让；
d. 两架以上航空器跟进滑行，后航空器不得超越前航空器，后航空器与前航空器的距离，不得小于 50 米；
e. 夜间滑行或者牵引，应当打开航空器上的航行灯；
f. 直升机可以用 1 米至 10 米高度的飞行代替滑行。
水上航空器在滑行或者牵引中，与船只对头或者交叉相遇，应当按照航空器滑行或者牵引时相遇的避让方法避让。

1.4.3.3 Taxiing (towing) of aircraft shall be conducted with permission from the air traffic controller of the control tower and in compliance with the following provisions:
a. An aircraft shall taxi or be towed along the specified route or the route assigned by the air traffic controller;
b. Aircraft, when taxiing, shall comply with the taxi speed restrictions laid down in the corresponding aircraft operations manual or pilot flight rules; the taxiing speed shall not exceed 15 kilometers per hour while taxiing in the proximity of obstructions;
c. When two aircraft are approaching head-on, each shall keep to the right and maintain the required safe separation. When two aircraft are crossing, the pilot who sees the other aircraft on his left shall stop taxiing and give way to the other;
d. When two or more aircraft are taxiing in succession, the succeeding aircraft shall not overtake the preceding one, and the longitudinal separation between them shall not be less than 50 meters;
e. When taxiing or being towed during nighttime, aircraft shall switch on their navigation lights;
f. Helicopters may fly at a height of 1 to 10 meters instead of ground taxiing.
Seaplanes, when approaching head-on or crossing with a ship while taxiing or being towed, shall follow the avoidance procedures as appropriate for such occasions when two aircraft meet.

1.4.3.4 航空器的起飞许可
a. 航空器滑进跑道前，航空器驾驶员应当做好起飞前的检查和准备。经过塔台管制员许可，方可滑进起飞位置。航空器驾驶员得到起飞许可后，应当立即起飞；如果在一分钟内不能起飞时，航空器驾驶员必须再次请求起飞许可。
b. 航空器起飞，应当使用全跑道。只有得到空中交通管制员的许可，方可不使用全跑道。

1.4.3.4 Take-off clearance
a. Before an aircraft taxis into the runway in use, the pilot shall complete his preflight preparations and checks. Taxiing into the take-off position is not allowed until the clearance from the aerodrome tower controller is obtained. An aircraft shall take off at once upon receipt of take-off clearance. If it fails to take off in one minute, the pilot shall request another clearance.
b. When taking off, an aircraft shall commence its take-off run from the take-off position near the runway threshold unless obtaining a clearance from ATC.

1.4.3.5 航空器的着陆许可
航空器进近至机场着陆，应当经过机场塔台空中交通管制员许可。着陆后，应当迅速脱离跑道。

1.4.3.5 Landing clearance
An aircraft may approach to land, only after a clearance has been obtained from the ATC controller of the control tower and shall break away from the runway as soon as the landing is completed.

1.4.3.6 等待
为了便于安排航空器降落的顺序，在航路和机场塔台管制范围的上空划有等待区域。

1.4.3.6 Holding
To facilitate arrangement for aircraft's landing sequence, holding patterns are established along airways and within aerodrome tower control area.

1.4.3.6.1 等待空域的高度层：
8 400 米以下以及 8 900 米至 12 500 米每 300 米为一个等待高度层，12 500 米（不含）以上每 600 米为一个等待高度层。最低等待高度层距离地面最高障碍物的真实高度不得小于 600 米，距离起始进近高度或高不得小于 300 米。

1.4.3.6.1 Levels in holding patterns:
8 400m or below and from 8 900m up to 12 500m, each level is separated by 300m; above 12 500m by 600m. A minimum holding level will at least provide a clearance of 600m above the highest obstacle on the ground and at least 300m higher than the initial approach altitude/height.

1.4.3.6.2 在等待空域内飞行的航空器，必须按照管制员的管制指令，严格保持在规定的等待空域内并在指定的高度层飞行。

1.4.3.6.2 An aircraft in a holding pattern shall comply with the instructions issued by the air traffic controller to fly strictly at a designated flight level and within designated holding pattern.

1.4.3.7 进、离场飞行
航空器起飞后在机场塔台管制区域内的上升，降落前在机场塔台管制区域内的下降，都应当根据机场塔台或进近管制室管制员的指令，按标准进离场程序飞行。

1.4.3.7 Arrival and departure flights
Climb after take-off or descent before landing within an aerodrome tower control area shall be carried out in accordance with the instructions from the air traffic controller of the control tower or approach control office, and in compliance with the standard instrument arrival and departure procedures.

1.5 通信与联络

1.5.1 所有按照仪表飞行规则或目视飞行规则飞行的航空器，都应当配备必需的通信导航设备，以保证其能够与相关空中交通管制部门保持不间断的通信联络。

1.5 Communication and contact

1.5.1 All aircraft operating under IFR or VFR shall be equipped with the necessary communication and navigation equipment in order to ensure uninterrupted liaison with the relevant ATC department.

1.5.2 航空器与空中交通管制员之间的无线电通话使用英语或汉语，并执行中国民用航空局规定的通话用语标准。

1.5.2 Aircraft and ATC unit shall establish radio communication contact in English or Chinese, and shall abide by the standard phraseology specified in the CAAC's Radiotelephony Communications for Air Traffic Services.

1.5.3 当航空器无线电通信设备发生故障时，应当及时向空中交通管制部门报告，并按照空中交通管制部门发布的程序及《辅助指挥、联络的符号和信号》（详见表 1.1-1、 1.1-2）中的规定执行。

1.5.3 In the event of failure of aircraft radio communication equipment, the pilot shall duly report this to ATC unit and comply with the procedures issued by ATC and the provisions specified in appendix (1) (2) "Symbols and Signals for Auxiliary Command and Liaison" (see Table 1.1-1, 1.1-2).

1.6 起飞和着陆的尾流间隔

1.6.1 起飞间隔
a. 航空器起飞时，后面航空器应当与前面航空器保持安全的时间间隔，以防止后面航空器受前面航空器尾流的影响。
b. 使用同一跑道或者间隔小于 760 米的平行跑道、交叉跑道以及预计起飞后航迹交叉的跑道起飞，最小时间间隔如下：

1.6 Wake turbulence separation minima for take-off and landing

1.6.1 Take-off separation minima
a. When an aircraft takes off behind another aircraft, a safe time separation shall be maintained between them, so as to avoid the effect of wake turbulence.
b. For aircraft taking off from the same runway, or parallel runways with a separation of less than 760m, intersecting runways or the runways from which the flight tracks may be expected to cross each other after taking off, the minimum time separations are as follows:

前面航空器 preceding aircraft	重型 heavy	重型 heavy	重型 heavy	中型 medium	中型 medium	中型 medium
后面航空器 succeeding aircraft	重型 heavy	中型 medium	轻型 light	重型 heavy	中型 medium	轻型 light
间隔 separation	2 分钟 2min	2 分钟 2min	3 分钟 3min	2 分钟 2min	2 分钟 2min	2 分钟 2min

注：重型航空器：起飞全重大于 136 吨；
中型航空器：起飞全重 7-136 吨；
轻型航空器：起飞全重等于或者小于 7 吨。

Note: Heavy aircraft is an aircraft with all-up weight of greater than 136 tonnes;
Medium aircraft, with all-up weight of 7-136 tonnes;
Light aircraft, with all-up weight of 7 tonnes or less.

c. 前面起飞的航空器与后面着陆的航空器之间的时间间隔，按照起飞间隔的规定执行。
d. 在正侧风风速大于 3 米 / 秒时，起飞的时间间隔不少于一分半钟。

c. Take-off separation minima shall be applied between the preceding aircraft, which is taking off, and the succeeding aircraft, which is landing.
d. When a 90-degree crosswind exceeds 3m/sec, the time separation for take-off shall not be less than one and a half minutes.

1.6.2 着陆间隔

a. 航空器着陆时，后面航空器应当与前面航空器保持安 全的时间间隔，以防止后面航空器受前面航空器尾流的影响。

b. 使用同一跑道或间隔小于 760 米的平行跑道，进近着陆的最小时间间隔：

1.6.2 Landing separation minima

a. When an aircraft lands behind another aircraft, a safe time separation shall be maintained between them, so as to avoid the effect of wake turbulence.

b. For aircraft approaching to land on the same runway or parallel runways with a separation of less than 760m, the minimum time separations are as follows:

前面航空器 preceding aircraft	重型 heavy	重型 heavy	重型 heavy	中型 medium	中型 medium	中型 medium
后面航空器 succeeding aircraft	重型 heavy	中型 medium	轻型 light	重型 heavy	中型 medium	轻型 light
间隔 separation	2 分钟 2min	3 分钟 3min	4 分钟 4min	2 分钟 2min	2 分钟 2min	3 分钟 3min

注：航空器的分类见 ENR 1.1 第 1.6.1 款 b。

Note: Categories of aircraft, see subsection ENR 1.1, item 1.6.1.b.

c. 在正侧风大于 3 米 / 秒时，着陆的时间间隔不少于一分半钟。

c. When a 90-degree crosswind exceeds 3m/sec, the time separation between landings shall not be less than one and a half minutes.

2. 最低飞行高度

见 GEN 3.3 第 5 款。

2. Minimum flight altitude

See subsection GEN 3.3, item 5.

3. 物品的投掷

3.1 除在有关当局规定的条件下，并经有关空中交通服务部门以有关的资料、通知或许可予以指明，不得从飞行中的航空器上进行空投物品或者喷洒液体。

3.2 航空器在飞行中，不得向下投掷或者任其坠下能传播传染病的任何物品。

3. Dropping of objects

3.1 Nothing shall be dropped or sprayed from an aircraft in flight except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services department.

3.2 No articles capable of causing a communicable disease shall be thrown out or allowed to fall from an aircraft when it is in flight.

4. 特技飞行

除在有关当局规定的条件下，并经有关空中交通服务部门以有关的资料、通知或许可予以指明，航空器不得作特技飞行。

4. Acrobatic flight

No aircraft shall be flown acrobatically except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services department.

5. 拖曳和广告飞行

除在有关当局规定的条件下，并经有关空中交通服务部门以有关的资料、通知或许可予以指明，航空器不得拖曳航空器或者其他物件。

5. Towing and advertising flights

No aircraft or other object shall be towed by an aircraft, except in accordance with requirements prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic service department.

6. 时间和计量单位

航空器在中国境内飞行均使用协调世界时和公制计量单位。必要时，可以提供英制计量单位供航空器驾驶员参考。

6. Times and units of measurement

Coordinated Universal Time and Metric System shall be used within the territory of the People's Republic of China. When necessary, the British System Measurement Units may be provided to pilots for reference .

7. 空域结构

7.1 为提供飞行情报服务和告警服务，中国民用航空局划设了飞行情报区，具体内容参见 ENR 2。

7.2 为提供空中交通管制服务，中国民用航空局在飞行情报区内划设了管制区域、管制地带。

7. Airspace structure

7.1 For the provision of flight information service and alerting service, the Civil Aviation Administration of China has established flight information regions, which are published in the section ENR 2.

7.2 For the provision of air traffic control service, the Civil Aviation Administration of China has established control areas and control zones within the Flight Information Regions.

8. 空中禁区和飞行限制区

8.1 为了防止对公众安全和秩序造成损害，特别是出于对飞行安全的考虑，在必要的情况下，划设空中禁区、空中限制区和空中危险区。这些区域在航行资料汇编中公布。

8.2 航空器在飞行中，无论在任何情况下，均不准飞入划定的空中禁区。中国民用航空局对飞入空中禁区的航空器驾驶员，将给予严肃处理，并且对该航空器飞入空中禁区所产生的一切后果，不负任何责任。

8.3 航空器必须遵守限制区的各项限制，避免发生危险影响飞行安全。

8.4 在危险区有活动期间，航空器均不准进入危险区，以免发生危险影响飞行安全。

8. Prohibited areas and flight restricted areas

8.1 Prohibited areas, restricted areas and danger areas are established, if necessary, for the prevention of harm to public safety or order, especially for the safety of air traffic. Such areas that have already been established are published in the AIP.

8.2 Under no circumstances, shall an aircraft enter a prohibited area. The Civil Aviation Administration of China will take serious disciplinary measures against the pilot of the aircraft entering such prohibited area and will take no responsibility for whatever consequences that may occur therefrom to the aircraft.

8.3 An aircraft shall obey various restrictions in connection with restricted areas, so as to avoid dangerous situation that may affect flight safety.

8.4 During the period of activation of a danger area, an aircraft shall not enter the area, so as to avoid dangerous situation that may affect flight safety.

9. 跳伞

除在有关当局规定的条件下，并经有关空中交通服务部门以有关的资料、通知或许可予以指明外，不得进行跳伞活动。紧急情况下需要跳伞除外。

9. Parachute jumping

Parachute jumping, other than emergency parachute jumping, shall not be made except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services department.

10. 滑翔机的云中飞行

（待定）

10. Cloud flights with gliders

(to be developed)

11. 气球、风筝、自我驱动的飞行模型和飞行物的放飞

（待定）

11. Ascents of balloons, kites, self-propelled flying models and flying bodies

(to be developed)

表 1.1-1 辅助指挥、联络的符号和信号 (1)
Table 1.1-1 SYMBOLS AND SIGNALS FOR AUXILIARY COMMAND AND LIAISON (1)

顺序 Nr.	含义 Meaning	昼间 Day Time	夜间 Night Time
1	请求起飞 Request take-off	飞行员向上举手 Pilot arm up	闪烁航行灯 Flashing navigational lights
2	允许起飞 Cleared for take-off	用白色信号旗向上指，然后指向起飞方向。 White flag up, then pointing to the take-off direction	打开绿色信号灯 Switching on green signal lights
3	禁止起飞（或者滑行） Do not take off(or taxi)	用红色信号旗向上指或者向航空器前方发射红色信号弹 Red flag up or firing red signal cartridge ahead of the aircraft	打开红色信号灯或者向航空器前方发射红色信号弹 Switching on red signal lights or firing red signal cartridge ahead of the aircraft
4	请求着陆 Request landing	航空器通过跑道上空并且摇摆航空器 Flying over the runway and rocking the aircraft	航空器通过跑道上空并且闪烁航行灯或者打开着陆灯 Flying over the runway and flashing the navigational lights or switching on landing lights
5	允许着陆 Cleared to land	着陆地带铺设“T”字布或者发射绿色信号弹 Laying a "T" sign cloth at the touchdown zone or firing green signal cartridge.	打开“T”字灯或者发射绿色信号弹 Switching on "T" light or firing green signal cartridge.
6	禁止着陆 Do not land	将“T”字布摆成“十”字形或者发射红色信号弹 Displaying a "+" sign instead of "T" sign cloth or firing red signal cartridge.	将“T”字灯改成“十”字形或者发射红色信号弹 Displaying a "+" light instead of "T" light or firing red signal cartridge.
7	命令全部飞机立即降落 All aircraft are ordered to land immediately	在“T”字布前 5 米处与横布平行放一横布 Laying a lateral cloth 5m beyond the "T" sign cloth.	连续发射绿色信号弹 Firing green signal cartridge continually.
8	请求立即强迫着陆 Request immediate forced landing	航空器通过跑道上空并且发出一颗或者数颗信号弹 Flying over the runway and firing one or several signal cartridge.	航空器通过跑道上空并且发出一颗或者数颗信号弹 Flying over the runway by the aircraft and firing one or several signal cartridge.
9	命令在备降机场着陆 Order to land at the alternate aerodrome.	在“T”字布位置摆一箭头式布，箭头指向备降机场 Laying an arrow-like cloth at the position of the "T" sign cloth with the arrowhead towards the alternate aerodrome.	在“T”字灯位置摆一箭头式灯光，箭头指向备降机场 Laying an arrow-like light at the position of "T" light with the arrowhead towards the alternate aerodrome.
10	命令在迫降地带着陆 Order to land at a forced landing strip.	将“T”字布摆在迫降地带 Displaying a "T" sign cloth at the forced landing strip.	关闭“T”字灯，用探照灯照射迫降地带 Switching off the "T" light and illuminating the forced landing strip with the searchlight.
11	在机场上空做右起落航线飞行 Make right-hand circuit over the aerodrome	在“T”字布前五米处用布摆一个三角形 Laying a cloth triangle 5m before the "T" sign cloth.	在“T”字灯前五米处用灯光摆一个三角形 Laying a lighting triangle 5m before the "T" light.

12	起落架未放下 Landing gear not down	将 “T” 字布分开五米或者发射红色信号弹 Separating the "T" sign cloth 5m longitudinally apart or firing red signal cartridge.	将 “T” 字灯分开五米或者发射红色信号弹 Separating the "T" light 5m longitudinally apart or firing red signal cartridge.
13	右起落架故障 Right landing gear out of order	将 “T” 字布横布右端折起 Folding the lateral right end of the "T" sign cloth.	
14	左起落架故障 Left landing gear out of order	将 “T” 字布横布左端折起 Folding the lateral left end of the "T" sign cloth	
15	前起落架故障 Nose landing gear out of order	在 “T” 字布前 , 纵布延长线上 10 米处 , 平行跑道铺设一纵布 Laying a longitudinal cloth parallel to the runway, 10m before the "T" sign cloth and right on its extended longitudinal center line.	
备注 : “T” 字布的尺寸 : 纵布的长度为 12 米 , 宽度为 2 米 ; 横布及辅助布的长度为 9 米 , 宽度为 2 米 ; “T” 字布的颜色 : 地面有雪用红色或者黑色 , 没有雪用白色。 Note: Size of the "T" sign cloth: The longitudinal cloth is 12m in length, 2m in width; the lateral cloth and its auxiliaries are 9m in length and 2m in width. The colour of the "T" sign cloth: Red or black if the ground is snow-covered; white if not snow-covered.			

表 1.1-2 辅助指挥、联络的符号和信号 (2)
Table 1.1-2 SYMBOLS AND SIGNALS FOR AUXILIARY COMMAND AND LIAISON (2)

序号 Nr.	信号类别 Types of signals	信号含义 Meanings of signals	
		飞行中的航空器 Aircraft in flight	地面上的航空器 Aircraft on ground
1	绿色灯光指向航空器 Green light directed to the aircraft	可以着陆 Cleared to land	可以起飞 Cleared to take off
2	红色灯光指向航空器 Red light directed to the aircraft	避让其他航空器并继续盘旋 Giving way to other aircraft and keeping on circling	停止 Stop
3	一连串绿色闪光指向航空器 Series of green flashing light directed to the aircraft	返回着陆 Turning back for landing	可以滑行 cleared to taxi
4	一连串红色闪光指向航空器 Series of red flashing lights directed to the aircraft	机场不安全 , 不要着陆 Aerodrome is unsafe. Do not land	滑离起飞滑跑位置 Taxi away from the take-off position
5	一连串白色闪光指向航空器 Series of white flashing light directed to the aircraft	在此机场着陆并滑行到停机坪 Land at this aerodrome and taxi to the apron	滑回起飞滑跑位置 Taxi back to the take-off position
6	红色信号弹 Red signal cartridge	暂不要着陆 Do not land for the moment	

ENR 1.2 目视飞行规则

1. 实施目视飞行时，航空器驾驶员必须加强空中观察。航空器应当与云保持一定的水平距离和垂直距离。目视飞行时，航空器驾驶员对保持航空器之间的间隔和航空器距地面障碍物的安全高度是否正确负责。

2. 航空器按照目视飞行规则飞行，包括按照目视飞行规则在飞行高度 6 000 米（不含）以上和作跨音速或者超音速飞行，以及飞行高度 3 000 米（不含）以下且指示空速大于 450 千米 / 小时飞行时，应当经空中交通管制部门批准。

3. 航空器按照目视飞行规则飞行应当符合以下气象条件: 航空器与云的水平距离不得小于 1 500 米，垂直距离不得小于 300 米；高度 3 000 米（含）以上，能见度不得小于 8 千米，高度 3 000 米以下，能见度不得小于 5 千米。

4. 目视飞行安全间隔
在同一航线、同一高度飞行时，巡航表速 250 千米 / 小时以下的航空器，航空器之间的间隔不得小于 2 000 米，巡航表速 250 千米 / 小时（含）以上的航空器，航空器之间的间隔不得小于 5 000 米。

5. 起落航线

5.1 机场的起落航线通常为左航线；若因地形、城市等条件的限制，或者为避免同邻近机场的起落航线交叉，也可以为右航线。
进行起落航线飞行时，禁止超越同型航空器；各航空器之间的距离，一般应当保持在 1 500 米以上；经空中交通管制员许可，速度大的航空器可以在第三转弯前超越速度小的航空器，超越时应当从前航空器的外侧超越，其间隔不得小于 200 米。除必须立即降落的航空器外，任何航空器不得从内侧超越前航空器。

5.2 通常情况下，准备起飞的航空器，在起落航线第四转弯后无其他航空器进入着陆时，经空中交通管制员许可，方可滑进跑道；跑道上无障碍物，方准起飞。
航空器起飞、着陆时，后航空器应当与前航空器保持规定的安全间隔。

ENR 1.2 VISUAL FLIGHT RULES

1. In visual flight, a pilot shall keep a vigilant watch. Aircraft shall maintain a certain vertical and horizontal distances from the clouds. When an aircraft is operating under VFR, the pilot shall be responsible for the correct maintenance of separation between aircraft as well as the safe altitude of the aircraft from ground obstacles.

2. Flights of aircraft in accordance with visual flight rules, including transonic or supersonic flights in accordance with visual flight rules above 6 000m (exclusive), and flights in accordance with visual flight rules at an indicated airspeed greater than 450km/h below 3 000m (exclusive), are subject to approval by the air traffic control unit.

3. Aircraft operating under VFR shall meet the following meteorological conditions: the horizontal distance and vertical distance between aircraft and clouds shall not be less than 1 500m and 300m respectively; for flights at 3 000m or above, visibility shall not be less than 8km, while for flights below 3 000m visibility shall not be less than 5km.

4. Visual flight safety separation
The separation between aircraft operating on the same track and at same altitude shall not be less than:
a. 2 000m when aircraft cruising indicated airspeeds are less than 250km/h; or
b. 5 000m when aircraft cruising indicated airspeeds are 250km/h or above.

5. Traffic circuit

5.1 An aerodrome traffic circuit is normally a left-hand one. It may, however, be a right-hand traffic circuit if it is constrained by the conditions of terrain or city location or if it is to avoid crossing with the traffic circuit of adjacent aerodrome.
An aircraft on traffic circuit is forbidden to overtake another aircraft of the same type. Aircraft shall maintain a minimum separation of 1 500m between them on the same traffic circuit. However, aircraft of higher speed may, with the clearance of the air traffic controller, overtake another of lower speed from the outer side before base-turn while maintaining a minimum lateral separation of 200m. No aircraft shall overtake the preceding one from the inner side unless an immediate landing is imminent.

5.2 Under normal conditions, an aircraft intending to depart shall enter the runway when there is no other aircraft on the final leg of the traffic circuit and clearance has been obtained from the air traffic controller, and shall not take off unless the runway is free from obstacles.
Succeeding aircraft shall maintain the specified safety separation from the proceeding aircraft during take-off or landing.

ENR 1.3 仪表飞行规则

1. 航空器在仪表气象条件 (低于 ENR 1.2 目视气象条件) 下飞行，云层、云上目视气象条件下飞行，高度 6 000 米以上飞行，都必须按照仪表飞行的规定飞行。

2. 按仪表飞行规则飞行时，应当遵守下列规定:
a. 航空器在指定空域内和仪表进近过程中，必须保持规定的高度，按照仪表进近程序图规定的航线飞行;
b. 进、离机场塔台管制区域的航空器，必须按照标准仪表进、离场图的规定，在指定的高度上飞行;
c. 在航线上飞行的航空器，必须保持规定的航线、高度层和速度。

3. 仪表飞行规则飞行时，空中交通管制员对航空器之间的间隔和高度层配备是否正确负责。

ENR 1.3 INSTRUMENT FLIGHT RULES

1. IFR flights are compulsory for an aircraft operating under any of the following conditions:
a. In IMC (below VMC stated in ENR 1.2)
b. Between layers;
c. "VMC-on-top";
d. Above 6 000m.

2. An aircraft operating under IFR shall comply with the following provisions:
a. During instrument approach, an aircraft operating within the specified airspace shall maintain the assigned level and fly along the route specified in the instrument approach chart;
b. An aircraft entering or leaving the aerodrome tower control area shall operate at the altitude assigned in the standard arrival chart or standard departure chart concerned;
c. An aircraft operating en-route shall maintain the assigned route, flight level and the specified speed.

3. When an aircraft is operating under IFR, the air traffic controller is responsible for correct separation and flight level assigned to that aircraft.

ENR 1.4 空中交通服务空域分类

ENR 1.4 ATS AIRSPACE CLASSIFICATION

（待定）

(to be developed)

ENR 1.5 等待、进近和离场程序

中华人民共和国航行资料汇编中公布的机场等待、进近和离场程序设计准则采用国际民用航空组织8168文件－ OPS/611（PANS － OPS）第二卷的有关规定。差异载于 GEN 1.7。

机场等待、仪表进近和离场程序见第三部分 - 机场（AD）。

ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

The designed criteria of holding, approach and departure procedures on aerodromes published in AIP China are based on the relevant rules contained in volume II, ICAO DOC8168-OPS/611(PANS-OPS). The differences are detailed in subsection GEN 1.7.

The holding, instrument approach and departure procedures on aerodromes, are detailed in Part III-Aerodrome (AD).

ENR1.6 雷达服务和程序

ENR1.6 RADAR SERVICES AND PROCEDURES

1. 雷达服务的一般规定

1.1 雷达服务单位为经过雷达识别的航空器提供雷达管制服务。

1.2 雷达管制间隔

区域管制最小雷达间隔为 10 千米；进近管制最小雷达间隔为 6 千米。

注：空中交通管制单位在区域部分航路上或进近范围实施雷达监控条件下的程序管制。

1.3 雷达服务终止时应当通知航空器，但在下列情况下可不必通报：

-航空器改为目视飞行；

-航空器已经着陆，或已经按指令转换到其它频率上。

1.4 使用雷达提供飞行情报服务时，不解除航空器驾驶员的任何责任，航空器驾驶员仍有最后的决定权。

2. 紧急情况

1. General procedures for radar services

1.1 Radar services unit will provide radar control services to radar-identified aircraft.

1.2 Separations for radar control

The minimum radar separations in control area are 10km and 6km in Approach Control Area.

Note: The air traffic control unit may implement procedural control supplemented by radar monitoring on some routes in CTA or some approach areas.

1.3 When radar service is terminated, the radar controller shall inform the aircraft concerned except when:

-Aircraft converts to VFR;

-Aircraft has landed or switched to another frequency.

1.4 The provision of flight information service by means of radar will in no way relieve a pilot from any responsibility; in other words, the final decision still rests with the pilot.

2. Emergency procedure

2.1 雷达失效或失去雷达识别时，雷达管制员通知被识别的航空器恢复非雷达管制。航空器驾驶员须恢复相应的位置报告。

2.1 In the event of radar failure or loss of radar identification, the radar controller shall notify the identified aircraft to return to non-radar control separation. The pilot shall accordingly resume making position reports.

2.2 航空器无线电失效时，雷达管制员应在原用频率上，指示航空器作一指定动作以表示收到指示并观察航空器航迹，以确定航空器无线电接收设备是否仍能工作。

2.2 In the event of aircraft radio failure, the radar controller shall determine whether or not the aircraft radio equipment is still functioning by instructing the aircraft on the frequency so far used to acknowledge receipt of instructions by making a specified maneuver and, in the meantime, the radar controller shall observe the aircraft's track.

2.3 如果航空器驾驶员确认航空器无线电接收机失效时，应将应答机调为模式 A、编码 7600，并将飞行意图通过盲目发射通知空中交通管制单位。

2.3 When the failure of aircraft radio receiver has been determined, the setting of the transponder shall be adjusted to Mode A, Code 7600, and the relevant ATC unit shall thereafter be notified of the pilot's intentions by the use of blind transmissions.

2.4 遇有非法干扰时，航空器驾驶员应将应答机调为模式 A、编码 7500。

2.4 In the event of unlawful interference, pilot shall set the transponder to Mode A, Code 7500.

2.5 遇有其它紧急情况时，航空器驾驶员应将应答机调为模式 A、编码 7700。

2.5 When encountering other emergency conditions in flight, pilot shall set the transponder to Mode A, Code 7700.

2.6 雷达失效时，由雷达间隔转为非雷达间隔时，紧急情况下 8 400 米以下可采用半数高度层（半数高度层为 150 米）调配高度间隔，但应当尽早配备规定

2.6 During an emergency situation of radar failure, when the applicable separation is changing from radar separation to non-radar separation, emergency

的高度层。

separation of half the applicable vertical separation minimum, 150m, may be used at 8 400m and below, but the applicable vertical separation minimum shall be resumed as soon as possible.

3. 目前，在下列管制空域和航路实施雷达管制，在其他管制空域实施程序管制或雷达监控下的程序管制。

3. Radar control service is provided in the following control areas and routes, and procedural control service is provided in the others except for some routes and segments under procedural control supplemented by radar monitoring.

管制空域 Controlled Airspace	上限/下限(米) Upper/Lower limits(m)	航空器最小水平雷达管制间隔(千米) The minimum horizontal radar separation(km)
北京终端管制区 Beijing TMA	6 000/GND	6
北京管制区 01、07-11、23、24 号扇区 Beijing CTA AR01，AR07-11，AR23，AR24	12 500/7 800(exclusive)	10
北京管制区 02-06、12、17-22 号扇区 Beijing CTA AR02-06，AR12，AR17-22	12 500/GND	
北京管制区 13、15 号扇区 Beijing CTA AR13，AR15	8 400/GND	
北京管制区 14、16 号扇区 Beijing CTA AR14，AR16	12 500/8 400(exclusive)	
北京管制区 25、27、29 号扇区	12 500/9 800(exclusive)	

Beijing CTA AR25，AR27，AR29		
北京管制区 26、28、30、31 号扇区 Beijing CTA AR26，AR28，AR30，AR31	9 800/7 800(exclusive)	
长春进近管制区 Changchun APP Area	6 000/GND	5.6
长沙进近管制区 Changsha APP Area	5 100/600(exclusive)	6
长沙管制区 Changsha CTA	7 800/3 600	10
成都进近管制区 Chengdu APP Area	6 000(exclusive)/GND	6
成都管制区（03 号扇区除外） Chengdu CTA (exclusive AR03)	12 500/GND	10
重庆进近管制区 Chongqing APP Area	6 000(exclusive)/GND	6
大连进近管制区 Dalian APP Area	6 000/GND	5.6
大连管制区 Dalian CTA	12 500/GND	9.3
福州进近管制区 Fuzhou APP Area	6 000/GND	6
广州进近管制区 Guangzhou APP Area	6 000/GND	6
广州管制区 01-06、29、30、33、34 号扇区 Guangzhou CTA AR01-06,29,30,33,34	12 500/3 000	10
广州管制区 08 号扇区 Guangzhou CTA AR08	12 500/4 500(exclusive)	
广州管制区 12、15-17、31、32、36 号扇区 Guangzhou CTA AR12,	12 500/7 800(exclusive)	

15-17,31,32,36		
广州管制区 13 号扇区 Guangzhou CTA AR13	9 500/7 800(exclusive)	
广州管制区 11、14 号扇区 Guangzhou CTA AR11, AR14	12 500/9 500(exclusive)	
广州管制区 22 号扇区 Guangzhou CTA AR22	9 500(exclusive)/ 7 800(exclusive)	
桂林进近管制区 Guilin APP Area	6 000/GND	6
贵阳进近管制区 Guiyang APP Area	6 000/GND	6
贵阳管制区 Guiyang CTA	7 800/GND	10
海口进近管制区 Haikou APP Area	7 200/GND	6
海拉尔管制区 Hailar CTA (within a 300km radius around the Hailar'HLD')	12 500/GND	10
杭州进近管制区 Hangzhou APP Area	6 000/GND	6
哈尔滨进近管制区 Harbin APP Area	6 000/GND	5.6
哈尔滨管制区 Harbin CTA (within a 350km radius around the Harbin airport ARP)	9 800(exclusive)/GND	9.3
合肥进近管制区 Hefei APP Area	6 000/GND	6
合肥管制区 Hefei CTA	7 800/3 600	10
呼和浩特进近管制区 Hohhot APP Area	4800/GND	6
呼和浩特管制区 Hohhot CTA	7 800/GND	10
济南进近管制区 Jinan APP Area	6 000/GND	6

济南管制区 Jinan CTA	12 500/1 500	10
昆明进近管制区 01、02 号扇区 Kunming APP AreaAP01，AP02	4 500/GND	6
昆明进近管制区 03-06 号扇区 Kunming APP AreaAP03-06	7 800/GND	
昆明进近管制区 07、08 号扇区 Kunming APP AreaAP07，AP08	4 200/GND	
昆明管制区 Kunming CTA	12 500/GND	10
兰州进近管制区 01、02、03 号扇区 Lanzhou APP AreaAP01-03	6 000/5100(exclusive)	6
兰州进近管制区 04、05 号扇区 Lanzhou APP AreaAP04，AP05	5100/GND	
兰州管制区 Lanzhou CTA	12 500/GND	10
南昌进近管制区 Nanchang APP Area	6 000/GND	6
南昌管制区 Nanchang CTA	7 800/1 800	10
南京进近管制区 Nanjing APP Area	6 000/GND	6
南宁进近管制区 Nanning APP Area	6 000/GND	6
南宁管制区 01-06 号扇区 Nanning CTA AR01-06	12 500/3 000	10
南宁管制区 08、09 号扇区 Nanning CTA AR08, AR09	7 800/GND	
宁波进近管制区 Ningbo APP Area	4 200/GND	6
青岛进近管制区 Qingdao APP Area	6 000/GND	6
青岛管制区 Qingdao CTA	12 500/3 600	10
三亚进近管制区 01 号扇区	3 000/GND	6

Sanya APP Area AP01		
三亚进近管制区 02 号扇区 Sanya APP Area AP02	6 000/GND	
三亚管制区 01 号扇区 Sanya CTA AR01	12 500/9200(exclusive)	10
三亚管制区 02、03 号扇区 Sanya CTA AR02, AR03	12 500/4 000	
三亚管制区 04 号扇区 Sanya CTA AR04	9 200/7 200(exclusive) (north of N1915)	
	9 200/6 000(exclusive) (south of N1915)	
三亚管制区 11 号扇区 Sanya CTA AR11	12 500/7 800(exclusive)	
三亚管制区 12 号扇区 Sanya CTA AR12	12 500/8 900(exclusive)	
上海进近管制区 Shanghai APP Area	6 000/GND	6
上海管制区 01、06、16、19、21、31、36 号扇区 Shanghai CTA AR01，AR06，AR16，AR19，AR21，AR31，AR36	12 500/6 000(exclusive)	10
上海管制区 02-05、07、08、15、24、26、27、32、33 号扇区 (不包括 A326 航路 DOPNO-IKADI 航段 7800 米不含以下， IKADI-N32°32′56″E123°29′20″7200 米不含以下， N32°32′56″E123°29′20″-APITO 航段 6600 米不含以下)	12 500/3 000	

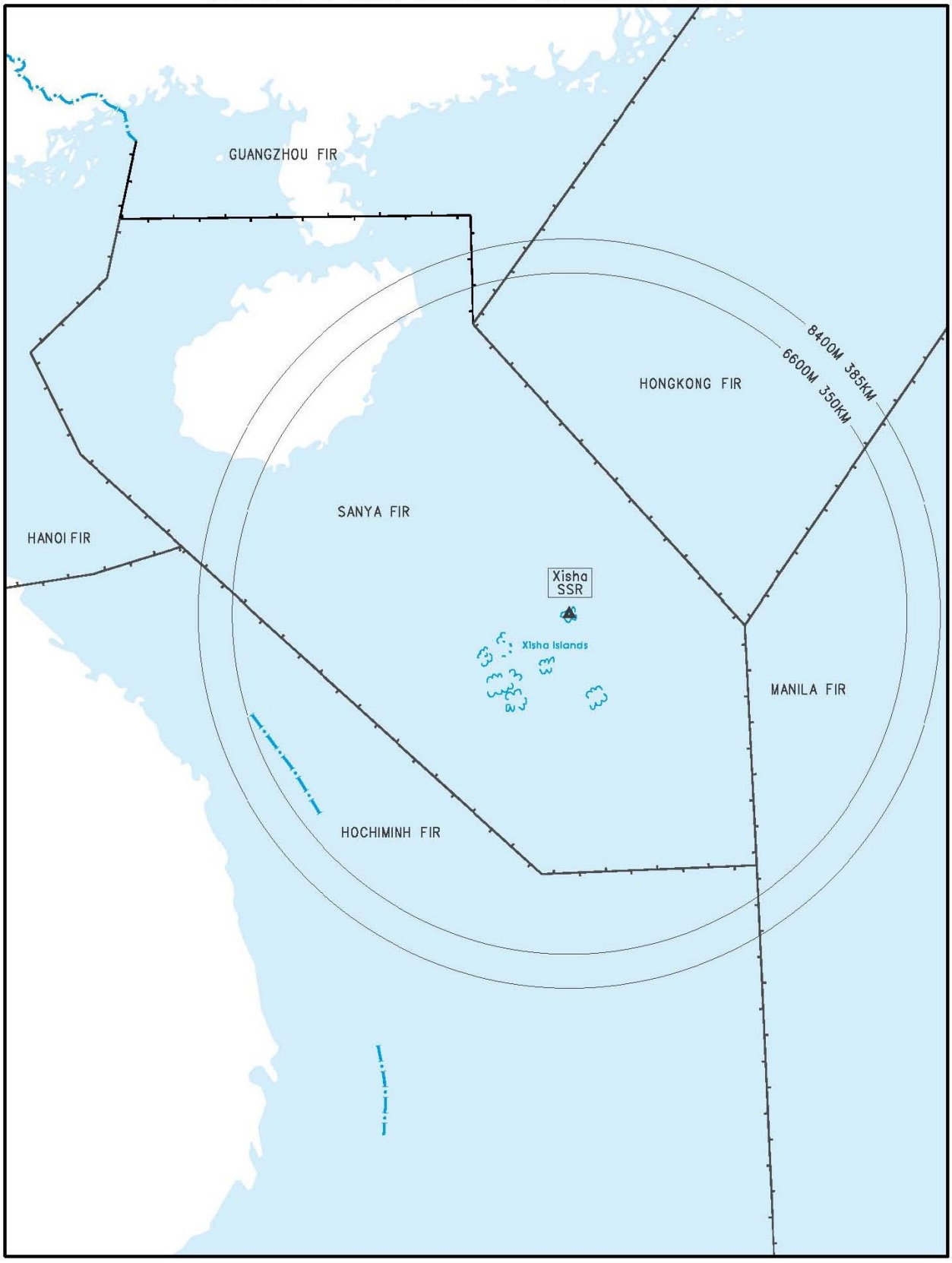
Shanghai CTAAR02-05，AR07，AR08，AR15，AR24，AR26，AR27，AR32，AR33 (exclude segments DOPNO-IKADI 7800m below， IKADI-N32°32′56″E123°29′20″ 7200m below， N32°32′56″E123°29′20″-APITO 6600m below on A326)		
上海管制区 09-13、17、20、22、23、25、29、30、34、35 号扇区 Shanghai CTA AR09-13，AR17，AR20，AR22，AR23，AR25，AR29，AR30，AR34，AR35	12 500/7 800(exclusive)	
上海管制区 14 号扇区 Shanghai CTA AR14	7 800/3 000	
上海管制区 18 号扇区 Shanghai CTA AR18	9 800(exclusive)/3 000	
上海管制区 28 号扇区 Shanghai CTA AR28	12 500/9 800	
汕头进近管制区 Shantou APP Area	4 500/GND	6
沈阳进近管制区 01、02 号扇区 Shenyang APP Area AP01，AP02	6 000/2 400	5.6
沈阳进近管制区 03 号扇区 Shenyang APP Area AP03	2 400/900	
沈阳管制区 01、03、04、06、07 号扇区 Shenyang CTA	9 800(exclusive)/3 600	9.3

AR01,AR03,AR04,AR06,AR07		
沈阳管制区 02、05 号扇区 Shenyang CTA AR02,AR05	12 500/3 600	
沈阳管制区 08、09、12-14 号扇区 Shenyang CTA AR08,AR09,AR12-14	12 500/9 800	
石家庄进近管制区 Shijiazhuang APP Area	3 600/GND	6
太原进近管制区 Taiyuan APP Area	4 500/GND	6
太原管制区 01、04 号扇区 Taiyuan CTA AR01，AR04	7 800/6 000(exclusive)	10
太原管制区 02、03 号扇区 Taiyuan CTA AR02，AR03	7 800/GND	
太原管制区 05 号扇区 Taiyuan CTA AR05	6 000/GND	
天津进近管制区 Tianjin APP Area	4 500/GND	6
温州进近管制区 Wenzhou APP Area	6 000/GND	6
乌鲁木齐进近管制区 Urumqi APP Area	6 000/GND	5.6
乌鲁木齐管制区 Urumqi CTA	12 500/GND	9.3
无锡进近管制区 Wuxi APP Area	3 000/GND	10
武汉进近管制区 Wuhan APP Area	6 000/GND	6
武汉管制区 Wuhan CTA	7 800/4 500	10
厦门进近管制区 Xiamen APP Area	5 400/GND	6
厦门管制区 Xiamen CTA	7 800/GND	10
西安进近管制区 Xi’an APP Area	6 000/GND	6
西安管制区 Xi’an CTA	12 500/5 100	10
西宁进近管制区 01 号扇区 Xining	6 000/5 100(exclusive)	6

APP Area AP01		
西宁进近管制区 02、03 号扇区 Xining APP Area AP02，AP03	5 100/GND	
烟台进近管制区 Yantai APP Area	3 600/GND	12
银川进近管制区 Yinchuan APP Area	6 000/GND	6
湛江区域 01、03 号扇区 ZGZJAR01/03	7 800/GND	10
湛江区域 02 号扇区 ZGZJAR02	8 900/GND	10
郑州进近管制区 Zhengzhou APP Area	5 700/GND	6
郑州管制区 Zhengzhou CTA	12 500/4 500	10
珠海终端区 Zhuhai TMA	4 500/GND	6

航路代号 Route designator	航段 Segments	上限/下限(米) Upper/Lower limits(m)	航空器最小水平雷达管制间隔(千米) The minimum horizontal radar separation(km)
A581	Liupanshui VOR-Huayuan VOR	12 500/8 400	20
B330	IDSEG-ELKAL	12 500/4 800	20
G212	TUTNA-SUBUL	12 500/5 100	10
	ARGUK-OTABO	12 500/5700(exclusive)	10
R213	MAGIT-Jiamusi VOR	12 500/5700(exclusive)	10
R473	Liling VOR-Wengyuan VOR	12 500/GND	20

西沙二次监视雷达覆盖图
COVERAGE OF XISHA SECONDARY SURVEILLANCE RADAR



ENR 1.7 高度表拔正程序

ENR 1.7 ALTIMETER SETTING PROCEDURES

1. 介绍

中国高度表拔正程序基本与国际民用航空组织 8168 文件第一卷第六部分相一致，详见以下规定。
仪表进近图、仪表进场图和仪表离场图提供过渡高度或过渡高和过渡高度层。
用以确定足够地形超障高度的机场修正海平面气压 (QNH) 或机场场面气压 (QFE) 报告和温度通过气象广播提供，并可向空中交通服务单位申请得到。QNH 或 QFE 值的单位为百帕。

1. Briefing

China's altimeter setting procedures in use basically conform to those contained in ICAO Doc 8168, Vol. I, Part 6, with details as follows:
Transition altitudes or transition heights and transition levels are given on the instrument approach charts and STAR/SID charts. QNH or QFE reports and temperature information for use in determining adequate terrain clearance are provided in MET broadcasts and are available on request from the air traffic services. QNH or QFE values are given in hectopascals.

2. 高度表拨正值的规定

2.1 航路飞行
航路飞行的高度表拨正值为 1013.2 百帕。

2.2 机场塔台管制区域飞行

2.2.1 在规定过渡高度和过渡高度层的机场：
在机场高度表拨正区域内规定的过渡高度及其以下飞行,高度表拨正值为机场修正海平面气压；在过渡高度层及其以上飞行，为 1013.2 百帕。

2.2.2 在规定过渡高和过渡高度层的机场：
在机场高度表拨正区域内规定的过渡高及其以下飞行，高度表拨正值为机场场面气压；在过渡高度层及其以上飞行，为 1013.2 百帕。

2.2.3 在没有规定过渡高度或过渡高和过渡高度层的机场
详见 ENR 1.7 第 3.1.3 款。

2.2.4 高原机场
高原机场的飞行使用 1013.2 百帕。

2. Altimeter settings to be used

2.1 En-route flight
The altimeter setting for en-route flight is 1013.2hPa.

2.2 Flights within aerodrome tower control areas

2.2.1 At aerodromes where transition altitudes and transition levels are established:
QNH shall be used for flights at or below the transition altitude specified in the aerodrome Altimeter Setting Regions; 1013.2hPa shall be used for flights at or above the transition level.

2.2.2 At aerodromes where transition heights and transition levels are established:
QFE shall be used for flights at or below the transition height specified in the Aerodrome Altimeter Setting Regions; 1013.2hPa shall be used for flights at or above the transition level.

2.2.3 At aerodromes where transition altitudes or transition heights and transition levels are not established
Ref. subsection ENR 1.7, item 3.1.3 for details.

2.2.4 At aerodromes of high elevation 1013.2hPa shall be used for flight operations.

3. 高度表拨正程序

3.1 航空器起飞或降落时，高度表拨正程序按照下列规定进行:

3.1.1 规定过渡高度和过渡高度层的机场
航空器起飞前，应当将机场修正海平面气压的数值对正航空器上气压高度表的固定指标；航空器起飞后，上升到过渡高度时，应当将航空器上气压高度表的气压刻度 1013.2 百帕对正固定指标；当航空器在下降过程中穿越过渡高度层时，应当将机场修正海平面气压的数值对正航空器上气压高度表的固定指标。

3. Altimeter setting procedures

3.1 When an aircraft is taking off from or landing at an aerodrome, the following altimeter setting procedures are to be observed:

3.1.1 At aerodromes where transition altitudes and transition levels are established
Before take-off, the aircraft altimeter subscale shall be set to QNH of the aerodrome; after take-off, upon reaching the transition altitude the altimeter subscale shall be set to 1013.2hPa; when an aircraft is passing through a transition level during descent, the altimeter subscale shall be set to QNH of the aerodrome.

3.1.2 规定过渡高和过渡高度层的机场
航空器起飞前，应当将机场场面气压的数值对正航空器上气压高度表的固定指标；航空器起飞后，上升到过渡高时，应当将航空器上气压高度表的气压刻度1013.2百帕对正固定指标。
当航空器在下降过程中穿越过渡高度层时，应当将机场场面气压的数值对正航空器上气压高度表的固定指标。

3.1.2 At aerodromes where transition heights and transition levels are established
Before take-off, the aircraft altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation; after take-off, upon reaching the transition height the altimeter subscale shall be set to 1013.2hPa; when an aircraft is passing through a transition level during descent, the altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation.

3.1.3 没有规定过渡高度或过渡高和过渡高度层的机场
航空器起飞前,应当将机场场面气压的数值对正航空器上气压高度表的固定指标；航空器起飞后，上升到600米高时，应当将航空器上气压高度表的气压刻度1013.2百帕对正固定指标。在机场塔台管制区域内的下降过程中，航空器应根据空中交通管制员的指令开始调表。

3.1.3 At aerodromes where transition altitudes or transition heights and transition levels are not established
Before take-off, the aircraft altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation; after take-off when the aircraft has reached a height of 600m, the altimeter subscale shall be set to 1013.2hPa. During the process of descending in the aerodrome tower control area, the aircraft shall start altimeter setting by the instruction of air traffic controller.

3.1.4 高原机场
航空器起飞前，当航空器上气压高度表的气压刻度不能调整到机场场面气压的数值时，应当将气压高度表的气压刻度1013.2百帕对正固定指标（此时所指示的高度为零点高度）。
航空器降落前，如果航空器上气压高度表的气压刻度不能调整到机场场面气压的数值时，应当按照降落机场空中交通管制员通知的假定零点高度（航空器着陆时所指示的高度）进行着陆。

3.1.4 At aerodromes of high elevation
When the aircraft altimeter subscale cannot be set to the atmospheric pressure at the aerodrome elevation, it will then be set to 1013.2hPa before take-off, with the indicated altitude interpreted as zero altitude.
When the aircraft altimeter subscale cannot be set to the atmospheric pressure at the aerodrome elevation, landing is to be made with the assumed zero altitude notified by the air traffic controller before landing.

3.1.5 为了安全实施高度表拨正，在机场地区划设了高度表拨正区域。要求低于过渡高度飞行的航空器，在进出高度表拨正区域的水平边界时或根据空中交通管制员的指示开始调整高度表，该水平边界详见ENR 1.7第4款。

3.1.5 For the safe execution of altimeter setting, Aerodrome Altimeter Setting Regions are defined. An aircraft below the transition altitude is required to start its altimeter setting when entering or leaving the lateral boundary of Altimeter Setting Region or by following the instruction of the air traffic controller. For details of lateral boundaries, please refer to subsection ENR 1.7, item 4.

3.2 航路飞行的垂直间隔，按照飞行高度层配备。飞行高度层按照以下标准划分:
a. 真航线角在0度至179度范围内，高度由900米至8 100米以及8 900米至12 500米，每隔600米为一个高度层；高度在12 500米（不含）以上，每隔1 200米为一个高度层。
b. 真航线角在180度至359度范围内，高度由600米至8 400米以及9 200米至12 200米，每隔600米为一个高度层；高度在13 100米以上，每隔1 200米为一个高度层。
c. 飞行高度层根据标准大气压条件下假定海平面计算，真航线角从航线起点和转弯点量取。

3.2 En-route vertical separations are based on flight level allocation. Flight levels are determined by the following criteria:
a. For a true track between 0° - 179° , a flight level at every 600m from 900m up to 8 100m and 8 900m up to 12 500m; a flight level at every 1 200m above 12 500m.
b. For a true track between 180° -359° , a flight level at every 600m from 600m up to 8 400m and 9 200m up to 12 200m; a flight level at every 1 200m above 13 100m.
c. The flight level shall be calculated on the basis of presumed sea level under standard atmospheric pressure conditions. True track shall be measured from the starting or turning point of the air route.

飞行高度层的具体配备标准见飞行高度层配备示意图（见图1.7-1、表1.7-1）。

For specific flight level allocation criteria, see diagram of flight levels allocation (See Figure 1.7-1, Table 1.7-1).

4. 高度表拨正区域

详见第三部分 - 机场（AD）。

4. Description of altimeter setting regions

Ref. Part III-aerodrome (AD) for details.

5. 适用于经营人的程序

飞行中将要使用的高度层必须在飞行计划中说明:
a. 如果在过渡高度层或者其上飞行，使用飞行高度层;
b. 如果在机场附近或在过渡高度之下飞行，使用高度。
注：有些机场使用高而不使用高度。

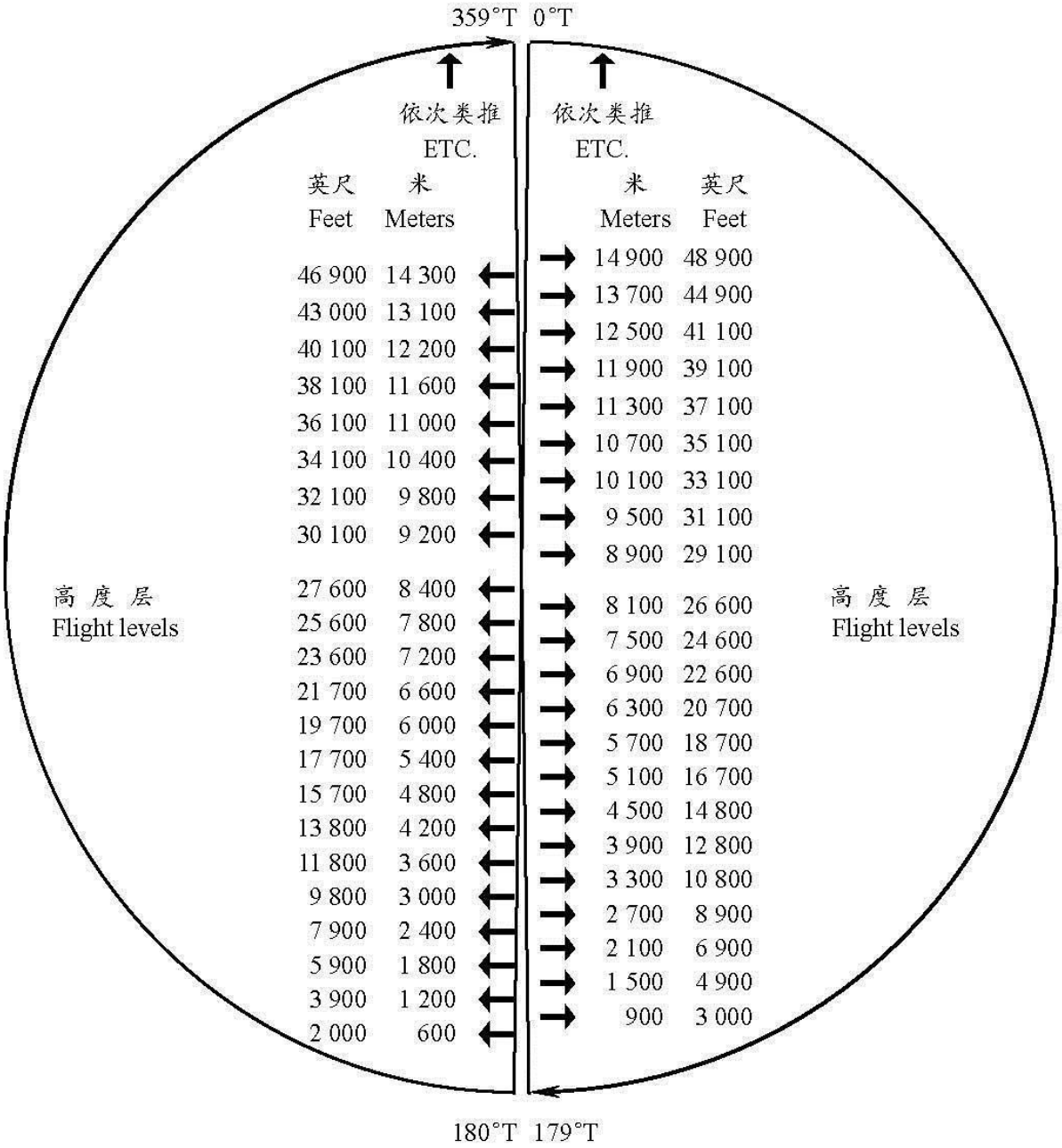
5. Procedures applicable to operators (including pilots)

The level at which a flight is to be conducted shall be specified in a flight plan:
a. In term of flight levels, if the flight is to be conducted at or above the transition level, and
b. In terms of altitudes, if the flight is to be conducted in the vicinity of an aerodrome and at or below the transition altitude.
Note: Height is used instead of altitude at some aerodromes.

图/Figure 1.7-1

飞 行 高 度 层 配 备 示 意 图

Diagram of Flight Levels Allocation



注：管制员将发布米制飞行高度层指令。航空器驾驶员应当根据中国民航飞行高度层配备标准示意图（表）来确定对应的英制飞行高度层。航空器应当飞对应的英制飞行高度层。航空器驾驶员应当知晓公英制转换带来的差异，驾驶舱仪表显示的米制高度与管制指令的米制高度不一定完全一致，但存在的差异不会超过30米。

Note: ATC will issue the Flight Level clearance in meters. Pilots shall use the China FLAS Diagram to determine the corresponding flight level in feet. The aircraft shall be flown using the flight level in FEET.
Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

表 #x20;1.7-1 飞行高度层配备标准表
Table 1.7-1 Table of Flight Levels Allocation

180° - 359° T			000° - 179° T		
Flight Levels			Flight Levels		
m	ft		m	ft	
ETC. ↑	ETC. ↑		ETC. ↑	ETC. ↑	
15500	50900		14900	48900	
14300	46900		13700	44900	
13100	43000				
			12500	41100	
12200	40100		11900	39100	
11600	38100		11300	37100	
11000	36100		10700	35100	
10400	34100		10100	33100	
9800	32100		9500	31100	
9200	30100		8900	29100	
8400	27600		8100	26600	
7800	25600		7500	24600	
7200	23600		6900	22600	
6600	21700		6300	20700	
6000	19700		5700	18700	
5400	17700		5100	16700	
4800	15700		4500	14800	
4200	13800		3900	12800	
3600	11800		3300	10800	
3000	9800		2700	8900	
2400	7900		2100	6900	
1800	5900		1500	4900	
1200	3900		900	3000	
600	2000		-	-	
m	ft		m	ft	

ENR 1.8 地区补充程序

(待定)

ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES

(to be developed)

ENR 1.9 空中交通流量管理

(待定)

ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT

(to be developed)

ENR1.10 飞行计划

1. 一般规定

1.1 航空器驾驶员、运营人或代理人都应当按照中国民用航空局有关主管部门批准的班期时刻或者批准的计划飞行。

1.2 如需改变班期时刻或者计划,应当在获得中国民用航空局有关主管部门许可后方可进行。

2. 飞经中国大陆飞行情报区的所有航空器必须向民航空管飞行计划处理中心提交飞行计划;飞经其他飞行情报区的所有航空器必须向相关空中交通服务单位提交飞行计划。

3. 飞行计划的提交

航空器营运人及其代理人应当不迟于预计撤轮挡时间前 150 分钟向民航空管飞行计划处理中心以及起飞机场的空中交通服务单位提交飞行计划。

4. 飞行计划的格式

按照《航行服务程序-空中交通管理》国际民用航空

ENR1.10 FLIGHT PLANNING

1. General procedures

1.1 All aircraft operator or agent shall operate in accordance with the flight schedules or plans approved by the competent department of the Civil Aviation Administration of China.

1.2 If it is necessary to make some changes on a flight schedule or plan, it is required to obtain the permission from the competent department of the Civil Aviation Administration of China before the conduct of the flight.

2. All aircraft operating through the FIRs of the China Mainlad shall send FPL messages to the flight plan processing center. All aircraft operating through the FIRs of Hongkong and Taibei shall send FPL messages to the related ATS unit.

3. Submission of a flight plan

All aircraft operator or agent shall submit flight plan to the flight plan processing center and the ARO of the departure aerodrome at least 150 minutes before the EOBT.

4. The format of a flight plan

Flight plan shall be complied with the format specified

组织 4444 文件，第 15 版，第 1 次修订，的格式执行。

in PANS-ATM ICAO Doc 4444, 15th edition, Rev. 1.

注：见表 1.10-1。

Note: See Table 1.10-1.

5. 飞行计划的变更

a.当航空器飞行计划预计或者已经推迟 30 分钟以上时，航空器营运人及其代理人应当立即提交飞行计划延误情况。

b.当航空器飞行计划变更时，航空器营运人及其代理人应当于航空器预计撤轮挡时间前 45 分钟提交飞行计划修改。

c.飞行计划修改应在最后通知的预计撤轮挡时间后 210 分钟以内提交。

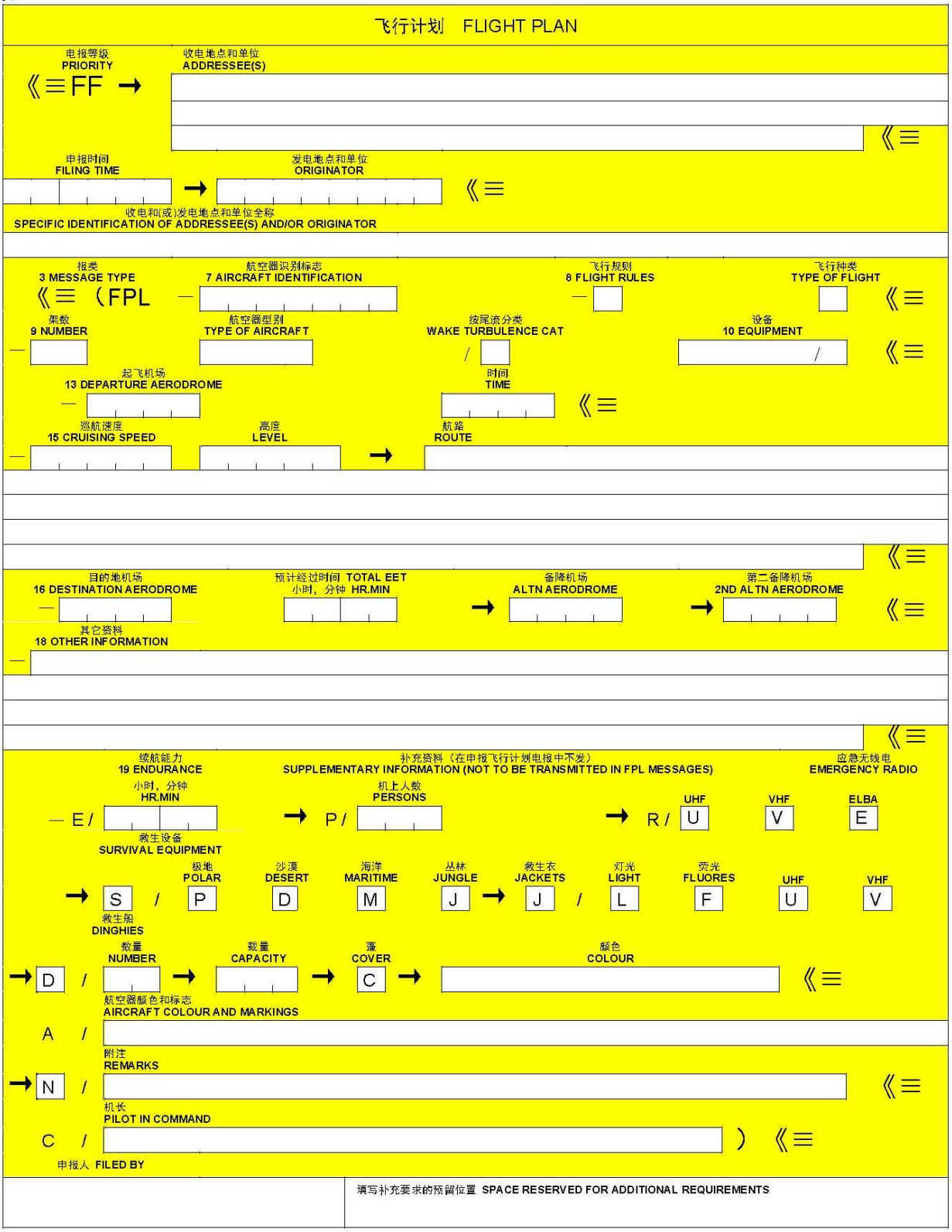
5. Changes to the submitted flight plan

a. An aircraft operator or his representative shall submit a delay when the departure of an aircraft is estimated to be delayed or has been delayed for more than 30 minutes.

b. An aircraft operator or his representative shall submit the CHG of the FPL at least 45 minutes before new EOBT.

c. The CHG of the FPL shall be submitted within 210 minutes after the last EOBT.

表/Table 1.10-1



ENR 1.11 飞行计划报收电地址

ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

1. 飞行动态电报是指领航计划报以及与其有关的延误报、修订领航计划报、取消领航计划报、起飞报以及落地报 (ICAO PANS-ATM 11.1.3)。

1.Flight movement messages in this context comprise FPL/CHG/DLA/CNL/DEP/ARR(Ref. ICAO PANS-ATM 11.1.3)。

2. 从北京飞行情报区、沈阳飞行情报区、上海飞行情报区、广州飞行情报区、武汉飞行情报区、三亚飞行情报区、昆明飞行情报区、兰州飞行情报区以及乌鲁木齐飞行情报区以内起飞的航班，航空器驾驶员、运营人或者其代理人应当按照按照下列规定，提交领航计划报及其有关延误报、修订领航计划报、取消领航计划报。

2.For the aircraft departing from Beijing FIR, Shenyang FIR、Shanghai FIR, Guangzhou FIR, Wuhan FIR, Sanya FIR, Kunming FIR, Lanzhou FIR, Urumqi FIR, The FPL/CHG/DLA/CNL message shall be submitted as follows:

2.1 应当向民航空管飞行计划处理中心 SITA 地址（PEKFP8X 和 SHAFP8X）提交领航飞行计划申请。拟通过 AFTN 提交领航飞行计划等电报申请的，应当事先与民航空管飞行计划处理中心签订协议并按照协议执行。

2.1The FPL/CHG/DLA/CNL shall be submitted to Flight Plan Processing Center of ATMB via SITA, the addresses are (PEKFP8X and SHAFP8X). If the Airline operators need to submit those messages by AFTN, it shall sign an agreement with the Flight Planning Processing Center of ATMB in advance.

3. 从北京飞行情报区、沈阳飞行情报区、上海飞行情报区、广州飞行情报区、武汉飞行情报区、三亚飞行情报区、昆明飞行情报区、兰州飞行情报区、乌鲁木齐飞行情报区以外区域起飞，进入上述飞行情报区的所有民用航空飞行活动的飞行动态电报（FPL/CHG/DLA/CNL/DEP/ARR）按下列飞行动态电报收电地址拍发。

注：本条飞行动态电报是指国境外空管单位拍发给国内空管单位的飞行动态电报（FPL/CHG/DAL/CNL/DEP/ARR），其中 ARR 是指国内飞往国境外，由国境外相关单位拍发的 ARR。

3.For the aircraft entering Beijing FIR, Shenyang FIR, Shanghai FIR, Guangzhou FIR, Wuhan FIR, Sanya FIR, Kunming FIR、Lanzhou FIR, Urumqi FIR, The FPL/CHG/DLA/CNL/DEP/ARR message shall be send to those ATS and ATFM service addresses as follows:

Note: The FPL/CHG/DAL/CNL/DEP/ARR in this paragraph means these messages issued by the ATS unit outside FIRs above.

3.1 根据国际民航组织航行服务程序 - 空中交通管理（ICAO PANS-ATM Doc4444，第十六版）第 11.2.1.2.3 条规定。用于空中交通服务目的飞行动态电报，应当发送至沿航路相关飞行情报区收电地址详见表 1。

3.1In accordance with ICAO PANS-ATM Doc 4444 11.2.1.2.3 Flight movement messages for ATS purposes shall be sent to the relevant FIRs AFTN addresses along the route as detailed in the Table1 below.

3.2 根据国际民航组织航行服务程序 - 空中交通管理（ICAO PANS-ATM Doc4444，第十六版）第 11.3.6 条规定，为提供流量管理服务目的，上述飞行动态电报应当加发民航局空管局运行管理中心（民航空管飞行计划处理中心地址）收电地址（ZBBBZFPM 和 ZSSSZFPM）。

3.2In accordance with ICAO PANS-ATM Doc 4444 11.3.6, for the purpose of providing traffic flow management services, the flight movement messages above shall be send to the addresses (ZBBBZFPM and ZSSSZFPM).

4. 特殊要求

4.special addresses requirement

特定航班 Specific flight	地 址 Addresses
East China Sea ADIZ(Refer ENR5.2.1)	ZBBBZGZX ZSACZQZX
R200 (BTN BEBEM and OLDID)	VHHKZQZX (FPL/CHG/DLA/CNL/DEP)

情 报 区 FIR		地 址 Addresses
北京飞行情报区	Beijing FIR	ZBPEZQZX
广州飞行情报区	Guangzhou FIR	ZGZUZQZX

昆明飞行情报区	Kunming FIR	ZPKMZQZX
兰州飞行情报区	Lanzhou FIR	ZLHWZQZX
三亚飞行情报区	Sanya FIR	ZJSAZQZX
上海飞行情报区	Shanghai FIR	ZSHAZQZX
沈阳飞行情报区	Shenyang FIR	ZYSHZQZX
乌鲁木齐飞行情报区	Urumqi FIR	ZWUQZQZX
武汉飞行情报区	Wuhan FIR	ZHWHZQZX

ENR 1.12 民用航空器的拦截

1. 总则

1.1 在中华人民共和国境内飞行的民用航空器，如果违反飞行规则，中华人民共和国有关机关有权采取必要措施，可以强迫其在指定的机场降落。

1.2 防空航空器拦截违反飞行规则的民用航空器和被拦截的民用航空器使用的信号，见表 1.12-1、1.12-2。

2. 被拦截航空器程序

2.1 一航空器被另一航空器拦截时，必须立即：
a. 遵循拦截航空器所发的指示，按表 1.12-1、1.12-2 中的说明，理解并回答目视信号；
b. 如可能，通知有关的空中交通服务部门；
c. 试图与拦截航空器或与有关的拦截控制单位建立无线电通信。使用紧急频率 121.5 兆赫进行普叫，报告被拦截航空器的身份和飞行性质。如未建立联络或可能时，在紧急频率 243 兆赫上重复这一呼叫；
d. 如装有二次雷达 (SSR) 应答器，除非有关空中交通服务部门另有指示外，调到模式 A、编码 7700 上。

2.2 如果同拦截航空器建立了无线电联络，但不能使用一种共同语言进行通话时，必须试图采用下列字句和发音来表达指示和重要的情报及对指示的认收，并且每个字需讲二遍：

ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

1. General rules

1.1 If a civil aircraft flying within the territory of the People's Republic of China is found in violation of flight rules, the relevant authority of the People's Republic of China has the right to take necessary action and force it to land at a designated aerodrome.

1.2 For signals used by the air defence aircraft intercepting a civil aircraft which is found in violation of flight rules, and signals used by the intercepted civil aircraft, please refer to Table 1.12-1, 1.12-2.

2. Procedures for intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:
a. Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Table 1.12-1, 1.12-2 ;
b. Notify, if possible, the appropriate air traffic service unit;
c. Attempt to establish radio communication with the intercepting aircraft or with the appropriate interception control unit, by making a general call on the emergency frequency 121.5MHz, giving the identity of the intercepted aircraft and the nature of flight and if no contact has been established and if practicable, repeating this call on the emergency frequency 243MHz;
d. If equipped with SSR transponder, select mode A, code 7700, unless otherwise instructed by the appropriate air traffic service unit.

2.2 If radio contact with the intercepting aircraft is established but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgment of instructions and essential information by using the phrases and pronunciations described in the following table and by repeating each phrase twice:

字 句 Phrases	发 音① Pronunciation	意 义	Meaning
CALL SIGN ② WILCO CAN NOT ④ REPEAT ④ AM LOST MAYDAY HIJACK ③ LAND… (place name) DESCEND	KOL SA-IN VILL-KO KANN NOTT REE-PEET AM LOSST MAYDAY HI-JACK LAAND… (place name) DEE-SEND	我的呼号是 (呼号) 明白，照办 不能照办 重复你的指示 我迷航了 我遇险了 我被劫持 我要求在… …(地名) 着陆 我要求下降	My call sign is (call sign) Understood, will comply Unable to comply Repeat your instruction Position unknown I am in distress I have been hijacked I request to land at (place name) I require descent

拦截航空器在上述情况下可使用下列字句：

The following phrases are expected to be used by the intercepting aircraft in the circumstances described above.

字 句 Phrases	发 音 Pronunciation	意 义	Meaning
CALL SIGN FOLLOW DESCEND YOU LAND PROCEED	KOL SA-IN FOL-LO DEE-SEND YOU LAAND PRO-SEED	你的呼号是 (呼号) 跟我来 下降以便着陆 在此机场着陆 你可以继续飞行	What is your call sign? Follow me Descend for landing Land at this aerodrome You may proceed

注：①在第二栏中，重读音节已划线。
②在用无线电话与空中交通服务部门联络时，需要指定一个呼号。该呼号应与飞行计划中注明的航空器识别标志一致。
③有些情况不允许，也不宜使用“HIJACK”一词。
④在特殊情况下，应使用“CAN NOT”和“REPEAT”二词，而不使用通常的“UNABLE”和“SAY AGAIN”二词，以便于理解。

Notes: ① In the second column, syllables to be emphasized are underlined.
② The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.
③ Circumstances may not always permit, nor make desirable, the use of the phrase “HIJACK".
④ The phrases CAN NOT and REPEAT are used in this particular context, rather than the normal phrases UNABLE and SAY AGAIN, in order to facilitate understanding.

2.3 如通过无线电收到从任何来源的任何指示与拦截航空器所发的目视信号有所矛盾时，被拦截航空器在继续遵守拦截航空器所发的目视 (信号) 指示的同时必须要求立即澄清。

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.4 如用无线电从任何来源接到任何指示与拦截航空器用无线电所发者相矛盾时，被拦截航空器在一面继续遵守拦截航空器所发的无线电指示的同时，必须要求立即澄清。

2.4 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

表 1.12-1 拦截航空器先用的信号和被拦截航空器回答的信号
Table 1.12-1 SIGNALS INITIATED BY INTERCEPTING AIRCRAFT AND RESPONSE SIGNALS BY INTERCEPTED AIRCRAFT

组别 Series	处置 Actions	拦截航空器的信号 Intercepting Aircraft Signals	含义 Meaning	被拦截航空器的信号 Intercepted Aircraft Signals	含义 Meaning
1	信号告警 Signal warning	昼间 : 通常在目标机前侧方 , 摇摆机翼 , 由内向外做水平转弯 , 并可发射机尾陆空协同信号弹。 夜间 : 同样动作 , 并不规则地闪烁航行灯。 DAY: Normally rocking wings from a position on the front side of the target aircraft, a level turn from inside to outside and firing the ground-air coordination signal cartridge from tail of the aircraft. Night: The same and, in addition, flashing navigational lights at irregular intervals.	你已越境 (偏航) 立即返回 (恢复正常航线)。 You have trespassed the national border (or off course) turn back (or return to the correct course) immediately.	昼间 : 摇摆机翼 , 并立即改变航向。 夜间 : 同样动作 , 并不规则地闪烁航行灯。 直升机 : 昼间或夜间 , 摇摆航空器 , 不规则地闪烁航行灯并改向飞行。 Day: Rocking wings and changing the course immediately. Night: The same and, in addition, flashing navigational lights at irregular intervals. Helicopter: Day or night, rocking aircraft, flashing navigational lights at irregular intervals and changing the course.	明白，照办。 Understood, will comply.
	动作警告 Maneuver warning	昼间 :通常在我方一侧向其做小速度差的连续攻击动作。 Day: Normally making the attacking action continually from inside of the frontier at a lower speed.	越境飞机 立即返回。 Trespassing aircraft must turn back immediately.		
	警告性射击 Warning firing	昼间或夜间 : 在被拦截目标的侧方 , 平行略靠前 , 用单炮向前方射击。 Day or night: At the side of the intercepted target, parallel to and slightly in front, firing ahead of it with one gun.	立即改变航向。 Change the course immediately.		

2	外逼 Forcing outwards	昼间或夜间 : 在我方一侧 , 向目标机反复压坡度。 Day or night: From inside the frontier repeatedly banking the aircraft to the target aircraft.	向外飞行 Flight outwards	昼间或夜间 : 摇摆机翼 , 立即改变航向 Day or night: Rocking wings, changing the course immediately. #x20;	明白 , 照办 Understood, will comply.
		昼间:向目标做连续的攻击动作或采用大角度进入拦截的方法 , 进行冲击。 夜间 : 向目标做连续的攻击动作。 Day: Making the attacking action continuously, or charging by intercepting at great angle. Night: Making the attacking action continuously to the target.			
	引导出境 Guiding out of frontier	1. 昼间或夜间 : 摇摆机翼 (夜间可不规则闪烁航行灯), 用目标跟得上的速度向境外飞行。 1.Day or night: Rocking wings (flashing navigational lights at irregular interval at night) and flying outwards the frontier at a speed that the target can follow.	跟我来 Follow me.	昼间或夜间 : 摇摆机翼 (不规则地闪烁航行灯), 并跟随。 Day or night: Rocking wings (flashing navigational lights at irregular intervals) and following.	明白 , 照办。 Understood, will comply
		2. 接近边境做大于 90° 的上升转弯急速脱离目标。不要穿越被拦截目标机的飞行路线。 2. Near frontier, an abrupt breakaway maneuver from the target consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the target aircraft.	你可以前进 You may proceed.		
3	迫降 Forcing to land	1. 昼间 : 在目标机左前方摇摆机翼 , 得到回答后,向左以目标跟得上的速度做水平慢转弯 , 飞向指定机场。 夜间 : 同样动作 , 并不规则地闪烁航行灯。 1.Day: Rocking wings in left front of target aircraft, after acknowledgement, making a slow level turn and flying to the designated aerodrome at a speed that the target can follow. Night: The same and, in addition, flashing navigational lights at irregular intervals.	你已被拦截跟我来。 You have been intercepted, follow me.	昼间 : 摇摆机翼并跟随。 夜间 : 同样动作 , 并不规则地闪烁航行灯。 Day: Rocking wings and following. Night: The same and, in addition, flashing navigational lights at irregular intervals.	明白 , 照办。 Understood, will comply.
		2. 到达机场后 , 在机场上空盘旋 , 长机放起落架,并沿着陆航向飞越跑道上空 (夜间同样动作 , 并打开着陆灯), 引导目标着陆。 2. After arriving at the aerodrome, lowering the landing gear and over- flying runway in use, the leader aircraft along the landing direction (Night: the same maneuver and, in addition, keeping landing lights on), guiding the aircraft to land.	可以在此机场着陆。 Land at this aerodrome.	放下起落架 , 夜间持续打开着陆灯。 Day: Lowering landing gear. Night: The same and, in addition, keeping the landing lights on.	

表 1.12-2 被拦截航空器先用的信号和拦截航空器回答的信号
Table 1.12-2 SIGNALS INITIATED BY INTERCEPTED AIRCRAFT AND RESPONSE SIGNALS BY INTERCEPTING AIRCRAFT

组别 Series	被拦截航空器的信号 Intercepted Aircraft Signals	含义 Meaning	拦截航空器的信号 Intercepting Aircraft Signals	含义 Meaning
4	昼间：高出场面 300 米以上但不高于 600 米飞越着陆跑道，收上起落架，在机场上空盘旋。 夜间：高出场面 300 米以上但不高于 600 米，飞越着陆跑道，闪烁着陆灯，在机场上空盘旋。如不能闪烁着陆灯，闪烁可利用的其他灯光。 Day: Raising landing gear (if fitted) and overflying runway in use at a height exceeding 300m but not exceeding 600m above the aerodrome level, and circling the aerodrome. Night: The same maneuvers, in addition, flashing landing lights continuously. If unable to flash landing lights, flash any other lights available.	你所指定的机场不合适 Aerodrome you have designated is inadequate.	拦截机收上起落架并使用第三组第 1 项信号。在地面引导下，将目标引领到其他机场。 The intercepting aircraft raises its landing gear and uses the first signals of Series 3. Under the guidance of the ground control, leading the target aircraft to another aerodrome.	明白，跟我来。 Understood, follow me.
			如决定释放被拦截机使用第二组引导出境第 2 项信号。 If it is decided to release the intercepted aircraft, using the second signals of Series 2.	明白，你可以前进。 Understood, you may proceed.
5	昼间或夜间：规则地开关一切可供使用的灯光，但其方式要与闪烁灯光有所区别。 Day or Night: Regularly switching on and off all available lights but in such manner as to be distinct from flashing lights	不能照办 Cannot comply.	昼间或夜间：摇摆机翼，闪烁航行灯，跟踪监视其行动。 Day or Night: Rocking wings, flashing navigational lights at irregular intervals and following and keeping it under surveillance.	明白 Understood
6	昼间或夜间：不规则地闪烁一切可供使用的灯光。 Day or Night: Irregularly flashing all available lights.	在遇险中 In distress.		明白 Understood

ENR 1.13 非法干扰

1. 航空器在飞行中遭遇非法干扰时，航空器驾驶员应将情况通知空中交通管制部门和飞行签派部门，并将二次雷达应答机置于模式 A、编码 7500。

2. 当接到航空器驾驶员受到非法干扰的报告或者从二次雷达发现模式 A、编码 7500 信号时，空管部门将采取如下措施:
a. 使用各种手段了解航空器受非法干扰情况;
b. 连续地发出空中交通情报和气象情报;
c. 根据当时的情况，提供就近机场供航空器驾驶员选用;
d. 尽可能使用雷达监视该航空器的动向。

3. 航空器驾驶员如果不能将非法干扰情况通知空中交通管制部门时，应当继续沿指定的航迹和指定的巡航高度或者按照飞行计划所申请的航线和高度飞行，直到至少能通知一个空中交通管制部门。

ENR 1.13 UNLAWFUL INTERFERENCE

1. The pilot of an aircraft that is being subjected to unlawful interference in flight shall notify an air traffic control unit or flight dispatch unit of this fact and in the meantime set his transponder to mode A, code 7500.

2. When an ATC unit receives a report from the pilot of an aircraft in flight being subjected to unlawful interference or finds code of mode A, code 7500 on SSR monitor, it shall take the following actions:
a. Use all methods available to identify the situation of the aircraft that is being subjected to unlawful interference;
b. Transmit continuously air traffic and weather information;
c. Provide information on adjacent aerodromes for the pilot's option based upon the current situation;
d. Monitor the movement of the aircraft by means of radar as far as practicable.

3. If the pilot is unable to notify an ATC unit of this fact, he shall continue his flight on the assigned track and at the assigned cruising level or route and altitude filed in FPL at least until being able to notify an ATS unit.

ENR 1.14 空中交通事件报告

发生空中交通事件的机组应到机场空中交通服务报告室，填写空中交通事件报告表 (见表 1.14-1)

1. 空中交通事件的定义

“空中交通事件”用来表示发生的与提供空中交通服务相关的严重事件。如:
a) 航空器接近;
b) 由下列原因（作为举例）所导致的会使航空器处于险情的严重问题:
1) 错误的工作程序
2) 不遵守工作程序，或
3) 地面设备故障。

1.1 航空器接近的定义

航空器接近: 航空器驾驶员或空中交通服务人员认为，航空器之间的距离及其相对位置和速度已处于危及相关航空器安全的一种状态。

航空器接近的等级分类如下:
碰撞危险: 存在严重碰撞危险的航空器接近。
安全无保证: 可能已危及航空器安全的航空器接近。

无碰撞危险: 不存在碰撞危险的航空器接近。
危险性不确定: 尚无足够情报确定有关危险的出现，或无法定性，或自相矛盾的证据排除了对危险接近的定性。

AIRPROX: 空中交通事件报告中用以表示航空器接近的代码。

1.2 空中交通事件按照下列类别分配代号以在报告中识别:

类别	代号
空中交通事件	事件
上面 a) 所述	AIRPROX(航空器接近)
上面 b) 中 1) 和 2)	程序
上面 b) 中 3)	所述 设备

2. 空中交通事件报告表的使用

ENR 1.14 REPORTING OF AIR TRAFFIC INCIDENTS

The flight crew of an aircraft involved in an air traffic incident is required to fill in an “Air Traffic Incident Report” form (see Table 1.14-1) at an Air Traffic Services Reporting Office.

1. Definition of air traffic incidents

“Air traffic incident” is used to mean a serious occurrence related to the provision of air traffic services, such as:
a) aircraft proximity (AIRPROX);
b) serious difficulty resulting in a hazard to aircraft caused, for example, by:
1) faulty procedures
2) non-compliance with procedures, or
3) failure of ground facilities.

1.1 Definitions for aircraft proximity

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

Aircraft proximity is classified as follows:
Risk of collision: The risk classification of aircraft proximity in which serious risk of collision has existed.
Safety not assured: The risk classification of aircraft proximity in which the safety of the aircraft may have been compromised.
No risk of collision: The risk classification of aircraft proximity in which no risk of collision has existed.
Risk not determined: The risk classification of aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.
AIRPROX: The code word used in an air traffic incident report to designate aircraft proximity.

1.2 Air traffic incidents are designated and identified in reports as follows:

Type	Designation
Air traffic incident	Incident
as a) above	AIRPROX(aircraft proximity)
as b) 1) and 2) above	Procedure
as b) 3) above	Facility

2. Use of the Air Traffic Incident Report Form

空中交通事件报告表旨在用于:
a) 在航空器到达后由航空器驾驶员填写关于一个空中交通事件的报告，或为了证实在飞行中最初通过无线电所作的事件报告。
注：如果航空器上有该表格，也可以用来作为飞行中进行初次报告的格式。

b) 空中交通服务单位用来记录通过无线电通信、电话和打字电报机收到的空中交通事件报告。
注：该表格可作为在航空固定通信网上传递的报文格式。

The Air Traffic Incident Report Form is intended for use:
a) By a pilot for filing a report on an air traffic incident after arrival or for confirming a report made initially by radio during flight.
Note: The form, if available on board, may also be of use in providing a pattern for making the initial report in flight.

b) By an ATS unit for recording an air traffic incident report received by radio, telephone or teleprinter.

Note: The form may be used as the format for the text of a message to be transmitted over the AFS network.

3. 报告程序

3.1 涉及空中交通事件的航空器驾驶员应遵守的程序如下:
a) 在飞行中，使用相应的空地通信频率报告有重大事件情况，特别当涉及到其它航空器时更应如此，以便迅速查明事实情况。

b) 航空器降落后尽快提交经填写完毕的空中交通事件报告表，用于:
1) 证实 a) 中所提出的报告，或当未能通过无线电通信报告时，填写有关该事件的初次报告。
2) 报告在事发时不需要立即通知的事件。

3.2 通过无线电所作的初次报告应包括以下信息:
a) 航空器识别标志;
b) 事件类别，如: 航空器接近;
c) 事件; 1. a) 和 b); 2. a)，b)，c)，d)，n); 3. a)，b)，c)，i); 4. a)，b);
d) 其它: 1. e)。

3.3 最初通过无线电报告的重大事件或者关于其它事件的初次报告的确认报告应提交给航空安全办公室，或提交给第一降落机场的空中交通服务报告室，以便由其转交给航空安全办公室。航空器驾驶员应完整地填写空中交通服务报告表格，并在必要时对初次报告的细节作补充。
注：在无空中交通服务报告室的地方可提交给另外一个空中交通服务单位。

3. Reporting procedures

3.1 The following are the procedures to be followed by a pilot who is or has been involved in an incident:
a) During flight, use the appropriate air/ground frequency for reporting an incident of major significance, particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;
b) As promptly as possible after landing, submit a completed Air Traffic Incident Report Form
1) For confirming a report of an incident made initially as in a) above, or for making the initial report on such an incident if it had not been possible to report it by radio;
2) For reporting an incident which did not require immediate notification at the time of occurrence.

3.2 An initial report made by radio should contain the following information:
a) Aircraft identification;
b) Type of incident, e.g. aircraft proximity;
c) The incident; 1. a) and b); 2.a), b), c), d), n); 3.a), b), c), i); 4. a), b);
d) Miscellaneous: 1. e).

3.3 The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to The Office of Aviation Safety, or to the ATS Reporting Office of the aerodrome of first landing for submission to The Office of Aviation Safety. The pilot should complete the Air Traffic Incident Report Form, supplementing the details of the initial reports as necessary.
Note: Where there is no ATS Reporting Office, the report may be submitted to another ATS unit.

4. 事件报告和事件处理报告表的目的

4.1 把航空器接近的事件报告给上级和随后进行的调查是为了促进航空器的安全。发生一次航空器接近事件的危险等级应在事件调查中确定，并分为“碰撞危险”，“安全无保证”，“无碰撞危险”，“危险性不确定”等四类。

4. Purpose of reporting and handling of the form

4.1 The purpose of the reporting of aircraft proximity incidents and their investigation is to promote the safety of aircraft. The degree of risk involved in an aircraft proximity incident should be determined in the incident investigation and classified as “risk of collision”, “safety not assured”, “no risk of collision” or “risk not determined”.

4.2 空中交通事件报告表的目的是为了给事件调查单位提供尽可能完整的事件的有关信息，以便他们以最短时间向有关航空器驾驶员或经营人反馈对航空器经营人的调查结果，该事件的调查结果，以及视情况对其所采取的纠正措施。

4.2 The purpose of the form is to provide investigatory authorities with as complete information on an air traffic incident as possible and to enable them to report back, with the least possible delay to the pilot or operator concerned, the result of the investigation of the operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

表/Table 1.14-1

空中交通事件报告表
Air traffic incident report form

提交和接收空中交通事件报告时使用，通过无线电传送的初次报告，必须包括阴影部分的项目。
For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded items should be included.

A — 航空器识别标志 Aircraft identification	B —事件种类 Type of incident 航空器接近/程序/设备* Airprox/procedure/Facility*

C —事件 The incident

1. 概要 General

a)事件发生的日期/时间 Date/time of incident .....UTC

b) 地点 Position .....

2. 自己的航空器 Own aircraft

a) 航向和航线 Heading and route .....

b) 真空速 True airspeed .....海里/小时 measured in kt .....千米/小时 km/h.....

c) 高度和高度表拨正 Level and altimeter setting.....

d) 航空器的升降 Aircraft climbing or descending

( ) 水平飞行 Level flight ( ) 爬升 Climbing ( ) 下降 Descending

e) 航空器转弯坡度 aircraft bank angle

( ) 水平 Wings level ( ) 小坡度 Slight bank ( ) 中坡度 Moderate bank

( ) 大坡度 Steep bank ( ) 倒转 inverted ( ) 不明 Unknown

f) 航空器转弯方向 Aircraft direction of bank

( ) 左 Left ( ) 右 Right ( ) 不明 Unknown

g) 挡住视线（根据需要尽可能多选） Restrictions to visibility (select as many as required)

( ) 眩目的阳光 Sunglare ( ) 风挡支架 Windscreen pillar ( ) 风挡脏 Dirty windscreen

( ) 其它驾驶舱构件 Other cockpit structure ( ) 无 None

h) 航空器灯光的使用（根据需要尽可能多选）Use of aircraft lighting (select as many as required)

( ) 航行灯 Navigation lights ( ) 闪光灯 Strobe lights ( ) 客舱灯 Cabin lights

( ) 红色防撞灯 Red anti-collision lights ( ) 着陆、滑行灯 Landing/taxi lights

( ) 标志灯(尾翼上) Logo (tail fin) lights ( ) 其它 Other ( ) 无 None

i) ATS 发布的飞行避让通知 Traffic avoidance advice issued by ATS

( ) 是，根据雷达 Yes, based on radar ( ) 是，根据目视观察 Yes, based on visual sighting

( ) 是，根据其它情报 Yes, based on other information ( ) 无 No

j) 发布的交通情报 Traffic information issued

( ) 是，根据雷达 Yes, based on radar ( ) 是，根据目视观察 Yes, based on visual sighting

( ) 是，根据其它情报 Yes, based on other information ( ) 无 No

k) 机载防撞系统—Airborne collision avoidance system—ACAS

（ ）未装备 Not carried （ ）种类 Type （ ）发布的交通咨询 Traffic advisory issued

（ ）发布的交通冲突处理咨询 Resolution advisory issued

（ ）未发布交通咨询或交通冲突处理咨询 Traffic advisory or resolution advisory not issued

l) 雷达识别 Radar identification

（ ）无可用雷达 No radar available （ ）雷达识别 Radar identification

（ ）没有雷达识别 No radar identification

m) 看到其它航空器 Other aircraft sighted

（ ）是 Yes （ ）否 No （ ）看错航空器 Wrong aircraft sighted

n) 采取避让措施 Avoiding action taken

（ ）是 Yes （ ）否 No

o) 飞行计划的种类 Type of flight plan 仪表飞行 / 目视飞行 / 无* IFR/VFR/none*

3. 其它航空器 Other aircraft

a) 类型及呼号/注册标志（如果知道）Type and call sign/registration (If known)----------

b) 如果 a)不明，则填写下列各项 If a) above not known, describe below

（ ）上单翼 High wing （ ）中单翼 Mid wing （ ）下单翼 Low wing

（ ）旋翼机 Rotorcraft

（ ）1 发 1 engine （ ）2 发 2 engines （ ）3 发 3 engines

（ ）4 发 4 engines （ ）4 发以上 More than 4 engines

标志、颜色或其它掌握的细节 Marking, colour or other available details

----

c) 航空器爬升或下降 Aircraft climbing or descending

（ ）水平飞行 Level fight （ ）爬升 Climbing （ ）下降 Descending

（ ）不明 Unknown

d) 航空器转弯坡度 Aircraft bank angle

（ ）水平 Wings level （ ）小坡度 Slight bank （ ）中坡度 Moderate bank

（ ）大坡度 Steep bank （ ）倒转 Inverted （ ）不明 Unknown

e) 航空器转弯方向 Aircraft direction of bank

（ ）左 Left （ ）右 Right （ ）不明 Unknown

f) 显示灯光 Lights displayed

（ ）航行灯 Navigation lights （ ）闪光灯 Strobe lights （ ）客舱灯 Cabin lights

（ ）红色防撞灯 Red anti-collision lights （ ）着陆、滑行灯 Landing/taxi lights

（ ）标志灯（尾翼上）Logo (tail fin) lights （ ）其它 Other

（ ）无 None （ ）不明 Unknown

g) ATS 发布的飞行避让通知 Traffic avoidance advice issued by ATS

（ ）是，根据雷达 Yes, based on radar （ ）是，根据目视观测 Yes, based on visual sighting

（ ）是，根据其它情报 Yes, based on other information （ ）无 No （ ）不明 Unknown

h) 发布的交通情报 Traffic information issued

（ ）是，根据雷达 Yes, based on radar （ ）是，根据目视观测 Yes, based on visual sighting

（ ）是，根据其它情报 Yes, based on other information （ ）无 No （ ）不明 Unknown

i) 采取避让措施 Avoiding action taken

（ ）是 Yes （ ）否 No （ ）不明 Unknown

4. 距离 Distance

a) 最近的水平距离 Closest horizontal distance .....

b) 最近的垂直距离 Closest vertical distance .....

5. 飞行天气情况 Flight weather conditions

a) 仪表气象条件/目视气象条件* IMC/VMC *

b) 云上/云下*/雾/霾或在云层之间* Above/ below * clouds/ fog/ haze or between layers*

c) 离云层的垂直距离 Distance vertically from cloud.....米/英尺*之下 m/ ft* below

.....米/英尺*之上 m/ft* above

d) 在云中/雨/雪/冻雨/雾/霾* In cloud/ rain/ snow/ sleet/ fog/ haze*

e) 朝向/背向太阳飞行* Flying into/ out of * sun

f) 飞行能见度 Flight visibility.....米/千米* m/km*

6. 航空器驾驶员认为重要的其它情报 Any other information considered important by the pilot-in-command

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D — 其它 Miscellaneous

1. 报告航空器的资料 Information regarding reporting aircraft

a) 航空器注册号 Aircraft registration .....

b) 航空器型号 Aircraft type .....

c) 经营人 Operator .....

d) 离港机场 Aerodrome of departure .....

e) 第一降落机场 Aerodrome of first landing .....目的地 destination .....

f) 通过无线电或其它方式向 Reported by radio or other means to .....（ATS 单位名称 name of ATS unit）报告时间 at time .....UTC

g) 填写表格的日期/时间/地点 Date/ time/ place of completion of form .....

2. 递交报告人的职务、地址和签名 Function, address and signature of person submitting report

a) 职务 Function .....

b) 地址 Address .....

c) 签名 Signature .....

d) 电话号码 Telephone number .....

3. 接受报告人的职务、地址和签名 Function and signature of person receiving report

a) 职务 Function ..... b) 签名 Signature .....

E — ATS 单位有关的补充资料 Supplementary information by ATS unit concerned

1. 报告的接收 Receipt of report

a) 从航空固定电信网/无线电/电话/其它（注明）*收到报告 Report received via AFTN/ radio / telephone / other (specify)* .....

b) 接受报告单位 Report received by ..... （ATS 单位名称 name of ATS unit）

2. ATS 采取的措施的详情 Details of ATS action

许可、所见事件（雷达/目视、发出的警告、当地调查结果，等）

Clearance, incident seen (radar/visually, warning given, result of local enquiry, etc.)

.....

.....

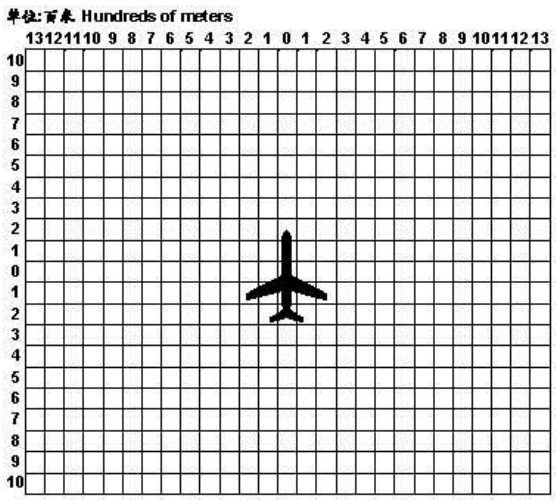
.....

.....

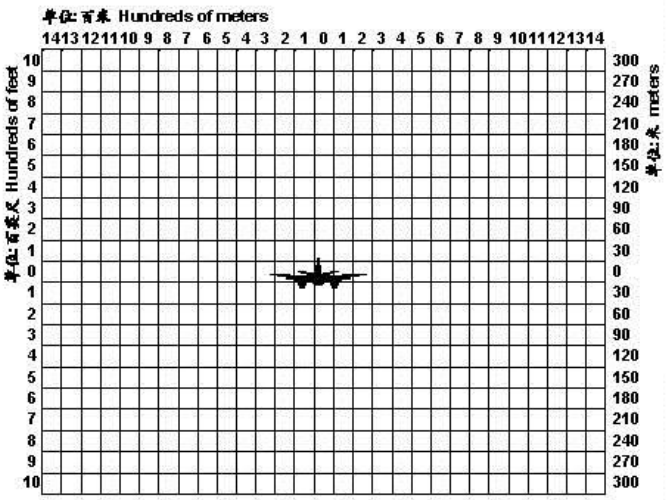
航空器接近示意图
Diagrams of airprox

以你为每幅图的中心位置，标出其它航空器相对于你的轨迹，左图为水平面图上的位置，右图为垂直面图上的位置。包括第一次看见及飞过的距离

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the center of each diagram. Include first sighting and passing distance.



俯视图
View from above



后视图
View from astern