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# Civil Aviation English for Pilots: An English Air-ground Communication Course Based on Simulating Videos

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University of San Francisco

**Civil Aviation English for Pilots: An English Air-ground Communication  
Course Based on Simulating Videos**

A Field Project Presented to  
The Faculty of the School of Education  
International and Multicultural Education Department

In Partial Fulfillment  
Of the Requirements for the Degree  
Master of Arts in Teaching English to Speakers of Other Language

by  
Yuting Li  
May 2016

**Civil Aviation English for Pilots: An English Air-ground Communication  
Course Based on Simulating Videos**

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MASTER OF ARTS

in

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGE

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May 2016

UNIVERSITY OF SAN FRANCISCO

Under the guidance and approval of the committee, and approval by all the members, this field project has been accepted in partial fulfillment of the requirement for the degree.

Approved:

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Instructor/Chairperson

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Date

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CHAPTER I  
INTRODUCTION

Statement of the Problem

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## CHAPTER I

### INTRODUCTION

#### **Statement of the Problem**

The personnel element in civil aviation includes both people working on the front line of operations, such as air traffic controllers and pilots, and people working “backstage”, such as dispatchers and maintenance engineers (Netjasov, 2015). There is no doubt that their professional knowledge and skills are essential to flight safety. In addition to their professional knowledge and skills, communication between pilots and air traffic controllers is another crucial element of flight safety. In the 1950s, with the remarkable increase of international air service, the International Civil Aviation Organization (ICAO) decided English as the mandatory language of international civil aviation. Their reasoning was to ensure efficient communication between pilots and air traffic controllers in order to guarantee the safety of international flights (Huang & Wu, 2005).

However, according to ICAO, one of the main causes of air incidents and accidents after 1980 was inefficient communication or miscommunication between pilots and air traffic controllers (Huang & Wu, 2005). So, the unsatisfactory English communication ability of pilots and air traffic controllers was regarded as a safety hazard. Hence, ICAO began to implement a program to increase the English proficiency of pilots and air traffic controllers. Based on the requirements, the Civil Aviation Administration of China (CAAC) utilized an English proficiency testing system for Chinese pilots called the Pilots’ English Proficiency Examination of CAAC (PEPEC). Accordingly, student pilots are required to pass the third level of the ICAO English program before graduation. Furthermore, all pilots must pass ICAO

English level-4 to qualify for international flights (Li, Xiao, & Ren, 2013).

After ICAO's English standard came into effect, thousands of student pilots have been trying to pass ICAO English level-3. Meanwhile, many experienced pilots (including captains) have returned to civil aviation universities to receive ICAO English training, worried about whether or not they could pass the test and return to work. In fact, there are reasons as to why English is a challenge for both experienced and student pilots. According to both experienced and student pilots, a large proportion of experienced pilots had never received English training prior to the ICAO English test being implemented. This resulted in them having little chance to learn English systematically or efficiently. As for the student pilots, they might have completed English courses in high school, however, when they enrolled in student pilot programs, physical qualities such as vision and height were valued more important than their English proficiency level. It is one of the notable factors that caused a dilemma for pilots suddenly required to pass the ICAO English proficiency test.

What would be a more appropriate alternative asserted by some is a branch of English education called English for Special Purposes (ESP). According to Rahman (2015), an ESP course should be developed based on the analysis of the purposes, needs, and the specific activities for which English will be needed. In regard to pilots, they do not need to develop great writing skills, but rather an effective reading ability, a high level of listening comprehension, and a sufficient speaking proficiency. In a professional setting, it is useless for them to know all conversational vocabulary and expressions, but they need to remember a number of specific terms conducive to civil aviation. Quite simply, they have a straightforward goal: efficient air-ground communication with air traffic controllers. In consideration of their

needs, the existing courses in China are not enough to meet this goal. Consequently, this is another factor of the situation that causes many pilots to continue to struggle to reach ICAO's English requirement.

By interviewing student and experienced pilots, the author found out that pilots in China are currently offered three English courses: General English, English for Flight Crew: Developing Reading Skills, and English for Flight Crew: Radiotelephony Communication. Among them, General English is required for university students of all majors and not specially designed for pilots. English for Flight Crew: Developing Reading Skills is a traditional reading course with emphasis on civil aviation. It emphasizes aviation related vocabulary as well as grammar rules. The last category is English for Flight Crew: Radiotelephony Communication. It is designed for air-ground communication for both pilots and air traffic controllers. It is also the only course with audio material. All in all, these three courses are instructed by what's called the Grammar-Translation Method, which emphasizes memorization, rather than actual usage of the language.

Pilots may be able to memorize words and grammar rules using the three courses discussed, but they can only parrot what they remembered, rather than communicating freely in and outside of the class. Alternatively, ESL teachers could develop a course which can make it easier for pilots to pass the ICAO English test, and most importantly, to communicate in English naturally at work. Therefore, the author recommends an ICAO English course that simulates real world flight communications and improves both the efficiency of meeting strict aviation English requirements, as well as the overall effectiveness of this communication.



## **Purpose of the Project**

The purpose of this field project is to fill the gap in the aviation English curriculum in China by developing a simulating video based English air-ground communication course (in conjunction with the class based conversational practice) and creating an improved method of teaching and retaining English pertaining to air-ground communication. The result of these efforts will help pilots use English more effectively on the job by focusing on real world conversational practice, rather than ineffective memorization techniques. Instead of replacing existing courses, the improved English air-ground communication course is designed for pilots who already possess certain civil aviation English knowledge, such as industry specific ICAO terminology and civil aviation terminology that they have learned previously. What is proposed is a communication practice course for pilots already possessing an intermediate to advanced English ability.

As an advanced air-ground communication course, this course should be offered to second year student pilots who have completed elementary English courses, and to returning pilots that have received basic ICAO English courses at their civil aviation universities. It is also recommended to airlines in order to keep pilots familiar with the English usage in every flight phase, especially in emergency situations including “forced landing” and “near-miss” that pilots occasionally encounter. Additionally, videos included in this course can also be used independently by pilots as auxiliary self-study material to review and continue to practice outside of class.

This immersion based English air-ground communication course should create a vivid and engaging learning environment so that pilots struggling with English radiotelephony

communication can feel genuinely interested in the material, rather than bored from the limitations of memorization based learning. Students are encouraged to be participants of class and shift their roles from “listeners” to “communicators”. All in all, this project will help pilots pass the PEPEC requirements in order to graduate or return to work. The result will help them better equip themselves with an English communication ability that drastically improves flight safety, as their English proficiency is so closely related to aviation safety.

### **Theoretical Framework**

The second language acquisition theory of Communicative Language Teaching is the foundation for this field project.

Celce-Murcia, Brinton and Snow (2014) state that, “Teaching languages (especially English) for specific occupational, vocational, scientific, and academic purposes was an early priority of CLT internationally for engineers, pilots, graduate students, hotel workers, and other groups”.

The goal of Communicative Language Teaching is to enable language learners to communicate in the target language with others in the real world (Celce-Murcia, Brinton, & Snow, 2014), which is synonymous to the primary purpose of this field project (making pilots naturally communicate with air traffic controllers). According to Larsen-Freeman and Anderson (2011), under the CLT approach, the teacher’s main responsibility in the classroom is to establish a conversational environment and prompt students, the communicators, to interact meaningfully with each other. Students will be involved in a lot of communicative activities and will have many opportunities to use target language instead of focusing primarily

on linguistic forms and technical grammar rules.

In a CLT class, students' native language is not prohibited but can only be used in a judicious way (Larsen-Freeman & Anderson, 2011). To some extent, proper use of the native language makes it more efficient during language teaching, especially for ESP learners whose purpose of language learning is very specific. However, the target language should be used when the teacher gives instructions, explanations, and assignments as well as during the communicative activities (Larsen-Freeman & Anderson, 2011). On one hand, students will have more chances to listen to and speak in the target language in this way. On the other hand, it shows them that their target language is a useful tool to understand others and to express their thoughts, instead of making the target language a meaningless chore to learn.

Another feature of Communicative Language Teaching is that functions of language are emphasized because within a social context, language users need to perform certain functions such as asking questions, promising, and persuasion (Larsen-Freeman & Anderson, 2011). This point is also very inspirational in teaching air-ground communication because every phrase or sentence that pilots or air traffic controllers use contains certain purposes. For example, when an air traffic controller says, "CCA 101 descend two-four-zero-zero", he or she actually makes a command instead of asking questions. When a pilot reports, "JAL 125 we have run into moderate turbulence", he or she gives information instead of expressing admiration. It is vital that the listener should understand the purpose behind the speaker's words, and that the aim of the speaker should be in accordance with what he or she says. Otherwise, no matter how accurately they use English, their communication may still be ineffective, and in an aviation setting, this can cause potential unsafe circumstances.

## **Significance of the Project**

Although English radiotelephony communication seems like a small branch in the field of English teaching, it is a crucial one. For airlines that spend more than one hundred thousand dollars and four years to train a pilot, they need pilots who meet ICAO's requirement as English speakers to run and grow business, especially when you consider China's current shortage of pilots. For pilots, their English proficiency determines how long it takes them to become captains, as pilots who cannot perform proper air-ground communication have limited flight routes, and consequently earn fewer flight hours. In other words, English can be either a big hinderance or benefit for pilots, as it directly affects their promotion and opportunity for career advancement.

More importantly for the public, it is all about the safety. According to statistics, the proportion of aircraft incidents and accidents caused by radiotelephony communication is between 12% to 22% of total flight incidents and accidents (Huang, 2005). In 1993, an air crash took place in China and killed 16 people because pilots did not understand the warning of "pull up". It is very serious and dangerous when airplanes are controlled by people who cannot understand air traffic controllers' instructions and indications in cockpit. Clearly it is extremely urgent to improve pilots' actual communication competence.

By making the aforementioned adjustments to the aviation English training, the benefits of employing Communicative Language Teaching (CLT) can be utilized by the aviation industry as well. Therefore, this improved method of teaching is a mutually beneficial to the airline company, pilots/flight crew, and the general public as a whole.

## **Limitations of the Project**

Like most projects, this project has certain limitations. The first limitation is the fact that the target population of this field project is pilots in China. However, the project can be adapted by ESL teachers to be used in other areas as well. Another limitation is that the content, the teaching methods, activities, and models included in this course are somewhat limited because the material related to radiotelephony communication is limited.

## **Definition of Terms**

**Air-ground Communication:** According to “Message from the Sky: Radiotelephony in Air-Ground Communication”, air-ground communication is a specific conversational discourse between pilots and air traffic controllers via special technological equipments. (Nitayaphorn, 2014)

**Air Traffic Controller:** Air traffic controllers are the professionals who regulate air traffic by monitoring planes during flying, guiding them to airports, assigning landing strips, and directing them to the proper terminals. They make quick decisions according to the information on radar screen to coordinate with pilots and other crews to ensure flight safety and efficiency. (Auerbach, 2013)

**Civil Aviation:** According to *Encyclopedia of Global Studies*, civil aviation is the operation of any civil (the opposite of military) aircraft and its related activities with the purpose of transportation by air. Different from many other fields, the industry has a character of

internationality from its beginning. (Anheier, Juergensmeyer, & Faessel, 2012)

**English for Specific Purposes (ESP):** In *Teaching English as a Second or Foreign Language*, Celce-Murcia, Brinton, and Snow (2014) define ESP as pedagogical activities for students, mostly adults, with specific English learning purpose on their current or future academic, professional as well as vocational domains.

**Grammar-Translation Method:** According to Celce-Murcia, Brinton, and Snow, Grammar-Translation Method was first used in teaching Latin and Greek in the 19<sup>th</sup> century. Later it became a method to teach modern languages as well. It has several characters including that instruction is given in native language, the focus is on grammar and vocabulary, translation is an important process, and the result of this approach is usually an inability of the students to communicate in the target language, etc. (2014).

**International Civil Aviation Organization (ICAO):** According to ICAO's official site, ICAO is a UN specialized agency whose duty is to cooperate with the 191 member states and industry groups to reach accordance on standards and recommended practices to support a safe, efficient, secure, environmentally responsible and economically sustainable civil aviation sector.

**Learner-centered Teaching:** According to Blumberg and Weimer (2012), instead of using a single teaching method, learner-centered teaching encourage a variety of teaching methods in

order to change the role of teachers from the information providers to learning facilitators.

**Phraseology:** In “International Communication and Discourse Analysis: The Case of Aviation English”, Hazrati (2014) explains that, “the language of air communication between Air Traffic Controllers and Pilots is not a standard variety of English Language and has very brief and specialized syntax which is called ‘Phraseology’. Phraseology is used in routine situations by both native and nonnative speakers with the goal of clarity and comprehension by very, and is regarded as English for Special Purpose.”

**Radiotelephony:** According to Nitayaphorn (2014) in “Message from the Sky: Radiotelephony in Air-Ground Communication”, radiotelephony is a universal language used in a restricted environment by pilots and air traffic controllers all over the world.

CHAPTER II  
REVIEW OF THE LITERATURE

Overview

Review of the Literature

Summary



## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

Pilots are required to pass ICAO English tests because their English language proficiency is closely related to operational efficiency and flight safety. However, Chinese pilots' English communication ability is generally unsatisfactory. Besides, current ICAO English courses in China cannot meet the goal of authentic and accurate English communication between pilots and ATCs. Therefore, developing a course that aims to create a vivid and engaging learning environment and enable pilots to speak in English fluently on the job is the purpose of the project. Understanding English air-ground communication and its features is the first component of this literature review. The second part of the literature review includes using simulating videos which offers a contextual learning environment (Batel, 2014). The last part of the literature review is Communicative Language Teaching (CLT). In summary, the three categories of literature reviewed in this chapter are English air-ground communication, using videos to teach English, and Communicative Language Teaching.

The theme of English air-ground communication includes three articles. "Message from the Sky: Radiotelephony in Air-ground Communication" written by Nitayaphorn reveals air-ground communication by specific and detailed features. "English for Specific Purposes (ESP): A Holistic Review" written by Rahman explains English air-ground communication as ESP. Finally, "Intercultural Communication and Discourse Analysis: The Case of Aviation English" written by Hazrati focuses on the cultural diversity in aviation context.

The second kind of supportive literature is “using videos to teach English” because videos are one indispensable component of the air-ground communication course developed in the project. They are also recommended to be used independently as auxiliary self-study materials for pilots. Two articles revealing why using videos to teach English and what kind of videos should be created and used will be reviewed. “The Effectiveness of Videos vs. Written Text in English Comprehension and Acquisition of ESL Students” written by Batel compares videos with written instructional materials as learning tools and indicates that the use of videos in language teaching is more attractive and more effective. Besides, “Designing Video Narratives to Contextualize Content for ESL Learners: A Design Process Case Study” by South, Gabbitas, and Merrill initially demonstrates how important the context is when learning a second language and then analyzes how narrative videos contextualize content and how to make videos attractive to learners and efficient to meet pedagogical goals.

Finally, Communicative Language Teaching (CLT) is the foundational theory of the project and also the third theme. In *Techniques & Principles in Language Teaching*, Larsen-Freeman and Anderson (2011) review the experience, principles, and techniques of the CLT class. It is of great advantages to the project. “Reflections on Communicative Language Teaching and Its Application in China” covers the historical and theoretical background of CLT as well as two versions of CLT. However, its most important contribution to this project is the demonstration of the implementation of CLT in China. It introduces the phenomena and the reasons behind them. In the third article, “Communicative Language Teaching in EFL University Context: Challenges for Teachers”, Rahman and Asmari (2015) reveal the difficulties and challenges the ESL teachers may encounter while conducting CLT.

Although the research was done by Rahman in Saudi Arabia, it still helps the project by avoiding some mistakes. Finally, “The Integration of Form-focused Instruction within Communicative Language Teaching: Instructional Options” encourages the combination of CLT and formal instruction to maximize the effectiveness of language teaching. Some Form-focused Instruction (FFI) techniques are also offered to the teachers.

## **Review of the Literature**

### **English Air-ground Communication**

In “Message from the Sky: Radiotelephony in Air-ground Communication”, Nitayaphorn (2014) defines air-ground communication as a specific conversational discourse between pilots and air traffic controllers through wireless technology. Based on the definition, the features of air-ground communication can be exposed. Firstly, what is the “specific conversational discourse”? It is a non-face-to-face conversation between a pilot in an active aircraft and an air traffic controller in the control center on the ground. The basic agreement of the conversation is that it is a one-on-one interaction (Nitayaphorn, 2014). In other words, there can be other pilot audiences on the same radio frequency, but there should not be any interruption from other aircrafts. Pilots must pay close attention to the exchanges and wait for their chance to talk with the air traffic controller after other pilots complete their conversation. Nitayaphorn (2014) also addresses that the conversational discourse is “talk-in-action”, which means pilots interact moment-to-moment as they talk, understand, and see. A great amount of information is exchanged in a short time so that the interactions can occur continuously in each flight phase including pre-flight, takeoff, departure, en route, descent, approach, and

landing. The conversations only happen in the workplace to fulfill the flight mission and are recorded in the aircraft as well as in the control center (Nitayaphorn, 2014).

Secondly, the relation “between pilots and air traffic controllers” is like two different departments in the same company because the duty of pilots is to deliver their passengers or cargos to the destination while air traffic controllers are responsible for offering instructions, directions and parameters to the pilots to guide them to the destination (Nitayaphorn, 2014). Fundamentally, they have different responsibilities but the same goal. Theoretically, they should have an equal status. However, air traffic controllers are very similar to traffic policemen. Pilots mostly need to follow ATCs’ (air traffic controllers’) instructions and directions and perform standard callouts, state intentions, ask questions and report their real-time circumstances to ATCs. So somehow, air traffic controllers usually have a higher level of authority than pilots (Nitayaphorn, 2014). Whereas, pilots still can negotiate with ATCs for an alternative arrangement to operate the aircraft because a basic rule in the cooperation is to respect each other to exchange information to accomplish the same goal (Nitayaphorn, 2014).

What is “wireless technology”? Most aircrafts are equipped with more than one high-quality radio transmissions which work in the very high frequency (VHF). And aircrafts fly high enough so that their transmitters can be received from hundreds of miles away (Nitayaphorn, 2014). However, it is sometimes interrupted by high-frequency noise. The interruption is a conditional difference of air-ground communication from natural conversations. Besides, we mentioned air-ground conversation as a one-on-one interaction. It is also caused by the characteristic of the transmission system. The system is a push-to-talk

system that the speaker needs to push the button every time when he or she conveys a message (Nitayaphorn, 2014). As a result, it is an instant information exchange system which requires moment-to-moment interactions.

In short, air-ground communication is task-oriented, high-workloaded and high-technological (Nitayaphorn, 2014). Its topics are limited within aviation-related issues including flight instructions, flight parameters, weather information, and specific aerodrome information. Additionally, according to certain flight stages, the content of the communication and what sorts of messages the participants should deliver are predictable.

About the linguistic properties of radiotelephony, by analyzing 556 messages from the *Manual of Radiotelephony* issued by ICAO, Nitayaphorn (2014) concludes that radiotelephony is a lingua franca, which is used among people with different first languages. It is “very close to robot-like or telegraphic language carried through a limited set of syntactical units within rigid discourse strategies, which only a few people involved in the same field of expertise would understand.” It is based on a set of prescribed rules to decrease the complexity and variety to reduce confusion and misunderstanding (Nitayaphorn, 2014).

English air-ground communication should also be understood as English for Special Purposes. “English for Specific Purposes (ESP): A Holistic Review” written by Rahman (2015) gives us an overall perspective. Emerging in the 1960s, ESP was a result of the rapid growth of science and technology and the rising use of English worldwide. ESP can be divided into two categories: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP) (Rahman, 2015). Radiotelephony belongs to EOP. The three absolute characteristics of ESP are: (1) It is designed according to the specific needs of the

learners. (2) It is instructed by underlying methodology and activities of the discipline where it is used. (3) It is focused on the language, skills, discourse and genres related to the activities (Rahman, 2015). Accordingly, two remarkable differences of ESP from GE (General English) should be concerned that the learners are usually adults who have certain accumulation of English and their purpose of learning ESP is to perform professional activities in the real world (Rahman, 2015). Hence, in ESP, the needs analysis should be done before the instruction to decide which language skills (from listening, speaking, reading, and writing) are most important to the learners. For pilots, as we mentioned, listening and speaking are the most important skills.

Rahman (2015) then states that “needs analysis is a very crucial first step prior to designing and developing a language course, producing, materials for teaching and learning, and developing language test”. Target Situation Analysis (TSA) namely means the analysis of the activities and working environment where the students will use English. Learning Situation Analysis (LSA) refers to the analysis of why the learners want to learn. Present Situation Analysis (PSA) refers to learners’ strengths and weaknesses before the course starts. Means Analysis (MA) is the teaching environment of the course including teachers, students, instructional methods, and facilities. It determines whether the course is workable. Language audits are a large-scale research performed by companies or governments to develop a macro teaching plan. The project can benefit from Rahman’s study that it offers the basic knowledge of ESP and the methods of needs analysis which is the crucial first step of language course development.

Hazrati focuses on the cultural diversity in aviation context. He addresses that both

native speakers' culture and non-native speakers' culture should be considered, especially when using English as a lingua franca in aviation because it may cause fatal problems. He also defines radiotelephony as "phraseology" which has reduced and specialized syntax in order to be used in routine situation by both native and non-native speakers with the aim to minimize the complexity and misunderstanding (Hazrati, 2015). He then analyzes three real cases to show the influence of cultural difference on comprehension between pilot-pilot, ATC-ATC, or pilot-ATC. For example, the degree of politeness differs from the rank of the speakers. So copilots tend to use more mitigated speech such as "would you" and "Right?" which might be regarded as less serious by the ATCs (Hazrati, 2015). It is even more common in hierarchical countries like South Korean and Japan.

Although intercultural knowledge is not one of the scoring criteria in ICAO's Language Proficiency Requirements (LPRs) (The criteria include vocabulary, grammar/structure, pronunciation/accent, fluency, comprehension, and interactions.), air-ground communication teachers still need to recognize the significant dimensions of culture in language teaching to ensure a safe career (Hazrati, 2015). As shown in past events, intercultural knowledge is very important when pilots encounter unexpected circumstances (Hazrati, 2015). Lack of intercultural knowledge may cause tragedies directly or indirectly. For Chinese pilots, what they should do is to understand the culture background of English spoken countries as well as other non English spoken countries and be sensitive to the cultural differences, what's more, to act in interculturally appropriate ways. In Hazrati's words, they should become interculturally sensitive and interculturally competent communicators (2015).

### **Using Videos to Teach English**

Why does this project involve videos to teach English instead of the traditional way of using written materials only? Batel's experimental study gives an answer. Batel divided six intermediate-level ESL students equally into two groups (Group H and Group K). In Phase (1), Group H watched a 10-minute segment of a movie while Group K read the corresponding passages in the book. Then both groups answered 14 questions, which included six chronologically reordering questions and eight True/False questions. To minimize the influence of participants' individual differences on the result, in Phase (2), these two groups switched their tasks to Group K reading another part of the book and Group H watching the corresponding segment of a movie. The video group scored remarkably higher than the book group in both phases with 25% to 30% gaps between the scores. The result indicates that the use of videos is more effective in language comprehension (Batel, 2014).

There are several reasons. First, research shows that there are two interrelated storage system of human beings, the verbal system and the image system, which can work separately (Batel, 2014). When watching videos, both systems are activated. It will be more effective than activating only one system. The use of video offers visual aid which enhances the participants' performance during cognitive process. Second, participants are engaged more when watching videos (Batel, 2014). Somehow, readers are always distracted in the middle or at the end of reading. Watching videos offers a contextual environment to keep the learners attracted. Lastly, learners are more motivated when videos are used as a learning tool because watching a movie is apparently more relaxing and entertaining than reading (Batel, 2014). All in all, Batel (2014) concludes that video use should be encouraged in language teaching since



it is more effective for language comprehension and learners are more engaged and motivated.

Another reason why we use videos in the air-ground communication course is that contextualization in second language teaching is beneficial to both the teaching process and the teaching result, which is also the opinion of South, Gabbitas, and Merrill (2008). In “Designing Video Narratives to Contextualize Content for ESL Learners: A Design Process Case Study”, the three authors analyze the need for context when learning a second language first. Together with formal language knowledge such as grammar, vocabulary, and syntax, a sense of context decides whether a language learner is a good language user since a good language user “must know how, when and why to say what to whom” (South, Gabbitas, & Merrill, 2008). Acquiring formal language components only covers “how” and partially “what”. “When” “why” and “what to whom” can only be mastered when language learners understand the context. As a result, contextualization is an important process in language teaching. It is also a recent educational movement called “situational learning” (South, Gabbitas, & Merrill, 2008). The key to contextualization is the real world simulation. Its methods include multimedia software, group and peer practice, one-on-one tutoring, and video-based narratives.

Compared with non-narrative videos which have been used for years in language teaching, narrative videos are more beneficial and recommended by South, Gabbitas, and Merrill (2008). Non-narrative videos are too short (3-5 minutes) to provide the context of the language task, whereas the extended dramatic narratives allow a second language learner to understand the context and know how to communicate effectively under different

circumstances. Moreover, narrative videos are more interesting and engaging to the learners than non-narrative videos so that learners will relate personally to the characters. Narrative videos are also more authentic than the non-narrative ones because they are neither too dense nor too sterile to be alike to actual speech. And they are more close to the real world language with emotional context.

Finally, the authors demonstrate how to design engaging and pedagogically rich videos. In short, to ensure engagement, professional storytellers, established techniques, testing with audience, and using professional actors are the keys. To meet pedagogical goals, particular topics and events, better integration of instructional materials, and respect for the pedagogical side are needed. Although this article neither aims at ESP nor civil aviation and it is not totally corresponding to the project, its views and suggestions on using videos to contextualize content for ESL learners are significantly instructive.

### **Communicative Language Teaching**

In the 1970s, educators began to question whether the existing language teaching methods could accomplish the goal of communicating with the target language. As a result, besides linguistic competence, communicative competence was also emphasized, which is also the goal of CLT. Although there is no single version of CLT, Larsen-Freeman and Anderson's experience of a CLT class offers a general concept. In CLT classes, (1) Authentic language should be used. (2) Understanding the speakers' intention is also a part of communicative competence. (3) The target language is a tool for class communication, not only the object to study. (4) Language functions are emphasized over forms. (5) Cohesion and coherence are important to bind sentences together. (6) Activities including games, role-plays,

and problem-solving tasks should be used to give learners opportunities to talk. (7) Students are communicators while teachers are communication promoters. (8) Errors should be tolerated during fluency-based activities and corrected later during accuracy-based activities. (9) Social context and situational context are also important to give meaning to the utterances. (10) Students are more motivated because they feel they are learning something useful. (Larsen-Freeman, & Anderson, 2011)

“Reflections on Communicative Language Teaching and Its Application in China” introduces the historical and theoretical background as well as the strong and the weak versions of CLT. But the most important support for this project is the information of how CLT is implemented in China. CLT was introduced to Chinese junior and senior high schools as well as colleges and universities in the early 1980s. However, its outcome did not show the expected result and we could hardly see its existence in most English language teaching classrooms in China. On the one hand, students were used to the traditional classroom tasks and held a negative attitude to the communicative activities. On the other hand, teachers felt frustrated due to students’ negative response and low English proficiency. (Liu, 2015)

There are four possible reasons for this phenomenon. Firstly, students were asked to perform to the situations they would never encounter outside of the classroom. In other words, activities were designed irrelevantly to the functional purpose. Liu (2015) suggests that communicative activities should be based on real-life situations and influenced by more varied and clear social context. Secondly, most students misunderstood CLT as useless because it would not offer them grammar knowledge and would not help them pass the grammar-based exams in China. ESL teachers are responsible to make students understand

that grammar is a tool to use English instead of the result of learning English. The goal of learning a language is to communicate with it. The third reason is that the students could not “balance the relationship between linguistic competence and communicative competence” (Liu, 2015). “Students should be aware that communicative competence does not derive from linguistic competence automatically.” (Liu, 2015) Participating in the communicative activities is an effective way to improve communicative competence. The last reason is the lack of authentic English language materials in China. This situation is getting better because of the increasing use of internet.

Rahman and Asmari (2015) also reveal the difficulties and challenges ESL teachers may encounter while conducting CLT. Although it is a research based on a quantitative method employing questionnaires in Saudi Arabia, it helps the project realize the challenges beforehand. Besides the challenges uncovered by Liu, possible difficulties in a CLT class include teachers’ lack of CLT training, students’ lack of motivation for developing communicative competence, insufficient support from administration, traditional view on teachers’ and students’ roles, large classroom size, current examination system, unsuitable syllabus, lack of AV aids in some classroom, difficulties in evaluating students’ performance, and unsuitability of western educational assumptions in the local context. In the process of developing the air-ground communication course, efforts will be made to overcome these difficulties.

“The Integration of Form-focused Instruction within Communicative Language Teaching: Instructional Options” gives a clue to overcome some of the difficulties by encouraging the combination of CLT and formal instruction to maximize the effectiveness of

language teaching. The strong version of CLT calls for abandoning formal instruction of language teaching, which causes many problems including the lack of grammatical accuracy and some difficulties we mentioned above. Therefore, form-focused instruction (FFI) was introduced by Ellis in 1990. FFI is declared to raise the learners' awareness of unlearned language features and notice them in subsequent communicative input and the "noticing" will enforce L2 learning (Abdel, & El-Dakhs, 2015). The integration of FFI and CLT encourages learners to discover grammar from real life examples and focus on form, meaning, and use in one learning progress. Finally, learners will develop linguistic competence and communicative competence at the same time. At the end of the article, some FFI instructional options of input, processing, output, and feedback stages are also offered as reference to ESL teachers.

### **Summary**

Understanding what air-ground communication is and what its characteristics are, why and how to use videos to teach English, and what we should pay attention to when using CLT as the teaching approach is the foundational knowledge for developing the video-based English air-ground communication course. By reviewing three articles on air-ground communication, we know that as ESP, air-ground communication is typically used by adults (pilots and ATCs) who have a professional goal of conducting effective communication to accomplish flight tasks where skills of listening and speaking are more emphasized than reading and writing. Radiotelephony is a kind of "phraseology" that has reduced and specialized syntax in order to be used in routine situation by both native and non-native

speakers with a low level of complexity and misunderstanding. It is based on wireless technology and requires a great amount of information exchange in a short time to ensure continuous interactions in each flight phase. Moreover, it is recorded and might be interrupted by high frequent noise. The content in air-ground communication is predictable according to each flight stage. What's more, both linguistic knowledge and intercultural knowledge should be instructed in air-ground communication classes to reduce misunderstanding during flight missions.

There are two articles under the theme of "using videos to teach English". The first one uses an experiment to indicate that using videos is more effective in language comprehension because they offer learners visual aid and engage and motivate them more. The second article emphasizes the importance of contextualization in language teaching and suggests the use of narrative videos instead of non-narrative videos because it provides context better and is more natural and authentic. Within the theme of Communicative Language Teaching, four supportive articles respectively introduce the principles of CLT, offer how CLT implemented in China, add more potential challenges and suggest the integration of form-focused Instruction within CLT. With the support offered by all the literature, this project will offer a well-planned, efficient and effective English air-ground communication course for Chinese pilots, helping them to communicate effectively on the job and pass the ICAO English test easily.

CHAPTER III  
THE PROJECT AND ITS DEVELOPMENT

Description of the Project

Development of the Project

The Project

## CHAPTER III

### THE PROJECT AND ITS DEVELOPMENT

#### **Description of the Project**

The intent of this field project is to enable pilots to communicate in English fluently by developing an advanced air-ground communication course. The course is designed for pilots who have basic English knowledge and basic ICAO English background. This project consists of an English air-ground communication textbook which includes corresponding exercises and communicative activities, a teacher's handbook and video material. The textbook contains eight units, 19 lessons.

Unit 1: "General Operation Procedures" – It includes Lesson 1 and Lesson 2. Lesson 1 focuses on phonetic alphabet, numerals, and call signs. Lesson 2 includes general communication procedures. Language function of establishing initial contact and keeping contact is also a part of Unit 1.

Unit 2: "Pre-start" – This unit contains the communication tasks before starting engines. Lesson 3 contains radio check and understanding ATIS. Lesson 4 contains requesting departure information and requesting ATC clearance. Language function of asking questions is also a part of Unit 2.

Unit 3: "Start up and Taxi" – It contains Lesson 5 whose topic is requesting pushback and start-up. Lesson 6 includes requesting taxi. Language focus of the comparison of British and American English is a part of this unit.

Unit 4: "Take off and Departure" – There are also two lessons in Unit 4. Lesson 7 consists of line up and takeoff information. Lesson 8 consists of departure and climb.



Language function of making requests is included.

Unit 5: “En Route” – Lesson 9 is the only lesson in this unit. It contains changing flight levels, requesting to join, cross airways, and holding en route. Language function of expressing perceptions is contained in Unit 5.

Unit 6: “Arrival and Approach” – This unit includes Lesson 10 that focuses on descent and hold. Lesson 11’s topic is approach. Language function of expressing concern and making suggestions is included in this unit.

Unit 7: “Landing and After Landing” – It has three lessons. Lesson 12 focuses on traffic circuit. Lesson 13 includes missed approach and local training. Lesson 14’s topics are final approach and after landing. Language focus of describing procedures including instructions, descriptions, and completed actions is also a part of this unit.

Unit 8: “Abnormal Situations” – There are five lessons in Unit 8: bad weather flying (lesson 15), ground events (Lesson 16), problems in flight (Lesson 17), urgency (Lesson 18), and distress (Lesson 19). Language focus of the comparison of standard phraseology and plain language is included in Unit 8.

Along with the textbook, the teacher’s handbook offers a recommendation teaching timeline that suggests breaking the course into 48 90-minute sessions held three times a week, with a total of 72 hours. Lesson plans are also included in teacher’s handbook. It introduces the objective, videos, exercises, activities, homework and assessment of each lesson. Exercise transcripts and answer keys are the third part of teacher’s handbook. The simulating videos of each unit can be found on the CD attached.

## **Development of the Project**

From 2008 to 2012, the author majored in English and minored in Air Transportation in the Civil Aviation Flight University of China (CAFUC) from where more than 80% of Chinese pilots graduate. During these four years, the author witnessed how difficult it was to these pilots (both student pilots and experienced pilots) to pass ICAO English test and to equip themselves with satisfactory English communication ability. One reason of their dilemma was that the ICAO English curriculum in China could not effectively improve their communication ability inside and outside of the class. So from that time, the author considered that a more effective and more attractive English air-ground communication course should be developed. After two-year study of Teaching English to Speakers of Other Language (TESOL) in the U.S., the author believes it's time to fulfill the dream.

Summarily, there are four stages of the development of the project. The first stage of developing the course is surveying Chinese pilots on their needs. It was done online through a broadly-used social networking App, *Wechat*. This stage confirms that there is a need of an engaging and learner-centered air-ground communication course. Analyzing the properties of air-ground communication and the existing air-ground communication materials is the second stage. It ensures the learning objectives and content in the course are pivotal and accurate. The next step is to read related studies to make sure the course developed can meet the goal, improving pilots' real communication ability. By reading these studies, the author finally focused on the method of using simulating videos to create contextualized learning environment and the approach of CLT which emphasizes improving communication abilities. And finally, writing the textbook and teacher's handbook were the last stage of this process.

The whole process of the development of the project was not easy, but the author believes it is her duty to contribute to the field by creating a reader friendly material. She believes that this project can help these Chinese pilots to pass ICAO English successfully and get the real communication ability on their jobs.

### **The Project**

(Please see the subsequent pages for the content of the project.)

2016

# English Air-ground communication



A Civil Aviation English Course for Pilots

*With Simulating Videos*

By Yuting Li

2016/5/1



## To the Teachers

Dear Civil Aviation English Teachers:

Thank you for choosing this English air-ground communication course. This is an advanced air-ground communication course designed for pilots who have elementary English knowledge and basic ICAO English background. Inside you will find eight units (19 lessons) with simulating videos, text, exercises, and communicational activities. Recommended teaching timeline, lesson plans, and exercise transcript & answer keys are included in *Teacher's Handbook*.

Based on the Communicative Language Teaching (CLT), this course aims to improve your students' real world communicational ability and help them pass ICAO English test smoothly. With simulating video and class-based communicational activities, students will be engaged in class and encouraged to be participants of class. In short, during class students' roles are "communicators" while your role is more like the "learning facilitator". Besides language knowledge and radiotelephony communication procedures, functions of language are also emphasized in this course to ensure your students using language effectively.

Thank you again for choosing this course. I believe that it will help you and your students to have enjoyable and efficient classes.

Yuting Li

## To the Students

Dear English Air-ground Communication Learners:

Thank you for choosing this English air-ground communication course. This is an advanced air-ground communication course designed for pilots who have completed elementary English courses and received basic ICAO English courses. Inside you will find eight units (19 lessons) with simulating videos, texts, exercises, and communicational activities.

This course aims to improve your real world communicational ability and help you pass ICAO English test smoothly. With simulating video and class-based communicational activities, you will be engaged in class and encouraged to be participants of class. In short, during class your role is a “communicator” while your teacher is the “learning facilitator”. So don’t be shy and join the class! Because besides language knowledge and communication procedures, knowledge of language functions are also very important for you to use English effectively so they are also emphasized in this course. Additionally, you can also use the material in this course including simulating videos as self-study material.

Thank you again for choosing this course. I believe that you will be interested and enjoy the classes.

Yuting Li

# Course Content

Lesson	Operational Topics	Communication Functions	Language Content
<b>Unit 1: General Operation Procedures</b>			
<b>Lesson 1: Call Signs</b>	<ul style="list-style-type: none"> <li>Establishing Initial Contact</li> </ul>	<ul style="list-style-type: none"> <li>Usage of Numerals</li> <li>Call Signs</li> <li>Establishing Initial Contact</li> </ul>	<ul style="list-style-type: none"> <li>Phonetic Alphabet</li> <li>Numerals</li> <li>Abbreviations</li> </ul>
<b>Lesson 2: Communication Procedures</b>	<ul style="list-style-type: none"> <li>Message Transmission</li> </ul>	<ul style="list-style-type: none"> <li>Asking to Repeat</li> <li>Correcting Message</li> <li>Message Acknowledgement and Readback</li> <li>Reporting Unable to Carry out Instructions</li> <li>Communication Handover</li> </ul>	<ul style="list-style-type: none"> <li>Standard Words and Phrases</li> <li>Phraseology</li> </ul>
<b>Unit 2: Pre-start</b>			
<b>Lesson 3: Radio Check and ATIS</b>	<ul style="list-style-type: none"> <li>Radio Check</li> <li>Reading ATIS</li> </ul>	<ul style="list-style-type: none"> <li>Radio Check</li> <li>Understanding ATIS</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>
<b>Lesson 4: Departure Information and ATC Clearance</b>	<ul style="list-style-type: none"> <li>Clearance Delivery</li> </ul>	<ul style="list-style-type: none"> <li>Asking for Departure Information</li> <li>Requesting ATC Clearance</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>
<b>Unit 3: Start up and Taxi</b>			
<b>Lesson 5: Pushback and Start up</b>	<ul style="list-style-type: none"> <li>Pushback</li> <li>Start-up</li> </ul>	<ul style="list-style-type: none"> <li>Requesting Pushback</li> <li>Requesting Start-up</li> <li>Communicating with Ground to Release Parking Brakes, Pushback and Start Engines</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>
<b>Lesson 6: Taxi</b>	<ul style="list-style-type: none"> <li>Taxi Before Departure</li> </ul>	<ul style="list-style-type: none"> <li>Requesting taxi</li> <li>Understanding Instructions Such as Holding and Giving Way to Others</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>
<b>Unit 4: Take off and Departure</b>			
<b>Lesson 7: Take off</b>	<ul style="list-style-type: none"> <li>Line up</li> <li>Takeoff</li> </ul>	<ul style="list-style-type: none"> <li>Understanding Instructions of Takeoff and Cancel Takeoff</li> <li>Reporting Airborne Time</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>
<b>Lesson 8: Departure and Climb</b>	<ul style="list-style-type: none"> <li>Departure</li> <li>Climb</li> </ul>	<ul style="list-style-type: none"> <li>Contacting Controllers of Approach</li> <li>Understanding Instructions Including Height and Directions</li> </ul>	<ul style="list-style-type: none"> <li>New Words and Phrases</li> </ul>

### Unit 5: En Route

<b>Lesson 9: En Route</b>	<ul style="list-style-type: none"> <li>● Changing Flight Levels</li> <li>● Join, Cross Airways and Hold en Route</li> </ul>	<ul style="list-style-type: none"> <li>● Reporting Position and Level Information</li> <li>● Requesting Join, Cross Airways and Holding</li> <li>● Understanding Route Information and Instructions</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
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### Unit 6: Arrival and Approach

<b>Lesson 10: Descent and Hold</b>	<ul style="list-style-type: none"> <li>● Descent</li> <li>● Hold</li> </ul>	<ul style="list-style-type: none"> <li>● Requesting Descent</li> <li>● Understanding Instructions of Descent, Hold and Height</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 11: Approach</b>	<ul style="list-style-type: none"> <li>● Approach</li> </ul>	<ul style="list-style-type: none"> <li>● Requesting and Receiving Approach Information</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>

### Unit 7: Landing and After Landing

<b>Lesson 12: Traffic Circuit</b>	<ul style="list-style-type: none"> <li>● Join Traffic Circuit</li> </ul>	<ul style="list-style-type: none"> <li>● Requesting Landing</li> <li>● Understanding Circuit Information</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 13: Missed Approach and Local Training</b>	<ul style="list-style-type: none"> <li>● Going Around</li> <li>● Touch and Go</li> <li>● Low Approach</li> </ul>	<ul style="list-style-type: none"> <li>● Understanding Instructions of Going Around</li> <li>● Understanding Advices of Going Around</li> <li>● Requesting Going Around and Local Training</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 14: Final Approach and After Landing</b>	<ul style="list-style-type: none"> <li>● Final Approach</li> <li>● Landing</li> <li>● Taxi after Landing</li> </ul>	<ul style="list-style-type: none"> <li>● Reporting Final Approach</li> <li>● Receiving Taxiway Information</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>

### Unit 8: Abnormal Situations

<b>Lesson 15: Bad Weather Flying</b>		<ul style="list-style-type: none"> <li>● Receiving and Reporting Bad Weather Information</li> <li>● Understanding Instructions During Bad Weather Flying</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 16: Ground Events</b>		<ul style="list-style-type: none"> <li>● Receiving and Reporting Ground Events</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 17: Problems in Flight</b>		<ul style="list-style-type: none"> <li>● Reporting Problems in Flight</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 18: Urgency</b>		<ul style="list-style-type: none"> <li>● Reporting Urgencies</li> <li>● Requesting Assistance</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>
<b>Lesson 19: Distress</b>		<ul style="list-style-type: none"> <li>● Reporting Distress</li> <li>● Requesting Emergency Assistance</li> </ul>	<ul style="list-style-type: none"> <li>● New Words and Phrases</li> </ul>



# Unit 1

## General Operation Procedures

### Lesson 1: Call signs

#### ※ Phonetic Alphabet

##### #1

Letter	Spelling	Pronunciation
A	Alpha	<u>AL</u> FAH
B	Bravo	BRAH <u>VOH</u>
C	Charlie	CHAR <u>LEE</u>
D	Delta	<u>DELL</u> TAH
E	Echo	<u>ECK</u> OH
F	Foxtrot	<u>FOKS</u> TROT
G	Golf	GOLF
H	Hotel	HOH <u>TELL</u>
I	India	<u>IN</u> DEE AH
J	Juliett	<u>JEW</u> LEE <u>ETT</u>
K	Kilo	<u>KEY</u> LOH
L	Lima	<u>LEE</u> MAH
M	Mike	MIKE
N	November	NO <u>VEM</u> BER
O	Oscar	<u>OSS</u> CAH
P	Papa	PAH <u>PAH</u>
Q	Quebec	KEH <u>BECK</u>
R	Romeo	<u>ROW</u> ME OH
S	Sierra	SEE <u>AIR</u> RAH
T	Tango	<u>TANG</u> GO
U	Uniform	<u>YOU</u> NEE FORM
V	Victor	<u>VIK</u> TAH
W	Whiskey	<u>WISS</u> KEY
X	X-ray	<u>ECKS</u> RAY
Y	Yankee	<u>YANG</u> KEY
Z	Zulu	<u>ZOO</u> LOO

#### ICAO Knowledge

##### Exceptions of Phonetic Alphabet:

在陆空无线电通话中，英文字母皆按 ICAO 规定（参见本科字母表）发音，但在不影响电文的准确接受和理解的前提下有如下例外：

<1> 一些习惯字母组合仍按英文字母发音，如：ILS、QFE、RVR 等；

<2> 航空公司呼号按注册规定发音，如：CCA (Air China)、CBF (China Northern)；

<3> 飞机型号按飞机制造厂注册号发音，如：B777 (Boeing 777)、A340 (Airbus 340)。

#### 👤 Exercise 1

Directions: Read the following letters.

A N U Y W C S Q H Y F S L M  
B X J K L Q I H F K N H F Y V

#### 👤 Exercise 2

Directions: Listen to the teacher and circle what you hear.

(1) A. Information J

B. Information G

C. Information F

(2) A. Taxiway M and C

B. Taxiway I and C

C. Taxiway M and L

(3) A. N9SV

B. N9DW

C. N9LA

#### 👥 Exercise 3

Directions: Work in pairs. While **Student A** reads the first three letter combinations (1~3), **Student B** closes the book and writes down them.

For the last three (4~6), switch roles.

(1) AZBMV

(4) FNXFS

(2) CYFTH

(5) DIULP

(3) GWFQS

(6) KOQBR

If there are any mistakes, discuss what was wrong.

 **Let's Talk**

Do you know why pilots use ICAO phonetic alphabet? Write your thought down then share it with your group members. Don't forget to take notes when they talk. Later you will share all you get to the whole class.

Your thought:

Other idea:

Now watch the video and check out the history of ICAO phonetic alphabet Captain Joe explains.



## ※ Numerals

### #3

Numeral	Pronunciation
0	ZE-RO
1	WUN
2	TOO
3	<b>TREE</b>
4	<b>FOW-er</b>
5	<b>FIFE</b>
6	SIX
7	SEV-en
8	AIT
9	<b>NIN-er</b>
Decimal	<b>DAY-SEE-MAL</b>
Hundred	HUN-dred
Thousand	<b>TOUSAND</b>



### ICAO Knowledge

#### Rules of Numeral Use:

<1> 一般规则:

分别读出每个位数上的数字。例:

数字	发音
10	WUN ZE-RO
75	SEV-en FIFE
583	FIFE AIT TREE
38143	TREE AIT WUN FOW-er TREE

整百整千的数字千位和百位之前的数字分别读出, 再加 HUNDRED/THOUSAND。例:

数字	发音
100	WUN HUN-dred
2500	TOO TOU-SAND FIFE HUND-dred
5000	FIFE TOU-SAND
11000	WUN WUN THOUSAND

<2> 含小数点的数字在小数点的位置读 DAY-SEE-MAL。例:

120.37 读作 WUN TOO ZE-RO DAY-SEE-MAL TREE SEV-en。

<3> 高度除标准气压 (QNE) 高度以百为单位, 前面冠以 Flight Level 以外, 其余高度都按照一般规则拼读。例:

7000m	SEV-en TOU-SAND
1500ft	WUN TOU-SAND FIFE HUN-dred
37000ft	FFLIGHT LEVEL TREE SEV-en ZERO

<4> 时间按一般规则拼读。例:

1300 读作 WUN TREE ZERO ZERO 或 ON THE HOUR  
2057 读作 TOO ZE-RO FIFE SEV-en 或 FIFE SEV-en TREE

### Exercise 4

Directions: Try to read these alphanumeric references, call signs and values. What does each one refer to?

- |                 |                  |                    |                |
|-----------------|------------------|--------------------|----------------|
| (1) 124.325 MHz | (2) 1009 hPa     | (3) P/N 46°/29178E | (4) 245 °      |
| (5) Condor 1438 | (6) 312 knots    | (7) 1,200 fpm      | (8) Mach 0.79  |
| (9) 3 ° slope   | (10) 29.98 in.Hg | (11) 109 tonnes    | (12) ETD 17:58 |

### Exercise 5

Directions: Listen to the teacher and write down the 3 sentences you hear.

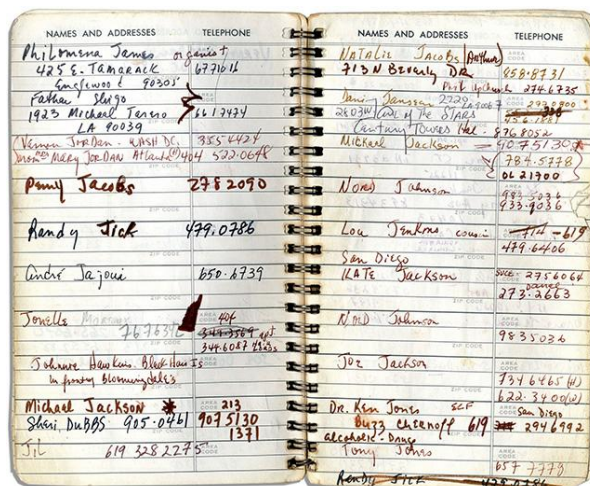
- (1)
- (2)
- (3)

 **Let's Talk**

What are the special numbers for you? Why they are special? Share them with your group numbers. Remember you can only read them with the pronunciation we learned.



Can you read telephone numbers with the phonetic numerals? Open your contact book and read it to the class!



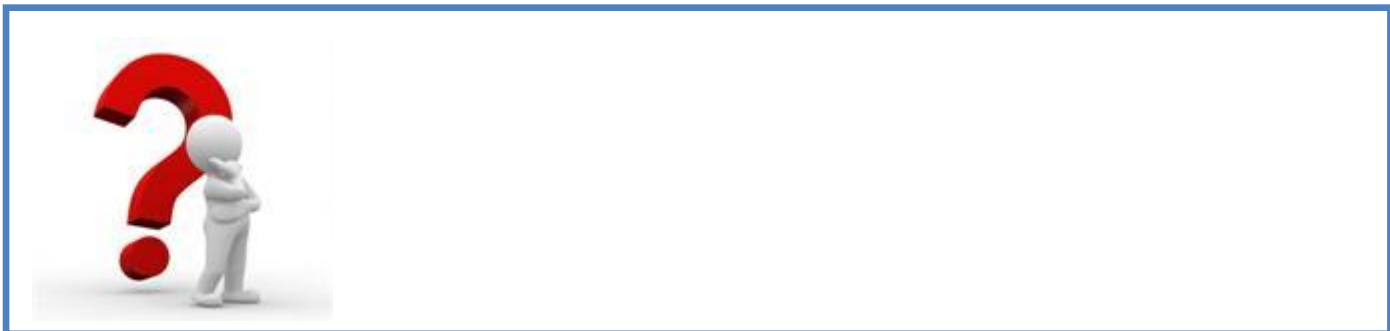
Now look at the track chart and tell your classmates the information you find on it.



✂ **Call Signs**

 **Discussion**

What are call signs? Discuss with your partner and share your idea with the class.



### Model Exchange:

PIL: Hong Kong Delivery G-ABCD

CTL: G-ABCD Hong Kong Delivery go ahead

### Exercise 6

Directions: Listen to the teacher and write down the call signs you hear.

(1)

(2)

(3)

(4)

(5)

### Exercise 7

Directions: Design your own call signs according to the rules and write them down on the blackboard. Tell your classmates how to read them.



### Role Play

Role A: Pilot, imagine you're in the cockpit.

Role B: ATC, imagine you're in the control center.

Contact each other and try to make requests, give instructions, or ask for information.

### ICAO Knowledge

#### What are call signs?

Call signs are any combination of letters and numbers that identify a communication facility.

#### Rules of Call signs:

<1> 管制单位呼号: 在规定的呼号前加上地名。例:

Area control centre	BEIJING CONTROL
Radar (in general)	BEIJING RADAR
Approach control	BEIJING APPROACH
Approach control radar arrivals	BEIJING ARRIVAL
Approach control radar departures	BEIJING DEPARTURE
Aerodrome control	BEIJING TOWER
Surface movement control	BEIJING GROUND
Clearance delivery	BEIJING DELIVERY
Precision approach radar	BEIJING PRECISION
Flight information Service	BEIJING INFORMATION
Apron control/ management service	BEIJING APRON
Company dispatch	AIR CHINA DISPATCH
Aeronautical	BEIJING RADIO

<2> 航空器呼号:

A. 航空器呼号有 5 种

- 5 位字母组成的航空器注册号, 如 G-ABCD;
- 经营者无线电代码 + 以上注册号, 如 BAW G—ABCD;
- 机型 + 航空器注册号, 如 ILYSHIN ERBCD;
- 经营者无线电代码 + 航班号, 如 CCA 981;
- 国际注册字母 + 数字, 如 N357826;

B. 航空器呼号的简化。除上述 d 条不得简化外, 其余航空器呼号均可在起始联络完成后, 在不发生混淆的情况下有管制单位予以简化。简化方法见下表。

Type a	Type b	Type c	Type d	Type e
GABCD	SPEEDBIRD GABCD	IL YUSHIN ERBCD	AIR FRANCE 140	N357826
GCD	SPEEDBIRD CD	IL YUSHIN CD	No abbreviated	N826

C. 重型尾流等级的航空器在与 ATC 初始联络时应在航空器呼号后加上 Heavy, 例:

PIT: Hong Kong Departure Japan Air 722 heavy reaching 6000 feet

## ※ Establishing Initial Contact

### #4

#### Information Gap Activity

Work in pairs. **Student A** will face to the screen while **Student B** backs to the screen. **Student B** shares his/her information first and then **Student A** tells what s/he gets. Don't take notes.



#### Discussion

Now watch the video again and discuss the following questions.

1. What is the main content of the video?
2. Which flight phase(s) is(are) this(these)?
3. What did Jason say to establish the initial content with the tower? What did the tower reply?
4. Jason explained a difference between a D airport and a C airport. What's that?
5. What Jason suggested the pilot to do when talk with a busy control center?
6. Do you know what ATIS is?

#### Language Function Focus

How to establish initial contact and keep contact?

双向通信的建立与延续

<1> 初始联络, 初次建立无线电联络的航空器应使用本机全称及 ATC 管制单位全称。例:

PIL: Hong Kong Delivery G-ABCD

对方呼号                      本机呼号

CTL: G-ABCD Hong Kong Delivery go ahead

<2> 在完成初始联络后,由管制单位简化航空器呼号。

<3> 当管制单位欲对所有航空器播发电文时,该电文前加 All stations (各台注意)。例:

CTL: All stations Beijing Control fuel dumping completed

<4> 当某架航空器欲对所有电台(包括空中及地面)播发电文时,该电文前加 All stations。例:

PIL: All stations G-CDAB southbound CH VOR to Hong Kong, leaving FL180 now descending to FL130

## Abbreviations

Complete the table. Match the abbreviations and acronyms to the explanations.

<i>AIRPROX TCAS ATIS RVR EGPWS ETOPS</i> <i>IAF ILS in.Hg LDA MSA RVSM</i>					
(1)	the combination of localiser and glideslope	(2)	distance over which runway markings and lights are visible	(3)	the length of runway which can actually be used during touchdown and landing
(4)	airborne system designed to avoid aircraft collisions	(5)	the rules by which the vertical separation between aircraft can be reduced	(6)	<i>AIRPROX</i> the situation in which two aircraft come dangerously close
(7)	the point at which the first segment of an instrument approach begins	(8)	aircraft system designed to warn crew of aircraft approaching terrain	(9)	ICAO provision permitting twin-engine aircraft to fly more than 60 minutes from a diversion airfield
(10)	the altitude below which aircraft must not descend in the terminal area	(11)	the automated system to provide updated aerodrome and meteorological information	(12)	the unit of measurement used for barometric settings in North America

Please read these abbreviations.

Listen to the teacher and identify the order in which you hear them.

	<i>AAL</i>		<i>ACC</i>		<i>ACARS</i>		<i>ASI</i>		<i>EFIS</i>
	<i>ETA</i>		<i>IAS</i>	<i>I</i>	<i>INS</i>		<i>IRS</i>		<i>OAT</i>

Do you know their meanings?

Please read these abbreviations.



## Lesson 2: Communication Procedures

### ※ General Communication Procedures



#1

PIL: Hong Kong Delivery ... 102

CTL: Station calling Hong Kong Delivery, say again your call sign

PIL: Hong Kong Delivery Air China 102

CTL: Air China 102 standby

PIL: Standing by Air China 102

CTL: Air China 102 go ahead

PIL: Air China 102 destination Beijing, gate 5, request ATC clearance

CTL: Air China 102 confirm you have got information G

PIL: Negative Air China 102

CTL: Air China 102 monitor ATIS 128. 2, call me when ready

PIL: Monitoring 128. 2 Air China 102

PIL: Air China 102 information G ready to start

CTL: Air China 102 cleared to Beijing via Bekol, flight planned route maintain 7 000 feet, Bekol Two Charlie, correction Bekol One Alpha Departure, request level change en route for 10 200m, squawk 5325

PIL: Say again after 7 000 Air China 102

CTL: Air China 102 maintain 7 000 feet Bekol One Alpha, I say again Bekol One Alpha Departure, request level change en route for 10 200m squawk 5325

PIL: Cleared to Beijing via Bekol, flight planned route, maintain 7 000 feet Bekol One Alpha Departure, request level change en route for 10 200m Squawk 5325 Air China 102

CTL: Air China 102 squawk 5335

PIL: Squawking 5325 Air China 102

CTL: Readback correct, contact Hong Kong Tower on 118.7, correction I say again, contact Hong Kong Ground on 121.6

PIL: 121.6 Air China 102

### ICAO Knowledge

#### Transmission Structure:

1. 首次联系时:  
对方呼号+己方呼号+通话内容
2. 飞行员向管制员报告时:  
己方呼号+通话内容
3. 飞行员复诵管制员通话内容时:  
通话内容+己方呼号

### Exercise 1

Directions: Answer the following questions according to the text.

- (1) How many times does the pilot request the controller to repeat information?

Which word or phrase does s/he use?

- (2) Which word or phrase does the controller use to correct message?





## Language Function Focus

### Asking for Repeat:

当被呼叫单位未听清呼叫方的呼号或电文时，被呼叫单位可要求对方重复。

要求重复的术语是：

Say again 请重复(重复全部电文)

Say again+ (item) 请重复(某项内容)(重复指定内容)

Say again all before (after) ...请重复.....前(或后)的内容(重复部分内容)

例：PIL: Beijing Ground ... 102

CTL: Station calling Beijing Ground, say again your call sign

PIL: Beijing Ground Air China 102

有时“say again”用作要求解释而不是单纯要求重复，要根据具体情况判断。

当认为对方接收电文有困难时，电文重要部分可发两遍。例：

PIL: Hong Kong Approach G-ABCD CC 3 500 feet engine on fire, I say again engine on fire



## Exercise 2

Directions: Listen to the teacher and write down the sentence s/he says to request to repeat.

(1)

(2)

(3)

## Exercise 3

Directions: Work in pairs. Read the following transmissions and ask your partner to repeat some of the information.

PIL: Hong Kong Ground CSN 306 bay 38, ready for taxi, information G

CTL: CSN 306 runway 31 taxiway D1 B1 and A12

PIL: Runway 31 taxiway D1 B1 and A12 CSN 306

CTL: Correct

## Language Function Focus

### Correcting Message:

当发送内容有误时，应使用 correction(更正)对错误电文加以更正。例：

PIL: Air China 102 ZHO 32 at 10 200m, WXI 47, correction WXI 57

CLT: Air 102 Roger

如果重复电文可以获得最佳更正效果，则管制员会在再次发送的电文前使用 Correction I Say again(更正，我重复一遍)，见对话结尾部分。

## Exercise 4

Directions: Listen to the teacher and write down the correct information.

(1)

(2)

(3)

## Exercise 5

Directions: Work in pairs. Read the following transmissions and correct some of the information.

CTL: CCA 981 cleared for takeoff report airborne

PIL: Cleared for takeoff, wilco CCA 981

PIL: CCA 981 airborne 35

CTL: CCA 981 contact Departure on 119.1

PIL: 119.1 CCA 981

## Language Function Focus

### Message Acknowledgement & Readback

电文的认收和复述

<1> 作为一般规则，用航空器呼号表示电文已收到。例：

CTL: Call me back when ready for taxi

PIL: CCA 101

<2> 对于执行指令，则需复述指令来证实收到电文。例：

CTL: GBD hold short of runway traffic on final

PIL: Holding short GBD

CTL: CSN 309 contact Beijing Control on 128.30

PIL: 128.30 CSN 309

<3> 驾驶员按要求应复诵以下 ATC 指令或许可

高度指令

航向指令

速度指令

航路放行许可及其他管制许可

起飞和着陆许可

有关进入、穿越、占用使用跑道指令

应答机操作指令

高度表拨正值

无线电频率



### Exercise 6

Directions: Work in pairs. After **Student A** reads each of the first five instructions (1~5), **Student B** responds. **Student B** reads the last five instructions (6~10) and **Student A** responds.

- (1) Air France 475, report ready for pushback
- (2) KLM 463, taxi to holding point runway 28
- (3) Japan Air 582, hold position
- (4) Aeromexico 394, cross Runway 09
- (5) Malaysian 356, contact Tower 118.375
- (6) Air China 2374, reduce speed to 210 knots
- (7) American 229, report runway lights in sight
- (8) Varig 463, make straight-in approach Runway 26, wind 290 degrees, 12 knots
- (9) Aeroflot 35, you are number two for landing, report short final
- (10) Emirates 468, climb to altitude 3 000 feet on runway heading



### Discussion

In what ways does good readback discipline reinforce flight safety and avoid confusion?



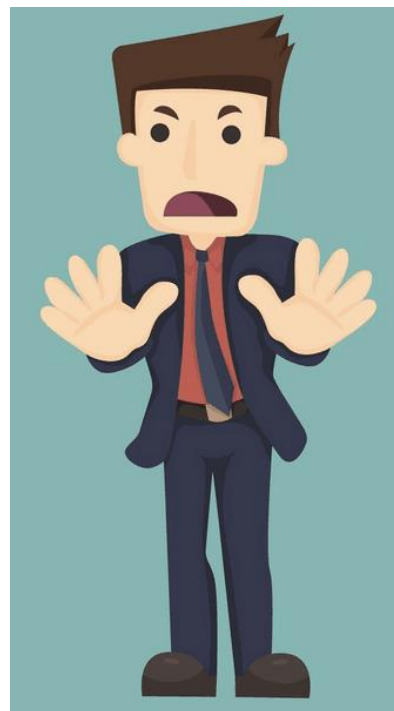
### Language Function Focus

#### Reporting Unable to Carry Out Instructions

当驾驶员不能执行 ATC 命令时，应使用短语 “unable to comply” 回复并讲明原因。例：

CTL: CSN 302 Hong Kong, cleared to Bekol FL 160 cross  
Bekol FL 130 or above

PIL: Hong Kong CSN 302 unable to comply, cannot cross  
Bekol FL 130 due Weight



### Exercise 7

Directions: Report unable to carry out the following instructions with reasons.

- (1) CCA 981 descend to 5 400m report reaching.
- (2) CSN 308 reduce to minimum approach speed, report outer marker
- (3) CCA 101 take off immediately

### Exercise 8

Directions: Listen to the teacher and write down the information of next contact station.

- (1)
- (2)
- (3)
- (4)
- (5)



### Language Function Focus

#### Communication Handover:

通信移交

<1> 在指定航空器向下一管制单位改频时，管制员在指令中指明下一单位呼号及联络频率。驾驶员必须复诵该频率。如没收到移交管制单位进一步的通信联络，则表明通信移交已经完成。例：

CTL: CAA 305 contact Guangzhou Control on 112.6

PIL: 112.6 CAA 305

<2> 当管制单位暂不与航空器通话,但通话还要进行下去时,管制员会让航空器在某一频率上 standby (暂时守候); 例:

CTL: CSN 301 standby 118.1 for Tower

PIL: 118.1 CSN 301

也可以让航空器在正在播发电文的频率上 Monitor (守听)。例:

CTL: CCA 102 monitoring ATIS 127.6

PIL: Monitoring 127.6 CCA 102

 **Let's Talk**

Look at the six different ways in which misunderstanding can occur. For each one, give an example.

- Vocabulary confusion
- A readback error
- Non-standard phraseology
- Incorrect or imprecise English
- A garbled message
- Incorrect pronunciation

Watch the video of Air China 981 landing at JFK International Airport. How do you think about this landing?

 #5

Now watch the video of Air China 981 communicating with JFK Ground Control. How do you think about the pilot's communication ability?

 #6

## ※ Standard Words and Phrases

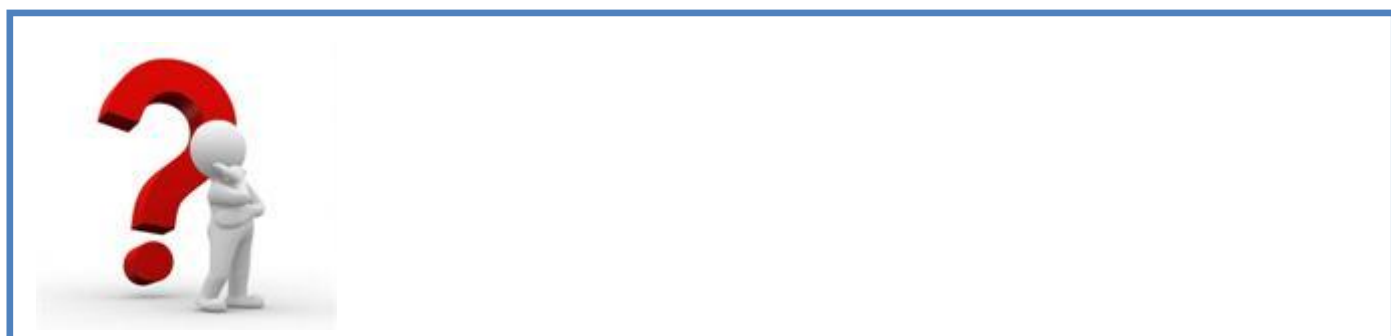
Words & Phrases	Meanings & Examples
Acknowledge	Let me know that you have received and understood this message. eg. CTL: Air China 981 acknowledge all further transmissions
Affirm	Yes. eg. CTL: CSN 304 are you ready for immediate departure PIL: CSN 304 affirm
Approved	Permission for proposed action granted. eg. CTL: Japan Air 786 pushback approved
Break	I hereby indicate the separation between portions of the message. (To be used where there is no clear distinction between the text and other portions of the message). eg. CTL: United 351 taxi to runway 18L, break center line taxiway lighting unserviceable
Break break	I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment. eg. CTL: Speedbird 918 descend immediately to FL 120, break break, all stations, stop transmitting MAYDAY
Cancel	Annul the previously transmitted clearance. eg. CTL: CCA 981 hold position, cancel I say again cancel takeoff, vehicle on the runway
Check	Examine a system or procedure. (No answer is normally expected). eg. CTL: CSN 302 check your transmitter and give me a long call
Cleared	Authorized to proceed under the conditions specified. eg. CTL: CCA 981 cleared for takeoff wind calm
Confirm	Have I correctly received the following ...? / Did you correctly receive this message? eg. CTL: United 359 confirm leaving 5 700m
Contact	Establish radio contact with ... eg. CTL: CCA 981 contact Tower on 118.1
Correct	That is correct. eg. CTL: Singapore 613 readback correct

Correction	An error has been made in this transmission (or message indicated), the correct version is ... eg. CTL: CCA 918, correction CCA 981 start-up approved
Disregard	Consider that transmission as not sent. eg. CTL: United 391 disregard previous ATC
Go ahead	Proceed with your message. (“Go ahead” is not normally used in surface movement communications). eg. CTL: Delta 321 Beijing Tower go ahead
How do you read	What is the readability if my transmission? eg. CTL: CSN 304 how do you read?
I say again	I repeat for clarity or emphasis. eg. PIL: Beijing Approach GCD VYK 4 500m, I say again 4 500m, engine losing power, engine losing power
Monitor	Listen out on (frequency). eg. CTL: CCA 131 monitor ATIS 123.35
Negative	No / Permission not granted. / That is not correct. eg. CTL: Japan Air 781 negative, start up at 05
Out	This exchange of transmissions is ended and no response is expected. (“Out” is not normally used in VHF communications).
Over	My transmission is ended and I expect a response from you. (“Over” is not normally used in VHF communications).
Read back	Repeat all, or the specified part, of this message back to me exactly as received. eg. CTL: CCA 981 readback correct
Recleared	A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof. eg. CTL: United 359 recleared for FL350 report reaching
Report	Pass me the following information. eg. CTL: CCA 981 report final
Request	I want ... eg. PIL: CCA 301 request time check

Roger	I have received all of your last transmission. eg. PIL: Delta 386 roger
Say again	Repeat all, or the following part, of your last transmission. eg. CTL: Station calling Tower say again your call sign
Speak slower	Reduce your rate of speech. eg. PIL: Beijing Control speak slower
Standby	Wait and I will call you. eg. CTL: CCA 981 standby 118.1 for Tower
Verify	Check and confirm with originator. eg. CTL: Singapore 367 verify position
Wilco	I understand your message and will comply with it. (Abbreviation for “will comply”). eg. PIL: CCA 981 wilco
Words twice	<1> As a request: Communication is difficult. Please say every word or group of words twice. eg. PIL: Beijing Control CCA 301 words twice <2> As information: Since communication is difficult, every word or group of words in this message will be send twice. eg. CTL: United 447 I read you 2 words twice

## Discussion

- <1> How to express “yes” and “no” with standard words or phrases?
- <2> What’s the difference between “approved” and “cleared”?
- <3> What’s the difference between “correct” and “correction”?
- <4> What’s the difference between “I say again” and “say again”?
- <5> What’s the difference between “roger” and “wilco”?



## Exercise 9

Directions: Match the words or phrases with the meanings.

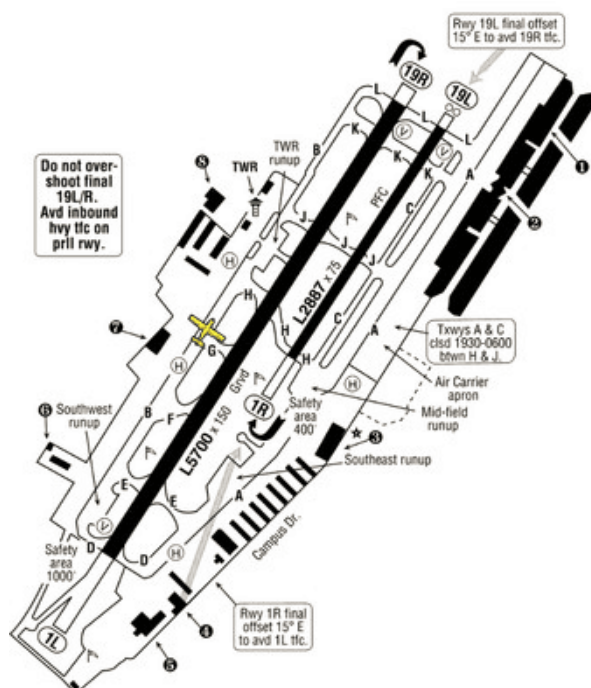
- |                       |   |
|-----------------------|---|
| (1) Approved          | a. Wait. I will call you back.                                    |
| (2) Check             | b. Check and confirm with the origination.                        |
| (3) Correction        | c. That is not correct.   |
| (4) Go ahead          | d. Proceed with your message.                                     |
| (5) Negative          | e. Permission for proposed action granted.                        |
| (6) Pass your message | f. Proceed with your message. (Not used in ground communication). |
| (7) Standby           | g. An error has been made. The correct version is ...             |
| (8) Verify            | h. Examine a system or procedure.                                 |

## Role Play

Role A: Pilot, image you're in the cockpit.

Role B: ATC, image you're in the control center.

Use the following information to contact each other with at least five standard words or phrases you learnt.





# Unit 2

## Pre-start

### Lesson 3: Radio Check and ATIS

#### ※ Radio Check



PIL: Hong Kong Ground CSN 304 radio check 121.6

CTL: Station calling Hong Kong Ground, say again your call sign

PIL: Hong Kong Ground CSN 304 radio check on 121.6, how do you read me

CTL: CSN 304 Hong Kong Ground your signal is unstable check your transmitter and give me a short call

PIL: Roger CSN 304

PIL: Ground CSN 304, 1 2 3 4 5, how do you read

CTL: CSN 304 read you 3, loud background whistle, check again

PIL: Roger, 5 4 3 2 1, how do you read now

CTL: CSN 304 loud and clear

PIL: Thank you CSN 304



#### ICAO Knowledge

##### Radio Check:

1. 无线电检查的通话顺序:

- <1> 对方呼号
- <2> 本机呼号
- <3> radio check
- <4> 信号怎样

2. 无线电检查时对信号质量的描述:

描述	质量
1	不清楚 (Unreadable)
2	可断续听到 (Readable now and then)
3	能听清但很困难 (Readable but with difficulty)
4	清楚 (Readable)
5	非常清楚 (Perfect Readable)

#### 👤 Exercise 1

Directions: Listen to the teacher and write down the call signs and the radio signal quality.

(1)

(2)

(3)

#### 👥 Exercise 2

Directions: Work in pairs. Check each other's radio signal quality.

### Exercise 3

Directions: Work in pairs. Can you explain to each other the five levels of signal quality?



PRESS RELEASE

### Exercise 4

Directions: Listen to the teacher and choose the correct answers.

- (1) A. 118.1      B. 118.4      C. 118.5      D. 118.7
- (2) A. cut in and out      B. unreadable      C. broken      D. readable but with difficulty
- (3) A. G-BACD      B. G-BTD      C. G-CDBA      D. G-DABC
- (4) A. because the controller asked for it  
 B. because the transmission was broken  
 C. because the whistle was very loud  
 D. because the controller read him with difficulty
- (5) A. GBCD      B. GBACD      C. GBTD      D. GTD



### Discussion

Why pilots do radio check? When do you think is necessary to do radio check?



### Language Function Focus

#### Asking questions:

Do / Does?	Do you have any indication of weather? Does the radar show any adverse weather?
Are /Is?	Are you ready? Is the cabin secure?
Have / Has?	Have you got any dangerous goods? Has Runway 24R been re-opened?
Say	Say heading
Confirm	Confirm position over MSA
Report	Report airborne
What?	What is the problem? What do you mean?
What sort / type?	What sort of TCAS advisory did you have?
Which?	Which runway is in use?
Who?	Who issued the clearance?
Whose?	Whose call sign is "Speedbird" ?
Why?	Why did you discontinue the approach? / Report reason for going around
When?	When do you expect to reach CAM? / Report PETO CAM
How much?	How much fuel have you got? / Report endurance
How many?	How many passengers are (there) on board? / Report passengers on board
How far?	How far are you from the threshold? / Report distance from threshold
How long?	How long do you require to turnaround? (time) How long is the runway? (distance) / Advise runway length
How often?	How often have you had that advisory?

NOTE: In R/T, "report" , "advise" , and "say" are usually used instead of plain English questions. Plain English may be used in situation requiring longer explanations.

### Exercise 5

Directions: Work in pairs. Make questions with each of the interrogative above.

### Exercise 6

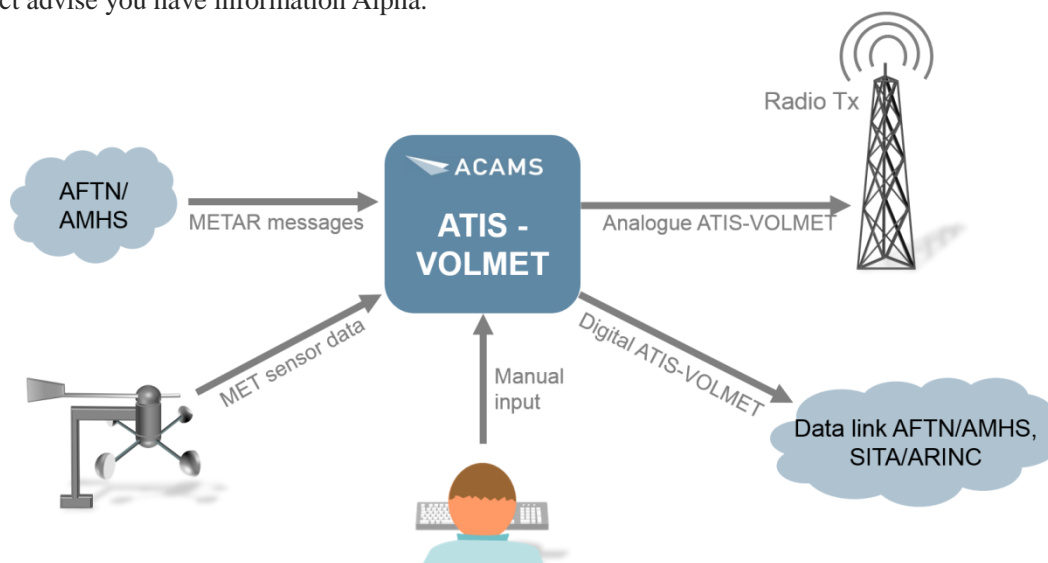
Directions: Listen to the teacher and choose the correct answer.

- |     |  |
|-----|--|
| (1) | a. We're at the intersection of TWY and K. |
| (2) | b. We have 238 passengers on board.        |
| (3) | c. We'll be ready in 20 minutes.           |
| (4) | d. 27R is in use.                          |
| (5) | e. We can keep for another 30 minutes.     |



 #3

Beijing Capital Airport Information Alpha. Zero one three zero hours, ILS approach runway 36R, runway surface wet, braking action good. Work in progress near beginning of runway 36L. Taxiway Papa closed. Wind 350 degrees 6 meters per second, CAVOK temperature 30 dew point 22, QFE1015 QNH1018. No Sig. On initial contact advise you have information Alpha.



### ICAO Knowledge

#### ATIS:

1. ATIS(Automatic Terminal Information Service)的种类。

航站自动情报服务通播分三类:

- <1> 进场通播, 为进场航空器提供的通播服务;
- <2> 离场通播, 为离场航空器提供的通播服务;
- <3> 进、离场通播, 为进场和离场航空器提供的通播服务。

2. 通播是按字母顺序依次排列的, 每 30-60 分钟一换, 驾驶员在与进离场管制单位建立初始联络时应确定已经收到通播。

3. 通播的一般格式。进离场通播的电文包括以下内容并按所列顺序播发:

- <1> 机场名称;
- <2> 代码;
- <3> 观测时间;
- <4> 预计进近类别;

- <5> 使用跑道;
- <6> 重要的跑道道面情况, 刹车效应;
- <7> 延迟等待 (如有必要);
- <8> 过滤高度层 (如有可能);
- <9> 其他必要的运行情报;
- <10> 地面风向量;
- <11> 能见度, 跑道视程 (可能时);
- <12> 现行天气;
- <13> 低于 1 500 米或扇区最低高度中的最大值的云, 两者中择其较大者, 积雨云; 如天况不明, 提供垂直能见度;
- <14> 大气温度;
- <15> 露点;
- <16> 高度表拨正值;
- <17> 有关进近、起飞爬山出航区域内的重要天气情报;
- <18> 趋势型着陆预报 (提供时);
- <19> 航站自动情报服务的特殊指令。

### Exercise 7

Directions: Work in pairs. Explain the information in Text #3 (ATIS) in your words.

### Exercise 8

Directions: Listen to the teacher and choose the correct answer.

- (1) A. 1250      B. 1520      C. 1525      D. 1020  
 (2) A. 150 12      B. 120 16      C. 260 11      D. 260 12  
 (3) A. 29.97      B. 29.92      C. 29.79      D. 29.29  
 (4) A. windshear      B. thunderstorm      C. heavy fog      D. strong wind



### Exercise 9

Directions: Can you match the following words and phrases with the meanings?

- |                       |  |
|-----------------------|--|
| (1) Adjust            | a. An electronic device that produces a radio-frequency carrier wave that can be modulated with information or data. |
| (2) Transmitter       | b. To change a condition to make it operate better.  |
| (3) Surface           | c. A brief count of numbers like 1234554321.   |
| (4) Short count       | d. The flat top part or the outside of something.  |
| (5) Whistle           | e. Ceiling and Visibility okay.  |
| (6) CAVOK             | f. Sharp background noise in radio.  |
| (7) No sig            | g. Spreading over an area in an untidy or irregular way.   |
| (8) Scattered         | h. No significant change.  |
| (9) Windshear         | i. Violent and uneven movement within a particular area of air, liquid, or gas.                                      |
| (10) Turbulence       | j. A strong horizontal or vertical wind shift that acts at right angles to the direction the wind is blowing.        |
| (11) Work in progress | k. Neither large nor small in amount or degree.  |
| (12) Moderate         | l. During working.   |



 **Let's Talk**

What are the communication tasks you should do before departure? Write your thought down then share it with your group members. Don't forget to take notes when they talk. Later you will share all you get to the whole class.

Your thought:

Other idea:

Now watch the video. What does the video tell you to do before departure?



# Lesson 4: Departure Information and ATC Clearance

## ※ Departure Information



#4

PIL: Beijing Ground CCA 101 request departure information

CTL: CCA 101 Beijing Ground departure runway 36L, wind

290 Degrees 4m/s QFE1012, temperature minus 2

dewpoint minus 6, RVR 550m

### ICAO Knowledge

#### Departure Information:

如机场没有提供 ATIS 或在无 ATIS 的机场，驾驶员可在开车之前询问当时的机场数据或离场条件（Departure information or takeoff data）。

离场条件的内容主要包括：起飞跑道、风向风速、高度表拨正值、温度、露点、能见度或 RVR 等。



### 👥 Exercise 1

Directions: Work in pairs. Explain the information in Text #4 in your words.



### Discussion

When do pilots need to ask for departure information?



### Exercise 2

Directions: Listen to the teacher and copy the departure information.



(1)

(2)

(3)

(4)

(5)

### Exercise 3

Directions: Work in pairs. According to ATIS and the departure information you learned, can you write some possible ATIS and departure information? Read them to your partner and let him/her copy your information.

### Exercise 4

Directions: Match the environment phenomena to the pictures.

1. bird strike

2. crosswind

3. fog

4. rain

5. standing water

6. turbulence

a.



b.



c.



d.



e.



f.





## ※ ATC Clearance

### #5

(1)

PIL: Beijing Ground CCA 101, 15 minutes before start, information M request ATC clearance

CTL: CCA 101 you are cleared to Hong Kong via flight planned route cruise level 10 800m, follow D08 Departure, squawk 3013

(2)

PIL: Hong Kong Delivery CCA 102 destination Beijing with information B, ready to copy ATC clearance

CTL: CCA102 cleared to Beijing via Bekol flight planned route, initial climb to 7 000 feet Bekol One A Departure, request level change en route, squawk 5345



### ICAO Knowledge

#### ATC Clearance:

管制许可(ATC clearance)的发布。管制许可根据内容不同而呈多种形式,既有详细描述航线及高度的航路放行许可,也有简短的着陆许可。

驾驶员在收到离场 ATIS 或离场条件 (departure information) 之后,通常在开车前 5-10 分钟向地面或放行 (Clearance Delivery) 单位请求本机放行许可。

放行许可 (ATC clearance) 抄收好之后,驾驶员必须复诵许可内容,在被证实正确无误后请求退出开车。

在开车前发布的航路放行许可并非起飞或进跑道许可。

Take off (起飞) 一词仅限于起飞许可和取消起飞许可的指令,除此而外,管制员在表达"离场"或"离地"的意思时用 departure 或 airborne。

### Discussion

Can you directly pushback, start up, taxi and take off after ATC clearance received?



## Exercise 5

Directions: Listen to the teacher and copy the ATC clearance.

(1)

(2)

(3)

(4)

(5)



## Exercise 6

Directions: Match the five words to these four pictures.

1. ramp

2. apron

3. gate

4. flight level

5. RVR

a.



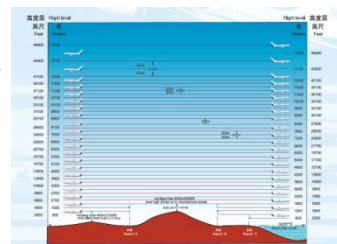
b.



c.



d.



## Exercise 7

Directions: Fill the following blanks with proper words or sentences.

PIL: Mike (1) \_\_\_\_\_ DYGTV

CTL: (2) \_\_\_\_\_ Mike Delivery go ahead

PIL: DTV (3) \_\_\_\_\_ 17 (4) \_\_\_\_\_ Parpal (5) \_\_\_\_\_ C, 8 minutes before (6) \_\_\_\_\_

CTL: DTV (7) \_\_\_\_\_ TO Parpal Tangel 2 Golf Departure Red 6 Amber 8, climb and maintain (8) \_\_\_\_\_ 150,

(9) \_\_\_\_\_ level change (10) \_\_\_\_\_ (11) \_\_\_\_\_ 2031, after departure (12) \_\_\_\_\_ 128.1

PIL: (13) \_\_\_\_\_

CTL: Readback correct.



PIL: Hong Kong Delivery CCA102  
 CTL: CCA 102 Hong Kong Delivery go ahead  
 PIL: CCA 102 request departure information  
 CTL: CCA 102 surface wind 280 degrees 12kts gusting to 25, temperature 31 dewpoint 27, QNH1012 hPa  
 departure runway 31  
 PIL: Runway 31 QNH1012, CCA 102  
 CTL: That's correct  
 PIL: Delivery CCA 102, 5 minutes before start, gate 2 to Beijing  
 CTL: CCA 102 your ATC clearance  
 PIL: Ready to copy  
 CTL: CCA 102 cleared to Beijing via Bekol, flight planned route, initial climb to 9 000 feet, Bekol Two C  
 Departure, request level change for 10 200m en route, squawk 5310  
 PIL: Cleared to Beijing via Bekol flight planned route, initial climb to 7 000 feet, Bekol Two C Departure,  
 level change for 10 200m en route, squawk 5310 CCA 102  
 CTL: CCA 102 confirm initial climb to 9 000 feet  
 PIL: Initial climb to 9 000 feet CCA 102  
 CTL: CCA 102 read—back correct, contact Ground on 121. 6, good day  
 PIL: 121. 6 CCA 102, good day

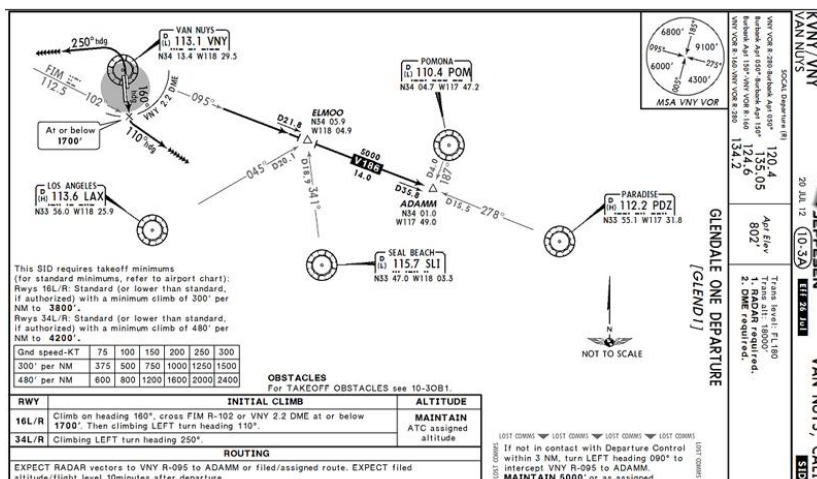


### Role Play

Role A: Pilot, image you're in the cockpit.

Role B: ATC, image you're in the control center.

Student A should ask the ATC clearance while student B should give ATC clearance according to the following picture. Don't forget to readback.



 Let's Talk #8

Watch the video for the first time and answer the following questions.

1. What's the first thing the pilot should do?
2. Which ATIS did the pilot get?
3. What's the next thing the pilot should do? What should the pilot not do?
4. What did the pilot use to help himself to remember information?
5. What did the pilot do after he got his next frequency?

Watch the video for the second time. During this time please copy the ATIS and the ATC clearance information.

What did the pilot do after he got the ATC clearance?

# Unit 3

## Start up and Taxi

### Lesson 5: Pushback and Start up

#### ※ Pushback



(1)

PIL: Apron GCD stand 2 request pushback

CTL: GCD pushback approved

(2)

PIL: Hong Kong Ground CCA 102, Gate 3 request pushback

CTL: CCA 102 standby, expect one minute delay due B747 taxiing behind, call you back

(3)

PIL: Ground crew ready for pushback

GND: Confirm brakes released

PIL: Brakes released

GND: Commencing pushback



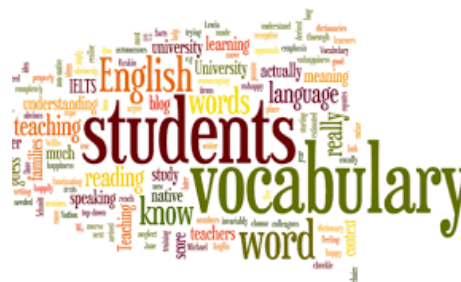
#### Discussion

Why the pilot needs to request pushback?



## Exercise 1

Directions: Match the words or phrases with the meanings.



- (1) Stand
  - (2) Pushback
  - (3) Brake
  - (4) Release
  - (5) Crew
  - (6) Cockpit
  - (7) Commence
- a. An airport procedure during which an aircraft is pushed backwards away from an airport gate by external power.
  - b. A device for slowing or stopping the motion of a machine or vehicle, or restraining it from starting to move again
  - c. Parking position.
  - d. The space set apart for the pilot and crew, as in a helicopter, large airliner, or transport aircraft.
  - e. Allow (something) to move, act, or flow freely.
  - f. A group of people who work on and operate an aircraft.
  - g. Begin.

## Exercise 2

Directions: Work in pairs to practice the conversation of requesting for pushback.



## Exercise 3

Directions: Listen to the five conversations read by teacher and write down the main content of each conversation.

- (1)
- (2)
- (3)
- (4)
- (5)

## ※ Start up

### #8

(1)

GND: Pushback completed confirm brakes set

PIL: Brakes set, start engine number 4

GND: All clear for engine start

PIL: Engine start completed, please disconnect interphone

GND: Disconnecting standby for Visual signal at your left

PIL: Roger

(2)

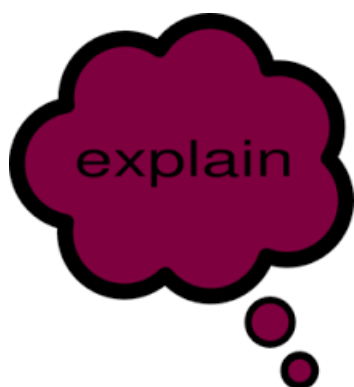
PIL: Hong Kong Ground CSN 306 destination Guangzhou, bay 25 request start—up information G

CTL: CSN 306 start up approved QNH1058



### Exercise 4

Directions: Explain the conversations in Text 8 to your partner.



### Discussion

Whom do you contact before start up?

#### ICAO Knowledge

##### Pushback and Start up:

驾驶员根据机场程序向相关管制单位请求推出航空器，有的大型机场专门设有机坪管制 (Apron Control) 负责此类事务。

用内话机与地面机务联系时可省去航空器呼号。

在起降频繁的机场，离场航空器通常按顺序离场，管制员根据本场情况向每架出港航空器排定具体离场时间，该时间一般在航空器请求开车时讲明。

视当时情况机组可在请求推出的同时请示开车。

在某些无 Clearance Delivery 的机场，地面管制 (Ground Control) 在给航空器推出开车指令的同时向该机发布离场指令/航路许可，例：

CCA 101 pushback and start up approved expect runway 36L D08  
Departure squawk 3123





#9

PIL: Beijing Ground CCA 101 Gate 3 to Hong Kong information B ready for pushback and start-up

CTL: CCA 101 standby

PIL: Standing by CCA 101

CTL: CCA 101 pushback and start—up approved, expect runway 36L, D08 Departure, squawk 3123

PIL: Pushback and start—up approved, runway in use 36L, D08 Departure Squawk 3123 CCA 101

CTL: Pushback correct, call me back when ready for taxi

PIL: CCA101

PIL: Ground cockpit good morning, ready for push

GND: Good morning, confirm parking brakes released

PIL: Parking brakes released

GND: Thank you, commencing pushback

PIL: Roger

GND: It's OK to start all engines during the push

PIL: Starting sequence 4 3 2 1

GND: Approved to start engine, number 4 3 2 1

PIL: Number 4 coming

GND: Number 4 approved

PIL: Number 3

GND: Approved number 3

PIL: Number 2

GND: Approved number 2

GND: Pushback completed, confirm parking brakes set please

PIL: Parking brakes set

GND: Thank you sir

PIL: Start number 1

GND: Number 1 approved

PIL: All engines have been started, check everything normal, disconnect interphone, thank you goodbye

GND: Roger I disconnect the interphone, good bye sir



## Exercise 5

Directions: According to text 9, answer the following questions.

- (1) How many different control departments did the pilot contact?
- (2) How many engines were started?





## Exercise 6

Directions: Fill in the blanks.

PIL: Beijing Ground CCA 720 (1) \_\_\_\_\_ A3 request (2) \_\_\_\_\_

CTL: CCA 720 pushback and start-up (3) \_\_\_\_\_ facing north

PIL: (4) \_\_\_\_\_

PIL: (To the Ground Crew) (5) \_\_\_\_\_

GND: Roger confirm brakes released

PIL: (6) \_\_\_\_\_

GND: Commencing pushback

GND: Pushback completed confirm brakes set

PIL: (7) \_\_\_\_\_

GND: All engines approved to start up

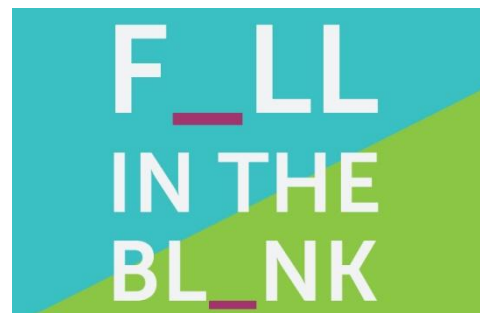
PIL: Roger, starting No. 3

GND: No. 3 rotating

PIL: All engines started(8) \_\_\_\_\_

GND: All is clear. Good flight

PIL: Thank you



## Role Play

Role A: Pilot, imagine you're in the cockpit.

Role B: ATC, imagine you're in the control center.

Role C: Ground crew, imagine you're on the apron.

Student A should request pushback and start up. Student B should approve pushback and start up.

Student C should communicate with Student A to finish pushback and start up.



**LANGUAGE FOCUS:****American and British English:**

Look at the pairs of words and identify which are written with American spelling and which with British spelling.

- |    |             |            |
|----|-------------|------------|
| 1. | center      | centre     |
| 2. | color       | colour     |
| 3. | downdraught | downdraft  |
| 4. | gage        | gauge      |
| 5. | leveled     | levelled   |
| 6. | programme   | Program    |
| 7. | stabiliser  | stabilizer |
| 8. | tyre        | tire       |

Look at the pairs of terms. For each pair, identify which is the American English and which is the British English usage.

- |     |                           |                        |
|-----|---------------------------|------------------------|
| 1.  | handoff                   | handover               |
| 2.  | traffic pattern           | traffic circuit        |
| 3.  | hold                      | stack                  |
| 4.  | airplane                  | aircraft               |
| 5.  | jetway                    | airbridge              |
| 6.  | hPa                       | in.Hg                  |
| 7.  | ramp                      | apron                  |
| 8.  | visibility: statute miles | visibility: kilometres |
| 9.  | clear the runway          | Vacate the runway      |
| 10. | disembark                 | deplane                |


**Discussion**

What other differences do you know between American and British English?



 **Let's Talk**

What are the communication tasks you should do before cruise? Write your thought down then share it with your group members. Don't forget to take notes when they talk. Later you will share all you get to the whole class.

Your thought:

Other idea:

Now watch the video. What does the video tell you to do before cruise?

 #9

2016

# English Air-ground communication

## Teacher's Handbook

**English Air-ground communication**

A Civil Aviation English Course for Pilots

*With Simulating Videos*

By Yuting Li

2016/5/1



# Recommended Teaching Timeline

Recommended Teaching Time: 1 Semester = 16 Weeks (3 Sessions/Week, 1.5 Hours/Session) = 72 Hours

Week #1		Lesson 1	Session #1	<b>Language Content:</b> Phonetic Alphabet <b>Video #1 &amp; #2</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #2	<b>Language Content:</b> Numerals <b>Video #3</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #3	<b>Language Function:</b> Establishing Initial Contact <b>Language Content:</b> Abbreviations <b>Video #4</b> <b>Exercises</b> <b>Communicative Activities</b>
Week #2	Unit 1	Lesson 2	Session #4	<b>Text #1:</b> General Communication Procedure <b>Language Function:</b> Asking to Repeat & Correcting Message <b>Language Content:</b> Common-used Standard Words & Phrases <b>Exercises</b> <b>Communicative Activities</b>
			Session #5	<b>Language Function:</b> Message Acknowledgement & Readback & Reporting Unable to Carry Out Instructions <b>Language Content:</b> Common-used Standard Words & Phrases <b>Video #5 &amp; #6</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #6	<b>Language Function:</b> Communication Handover <b>Language Content:</b> Common-used Standard Words & Phrases <b>Exercises</b> <b>Communicative Activities</b>
Week #3	Unit 2	Lesson 3	Session #7	<b>Topic:</b> Radio Check <b>Text #2</b> <b>Language Content:</b> New Words and Phrases <b>Language Function:</b> Asking Questions <b>Exercises</b> <b>Communicative Activities</b>
			Session #8	<b>Topic:</b> ATIS <b>Language Content:</b> New Words and Phrases <b>Video #7</b> <b>Text #3</b> <b>Exercises</b> <b>Communicative Activities</b>

			Session #9	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #4</b>		Lesson 4	Session #10	<b>Topic:</b> Departure Information <b>Language Content:</b> New Words and Phrases <b>Text #4</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #11	<b>Topic:</b> ATC Clearance <b>Language Content:</b> New Words and Phrases <b>Text #5</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #12	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Video #8</b> <b>Text #6</b> <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #5</b>	Unit 3	Lesson 5	Session #13	<b>Topic:</b> Pushback & Start-up <b>Language Content:</b> New Words and Phrases <b>Text #7</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #14	<b>Topic:</b> Release Parking Brakes & Pushback & Start Engines <b>Language Content:</b> New Words and Phrases <b>Text #8 &amp; #9</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #15	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Language Content:</b> British and American English <b>Video #9</b> <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #6</b>	Unit 3	Lesson 6	Session #16	<b>Topic:</b> Taxi <b>Language Content:</b> New Words and Phrases <b>Text #10</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #17	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Text #11</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #18	<b>Test #1</b>

Week #7		Lesson 7	Session #19	<b>Topic:</b> Line up & Reporting Airborne Time <b>Language Content:</b> New Words and Phrases <b>Text #12</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #20	<b>Topic:</b> Takeoff <b>Language Content:</b> New Words and Phrases <b>Video #11</b> <b>Text #13</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #21	<b>Group Work #1</b>
Week #8	Unit 4	Lesson 8	Session #22	<b>Topic:</b> Contacting Controllers of Approach <b>Language Content:</b> New Words and Phrases <b>Text #14</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #23	<b>Topic:</b> Height and Direction Instructions <b>Language Content:</b> New Words and Phrases <b>Video #12</b> <b>Text #15</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #24	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Video #13</b> <b>Exercises</b> <b>Communicative Activities</b>
Week #9	Unit 5	Lesson 9	Session #25	<b>Topic:</b> Reporting Position and Level Information <b>Language Content:</b> New Words and Phrases <b>Text #16</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #26	<b>Topic:</b> Join, Cross Airways and Hold <b>Language Content:</b> New Words and Phrases <b>Text #17</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #27	<b>Topic:</b> Route Information <b>Language Content:</b> New Words and Phrases <b>Video #14</b> <b>Exercises</b> <b>Communicative Activities</b>

<b>Week #10</b>	<b>Unit 6</b>	Lesson 10	Session #28	<b>Topic:</b> Descent <b>Language Content:</b> New Words and Phrases <b>Video #15</b> <b>Text #18</b> <b>Exercises</b> <b>Communicative Activities</b>	
			Session #29	<b>Topic:</b> Hold <b>Language Content:</b> New Words and Phrases <b>Text #19</b> <b>Exercises</b> <b>Communicative Activities</b>	
			Session #30	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Video #16</b> <b>Exercises</b> <b>Communicative Activities</b>	
<b>Week #11</b>		<b>Unit 6</b>	Lesson 11	Session #31	<b>Topic:</b> Approach <b>Language Content:</b> New Words and Phrases <b>Text #20</b> <b>Exercises</b> <b>Communicative Activities</b>
				Session #32	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Video #17</b> <b>Text #21</b> <b>Exercises</b> <b>Communicative Activities</b>
				Session #33	<b>Test #2</b>
<b>Week #12</b>	<b>Unit 7</b>		Lesson 12	Session #34	<b>Topic:</b> Landing <b>Language Content:</b> New Words and Phrases <b>Text #22</b> <b>Exercises</b> <b>Communicative Activities</b>
				Session #35	<b>Topic:</b> Traffic Circuit <b>Language Content:</b> New Words and Phrases <b>Video #18</b> <b>Text #23</b> <b>Exercises</b> <b>Communicative Activities</b>
				Session #36	<b>Group Work #2</b>
<b>Week #13</b>		<b>Unit 7</b>	Lesson 13	Session #37	<b>Topic:</b> Missed Approach <b>Language Content:</b> New Words and Phrases <b>Text #24</b> <b>Exercises</b> <b>Communicative Activities</b>



			Session #38	<b>Topic:</b> Requesting for Local Training <b>Language Content:</b> New Words and Phrases <b>Text #25</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #39	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Video #19</b> <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #14</b>		Lesson 14	Session #40	<b>Topic:</b> Final Approach <b>Language Content:</b> New Words and Phrases <b>Text #26</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #41	<b>Topic:</b> Landing <b>Language Content:</b> New Words and Phrases <b>Text #27</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #42	<b>Topic:</b> After Landing <b>Language Content:</b> New Words and Phrases <b>Video #20</b> <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #15</b>	<b>Unit 8</b>	Lesson 15~19	Session #43	<b>Topic:</b> Bad Weather & Ground Events & Problems in Flight <b>Language Content:</b> New Words and Phrases <b>Video #21</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #44	<b>Topic:</b> Urgency & Distress <b>Language Content:</b> New Words and Phrases <b>Video #22</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #45	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Exercises</b> <b>Communicative Activities</b>
<b>Week #16</b>	<b>Overall Review</b>		Session #46	<b>Topic:</b> Drills on Transmissions Students Have Learned <b>Text #28</b> <b>Exercises</b> <b>Communicative Activities</b>
			Session #47	<b>Group Work #3</b>
			Session #48	<b>Test #3</b>

# Unit 1

## General Operation Procedures

### Lesson 1: Call signs

#### Lesson Plan:

##### Objective:

By the end of this lesson, students will be able to:

- (1) read alphabet, numerals and their combinations correctly;
- (2) understand the rule of call signs and read them correctly;
- (3) establish initial contact;
- (4) read civil aviation abbreviations correctly and know their meanings;
- (5) grasp information from videos and charts;
- (6) exchange information with others;
- (7) express their thought in plain language.

##### Description of Videos:

**Video #1:** is the pronunciation of phonetic alphabet. You can show it to students in class and also let them watch after class.

**Video #2:** is the history of phonetic alphabet. Related activities will be explained in “Description of Activities”.

**Video #3:** is the pronunciation of numerals. You can show it to students in class and also let them watch after class.

**Video #4:** is a communicational tutorial video of the arrival phase. An information gap activity and discussion questions will be explained in “Description of Activities”.

##### Description of Exercises:

**Exercise 1:** aims to help students read single letters correctly. You can give them time to practice first and then let them read to the class. Chain drill can be employed to make it more interesting and ensure every student getting chance to talk.

**Exercise 2:** aims to help students grasp letter related information by listening. Read the sentences to your students in normal speed and let them choose the correct information.

**Exercise 3:** aims to help students exchange letter information accurately. It is a pair work so make sure everyone has a partner. Observe how they use phonetic alphabet.

**Exercise 4:** aims to help students read number related information correctly and know what a number refers to. You can let them try to read and guess the meanings first and then show the right pronunciation and explain their meaning.

**Exercise 5:** aims to help students grasp full sentences (with letter and number information) and meanwhile give them examples of what standard phraseology is. You can read the sentences in the normal speed first and then slower.

**Exercise 6:** aims to help students grasp call sign information. Read the call signs to the students in normal speed.

**Exercise 7:** aims to check whether students understand the rules of call signs and practice to read call signs. They will design their own call signs which can make them feel relaxed and interested. You can also encourage them to explain the meaning of their call signs.

**Description of Activities:****Let's Talk (for phonetic alphabet, Video #2):**

- (1) In the first part, let students guess why pilots use phonetic alphabet and share their thought with group members (3-4 people in each group). They should take note when others are talking. On the one hand, students will practice to share their thought with others. On the other hand, they will practice to take notes.
- (2) In the second part, show Video #2 to students for the first time and let find out the history of phonetic alphabet. Also check whether they obtain detailed information like the examples of confusions regular pronunciation may cause. Show the video again to let them get more information.

**Let's Talk (for numerals):**

- (1) Let students work in groups and share the important numbers for them with the pronunciation they learnt. Also encourage them to tell why these numbers are special;
- (2) Let students open their contact book and read telephone numbers with the phonetic numerals. If they don't have contact book, simply read numbers on the illustration. By this activity they will find they can also use phonetic numerals outside of their job and it's interesting.
- (3) Give examples first and then let students read the track chart and tell the information they find.

**Discussion (for call signs):**

This discussion activity lets students share what they know about call signs and meanwhile makes them curious about the following content (call sign rules) they will learn next.

**Role Play:**

Let students image they are in the cockpit or in the control center (if you have enough time, classroom can be dressed up like working environment) and let them work in pairs to role play. Don't correct their errors during they are playing. After they finish, only correct the phonetic alphabet, numeral and callsign errors (what they learnt). It's a pair work so make sure every student has a partner.

**Information Gap Activity (Video #4) & Discussion (Video #4):**

Let students work in pairs and make sure one student can both watch and hear video while the other one can only hear it. Play the video once and don't let them take notes. Then let them share what they learnt. Students who only hear the video talk first. Let them try to answer the discussion questions before play the video for the second time. Now they should get more accurate answers to the questions.

**Homework:**

Practice phonetic alphabet, numerals, call signs, establishing initial contact and remember aviation abbreviations.

**Assessment:**

Class observation.

## Exercise Transcripts & Answers Keys:

### Exercise 2:

- (1) Hong Kong Ground CSN 306 destination Guangzhou, bay 25 request start-up information G.
- (2) CCA 998 taxi via taxiway M and C to holding point Runway 36L wind 350 degrees 8m/s QNH 1010.
- (3) N9DW go ahead and level 1100.

Answer Keys: B A B

### Exercise 4:

- Answer Keys: (1) Radio frequency (2) Atmospheric pressure (3) Part Number (4) Heading, course, wind direction, vector  
(5) Flight number (6) Airspeed (7) Rate of climb/descent (8) Mach number (9) Rate of descent (10) Atmospheric pressure  
(11) Weight (12) Time

### Exercise 5:

- (1) Air China 102 ZHO 32 at 10200m, WXI 4.
- (2) China Southern 309 contact Beijing Control on 128.30.
- (3) Beijing Control Speedbird GABCD, EKIVI 47, FL 330.

### Exercise 6:

- (1) CCA 102 (2) B589313 (3) Shang Hai Approach (4) Alpha Control (5) G-JUWL

### Abbreviations

- Answer Keys: (1) ILS (2) RVR (3) LDA (4) TCAS (5) RVSM (6) AIRPROX (7) IAF (8) EGPWS (9) ETOPS  
(10) MSA (11) ATIS (12) in.Hg

## Lesson 2: Communication Procedures

### Lesson Plan:

#### Objective:

By the end of this lesson, students will be able to:

- (1) understand the transmission structure of air-ground communication;
- (2) be familiar with the common-used standard words and phrases;
- (3) ask for repeat, correct message, readback, report unable to carry out instructions, and handover communications;
- (4) understand different possibilities of misunderstanding and avoid these misunderstanding;
- (5) express their thought in plain language more fluently;
- (6) get information from chart and use the information to communicate.

#### Description of Videos:

**Video #5:** is the video of a perfect landing of Air China 981 on JFK International Airport. Related activities will be explained in “Description of Activities”.

**Video #6:** is the video of the pilot from the same flight (Air China 981) talk to the JFK Ground Control. It’s obvious that the pilot couldn’t understand much of the information or request the Ground Control made; meanwhile, he couldn’t express himself in plain English or air-ground communication. Related activities will be explained in “Description of Activities”.

#### Description of Texts:

**Text #1:** is a dialog including the language uses that will be taught in Lesson 2. You can let students do exercise 1 before explain the dialog.

#### Description of Exercises:

**Exercise 1:** aims to let students find the language use of asking to repeat and correcting messages from the text by themselves. It’s okay if they make any mistakes. The related knowledge and exercises are on the next page. After teaching and doing the exercises, give them another chance to answer the questions in exercise 1.

**Exercise 2:** aims to help students to be familiar with the language use of requesting to repeat information. Meanwhile, they will practice listening ability. Read the dialogs to your students in normal speed and let them write down the sentences used to request to repeat.

**Exercise 3:** aims to help students to master the language use of requesting to repeat. A dialog is included in the exercise for them to use. It is a pair work so make sure everyone has a partner. Observe how they master the language use.

**Exercise 4:** aims to let students understand how to correct message and what the correct message is in such occasion. Read the sentences in normal speed and let them write down the correct information.

**Exercise 5:** aims to help students master the language use of correcting message. A dialog is included in the exercise for them to use. It is a pair work so make sure everyone has a partner. Observe how they master the language use.

**Exercise 6:** aims to help students to correctly respond to the ATCs (message acknowledgement or readback). It is a pair work so make sure everyone has a partner. Observe how they work.

**Exercise 7:** aims to help students master the language use of reporting unable to carry out instructions. Three sentences are included for them to practice.

**Exercise 8:** aims to help students to master the language use of communication handover. Read the sentences in normal speed and let them write down the information of next contact station.

**Exercise 9:** aims to help students remember the common-used standard words and phrases. Let students match the words or phrases with their meanings.

#### **Description of Activities:**

##### **Discussion (for readback)**

This discussion activity aims to let the students understand why readback can reinforce flight safety and avoid confusion and remember what a good readback should be.

##### **Let's Talk (for misunderstanding, Video #5 & #6):**

- (1) In the first part, let students understand the six different ways in which misunderstanding can occur and give examples of each way. It will help students to relate the mistakes they may make to the six ways and avoid these mistakes.
- (2) In the second part, show Video #5 to students. After this video, let the students talk about what they think about the landing.
- (3) In the third part, show Video #6 to students and ask them what they think about the English proficiency of the pilot.

By comparing the flight skills and the English proficiency, let the students understand even they have perfect flight skills, poor English communication ability can still make it embarrassing and even dangerous.

##### **Discussion (for common-used standard words and phrases):**

This discussion activity aims to let students remember the common-used standard words and phrases by comparing similar words and phrases.

##### **Role Play:**

This activity aims to let students to use the language uses they learnt in Lesson 2. Related information is offered in the chart. Let them imagine they are in the cockpit or in the control center (if you have enough time, classroom can be dressed up like working environment) and let them work in pairs to role play. Don't correct their errors during they are playing. Correct the errors after they finish. It's a pair work so make sure every student has a partner.

#### **Homework:**

Practice the standard communication process and the language uses of asking to repeat, correcting message, message acknowledgement, readback, reporting unable to carry out instructions, and communication handover. Remember the common-used standard words and phrases.

#### **Assessment:**

Class observation.

## Exercise Transcripts & Answers Keys:

Exercise 1:

Answer Keys: (1) 1 Say again (2) Correction

Exercise 2

(1) PIL: Guangzhou Control CCA 101 ready for descent

CLT: CCA 101 descend to 7 200m after passing JSWEI

PIL: Say again height CCA 101

CLT: CCA 101 descend to 7 200m

PIL: Descend to 7 200m after passing JSWEI CCA 101

(2) CLT: CCA 982 cleared to land, wind 330 degrees 8m/s

PIL: Say again CCA 982

CTL: Cleared to land, wind 330 degrees 8m/s

PIL: Cleared to land, wind 330 degrees 8m/s CCA 982

(3) PIL: Hong Kong Tower G-ABCD 10 miles south 3 000 feet for landing

CTL: Say again after 10 miles G-ABCD

PIL: South 3 000 feet for landing G-ABCD

Exercise 4:

(1) BAW 315 holding point 32, correction holding point 35

(2) Hong Kong Departure CAG 4016 passing 2 000 feet, correction passing 2 500 feet

(3) CCA 101 expedite climb to 7 000m due traffic, contact Beijing Control on 128.3, correction contact Beijing Control on 127.6

Exercise 8:

(1) Readback correct, contact Guilin Tower on 119.3

(2) N451 climb straight ahead and contact Departure 126.3

(3) Lufthansa 720 contact 128.5 for Beijing Control good-day

(4) CCA 162 hold at holding point V, contact Tower 118.7, good-day

(5) CSN 309 contact Zhengzhou on 122.20

Answer Keys: (1) Guilin Tower, 119.3 (2) Departure, 126.3 (3) Beijing Control, 128.5 (4) Tower, 118.7 (5) Zhengzhou, 122.20

Exercise 9:

Answer Keys: (1) e (2) h (3) g (4) f (5) c (6) d (7) a (8) b



# Unit 2:

## Pre-start

### Lesson 3: Radio Check and ATIS

#### Lesson Plan:

##### Objective:

By the end of this lesson, students will be able to:

- (1) do radio check;
- (2) understand ATIS and grasp information from ATIS;
- (3) ask questions with plain language;
- (4) know the communication tasks they should do before departure.

##### Description of Videos:

**Video #7:** is a video explains pilots' communication tasks before departure. It includes ATIS, contacting Ground Control, contacting Tower. Related activities will be explained in "Description of Activities".

##### Description of Texts:

**Text #2:** is a dialog of radio check.

**Text #3:** is a passage of ATIS.

##### Description of Exercises:

**Exercise 1:** aims to help students to grasp call sign and radio signal quality by listening. Read the exchanges and sentence in normal speed. Let students write down the call sign of each flight and its radio signal quality.

**Exercise 2:** aims to help students to practice how to do radio check. It is a pair work so make sure everyone has a partner. Observe how they do radio check during practice.

**Exercise 3:** aims to help students understand the five levels of radio signal quality. Let them work in pairs and explain the five levels with plain English. Make sure everyone has a partner. Observe how they explain.

**Exercise 4:** aims to improve students' listening comprehension ability. Read the dialog and questions in normal speed and let them choose the correct answer. You can read the dialog for the second time for them to check their answers.

**Exercise 5:** aims to help students use correct sentence patterns to ask questions. Students should use each sentence pattern in the chart to ask questions. It is a pair work so make sure everyone has a partner. Observe how they work.

**Exercise 6:** aims to help students to answer questions. Read the five questions in normal speed and let them match the answers to these questions.

**Exercise 7:** aims to check whether students understand the information in ATIS. They should work in pairs and explain the information in Text #3. Make sure everyone has a partner. Observe how they explain.

**Exercise 8:** aims to help students to grasp information from ATIS by listening. Read the ATIS and questions in normal speed and let them choose the correct answers.

**Exercise 9:** aims to help students remember the new words and phrases. Let them match the words and phrases with the meanings.

**Description of Activities:****Discussion (for radio check):**

This discussion activity lets students share their opinions of why and when pilots should do radio check. On the one hand, it helps them to understand the purpose of radio check and remember when they should do radio check. On the other hand, it helps them to practice speaking.

**Let's Talk (for communication tasks before departure, Video #7):**

- (1) In the first part, let students think what the communication tasks before departure are and share their thought with group members (3-4 people in each group). They should take note when others are talking. On the one hand, students will think the communication steps by themselves which can help them understand and remember the tasks better. On the other hand, they will practice speaking during the activity.
- (2) In the second part, show Video #7 to students for the first time and let them find out the tasks explained in the video. Show the video again to let them get more detailed information.

**Homework:**

Practice radio check. Understand ATIS. Remember new words and phrases.

**Assessment:**

Class observation.

## Exercise Transcripts & Answers Keys:

### Exercise 1:

(1) PIL: Hong Kong Ground CCA 908 radio check 129.0, how do you read

CTL: CCA 908 Hong Kong Ground read you 5

(2) PIL: Beijing Ground United 888 radio check 128.3, how do you read me

CTL: United 888 Beijing Ground I read you 4

(3) CTL: CSN 304 I read you 2, adjust your transmitter

### Exercise 4:

PIL: Kenton Tower GBACD radio check 118.5

CTL: Station calling Kenton Tower readability 1

PIL: Tower GBACD 12345 how do you read me now

CTL: GCD I read you 3 with loud background whistling, check your transmitter and give me a short count

PIL: Roger, call you in 3 minutes

PIL: Tower GCD 12345 54321

CTL: GCD read you 5

PIL: Kenton Tower GCD SELCAL check GBTD

CTL: Roger GBTD

PIL: SELCAL checked okay GBTD

### Questions:

- (1) What is the Tower frequency?
- (2) The reason for the pilot giving a short count is because his transmission is ...
- (3) What's the full call sign of the aircraft?
- (4) Why did the pilot say "call you in 3 minutes"?
- (5) What is the SELCAL of the aircraft?

Answer Keys: (1) C (2) B (3) A (4) D (5) C

### Exercise 6:

- (1) How many passengers do you have on board?

- (2) When can you be ready?
- (3) Which runway is in use?
- (4) What's your present location?
- (5) How much fuel have you got?

Answer Keys: (1) b (2) c (3) d (4) a (5) e

#### Exercise 8:

Frankfurt information A time 15.20. Runways in use 25 18 transition level 60 met report as of 15.20: wind 260 11 knots visibility 8 kilometers and recent snow shower cloud 3 oktas 2 700 feet, 3 oktas 9 000 feet temperature 1 dew point – 1 centigrade QNH1015 hectopascal equals 29.97 inches trend no sig. Warning for Frankfurt weather announcement tomorrow morning 6 o'clock strong winds 320 at 15 knots gusts up to 34 knots information A out.

#### Questions:

- (1) At what time is the information recorded?
- (2) What is the wind component?
- (3) QNH1015 hectopascals equals to ...
- (4) What weather will it be for 6 o'clock tomorrow morning?

Answer Keys: (1) B (2) C (3) A (4) D

#### Exercise 9:

Answer Keys: (1) b (2) a (3) d (4) c (5) f (6) e (7) h (8) g (9) j (10) i (11) l (12) k

## Lesson 4: Departure Information and ATC Clearance

### Lesson Plan:

#### Objective:

By the end of this lesson, students will be able to:

- (1) ask for departure information and understand when they should ask for departure information;
- (2) request ATC clearance;
- (3) remember new words and phrases;
- (4) grasp information from videos and charts;
- (5) exchange information with others;
- (6) express their thought in plain language.

#### Description of Videos:

**Video #8:** is an air-ground communication tutorial video of departure. It includes ATIS and asking for ATC clearance. Related activities will be explained in “Description of Activities”.

#### Description of Texts:

**Text #4:** is an exchange of asking for departure information.

**Text #5:** is two exchanges of requesting ATC clearance.

**Text #6:** is a dialog of from requesting departure information to requesting ATC clearance.

#### Description of Exercises:

**Exercise 1:** aims to help students understand departure information by letting them explain the information by themselves. Meanwhile, they can improve their speaking ability.

**Exercise 2:** aims to let students practice to copy departure information. Read the sentences in normal speed and let them copy the information.

**Exercise 3:** aims to help students to master the structure and meaning of ATIS and departure information. They should write their own ATIS or departure information and read them to their partner. It also requires copying the information. It is a pair work so make sure everyone has a partner. Observe how they work.

**Exercise 4:** aims to help students remember the word and phrases possibly used in ATIS and departure information. They should match the environment phenomena to the pictures. You can also ask them to do the further activities as explaining what the dangers under these environment phenomena can be.

**Exercise 5:** aims to enable students to copy ATC clearance. Read the sentences in normal speed and let them copy the ATC clearances. You can also ask them to readback the ATC clearances according to their notes. Emphasize the importance of taking notes of instructions and information during communicating with the ATCs.

**Exercise 6:** aims to help students to remember the words and phrases possibly used during activities on the airport. Let them match the five words to these four pictures. (“Ramp” and “apron” have the same meaning and both should be matched to picture b).

**Exercise 7:** aims to check whether students understand the structures of air-ground communication. It also helps students to practice readback ATC clearance. Let them fill the blanks with proper words and sentences.

**Description of Activities:****Discussion (for departure information):**

This discussion activity lets students think about the differences between ATIS and departure information and understand when they need to ask for departure information. They will share their thought with their partner which can improve their communication ability.

**Discussion (for ATC clearance):**

This discussion activity lets students understand the function of ATC clearance. They should remember that after receiving ATC clearance, further approving is needed before pushback, start up, taxi and take off.

**Role Play:**

Let students imagine they are in the cockpit or in the control center (if you have enough time, classroom can be dressed up like working environment) and let them work in pairs to role play. Student A should request ATC clearance while Student B should give ATC clearance according to the given Jeppesen airport chart. Only correct their errors after they finish. It's a pair work so make sure every student has a partner.

**Let's Talk (for ATC clearance, Video #8):**

- (1) In the first part, let students watch Video #8 for the first time and answer the five listening comprehension questions.
- (2) In the second part, show the video for the second time and let students copy the ATIS and the ATC clearance information. Compare their answers with others.
- (3) In the third part, let them list the following tasks after pilot got ATC clearance. Share their answers with their classmates.

**Homework:**

Practice asking for departure information and requesting for ATC clearance. Review in what circumstances they should ask departure information and what they should do after receiving ATC clearance.

**Assessment:**

Class observation.

## Exercise Transcripts & Answers Keys:

### Exercise 2:

- (1) Runway in use for takeoff 34, wind 310 degrees 8 kts, temperature 31 dew point 27, QNH1003
- (2) Departure runway 28, 330 degrees 20 kts, broken 3 000 feet temperature plus 1 dew point minus 3, QNH1012 RVR 600m
- (3) Takeoff runway 11, 090 degrees 15kts gusting 25 kts, temperature 8 dew point 2 QNH 1021
- (4) Surface wind 130 degrees 10 kts, temperature 12 dew point 8 QNH 1010 departure runway 09
- (5) Departure runway 15 expect SID G3 or H4, transition level 80, wind 210 degrees 5kts, temperature 20 dew point 12, QNH 1025 mb, caution bird activity south of the field

### Exercise 4:

Answer Keys: 1. a    2. d    3. f    4. b    5. e    6. c

### Exercise 5:

- (1) GCHLM cleared to Paris De Gaulle, D3 departure, flight planned route, initially climb to FL180, request level change en route, squawk 5124 contact 121. 1 when airborne
- (2) CCA 9005 Heavy cleared to Kennedy Airport via Connety 4 departure then as filed. Maintain FL220, departure frequency will be 118.6 squawk 1570
- (3) BAW 461 cleared to Geneva via BPK 1F. Upper Green 1 Upper Red 7 Upper Amber 242 and Upper Blue 28, initial climb to FL120, request level change en route, squawk 1530
- (4) CCA 934 cleared as filed expect Temell 7 G departure squawk 5663
- (5) London ATC clears AFR 391 to Orly via-flight planned route, BPK 1 G departure, climb to and maintain FL250, request level change en route, contact 124. 4 when airborne squawk 2514

### Exercise 6:

Answer Keys: 1. b    2. b    3. a    4. d    5. c

### Exercise 7:

Answer Keys: (1) Delivery    (2) DTV    (3) gate    (4) destination    (5) information    (6) startup    (7) cleared    (8) FL  
 (9) request    (10) on    (11) squake    (12) on    (13) Parpal Tangel 2 Golf Departure Red 6 Amber 8, climb and maintain FL 150

request level change on squake 2031, after departure on 128.1 DTV



# Unit 3:

## Start up and Taxi

### Lesson 5: Pushback and Start up

#### Lesson Plan:

##### Objective:

By the end of this lesson, students will be able to:

- (1) request pushback;
- (2) request start up;
- (3) remember new words and phrases;
- (4) understand the differences between British and American English;
- (5) exchange information with others;
- (6) express their thought in plain language.

##### Description of Videos:

**Video #9:** is a video of the communication tasks before cruise. Related activities will be explained in “Description of Activities”.

##### Description of Texts:

**Text #7:** has three dialogs of requesting pushback.

**Text #8:** has two dialogs of requesting start up.

**Text #9:** is a dialog of requesting pushback and start up.

##### Description of Exercises:

**Exercise 1:** aims to help students remember the words possibly used during requesting pushback. They should match the words with the definitions. Such kind of activity can also help students to use explanations to express words or phrases they forget.

**Exercise 2:** aims to enable students to request pushback. Let them practice the conversation of requesting pushback with their partners. It is a pair work so make sure everyone has a partner. Observe how they work during practice.

**Exercise 3:** aims to help students to be familiar with the English air-ground communication they have learnt so far and practice their listening comprehension ability. The five exchanges or passage are requesting departure information, ATIS, requesting ATC clearance, requesting pushback and radio check. Read them in normal speed and let your students write down the main content of each conversation.

**Exercise 4:** aims to help students to understand Text #8 and use their language to explain the exchanges. It is a pair work so make sure everyone has a partner. Observe how they work during practice.

**Exercise 5:** aims to check whether students understand the process of requesting pushback and start up.

**Exercise 6:** aims to help students to understand the communication during requesting pushback and start up. Let them fill the blanks with words or sentences.

**Description of Activities:****Discussion (for requesting pushback):**

This discussion activity lets students share their knowledge of why pilots must request pushback.

**Discussion (for requesting pushback):**

This discussion activity lets students think about whom they should contact before start up. On the one hand, they should be familiar with the language use. On the other hand, they should also know to whom they should talk to during different flight phases.

**Role Play:**

Let students imagine they are in the cockpit (pilots), in the control center (ATCs), or on the apron (ground crews). If there is enough time, classroom can be dressed up like working environment. Every group should have three students to role play. Student A should ask Student B to approve pushback and start up. Student B should approve or reject pushback and start up. After that, Student B should work with Student A to finish pushback and start up. Only correct their errors after they finish the role play.

**Discussion (for the comparison of British and American English):**

This discussion activity lets students share what they know about the differences between British and American English besides what they just learn. It encourages them to learn from each other.

**Let's Talk (for communication tasks before cruise, Video #9):**

- (1) In the first part, let students think about what the communication tasks they need to do before cruise and share their thought with group members (3-4 people in each group). They should take note when others are talking. By this activity, they can review what they have learned and share what they deduce. It will also help them to practice expressing their thought in English.
- (2) In the second part, show Video #9 to students and let them grasp the communication tasks before cruise from the video. Check what they get after the first play. Show the video again to let them get more detailed information.

**Homework:**

Practice requesting pushback and requesting start up. Review the differences between British and American English. Review the communication tasks before cruise.

**Assessment:**

Class observation.

## Exercise Transcripts & Answers Keys:

Exercise 1:

Answer Keys: (1) c (2) a (3) b (4) e (5) f (6) d (7) g

Exercise 3:

(1) PIL: Qingdao Ground CSN 304 request departure information

CTL: CSN 304 Qingdao Ground surface wind 120 degrees 15 knots gusting to 25, temperature 26 dewpoint 21, QNH 1012 hectopascals departure runway 14

(2) This is Hong Kong International Airport Information T at time 0900, runway in use 13, expect IGS approach, surface wind 090 degrees 10-20 knots visibility 9km, cloud scattered 1 400 feet, scattered 1 800 feet temperature 24 QNH1011 hPa, expect windshear and moderate turbulence on approach an departure, acknowledge Information T on frequencies 119.1 for Arrival and 124.65 for Departure.

(3) PIL: Hong Kong Delivery CCA 123 destination Guilin with information T, ready to copy ATC clearance

CTL: CCA123 cleared to Guilin via Bekol flight planned route, initial climb to 8 000 feet Bekol One D Departure, request level change en route, squawk 5345

(4) PIL: Apron CCA 101 request pushback

CTL: CCA 101 pushback approved

(5) PIL: Tower G-ABCD radio check 118.7

CTL: Station calling Tower you are unreadable

Answer Keys: (1) Requesting departure information (2) ATIS (3) Requesting ATC clearance (4) Requesting pushback

(5) Radio check

Exercise 5:

Answer keys: (1) 2, Beijing Ground & Ground (2) 4

Exercise 6:

Answer keys: (1) Gate (2) pushback and start up (3) approved (4) Pushback and start up approved facing north CCA 720

(5) Ready for pushback facing north (6) Brakes released (7) Brakes set (8) remove all ground equipment

CHAPTER IV  
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Recommendations

## CHAPTER IV

### CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

Communication between pilots and ATCs is one crucial element that affects flight safety. As a result, with the significant increase of international air service, ICAO decided English as the mandatory language of international civil aviation in the 1950s. According to the English requirement of ICAO, an English proficiency test was required in China. However, pilot's lack of English background and the imperfect English air-ground communication curriculum in China cause a dilemma. Student pilots cannot pass required English test (ICAO English level-3) to graduate and some experienced pilots are required to stop working to study English air-ground communication in order to pass ICAO English level-4.

To solve this problem, a simulating video based English air-ground communication course with an effective language teaching approach, CLT, was developed in the project. This immersion based English air-ground communication course creates a vivid learning environment so that pilots can be attracted in the material, rather than bored from ineffective memorization based learning. Additionally, students are encouraged to shift their roles from "listeners" to "communicators" in class. The project will help pilots pass ICAO English test to graduate or return to work. Furthermore, pilots will get more opportunities to get promotion with good English communication ability. It is also helpful to the airlines to have more English-certified pilots to run and grow business. Most importantly, flight safety will be improved since pilots will be better equipped with English communication ability.

## **Recommendations**

There are four recommendations for the use of the project. Firstly, as an advanced air-ground communication course, its focus is to improve the fluency, accuracy and efficiency of English communication between pilots and ATCs instead of instructing the basic language knowledge. Therefore, this course should be offered to second year student pilots who have completed elementary English courses, and to returning pilots that have received basic ICAO English courses. Secondly, it is also recommended to airlines to use the project to keep pilots familiar with the English usage in every flight phase and emergency situations such as “forced landing” and “near-miss” because besides learning, retaining is another important work for pilots to improve air-ground communication ability. Especially, for the language usages during the emergency situations pilots occasionally encounter, they must be familiar with the usage so that they are able to handle these dangerous situations.

Thirdly, exercises and communicative activities are included in the textbook and described in the teacher’s handbook. ICAO English teachers are required to use these exercises and activities to accomplish the goal of helping pilots to use English fluently. Teachers are also encouraged to adapt the exercises and activities or develop their own activities according to the students’ situation. Finally, videos included in this course can also be used independently by pilots as auxiliary self-study material to review and continue to practice outside of class.

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