

○ 依据国际民航组织英语标准编写
In Accordance With ICAO Standard

国际航线 飞行英语

Aviation English
for International Flight

Radiotelephony (Teacher's Book) *Communication*

(教师用书) 无线电通话



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四川出版集团 · 四川科学技术出版社

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序

语言影响飞行安全,这不是一个学术命题,而是血的教训。世界航空史上最惨烈的空难是由飞行机组与空管人员之间英语沟通的问题造成的(Tenerife 1977)。根据 ICAO 统计,全球各种飞行事故或事故征候的主要原因约有 70% 与通话不畅通有关。为此 ICAO 颁发了《ICAO 语言熟练要求执行手册》(DOC9835/AN453)并在相关附件 1、附件 2、附件 6、附件 11 等有关条款中要求从事国际飞行服务的飞行人员、管制人员要达到相应的英语通话标准。有关附件规定:2008 年 3 月 5 日以后,全球与国际航空活动相关的民航飞行员和管制员必须达到规定的语言等级标准。同时在附件 1“人员执照标准”中也规定飞行员和空中交通管制员,以及航空电台话务员等执照人员必须达到无线电通话语言能力要求,即必须达到 ICAO 英语等级 4 级以上标准,并对于低于 6 级的人员定期测试。

中国是一个崛起的大国,我国民航,正由民航大国向民航强国迈进。要实现这样一个量到质的转变,影响的因素很多,最重要的是人的因素。提高飞行人员的英语水平,从信息转换的技术环节上保证飞行安全,是一不可以回避的问题。民航总局十分重视我国飞行人员的英语提高问题,于 20 世纪 90 年代中期发起了英语工程,建立了有效的飞行人员英语培训与测试体系,并按照国际惯例,把飞行人员的英语考核结果纳入飞行执照管理。此举全面而有效地促进了我国民航飞行人员的整体英语水平的提升,受到了国际社会的称赞。不过,我们的飞行人员现有英语水平距 ICAO 出台的相关英语标准还有一定的距离。

如何缩短这个差异?民航总局已进行并采取了各种措施。由民航特聘专家吴土星教授主编的这套“国际航线飞行英语”丛书及时为飞行人员学习和培训提供了较好的材料。我与土星教授相识 20 年,他本是学英语出生,并无民航知识,可他毅力坚强,做学问犹如做人,不屈不挠,自学了飞行和空管的所有专业课程,还曾考取过管制员执照。他就像一个不会水的人,自己在岸边扑腾学游泳,一旦会游了,就向深水游去,激起朵朵浪花。他已出版了 4 部飞行和空管英语的教材和书籍,发表了 20 多篇论文,还是 ICAO 英语研究组的成员。这套教材的编写采用了语言学上的三 P 原则,即 PRESENTATION(准备和陈述),PRACTICE(练习和学习),PRODUCE(巩固和掌握)。其实飞行英语的特征就是听和说,这种对症下药的编写路数正好对应了实际飞行的语言需要;在内容选用上尤其令人叫好。书中选择了过去 20 年全球空难和事故报告相关的英语通话内容,这样不仅有助于

帮助飞行员提高英语水平,还对他们今后飞行中应对相同或类似的情况提供了可行的语言支持。相信这套按照 ICAO 的具体语言要求和标准编写的丛书不仅对飞行员们学习和掌握航空英语有极大的帮助,同时供飞行员朋友们参加英语考试参考。

马涛

2006 年 5 月 8 日于北京

编写说明

为了帮助我国民航飞行人员提高英语水平并使之达到 ICAO(国际民航组织)相关英语标准,我们按照 ICAO 的具体语言要求和标准编写了这套“国际航线飞行英语”丛书。本套丛书包括 5 本既独立又相关的书,分别是:《无线电通话(学生用书)》、《无线电通话(教师用书)》、《听力训练》、《口语训练》和《核心进阶词汇》。

《无线电通话》是基于 ICAO 关于飞行人员英语熟练程度的合格要求编写的,编写时我们考虑了三 P 原则,即 Presentation 准备和陈述,Practice 练习和学习,Produce 巩固和掌握。本书结构合理,共 9 个单元,1 个练习总汇。每单元设两课,每一课有 4 个部分,Part I 含 Warm-up Activities,和 Vocabulary,是为 Presentation; Part II 是 Practice,共有 5 段对话和 1 篇听力材料;Part III Plain Language Learning 是设计的笔头练习 Part IV Interview 是设计的口语练习,第三和第四部分包括练习总汇是为 Produce。本书内容十分充实,在选材上我们充分考虑了飞行实际工作需要,同时结合 ICAO 的英语要求难度,选择了过去 20 年全球空难和事故报告里相关的英语通话内容,这样不仅有助于帮助飞行员提高英语水平,还对他们今后飞行中应对相同或近似的情况提供了可行的语言支持。为了使飞行员们在学习时有较好的练习线索,我们在书中设计了 Interview 的练习形式。在这个模拟通话练习中,我们向学习者提供必须的航行资料和空管信息,只要两人就可以对练。通过这个练习,飞行员们还可以熟悉口语考试的形式。

ICAO 对飞行人员的英语要求是结合工作实际而提出来的,其中,听力是重要部分。《听力训练》的编写把 ICAO 要求与飞行实际密切结合起来。本书共 5 个部分。第一部分是对 ICAO 相关英语标准的英语介绍,第二部分是听力技巧介绍和听力考试实践技巧介绍,第三部分是 15 套听力测试练习,第四部分是测试练习的答案和难题详解,第五部分是测试练习的录音原文。

英语口语教材编写一直是比较困难的,其主要难点在于设计口语练习的场景,尤其难于设计模拟对话。《口语训练》克服了这些困难。本书完全按照飞行实际工作条件而设计,全书有 5 个单元,共 10 课。每课含 Warm-up Activities, Read Aloud, Readback Drills, Communicating With ATC: Normal Procedure, Communicating With ATC: Abnormal Procedure, Narration Practice, Interview And Aviation Humors。本书的主线是模拟正常和非正常条件以及飞行中的特情,每一课中设计

的 Interview 是模拟的飞行英语测试口语部分;为了活跃口语练习,增加学习兴趣,我们在 Worm-up Activity 里特意编排了一首与飞行为主题的英文诗歌并在每课编进了 Aviation Humors。本书最后是 Plain Language Practice,为飞行员提供日常英语练习的学习材料。

《核心进阶词汇》一书是在我们正在开发的民航英语语料库基础之上编撰的。本书 5,000 飞行英语词汇是从 200 万民航英语语料库中筛选出来的。本书按字母顺序编排,对重要词汇标出该词汇的出现频率,对所有词汇进行日常英语和民航尤其是飞行专业英语释义。本书的词汇涵盖 ICAO 英语标准对词汇的要求。

吴土星

2006 年 5 月于中国民航飞行学院



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UNIT ONE GROUND PREPARATION

Lesson 1 Maintenance Check

●Part I Warm-up Activities

1.1 Listening Activities

1.1.1 Directions: Listen to the statements and fill in the missing words in the blanks.

1. The trained flight crew use normal procedures to insure the airplane condition is acceptable for flight.

2. The pilots should prepare for the possibility of an emergency during takeoffs.

3. When emergency occurs in flight, there is little time to decide the proper action to be taken.

4. You must have an established plan of action and a thorough knowledge of your aircraft before an actual incident occurs.

5. Most power losses occur at the first application or reduction of power.

1.1.2 Directions: Listen to the passage and fill in the missing words in the blanks.

Maintenance check is one of the most important pre-flight activities. Aircraft maintenance engineers, licensed by aviation authorities are trained to check and overhaul airframes, engines and systems.

To convince the flight crew of the safety of the aircraft that they are going to fly, the maintenance engineers will inspect each part of an aircraft according to the manufacturers' maintenance manuals and service bulletins. Different types and degrees of inspection are required at different times and routine replacement of individual items is based on the number of landings, flying hours and other criteria.

The captain should check the maintenance log before departure, ensure a valid maintenance



nance release is in force, and be satisfied that any defects carried in the log are satisfactory for the flight.

The minimum equipment list will give guidance as to whether a defect is allowable. If you are not sure, consultation with the engineer is a good way of picking up any concerns or background information. When you look at the log, you should also note any cabin defects and pass them on to flight crew and the senior cabin crews.

1.2 Oral Activities

Directions: Listen to the passage and then answer the questions.

Questions:

Why should the pilot have his seat in position?

What is the requirement for wearing a harness?

Why is there a requirement for wearing a harness?

When operating as a pilot, the crew member must always have his seat in a position from which he can take immediate control of the aircraft. Regulations require that pilots wear safety harness for take-off and landing but it is recommended that seat belts be fastened at all times between engine start and shut down. If you wear the full harness at all times it becomes the norm and small discomforts are routine. One reason to do this is that the customers who visit the flight deck seem to feel more comfortable when they see someone tied in. Of course, in-cruise, the shoulder harness is not going to be as valuable to you as the negative strap, which should be connected. Full harness should be worn for take-off and for at least five minutes before landing. Also, it makes sense to wear it when turbulence is encountered or predicted, and definitely when one pilot leaves his seat.

●Part II Practice

2.1 Listening Practice One

Directions: There are two exchanges in Practice One. Listen to the exchanges and fill in the blanks.

Exchange One: Dent on the Blade of an Engine

PIL: Sir, will you please come here to have a look?

M (Mechanic): Yes.

PIL: There is a nick and some dents on the blade of No. 3 port engine. I suppose a rock hit it.



M: That is a serious problem. A lot of forces are applied to the blade when the engines are running. A minor problem can quickly develop into a serious engine failure.

PIL: I know about the danger of nicks and dents and scratches.

M: Yes. We know these can cause failures, so we must carefully remove them. Fortunately, all the other blades are in good condition.

PIL: By the way, when I apply the power, N1 has a bit of over-speed.

M: Do you have any balance problem while controlling the aircraft?

PI: A little bit.

M: We are going to give it a thorough check.

PIL: Thank you, Sir.

Exchange Two: Hydraulic Leak

PIL: I smelled hydraulic fluid some where near the landing gear bay. I haven't found any leakage there.

M: Let me put an auxiliary hydraulic pump on the system and sort it out.

PIL: Good, that will make it easier to find the leakage.

M: There is no problem for the actuating cylinder. Maybe, a worn O-ring is allowing a leak.

PIL: Take a close look at it, sir.

M: Ah, here is your leak. This hydraulic line joint has developed a leak.

PIL: It must be cracked. You will have a hard time.

M: No, I don't think so, joints are just loose. I'll tighten them with a wrench.

PIL: I bet the gasket must be replaced.

M: You are right. I'll replace it with a new one.

(Ten minutes later.)

M: Turn the auxiliary hydraulic pump on again. We'll check it. OK, they are fixed.

PIL: Thank you.

2.2 Listening Practice Two

Directions: There are two exchanges in Listening Practice Two. Listen to the exchanges and fill in the missing information.

Exchange One: A Chair in the Cabin Is Broken

PIL: Excuse me, please come here to the cockpit.

M: What can I do for you?

PIL: It seems that the right-hand chair in the cockpit is damaged.

M: Can you give me more details, please?

PIL: The first officer can't move or raise his chair.



M: How about the safety belts and shoulder harness?

PIL: They are working properly. Forget them, the only problem is the chair.

M: I see. Let me have a closer look. Oh, yes, the control lever is too tight. No one could move it.

PIL: The first officer must adjust the seat position properly to obtain the optimum eye reference position.

M: You're right, but we have no spare parts here. What can I do?

PIL: I'll inform our company of the situation. Perhaps the flight has to be postponed.

M: It is hard to say. Just depends. We will try to fix it as soon as possible.

PIL: It all depends on you, right?

M: I will try my best.

Exchange Two: Loose Rivet

(After walking around the aircraft)

M: Captain, have you noticed any problems with the aircraft?

PIL: Come here. Look, some of the rivets at the wing root have been pulled loose from the bulkhead. You can move the skin there. It should be tight.

M: Let me have a look. Yes, it is loose. I'll look at the inspection plates after the main spar.

PIL: Oh, there are another two loose rivets near the fillet. They are likely to show wear, and can't attach to the longerons.

M: I am going to replace these rivets. Hand me the screw driver, please.

PIL: Be sure to tighten all the rivets before we fly the aircraft.

M: Don't worry. I'll fix them all in a few minutes. The aircraft will be perfect when it flies again.

PIL: I am so glad to hear that.

2.3 Listening Practice Three

Directions: There are five exchanges in Listening Practice Three. Listen to the exchanges and fill in the table.

No.	Full Callsign	Position	Wind Data
1	BAW725	north apron	wind 230 12 knots
2	GVAEW	taxiway D8	wind 220 14 knots
3	KD-3351	spot 23 at south ramp	330 24 knots variable
4	GTIUJ	standing park45	wind variable 13 knots
5	N2469T	maintenance ramp	wind 010 11 knots



1.

PIL: Blueyard ground, BAW725.

CTL: BAW725, Blueyard ground, pass your message.

PIL: We are ready to copy ATC clearance. We are at the north apron.

CTL: You are cleared to London, FPR climb to FL50 initially, request level change en-route. Turn left heading 090 after departure, squawk 4326.

PIL: Wind information, please.

CTL: Wind 230, 12 knots.

PIL: Thanks.

2.

PIL: Stansted Ground, good morning, GVAEW.

CTL: GVW, good morning. You are at taxiway D8?

PIL: Yes, we are. We have information M, take off runway 09, wind 220, 14 knots. There is maintenance work.

CTL: Caution maintenance work in progress near D08.

PIL: Thank you, Sir.

3.

PIL: Greenland Approach, KD-3351, good morning. We are at spot 23 at south ramp, ready for taxi.

CTL: KD-3351, taxi with caution, the mid-point of taxiway partly covered by patches of ice, brake action is poor.

PIL: And the cross wind is strong?

CTL: Wind is 330, 24 knots, variable.

4.

PIL: Delivery GTIUJ, five minutes before start for La Paz airport, standing park 45.

CTL: GUJ, have you got current ATIS?

PIL: I have got information B. But I would like to confirm the wind data.

CTL: Wind variable, 13 knots.

5.

PIL: Santiago Ground, N2469T, request departure information.

CTL: N2469T, departure runway 27, wind 010, 11 knots, QNH1013.

PIL: We are at the maintenance ramp, request detailed taxi instruction.

2.4 Listening and Speaking Practice

Directions: There is one passage in this part. Listen to the passage and answer the



questions.

Ground preparation

Spending some time prior to each flight can afford the pilot an excellent opportunity for a thorough preflight inspection. Carelessly performed or disregarded preflight inspections have been a contributing cause of many accidents. Flights have been started, but sometimes not completed, because fuel or oil tanks were not checked, fuel caps were left off or loose, pitot systems were covered or blocked, gust locks were left on, wheel skirts were jammed with mud, engine coolers were blocked by bird nests or wings and other surfaces were covered by frost, snow and ice.

There are other preflight considerations, too. Be sure to consider your aircraft's fuel capacity, consumption rate, and range vs. wind conditions of each flight, and give careful thought to endurance and fuel reserves well above the minimum required by the FAR's.

Review route, minimum altitudes along the flight path, navigation aids, notices to air-men, alternate airports in the area, destination airport runway lengths, and the like. Learn as much as you can about your destination airport before you depart.

Questions:

1. According to the passage, what is a main cause of aircraft accidents?

Carelessly performed or disregarded preflight inspections.

2. What should you do for fuel inspection before flight?

Be sure to consider your aircraft's fuel capacity, consumption rate, and range vs. wind conditions of each flight, and give careful thought to endurance and fuel reserves well above the minimum required by the FAR's.

3. Cite at least five items to be checked during pre-flight preparation.

fuel and oil tanks; , fuel caps; pitot systems; gust locks; wheel skirts; engine coolers; wings and other surfaces.

●Part III Plain Language Learning

3.1 Sentence Making (reference answer omitted)

3.2 Passage Building (reference answer omitted)

3.3 Translate the Following Sentences from Chinese into English

1. 由于浓雾能见度变坏。

Visibility is deteriorating due to dense fog.

2. 滑行道很滑, 滑行时要小心。

Taxi with caution; taxiways are very slippery.



3. 由于发动机短舱附近漏油,有一架飞机正返回北边的停机位。

There is traffic returning to the north stand due to hydraulic leakage near the engine nacelle.

4. 港龙 235 我们的第二部高频收发机故障,请通知维修人员在我们到达时检查一下。

HDA235, we have trouble with HF number two transmitter and receiver. Please call maintenance to check it after our arrival.

5. 香港管制,如果你们有备用器材,我们想换一部,这样可缩短过站停留时间,否则,由于起飞时限关系,我们将过夜。

Hongkong Control, if you have a spare part, we would like to change it to shorten over station, otherwise, we'll stop over night due to dead line.

3.4 Translate the Following Sentences from English into Chinese

1. CCA981, No. 1 engine on fire, we have completed emergency procedure checklist, warning light remains illuminated, request immediate landing.

国航 981 一发失火,我们已完成紧急程序检查单,警告灯仍亮,请求立即着陆。

2. UAL569, your departure time has to be delayed due to an aircraft lower cargo fire on the runway.

联航 569, 由于跑道上的飞机下货舱失火,起飞时间推迟。

3. Hong Kong Ground, CSN308, radio check 124.65. How do you read?

香港地面,南航 308, 无线电检查 124.65 听我声音怎样?

4. This is your captain speaking am sorry to inform you that due to flow control, we will be delayed about one hour. Please remain in your seats and wait.

我是本架飞机的机长。抱歉的通知您,因为空中交通管制的流量控制,我们将延误一小时,请大家在你的座位上休息等待。

5. Takeoff aborted due to number one engine failure. We've managed to stop on the overrun.

一发失效,中断起飞,我已控制飞机在保险道上停下。

●Part IV Interview

(reference answer omitted)