

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ВОЗДУШНОГО ТРАНСПОРТА

**ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ
БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ
ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ
«МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ
УНИВЕРСИТЕТ ГРАЖДАНСКОЙ АВИАЦИИ» (МГТУ ГА)**

Кафедра специальной языковой подготовки
Н.В. Романовская, Е.В. Черняева, С.К. Зеленкова

ПРОФЕССИОНАЛЬНЫЙ АНГЛИЙСКИЙ ЯЗЫК

УЧЕБНОЕ ПОСОБИЕ

ПО ПРОФЕССИОНАЛЬНО-ОРИЕНТИРОВАННОМУ АНГЛИЙСКОМУ ЯЗЫКУ

Рекомендовано УМО вузов по образованию в области эксплуатации авиационной и космической техники в качестве учебного пособия для студентов высших учебных заведений по направлениям подготовки:

- 25.03.01, 25.04.01 (162300) «Техническая эксплуатация летательных аппаратов и двигателей»;
- 20.03.01 (280700) «Техносферная безопасность»;
- 25.03.03 (161000) «Аэронавигация»

Москва-2014

УДК 378=111(075.3)

ББК ЧИ (Англ.)

Р69

Печатается по решению редакционно-издательского совета
Московского государственного технического университета ГА

Рецензенты: канд. пед. наук А.К. Нестеренко;
доц. Е.Н. Николаева

Романовская Н.В., Черняева Е.В., Зеленкова С.К.

Р69 Профессиональный английский язык: учебное пособие по профессионально-ориентированному английскому языку. - М.: МГТУ ГА, 2014. -56 с.

ISBN 978-5-86311-955-7

Данное пособие предназначено для студентов УВД, БТП, СО, студентов и магистров МФ. Пособие можно использовать для углублённого обучения общему и профессионально-ориентированному английскому языку для студентов всех направлений и специальностей.

Пособие состоит из 4-х частей, каждая из которых содержит текст, взятый из англоязычной прессы без какой-либо адаптации и основанный на событиях, связанных с катастрофой Боинга 777.

Упражнения к текстам составлены с целью отработки навыков аналитического чтения, а также овладения умением использовать практически все структуры английской грамматики. Упражнение 3 (во всех Units) предназначено для отработки навыков диалогической речи как в плане понимания англо-язычной речи, так и в плане говорения на английском языке. 4 части пособия практически охватывают весь грамматический материал английского языка. Лексические упражнения разработаны для развития навыков понимания, говорения и ведения диалога. В разделе "Reader" закрепляется лексика и грамматика, изучаемая в 4-х частях.

Рассмотрено и одобрено на заседаниях кафедры 28.08.2014 г. и учебно-методического совета 02.09.2014 г.

ББК ЧИ (Англ.)

Св. план 2014 г.

поз. 63

ISBN 978-5-86311-955-7

© Московский государственный
технический университет ГА, 2014

Malaysia plane: 10 questions that are still unresolved

(By Vanessa Barford BBC News Magazine)

As the search for missing Malaysia Airlines flight MH370 continues in the southern Indian Ocean, some key questions remain unanswered.

Here are 10 questions about what happened to the Boeing 777 that disappeared after leaving Kuala Lumpur bound for Beijing on 8 March, with 239 people on board.

Unit 1

1. Why did the plane make a sharp left turn?

Military radar logs show flight MH370 turned unexpectedly west when it diverted from its planned flight path, by which time the plane's transponder had already been switched off, and its last ACARS datalink transmission sent.

Sudden turns like this are "extremely rare", according to Dr Guy Gratton of Brunel University's Flight Safety Lab. He says the only real reason pilots are likely to make such a manoeuvre is if there's a serious problem on the plane which makes them decide to divert to a different destination, to get the aircraft on the ground.

That could be a fire or sudden decompression, according to David Barry, an expert on flight data monitoring at Cranfield University.

Malicious intent - by a pilot or intruder - is another possibility.

But unless the "**black box**" **flight recorders** are found, whatever happened in the cockpit at that moment will remain in the realms of speculation.

2. Is it reasonable to speculate that a pilot could have intended to kill himself?

There has been much speculation in the media that suicide might have been behind the loss of the plane.

It wouldn't be the first time it's happened. The crashes of **Egypt Air flight 990** in 1999 and **Silk Air flight 185** in 1997 are both thought to have been caused deliberately by a pilot, though the view has been contested. The **Aviation Safety Network** says there have been eight plane crashes linked to pilot suicide since 1976. So far, no evidence has been released from searches of the homes of Captain Zaharie Ahmad Shah and his co-pilot Fariq Abdul Hamid that back up any similar explanation for MH370. There has been speculation that Shah may have been upset after breaking up with his wife, but there is so far no reliable source for his state of mind. It's been reported police are still examining a flight simulator found in the captain's home.

Barry says the apparent turning off of certain systems might give weight to the theory, but "pilot suicide is a theory like any other". Gratton agrees. "There simply isn't any evidence to prove or disprove it," he says.

Assignment 1: Give the Russian Equivalents to the Following Words and Word Combinations:

To make a sharp left turn; military radar logs; to divert; unexpectedly; flight path; transponder; to switch off; ACARS datalink; extremely rare; the only real reason; destination; to get the aircraft on the ground; decompression; flight data monitoring; malicious intent; intruder; “black box”; the realm of speculations; in the media; suicide; to cause deliberately; to contest; a crash; evidence; search; to intend; reasonable; to back up; to upset; to break up; reliable source; a flight simulator; to give weight to the theory; to disprove; turning off.

Assignment 2: Give the English Equivalents to the Following Words and Word Combinations:

Посадить самолёт на землю; резко повернуть влево; крайне редко; отклониться от курса; неожиданно; передатчик; траектория полёта; разгерметизация; в области спекуляций; злой умысел; угонщик; оспаривать; доказательство; катастрофа; в средствах массовой информации; намерение; намереваться; вызывать преднамеренно (умышленно); оспаривать; опровергать; обыск; разумный; надёжный источник; состояние ума; поддерживать; разорвать (порвать); быть расстроенным; тренажер; опровергать; отключение; придать вес.

Assignment 3: Answer the Following Questions:

1. What is the first of the ten questions that are still unresolved?
2. What do military radar logs show?
3. Where did flight MH370 turn unexpectedly?
4. By what time had the plane’s transponder already been switched off?
5. Are sudden turns like this very frequent?
6. For what reason are pilots likely to make such a maneuver?
7. What is another possibility for pilots to make such a maneuver?
8. In what way could the “black box” flight recorders be helpful in the investigation of the crash?
9. What is the second of the ten questions?

10. What kind of speculation concerning the cause of the crash has been in the media?
11. What crashes are thought to have been caused deliberately by a pilot?
12. How many plane crashes linked to pilot suicide have there been since 1976, according to Aviation Safety Network?
13. Has any evidence been released from searches of the homes of the Captain and his co-pilot?
14. What speculation has there been concerning Shah?
15. What has police found in the captain's home?
16. Is there any evidence to prove "pilot suicide" theory?

Assignment 4: Find in the Text Synonyms to the Following Words and Word Combinations:

Goes on; occur; depart; leaving for; deviate; suddenly; trajectory; transmitter; to cut off; seldom; a jet; to make up one's mind; to land; depressurization; evil intent; to commit suicide; to dispute; to support; distressed; to switch off.

Assignment 5: Find in the Text Words and Word Combinations with Opposite Meanings:

Resolved; answered; appear; arrive; expectedly; to switch on; frequent; to turn on; to disprove.

Assignment 6: Tell a story of a plane crash you've heard lately.

GRAMMAR

Субъектный инфинитивный оборот

(Nominative with the Infinitive)

Этот оборот можно представить схематически следующим образом:

подлежащее – сказуемое – инфинитив.

Обычно в предложениях, содержащих субъектный инфинитивный оборот, основное содержание заключено в подлежащем и инфинитиве, а английское сказуемое является чем-то вводным. Перевод таких предложений на русский язык в большинстве случаев начинается с перевода сказуемого, которое передается в неопределенно-личной форме (говорят, считают, сообщают, полагают, известно и т.п.). Затем строится придаточное предложение с союзом «что», в котором инфинитив английского предложения становится личной формой сказуемого. Чаще всего сказуемое такого предложения выражено глаголом в пассиве: be expected, be reported, be said, be believed, be understood, be seen (в значении «рассматривать», «считать»), be supposed и т.п.

- The French delegate was reported to have advanced new proposals – *Как сообщалось, делегат Франции выдвинул новые предложения.*
- His threat came on the eve of today's Cabinet meeting, which is expected to discuss future spending cuts. – *Его угроза последовала в канун сегодняшнего заседания кабинета министров, на котором, как ожидается, будут обсуждаться сокращения будущих расходов на социальные нужды.*
- In the case of a market economy, a "normal" price is understood to be the price of a given product on the domestic market. – *В случае рыночной экономики понимается, что «нормальная» цена означает цену данного изделия на внутреннем рынке.*

Глаголы: seem, appear, happen, chance, prove, turn out употребляются в активной форме.

- The British government seems to have changed its attitude. – *Английское правительство, видимо, изменило свою позицию.*
- In some cases, however, the new proposals appear to favor the settler minority even more than before. – *В некоторых случаях, однако, оказывается, новые предложения еще в большей степени, чем прежде, удовлетворяют белое меньшинство.*
- The next few days may prove crucial for southern Africa. – *Следующие несколько дней могут оказаться решающими для юга Африки.*

Иногда глагол в предложении с субъектным инфинитивным оборотом может представлять собой именное составное сказуемое: be liable – вероятно; be likely – по-видимому, похоже; be unlikely – маловероятно; be sure, be certain – конечно, несомненно, обязательно; be bound – наверняка, неизбежно.

- His remarks are likely to be received with some skepticism by some councilors – *Его замечания, вероятно, будут восприняты скептически некоторыми членами совета.*
- "This is bound to have repercussions elsewhere in the car component industry", he said – *«Это, наверняка, получит отклик на всех*

предприятиях по производству автомобильных компонентов» – сказал он.

- They are not likely to alter their view – *Вряд ли они изменят свое мнение.*
- That reaffirmation may turn out to be one of the most important policy developments for the Asian-Pacific region. – *Может оказаться, что это подтверждение является одним из важнейших политических событий для Азиатско-Тихоокеанского региона.*

Субъектный инфинитивный оборот получил широкое распространение в газетно-информационном стиле благодаря своей сжатости, с одной стороны, и потому что он дает возможность автору заметки или статьи снять с себя ответственность за подаваемую информацию, с другой стороны.

Объектный Инфинитивный Оборот (Accusative with the Infinitive)

Схематически этот оборот можно представить следующим образом:

I II III

Подлежащее – Сказуемое – Прямое дополнение + Infinitive

Он состоит из существительного в общем падеже или личного местоимения в объектном падеже и инфинитива. В предложении является прямым дополнением и на русский язык, как правило, переводится придаточным дополнительным предложением с союзами «что», «как», «чтобы».

- I believe him to be a very experienced and skilled neurologist. – *Я полагаю, что он – очень опытный и квалифицированный невропатолог.*
- I didn't notice him enter the room. – *Я не заметила, как он вошел в комнату.*
- He wanted them to book hotel accommodation in advance – *Он хотел, чтобы они заранее забронировали места в гостинице.*

После сказуемого-глагола, выражающего физическое восприятие, инфинитив в этом обороте употребляется без частицы to. Это такие глаголы как: see видеть; hear слышать; feel чувствовать; notice” замечать; watch наблюдать.

- They also saw two candidates closely connected with their party defeat official Unionist opposition. – *Они также явились свидетелями того, как два кандидата, тесно связанные с их партией, нанесли поражение официальной юнионистской оппозиции.*
- I've never heard the boss speak English. – *Я никогда не слышал, как босс говорит по-английски.*

- Suddenly I felt somebody touch my shoulder. – *Вдруг я почувствовал, как кто-то тронул меня за плечо.*
- Nobody noticed the head of the department leave the office. – *Никто не заметил, как начальник отдела вышел из офиса.*
- The surgeon watched the patient open his eyes after a 24-hour sleep following the operation. – *Хирург наблюдал, как больной открыл глаза после 24-часового сна, последовавшего за операцией.*

При глаголах make и cause в значении «заставлять», при переводе объектного инфинитивного оборота придаточное предложение не строится.

- Heat causes the liquid to evaporate. – *Тепло заставляет жидкость испаряться.*
- The instructor made his students do all exercises in writing. – *Преподаватель заставил студентов выполнить все упражнения письменно.*

Assignment 7: Give the three forms of all the verbs in the Text of the Unit:

Assignment 8: Find in the Text complexes which do not exist in the Russian language and translate them into Russian.

Assignment 9: Pay attention to the verbs in Passive and translate them into Russian.

Assignment 10. Translate the following sentences into English, paying special attention to the use of the modal verbs and their equivalents:

1. Что я могу для Вас сделать?
2. Вам придётся сделать пересадку в Лондоне.
3. Ваш рейс, возможно, задержится.
4. Он не может вести машину, у него нет водительских прав.
5. Вам следует поговорить об этом с начальником службы безопасности аэропорта.
6. Нам пришлось лететь авиакомпанией "Люфтганза", так как у Трансаэро нет прямого рейса из Москвы в Сидней.
7. Не переходите улицу на красный свет. Вас могут оштрафовать. И Вы можете попасть под машину.
8. В какое время мне надо приехать в аэропорт, чтобы не опоздать на этот рейс?
9. - Вы не могли бы подсказать мне, где сойти? - Вам нужно сойти у Банка России и сесть на любой автобус.

10. Вы можете сесть на любое место.
11. Ваши дети должны знать правила уличного движения.
12. Ты должен знать все дорожные знаки.
13. - Она умеет играть на пиано? - Нет, она умеет играть только на гитаре.
14. Тебе придётся извиниться перед КВС за своё поведение.
15. К сожалению, Вы не сможете поговорить с ним. Он в коме.

READER

Flight MH370: 10 other mysterious aviation disasters



ngapore's Air Force has joined the hunt for the missing Malaysia Airlines flight
Continue reading the main story

MH370 mystery

The disappearance of a Malaysia Airlines flight is increasingly baffling, but it is not the first plane to vanish without trace or have its investigation surrounded by confusion and chaos.

From adventurer Steve Fossett's disappearance over the Nevada desert to the claims of a revenge killing behind the crash of EgyptAir Flight 990, here are 10 of the most mysterious aviation disasters.

Amelia Earhart

Amelia Earhart with her navigator Captain Fred Noonan, at a Brazilian airfield during her round-the-world trip

Surely the most famous plane disappearance of all time belongs to female flying ace **Amelia Earhart**, whose aircraft disappeared in 1937, during an attempt to circumnavigate the globe. She was flying with her navigator Captain Fred Noonan over the Pacific at the time. After a major search effort failed to find any trace of her or her twin-engine plane, she was declared dead two years later. It has **not stopped people looking for her though.**

Unit 2

3. Is a hijack scenario even possible?

Airliners have been fitted with strengthened flight deck doors - intended to prevent intruders from taking control - since 9/11. David Learmount, safety editor at Flight International magazine, says they are "bulletproof" and "couldn't be penetrated with an axe".

Sylvia Wrigley, light aircraft pilot and author of *Why Planes Crash*, agrees it's unlikely anyone would be able to force their way in. "Even if the door was being broken down, they wouldn't be able to get in before there'd been a mayday call, unless the pilots were incapacitated," she says.

However, one former pilot, who did not wish to be named, has suggested there is theoretically a way to disable the lock and get into the flight deck.

But in any case, however secure the door, there are times when the door is open - when a member of the crew either visits the toilet or has to check on something in the cabin. It's always been pointed out that it would be possible to rush the cockpit when this is the case. Some airlines, including Israel's El Al, have double doors to guard against this scenario. Gratton says there's a procedure which requires a member of the cabin crew to guard the door when it's opened.

But even in the event of hijackers rushing the cockpit, it would be easy for either crew member to send a distress signal.

The security of the cockpit door offers protection against intruders, but it also **prevents action being taken** if something does go wrong. **Last month the co-pilot of an Ethiopian Airlines** flight waited for the pilot to go to the toilet before hijacking the aircraft and flying it to Switzerland.

There's also the possibility that a pilot invited a passenger in. Photographs have emerged of the co-pilot of MH370 entertaining teenage tourists in an aircraft cockpit during a previous flight.

Boeing said it would be inappropriate to comment on an ongoing investigation.

4. Is there an accidental scenario that stands up to scrutiny?

So far most theories have been based on the assumption that the communications systems and the plane's transponder were deliberately disabled, a view endorsed by Malaysian officials.

However, Wrigley believes it's possible a sequence of events may have taken the plane so far off course by accident. "Something could have gone wrong in stages. A fire could have taken out part of the plane, or led to some systems failing, but left the plane intact. Then there could have been decompression - not an explosive decompression, but a gradual one," she says.

Wrigley cites the Helios Airways flight 522 which crashed into a mountain in Greece in 2005 after a loss of cabin pressure and lack of oxygen incapacitated the crew, but left the plane flying on autopilot, as an example. "I'm not saying it's a likely scenario, but it's not impossible," she says.

Pilots have pointed out that one of the very first actions in many emergency drills is to send a message to air traffic control or some other form of signal. For a purely accidental scenario to make sense, whatever initial event took place must have simultaneously knocked out all regular means to communicate with the ground.

Assignment 1: Give the Russian Equivalents to the Following Words and Word Combinations:

A hijack scenario; to be fitted with; flight deck; to prevent smb from doing smth; “bulletproof”; to penetrate; light aircraft; to force one’s way in; a mayday call; incapacitated; a way; to disable the lock; however secure; to check on smth; a cabin; to rush the cockpit; to guard against; the cabin crew; distress signal; to offer protection; to prevent action to be taken; to emerge; to entertain teenage tourists; inappropriate; an ongoing investigation; assumption; accidental scenario; scrutiny; were deliberately disabled; to endorse; to believe; a sequence of events; to take so far off course; explosive decompression; gradual decompression; lack of oxygen; to incapacitate; to fly on autopilot; to point out; an emergency drill; a purely accidental scenario; to make sense; simultaneously; to knock out; regular means; crew member.

Assignment 2: Give the English Equivalents to the Following Words and Word Combinations:

УВД; приспособливать; одновременно; лёгкий самолёт; иметь смысл; быть оборудованным; быть обездвиженным; подчёркивать; выбить; укреплять; захватить управление (самолётом); послать сообщение; пуленепроницаемый; ворваться; кабина экипажа; вывести и строя; автопилот; отсутствие кислорода; как бы ни была обезопасена дверь; проверить что-либо в салоне; ворваться в кабину пилота; двойные двери; охранять дверь; сигнал тревоги; член экипажа; защита от захватчиков (самолёта); появились фотографии; юные туристы; предыдущий рейс; развлекать; неуместный; ведущееся расследование; исследование; предположение; вывести из строя; умышленно; последовательность событий; не затронуть; подтверждать; отказ некоторых систем; мгновенная разгерметизация; постепенная разгерметизация; врезаться в гору; потеря давления; связаться с землёй; послать сообщение АТС.

Assignment 3: Answer the Following Questions:

1. What is the third of the ten questions?
2. What have airlines been fitted with strengthened flight deck doors for?

3. In what way were flight deck doors strengthened?
4. Could such doors be penetrated with an axe?
5. In what case couldn't a message be sent if the door was being broken down?
6. Is there theoretically a way to disable the lock and get into the flight deck?
7. In what cases may the door of the flight deck be open?
8. What do some airlines do to prevent such scenario?
9. Would it be easy for either crew member to send a distress signal in the event of hijackers rushing the cockpit?
10. What may happen due to the security of the cockpit door if something does go wrong?
11. What did the co-pilot of an Ethiopian Airlines do last month?
12. What kind of photographs have emerged?
13. Why would it be inappropriate to comment on an ongoing investigation?
14. What is the fourth of the ten questions?
15. What assumptions have most theories been based on so far?
16. Who was this view endorsed by?
17. What could lead to some systems failing?
18. What kind of decompression could have been?
19. What plane crashed into the mountain in Greece?
20. What was the cause of that crash?
21. What have pilots pointed out?
22. What is one of the very first actions in many emergency drills?

Assignment 4: Find in the Text Synonyms to the Following Words and Word Combinations:

A plane; to be equipped; cockpit; to make one's way in; a distress signal; to break the lock; to get into the flight deck; to stress; to prevent this scenario; to appear; to cut off; depressurization; to disable; similar; to switch off.

Assignment 5: Find in the Text Words and Word Combinations with Opposite Meanings:

To lose control; to make one's way out; to get out; capacitate; to want; closed; difficult; right; appropriate; possible; gradual decompression; irregular.

Assignment 6: Tell some story of a plane crash and the cause of the crash.

GRAMMAR

Герундий (Gerund) и Герундиальный оборот

Формы герундия

	Active	Passive
Indefinite (действие одновременно с действием сказуемого)	asking writing	being asked being written
Perfect (действие предшествует действию сказуемого)	having asked having written	having been asked having been written

Герундий

Герундий может выполнять функцию любого члена предложения и переводится на русский язык существительным, инфинитивом, деепричастием или придаточным предложением.

Герундий в функции подлежащего, именной части составного сказуемого, дополнения и определения переводится либо существительным, либо инфинитивом:

- More troops going there will only make things worse. (подлежащее) – *Отправка туда дополнительных контингентов войск усугубит дело.*
- Rejecting their proposals is rejecting the people's demands for better living conditions (именная часть составного сказуемого) – *Отвергнуть эти предложения – значит отвергнуть требования народа улучшить его жизненные условия.*
- Martov openly proposed expelling the Bolsheviks from the party (прямое дополнение) – *Мартов открыто предложил исключить большевиков из партии.*
- The present policy succeeded in increasing number out of work and in reducing production in Britain (предложное дополнение) – *Проводимая в настоящее время политика привела к увеличению числа безработных и сокращению производства в Британии.*
- There is only one way of solving this problem. (правое определение) – *Существует только один способ решения этой проблемы.*

Герундий в функции обстоятельства переводится:

А) Деепричастием:

- On carrying out his experiment, Faraday discovered electromagnetic induction. – *Проводя свой эксперимент, Фарадей открыл электромагнитную индукцию.*
- We perform “work” by lifting the weight from the floor. – *Мы совершаем «работу», поднимая груз с пола.*
- In almost every case, such efforts rearranged the problem without solving it. (обстоятельство) – *Почти во всех случаях такие усилия реструктурировали проблему, не решая ее.*

Б) Придаточным предложением:

- Far from hindering this development, the government is actually encouraging it. – *Вместо того, чтобы воспрепятствовать такому ходу событий, правительство фактически поощряет его.*
- Besides being a prominent scientist, Lomonosov was also a talented poet. – *Кроме того, что Ломоносов был выдающимся ученым, он еще был и талантливым поэтом.*

Герундиальный оборот

Когда перед герундием стоит одно из притяжательных местоимений (my, his, her, its, our, your, their) или существительное (неодушевленное – в общем

падеже, одушевленное – в притяжательном – ‘s), он образует герундиальный оборот.

Герундиальный оборот, как и простой герундий, в предложении может выполнять любую функцию. На русский язык всегда переводится придаточным предложением, в котором подлежащим является притяжательное местоимение или существительное, стоящее перед герундием, а герундий переводится личной глагольной формой сказуемого.

Союз, которым присоединяется это придаточное предложение к главному, определяется по падежному вопросу к сказуемому. В основном, это такие союзы как: **то, что; о том, чтобы; для того, чтобы; против того, чтобы и т.п.**

- Her having left Moscow so unexpectedly surprised us very much. (подлежащее) – *То, что она так неожиданно уехала из Москвы, нас очень удивило.*
- The news of his having returned from the expedition is known to everybody (определение) – *Новость о том, что он вернулся из экспедиции, известна всем.*
- I rely upon his doing the work properly (предложное дополнение) – *Я рассчитываю на то, что он выполнит работу как следует.*
- She insisted on her husband's being examined by a physician. – *Она настаивала на том, чтобы ее мужа осмотрел терапевт.*

Сослагательное наклонение

Subjunctive mood

	Изъявительное наклонение Indicative mood			Сослагательное наклонение Subjunctive mood		
	To be	To have	To speak	To be	To have	To speak
Present	Am Is Are	Have Has	Speak Speaks	Be	Have	Speak
Past	Was Were	Had	Spoke	Were	Had	Spoke
Past perfect	Had been	Had had	Had spoken	Had been	Had had	Had spoken

Жирным шрифтом выделены те формы сослагательного наклонения, которые не совпадают с изъявительным наклонением:

в изъявительном наклонении

I am

He is

We are

I have

He has

I speak

He speaks

в сослагательном наклонении

одна форма «**Be**»

одна форма «**Have**»

для всех лиц и чисел

одна форма «**Speak**»

для всех лиц и чисел

I was	одна форма « Were »
We were	для всех лиц и чисел

Эквиваленты сослагательного наклонения:

Should (бы)

Would (бы)

Could (мог бы)

Might (мог бы)

Ought (to) (следовало бы)

Употребление сослагательного наклонения в условных предложениях

- 1) Если ты позвонишь мне сегодня вечером, я помогу тебе.
- 2) Если бы ты позвонил мне сегодня вечером, Я бы помог тебе.
- 3) Если бы ты позвонил мне вчера, я бы помог тебе.

1) Если условие выражено в изъявительном наклонении и действие относится к будущему, придаточном (с if) предложении употребляется Present Indefinite, а в главном Future Indefinite.

If you **call** me tonight, **I'll help** you.

- 2) Если условие выражено в сослагательном наклонении и действие относится к настоящему или будущему, в придаточном предложении (с if) употребляется Past Subjunctive, а в главном эквивалент сослагательного наклонения + Infinitive

If you **called** me tonight, I **would help** you.

- 3) Если условие выражено в сослагательном наклонении и действие относится к прошлому, в придаточном предложении (с if) употребляется Past Perfect Subjunctive, а в главном – эквивалент сослагательного наклонения + Perfect Infinitive.

If you **had called** me yesterday, I **would have helped** you.

*Употребление сослагательного наклонения
в придаточных подлежащих и придаточных дополнительных.*

В придаточных подлежащих после выражений:

It is necessary

It is unnecessary

It is desirable

It is advisable

It is doubtful

It is doubtless

И в придаточных дополнительных после глаголов

Suggest, demand, command, order, doubt, recommend, insist и т.п. употребляется Present Subjunctive в книжной речи и should+ Infinitive для всех лиц и чисел в разговорной речи (Британский вариант).

В Американском варианте и в книжной речи, и в разговорной речи - Present Subjunctive для всех лиц и чисел.

It is necessary all the exercises **(should) be done** in writing.

It is doubtful he **come** to the party with his wife.

It is desirable she **do** this work without delay.

I suggest our monitor **buy** tickets for all the students.

Остальные случаи употребления

Сослагательного наклонения:

1) В придаточных дополнительных после глаголов **wish** в главном предложении употребляется **Past Subjunctive** для обозначения одновременности действий главного и придаточного предложений и **Past Perfect Subjunctive** для обозначения предшествования действия придаточного предложения действию главного

I wish he **were** with us now.

Я желаю, чтобы он был с нами сейчас.

Жаль, что его нет сейчас с нами.

2) В придаточных уступительных после союзов **as if** , **as though** («как будто») употребляется **Past Subjunctive** для обозначения одновременности действий главного и придаточного предложений и **Past Perfect Subjunctive** для обозначения предшествования действия придаточного предложения действию главного:

She looks **as if** she **were** sick.

Она выглядела так, как будто больна.

She looks **as if** she **had been** sick for a very long time.

3) В придаточных предложениях, начинающихся со слов *whoever*, *whatever*, *whenever*, *wherever* употребляется **Present Subjunctive** в письменной речи и **should+ Infinitive** для всех лиц и чисел в устной речи. В американском варианте во всех случаях **Present Subjunctive**

Whatever he **says** I'll go there myself. Что бы он ни говорил, я пойду туда сама.

Whenever you call, I'll be happy to speak to you. Когда бы ты ни позвонил, я буду счастлива.

Wherever he goes, I'll follow him. Куда бы он ни поехал, я последую за ним.

Инфинитивный оборот с предлогом

“for” (for – phrase)

Этот инфинитивный оборот вводится предлогом *for* и состоит из существительного в общем падеже или личного местоимения в объектном падеже и инфинитива. На русский язык всегда переводится придаточным предложением.

В предложении может выполнять следующие функции:

Подлежащего:

- It would be foolly for Britain to take such a step. *Такой шаг со стороны Англии был бы неразумен.*

Именной части составного сказуемого:

- The most important thing is for these developing countries to join their effort to fight for socialism. *Главное, чтобы все эти развивающиеся страны объединили свои усилия в борьбе за социализм.*

Дополнения:

- The resolution allows for an emergency session of the General Assembly to be called on 24-hour notice. – *В резолюции допускается созыв чрезвычайной сессии Генеральной Ассамблеи с предварительным уведомлением за 24 часа.*

Определения:

- This presents another problem for them to tackle. – *Это еще одна проблема, которую им предстоит решить.*

Обстоятельства:

- The questions were too complicated for the conference to dispose of them quickly. – *Вопросы были слишком сложные, чтобы совещание могло решить их быстро.*

Participle

ФОРМЫ Participle

	Active	Passive
Present (действие одновременно с действием сказуемого)	asking writing	being asked being written
Perfect (действие предшествует действию сказуемого)	having asked having written	having been asked having been written
Past (действие одновременно с действием сказуемого или	-- --	asked } III форма written } III форма

	Active	Passive
предшествует действию сказуемого)		

Английскому Participle в русском языке соответствуют грамматические категории: причастие и деепричастие.

В функции определения Participle соответствует русскому причастию; в функции обстоятельства - русскому деепричастию.

Когда Participle употребляется в функции определения, оно переводится на русский язык:

Причастием:

- The commission itself could investigate the kind of criteria used. *Комиссия сама могла изучить вид используемых критериев.*

Причастным оборотом:

- Revenue derived from transactions using information technology is significant and growing exponentially. *Прибыль, получаемая от сделок, использующих информационную технологию, значительна и возрастает экспоненциально.*

Придаточным определительным предложением:

- The pact now being studied by the constituent assembly was signed by the major political parties. *Соглашение, которое сейчас изучается учредительным собранием, было подписано всеми крупными политическими партиями.*

В функции обстоятельства Participle может переводиться на русский язык:

Деепричастием или деепричастным оборотом:

- Answering the question, he made a mistake. *Отвечая на вопрос, он сделал ошибку.*
- Having gone through the Customs, we proceeded to the Passport Control. *Пройдя таможеню, мы проследовали к паспортному контролю.*
- She believes that left Labour MPs have a very important role to play, while recognizing that what they can achieve in Parliament is limited. *Она полагает, что членам парламента от левого крыла лейбористов предстоит сыграть важную роль, в то же время признавая, что их возможности в парламенте весьма ограничены.*

Придаточным обстоятельственным предложением:

- Having been written by a talented author, the book was a success. *Так как книга была написана талантливым писателем, она имела успех.*
- Asked what the management had gained he said: *Когда его спросили, чего добилось руководство, он сказал:*

Когда перед Participle стоит слово или группа слов без предлога - налицо независимый причастный оборот (Absolute Participle Construction), который на русский язык переводится всегда придаточным обстоятельственным предложением.

Если этот оборот стоит в начале предложения (перед подлежащим), русское придаточное предложение присоединяется к главному при помощи союзов: так как, если, когда, после того как:

- Weather permitting, we'll go to the country. *Если погода позволит, мы поедем загород.*
- All the baggage having been packed, we sat down to dinner. *После того, как весь багаж был упакован, мы сели обедать.*
- It being late, we decided to return home. *Т.к. было поздно, мы решили вернуться домой.*

Если независимый причастный оборот стоит в конце предложения, русское придаточное предложение присоединяется к главному союзами причем, а, но, и, так как. Иногда совсем бессоюзно.

- We had a class in spoken English, most of the questions being asked by the students themselves. *У нас был урок разговорного английского языка, причем большинство вопросов задавали сами студенты.*

Иногда перед оборотом может стоять союз with. Но наличие данного союза не влияет на общие правила перевода независимых причастных конструкций.

- A conference on ecology was held in Moscow, with representatives from over 100 countries attending it. *В Москве состоялась конференция по экологии, и на ней присутствовали представители из более чем 100 стран.*

Функции Infinitive в предложении.

Infinitive в английском предложении может выполнять следующие функции.

Подлежащее. На русский язык переводится инфинитивом или именем существительным.

- To write English words is difficult. *Писать английские слова трудно.*
- To copy this booklet is not allowed. *Копирование этого буклета запрещено.*
Именная часть составного сказуемого. На русский язык переводится инфинитивом со словами «состоит в том, что», «является то, что» и т.п.
- Her duty is to keep books in the company. *Её обязанность заключается в том, чтобы вести бухгалтерский учет в компании.*
Дополнение. На русский язык переводится инфинитивом или существительным.
- I prefer to read English books in the original. *Я предпочитаю читать английские книги в оригинале.*
- He likes to swim in the ocean. *Ему нравится плавание в океане.*
Обстоятельство. На русский язык переводится инфинитивом с союзом «чтобы», «для того, чтобы», или существительным с предлогом «для».
- To pass his exam in Spanish he had to work hard. *Для того, чтобы сдать экзамен по испанскому языку, ему пришлось как следует поработать.*
- To have the agreement signed they had to spend much time and effort. *Для подписания данного соглашения им пришлось затратить много времени и усилий.*
Правое определение. Инфинитив в функции определения может употребляться как в активной, так и в пассивной форме. На русский язык, как правило, переводится придаточным определительным предложением с оттенком долженствования.
- Unemployment is not inevitable burden to be suffered in silence by the working people. *Безработица не является неизбежным бременем, которое безропотно должны нести трудящиеся.*

Assignment 7: Give the three forms of all the verbs in the Text of the Unit:

Assignment 8: Find in the Text complexes which do not exist in the Russian language and translate them into Russian.

Assignment 9: Pay attention to the verbs in Passive and translate them into Russian.

READER**Air France Flight 447**

After several false leads, blamed on "sea trash", wreckage of Flight 447 was finally found after five days

When **Air France flight 447** from Rio de Janeiro to Paris went down in 2009, it was **five days** before any wreckage was spotted and nearly two years before its "black boxes" were found - at a depth of around 4,000m (13,000ft). None of the 228 people on board the Airbus 330 survived. **French investigators found** that the autopilot disconnected, probably after air speed instruments were frozen by ice crystals, and then the pilots steered the plane at too steep an angle to maintain speed - eventually stalling it - despite a warning sounding in the cockpit for nearly a minute. Air France rejected those accusations.

EgyptAir Flight 990



The black box on the doomed EgyptAir flight was recovered and used in the investigation

This routine flight from New York's JFK Airport to Cairo on 31 October 1999 went down in the Atlantic, killing all 217 people on board. Because the crash happened in international waters the investigation fell to Egyptian authorities. After initially asking American aviation officials to investigate on their behalf, Egypt reversed the decision after **the US concluded** that Egyptian co-pilot Gameel el-Batouty had brought the plane down on purpose. A former EgyptAir pilot suggested a possible motive, claiming that Mr el-Batouty had been reprimanded for sexual misconduct by a company executive who was on the flight. The Egyptian investigation, however, **blamed the crash on a mechanical failure.**

Unit 3

5. Why was no action taken when the plane's transponder signal went off?

MH370's transponder - which communicates with ground radar - was shut down as the aircraft crossed from Malaysian air traffic control into Vietnamese airspace over the South China Sea.

If a plane disappeared in Europe, Barry says someone in air traffic control would have noticed and raised the alarm pretty quickly. Gratton agrees. "In Europe handover is extremely slick.

"At the very least I'd expect air traffic controllers to try and contact a nearby aircraft to try and establish direct contact. Pilots frequently use TCAS [traffic collision avoidance system], which detects transponders of other aircraft to ensure they aren't too close to each other," he adds.

Air traffic control

However Steve Buzdygan, a former BA 777 pilot, says that from memory, there's a gap or "dead spot" of about 10 minutes in the VHF transmission before the plane would have crossed into Vietnamese airspace.

Learmount says it's also perfectly feasible that nobody on the ground noticed the plane's disappearance. "Malaysian air traffic control had probably handed it over to the Vietnamese and forgotten about it. There could have been a five-minute delay before anyone noticed the plane hadn't arrived - a gap in which nobody pressed the alarm button," he says.

Even if air traffic control did notice the plane was amiss, they wouldn't necessarily have made it public, he adds.

The Civil Aviation Authority of Vietnam says the plane failed to check in as scheduled at 0121 with air traffic control in Ho Chi Minh City. However, **an unnamed pilot flying a 777 heading for Japan says** he briefly established contact with MH370 minutes after he was asked to do so by Vietnamese air traffic control.

6. Why isn't it easier to track missing planes by military satellite?

The search effort on seas some 2,500km (1,500 miles) to the south-west of the Australian city of Perth has relied on images provided by commercial satellite companies.

Dan Schnurr, chief technology officer at Geospatial Insight, says there are 20 known satellites that have a resolution capable of obtaining these images in the "vast tracts of the ocean passing over the poles". Of those, probably about 10 of them capture images on a daily basis.

The images are beamed down from the satellites in very near real time, and are probably on the ground within two or three hours of image capture, he says. The delay in detecting valuable images is down to the time it takes to analyse the large volume of imagery.

There are also satellite sources owned by the military and government, but these have not been prominent in the search. This has led to some speculation that the fate of the plane was known about earlier in the search, but not revealed.

Laurence Gonzales, author of *flight 232: A Story of Disaster and Survival*, says some nations are bound to have more sophisticated surveillance systems than they are letting on. "A very small, fast ballistic missile can be picked up easily, so how can they lose a big, slow-moving object like a jumbo jet? It tells me somewhere in the angles of power in the world someone knows where the plane is but doesn't want to talk about it, probably for reasons of national security because they don't want to reveal the sophistication of the material they have... that their satellite technology is so good it can read a label on a golf ball," he says.

But Gratton says military satellites looking for ballistic missiles probably wouldn't have thrown up much useful data because they wouldn't have been calibrated to pick up aircraft of this size.

"This aircraft was seven miles up and travelled at three-quarters of the speed of sound. Ballistic missiles go up to four or five times the speed of sound, and 30 to 50 miles up - they have very different profiles," he says.

7. Did the plane glide into the sea or plunge after running out of fuel?

The MH370's final moments seem to depend on whether the plane was still being flown by a pilot.

"If it was under control, the plane was capable of being glided. The Airbus that went into the New York's Hudson River lost both engines - which is an identical outcome to running out of fuel - and the pilot managed to land on the water," Gratton says.

Barry agrees there could have been a gentle descent. "Aircraft of this size will normally fly or glide over 50 miles before they hit the sea if they run out of fuel," he says. However, if no-one was at the controls, he says the descent could have been "pretty severe".

Assignment 1: Give the Russian Equivalents to the Following Words and Word Combinations:

To shut down; to go off; to raise the alarm; slick; handover; nearby; to establish direct contact; traffic collision avoidance system (TCAS); to detect; to ensure; from memory; a gap; "dead spot"; to cross into Vietnamese airspace; feasible; to hand over; delay; alarm button; to be amiss; necessarily; to make public; to foul; to check in; as scheduled; to head for Japan; to track; missing planes; a military satellite; search effort; to rely (on); image; to provide; commercial; a resolution; capable of obtaining; vast tracts; the poles; capture; on a daily basis; to beam down; very near real time; image capture; valuable; a large volume; imagery sources; prominent; to reveal; are bound to have; sophisticated surveillance systems; to let on; fast; ballistic missile; to

pick up; to lose; a jumbo jet; national security; satellite technology; label; golf ball; for reason of; in the angles of power; to throw up much useful data; to calibrate; size; the speed of sound; profiles; to glide; to plunge; to run out of fuel (money, etc.); to depend (on); to fly a plane; identical outcome; a gentle descent; at the controls; descent; pretty severe.

Assignment 2: Give the English Equivalents to the Following Words and Word Combinations:

Довольно жёсткая посадка; выключить; военный спутник; снижение; поднять тревогу; полюса; мягкое снижение; быстрый; захват; за пультом управления; пропасть (о сигнале); ценный; одинаковый результат; передача (из рук в руки); расположенный вблизи; усилия по поиску; система избежать столкновения в воздухе; способный получить; быть за штурвалом самолёта; установить прямой контакт; коммерческий; скорость звука; «мертвая зона»; на ежедневной основе; закончиться (о топливе, деньгах и т.п.); обнаружить; обеспечить; зависеть (от); погрузиться; гарантировать (обеспечивать); на памяти; промежуток (интервал); войти в воздушное пространство Вьетнама; погрузиться; скользить; возможный; передать; задержка; тревожная кнопка; очертания (габариты); широко-фюзеляжный самолёт; делать вид (притворяться); возможный (выполнимый); отсутствовать; необходимо; обнародовать (предать огласке); зарегистрироваться; по графику; следовать в Японию; прокладывать путь (намечать курс); исчезнувшие самолёты⁴ полагаться (на); изображение; обеспечивать; разрешение (разложение на составные части); полоса пространства; почти реальное время; большой объём; захват картинки; образность; вбрасывать большое количество полезной информации; источники; выдающийся; раскрывать (обнаруживать); наверняка имеют; самые современные системы наблюдения; баллистическая ракета; подбирать; национальная безопасность; размер; терять; спутниковая технология; по причине; этикетка; мяч для гольфа; градуировать; точка зрения (угол).

Assignment 3: Answer the Following Questions:

1. What is the fifth of the ten questions which are still unresolved?
2. What is the function of a transponder?
3. What is the difference between a transponder and flight recorders?
4. What is the function of the “black box”?
5. What is the colour of the “black box”?

6. When was MH370's transponder shut down?
7. What would have happened if a plane disappeared in Europe?
8. What do pilots use frequently?
9. What do the letters TCAS stand for?
10. What is TCAS used for?
11. Why is it necessary to detect transponders of other aircraft?
12. What gap or "dead spot" was there in the VHF transmission before the plane would have crossed into Vietnamese airspace?
13. What delay could have been before anyone noticed the plane hadn't arrived?
14. What does the Civil Aviation Authority of Vietnam say?
15. Who briefly established contact with MH370 minutes after he was asked to do so by Vietnamese air traffic control?
16. What is the sixth of the ten questions that are still unresolved?
17. What has the research effort on seas rely on?
18. Who were the images provided by?
19. How many satellites that have a resolution capable of obtaining such images are known?
20. How many of them capture images on a daily basis?
21. How long does it take the images to get to the ground?
22. Have satellite sources owned by the military and government been prominent in the search?
23. What speculations did this fact lead to?
24. What does Laurence Gonzales say?
25. A very small, fast ballistic missile can be picked up easily, can't it?
26. Why doesn't someone who knows where the plane is want to talk about it?
27. In what way does it concern national security?
28. Why wouldn't military satellites have thrown up much useful data?
29. What do the words "wouldn't have been calibrated to pick up aircraft of this size" mean?

30. What is the seventh of the ten questions that are still unresolved?
31. What do the MH370's final moments seem to depend on?
32. In what case was the plane capable of being glided?
33. Which is an identical outcome to running out of fuel?
34. How long will aircraft of this size normally fly or glide before they hit the sea if they run out of fuel?
35. In what case could the descent have been "pretty severe"?

Assignment 4: Find in the Text Synonyms to the Following Words and Word Combinations:

To switch off; to disappear; very; fast; often; to guarantee; possible; to vanish; to be missing; to set up; to get; a strip; every day; big; to possess; conspicuous; to make public; are sure to have; to speak; could be glided; similar; a wide-fuselage aircraft; result.

Assignment 5: Find in the Text Words and Word Combinations with Opposite Meanings:

To switch on; to appear; to drop; seldom; far; after; impossible; appearance; to remember; unnecessarily; to manage; incapable; small; far; invaluable; inconspicuous; big; slow; difficult; little; useless; bad; similar; different; hard; soft.

Assignment 6: Tell the story of the Airbus which went into the New York's Hudson River.

GRAMMAR

Modal verbs and their equivalents

1. Can (could); may (might)

Can (could)- физическая возможность или возможность, предоставленная обстоятельствами, умение делать что-либо.

I **can** tell you where to get off.

Can I book a flight to Paris for tomorrow morning?

He **can** play chess.

I'll **be able** to contact him tonight.

Can I speak to your daughter? (Is she available?)

May (might) - моральная возможность, разрешение, предположение.

He may speak to his boss so rudely under such circumstances.

May I speak to your daughter? (Will you allow me to speak?)

He may come late tonight.

2. **Must (have to); should**

must - долженствование, вызванное каким-либо регламентирующим документом (законом, указом, инструкцией и т.п.).

Both drivers and pedestrians **must** follow traffic rules.

Drivers **must** know road signs.

have to - долженствование, вызванное обстоятельствами

I **had to** transfer at Moscow because there was no through train to Sochi.

You'll **have to** fly by Lufthansa Flight LH203 as it is the only non-stop flight to Singapore.

should - рекомендация, совет, пожелание

You **should** call your chief and apologize to him for your improper behavior.

He **should go** to the place of the air accident without delay.

Эмфатические конструкции

Эмфатическое предложение - это предложение, в котором логически или эмоционально выделяется тот или иной член предложения. В английском предложении такое выделение может происходить тремя способами:

1. Посредством эмфатической конструкции it is (was)... that (who, which, where, when, etc.), которая может переводиться на русский язык с помощью усилительных слов: именно; как раз; только; не кто иной, как; не что иное, как; уже; еще или с помощью измененного порядка слов, т.е. постановкой выделяемого слова на необычное для него место. В устной речи данное слово или группа слов могут быть выделены интонацией и ударением.

Например:

а) Выделяется подлежащее: It was Mr. Heath who coined that memorable phrase: "The unacceptable face of capitalism". Не кто иной, как Г-н. Хит, отчеканил незабываемую фразу: «Неприемлимое лицо капитализма».

б) Выделяется дополнение: When these employers talk about the interests of the nation it is their profits which they have in mind. *Когда эти предприниматели говорят об интересах страны, они имеют в виду только свои прибыли.*

с) Выделяется обстоятельство: Each time when fascist regimes find themselves in a difficult situation they commit acts of despair and are capable only of perpetrating new crimes. It was that way that the German fascists behaved. *Каждый раз, когда фашистские режимы оказываются в затруднительном положении, они идут на крайние меры и способы только на новые преступления. Именно так и вели себя немецкие фашисты.*

2. Сказуемое выделяется введением в утвердительном предложении глагола to do в соответствующей форме:

And while the Conservatives did try to expand the scope of the Bill, it passed through the House of Lords more or less intact. *И хотя консерваторы действительно пытались расширить сферу действия этого законопроекта, он был принят Палатой лордов почти в неизменном виде.*

3. Выделение может происходить, с помощью инверсии в предложениях, начинающихся с:

а) отрицательных или ограничительных наречий **nor; neither; never; not once; not only; not until; no sooner... than; hardly (scarcely)... when; little; nowhere.**

"Never has capitalism been so exposed", says the resolution of the British Communist Party Congress. *"Никогда еще не был так убедительно изобличен капитализм", - говорилось в резолюции съезда Коммунистической партии Великобритании.*

б) утвердительных наречий **only; really; so; here; there; than** (если подлежащее выражено существительным):

Only when the full terms are known will it be possible to form a final judgement. *Только тогда, когда будут полностью известны условия, станет возможно вынести окончательное суждение.*

Assignment 7: Give the three forms of all the verbs in the Text of the Unit:

Assignment 8: Find in the Text complexes which do not exist in the Russian language and translate them into Russian.

Assignment 9: Pay attention to the verbs in Passive and translate them into Russian.

READER

British South American Airways Star Dust



member of an Andes expedition team that found parts of the wreckage of Star Dust

In August 1947 a British Avro Lancastrian airliner, named Star Dust crashed into a mountain in the Argentine Andes during a routine flight from Buenos Aires to Santiago in Chile. Searches for the aircraft came up blank and conspiracy theories soon emerged that pointed the finger at saboteurs and - **after confusion over the final coded transmission to Santiago airport** - even aliens. The speculation was eventually put to rest 50 years later when mountaineers stumbled across the remnants of the plane's wreckage and experts concluded that the crew had been confused by poor weather and accidentally started their descent too soon.

Bermuda Triangle



new members who flew on the Flight 19 mission in 1945, which started the Bermuda Triangle myth

Scores of ships and planes are said to have vanished without trace over the decades in this vast triangular area of ocean that has imaginary points in Bermuda, Florida and Puerto Rico. Two British South American Airways planes disappeared in the region in the 1940s, but **research by a BBC journalist in 2009** found that one probably suffered a catastrophic technical failure while the other is likely to have run out of fuel. The myth of the Bermuda Triangle, however, lives on.

Unit 4

8. Would the passengers have known something was wrong?

If a major malfunction had not occurred, it is unclear whether passengers would have known anything was awry, especially if there were no obvious signs of a struggle onboard. Joe Pappalardo, senior editor at Popular Mechanics magazine, says in most scenarios where a plane flies off course for hours, passengers can remain oblivious. At 01:00, many would probably have been asleep. In the morning, the astute might have worked out the Sun was in the wrong position.

Boeing 777s can fly higher than 40,000ft

Malaysian authorities have said the plane rose to 45,000ft, before falling to 23,000ft, after it changed course. If that's the case, passengers might have felt the loss of altitude, according to Pappalardo.

However one theory is that the plane's apparent climb could have been designed to induce hypoxia - oxygen deprivation - which could have knocked people unconscious and even killed them.

Wrigley thinks it could have played out in one of two ways. "In the horror story version passengers would have realised something was wrong as the plane climbed - and a decompression event would have led to oxygen masks coming down, and an awareness that oxygen was limited. A better scenario is they didn't know anything had happened until impact," she says.

9. Why didn't passengers use their mobile phones?

One **commonly asked question** is why, if it had been obvious something was wrong, passengers wouldn't have used mobile phones to call relatives and raise the alarm. This seems especially puzzling in light of the example of United flight 93, where passengers communicated with people on the ground after the plane was hijacked during 9/11.

Waiting for news of MH370 in Beijing

It's been stated that it's extremely unlikely that anyone could get mobile signal on an airliner at 30,000ft. Barry agrees the chances of a mobile phone working on the plane were "virtually impossible". "It can be hard to get a signal on a remote road, let alone seven miles up, away from mobile phone masts, travelling at 500mph," he says.

10. Why can't planes be set up to give full real-time data to a satellite?

Arguably the most baffling thing to a layperson about the disappearance of MH370 is how it is even possible for a plane of this size to disappear so easily. In an era when people are used to being able to track a stolen smartphone, it's perplexing that switching off a couple of systems can apparently allow an airliner to vanish.

Barry says the technology exists to allow planes to give off full real-time data. The problem is planes are "snapshots in time from when they are designed".

"We're doing research into devices that will allow aircraft to start transmitting information by satellite when something unusual like a fire or decompression happens, but it's hard to fit things into a plane retrospectively.

"The 777 went into service in the early 90s... the technology is of that era," he says. However, Gratton says ACARS would have done the job if it hadn't been turned off. A more complex satellite system would also be open to that risk, he argues, unless the industry wanted to go with a system that couldn't be manually switched off, and that would come with other risks.

"It's not a particularly easy question. Is the bigger risk an aircraft going missing, or electronics overheating? Both situations can't be met," he says.

Assignment 1: Give the Russian Equivalents to the Following Words and Word Combinations:

Malfunction; to occur; awry; obvious; onboard; fly off course; to remain obvious; astute; authorities; a loss of altitude; apparent climb; to design; to induce hypoxia; oxygen deprivation; unconscious; a horror story version; to realize; a decompression event; oxygen masks; to come down; an awareness; impact; a commonly asked question; to raise the alarm; especially; puzzling; in light of; virtually impossible; a remote road; let alone; phone masts; arguably; the most falling thing; a layperson; an era; to track; a stolen smartphone; perplex; apparently; to allow; to vanish; to give off; real-time data; snapshots; a device; unusual; retrospectively; manually; particularly; to go missing; to overheat; to meet a situation.

Assignment 2: Give the English Equivalents to the Following Words and Word Combinations:

Преодолевать; сбой (поломка); поднять тревогу; перегреть; случаться (происходить); особенно; пропасть; неправильный; озадачивать (ставить в тупик); в частности; очевидный; в свете; вручную; на борту; поистине (фактически) невозможный; ретроспективно; сбиться с курса; отдалённая дорога; необычный; оставаться в забвении; не говоря уже о ...; устройство; пронизательный; телефонные мачты; моментальные снимки; власти; срочно; данные в реальном времени; потеря высоты; очевидный набор высоты; проектировать; вызывать гипоксию; эра; украденный смартфон; бессознательный; версия ужасной истории; осознавать; выдавать (отдавать); исчезать; разрешать; очевидно; разгерметизация; кислородные маски; спускаться; осознание; удар; всеми задаваемый вопрос; лишение кислорода; проследить (выследить); ставить в тупик (приводить в недоумение); самое озадачивающие; непрофессионал (неспециалист).

Assignment 3: Answer the Following Questions:

1. What is the eighth of the questions?
2. What is unclear if a major malfunction had not occurred?
3. What happens in most scenarios where a plane flies off course for hours?
4. What would many passengers have done?
5. What might the astute have worked out in the morning?
6. How high can Boeing 777 fly?
7. What have Malaysian authorities said?
8. Might the passengers have felt the loss of altitude?
9. What does one theory say?
10. What could the plane's apparent climb have been designed for?
11. What is hypoxia?
12. What could have happened in the horror story version?
13. What is a better scenario?
14. What is the ninth of the ten questions?
15. What is one commonly asked question?
16. Why was it impossible to get mobile signal on an airliner?
17. What is the tenth question?
18. Is it possible for a plane of this size to disappear easily?
19. What is perplexing in this story?
20. What devices are they doing research into?
21. When did the 777 go into service?
22. In what case would ACARS have done the job?
23. In what case would a more complex satellite system also be open to that risk?

Assignment 4: Find in the Text Synonyms to the Following Words and Word Combinations:

What's the matter?; failure; to happen; wrong; evident; aircraft; to solve; height; lack; terror; to perceive; depressurization; realization; a blow; usually; to ring up; exceedingly; in fact; difficult; to receive; not to say; layman; to embarrass; to disappear; to turn off evidently; to go into operation; by hand.

Assignment 5: Find in the Text Words and Word Combinations with Opposite Meanings:

Right; clear; awake; descent; conscious; descend; compression; likely; possible; easy; appearance; to appear; easily; usual; close.

Assignment 6: Tell a story of a plane crash you've heard lately.

GRAMMAR

Assignment 7: Give the three forms of all the verbs in the Text of the Unit:

Assignment 8: Find in the Text complexes which do not exist in the Russian language and translate them into Russian.

Assignment 9: Pay attention to the verbs in Passive and translate them into Russian.

READER**Uruguayan Air Force Flight 571**

urvivors of flight 571's crash in the Andes walk across snow to board rescue helicopters

Another plane that fell victim to low cloud and high mountains in the days before cockpit technology was able to better inform pilots. Flight 571 was flying from Uruguay to Santiago, Chile, and came down in the Andes, losing both wings as it clipped the top of mountains. Of the 45 people on board the flight, around half survived not only the impact but also a further 72 days stranded on the mountain. Eventually, rescuers reached 16 survivors who **admitted they had resorted to cannibalism** to stay alive. The survivors' story was told on the big screen in the 1993 film *Alive*.

TWA flight 800



remains of the TWA Flight 800 wreckage that were reassembled as part of the investigation

Trans World Airlines flight 800 left New York's JFK airport shortly after 20:00 on 17 July 1996 and exploded just a few minutes later, killing all 230 people on board. The pilot of another flight **radioed Boston air traffic control** to say: "We just saw an explosion up ahead of us here...about 16,000 feet or something like that. It just went down into the water." Subsequent investigations **blamed the blast** on an electrical short circuit that caused an explosion in one of the fuel tanks. Eyewitness accounts spawned several conspiracy theories that, thanks to the growing use of the internet, convinced many that the plane had been shot down. That particular theory gained ground after Pierre Salinger, a journalist who had been President Kennedy's press secretary, **claimed that a US missile test** had caused the blast but his supporting documents were quickly discredited.

Malaysia missing plane: Automated signals offer more clues



Malaysia Airlines Boeing 777-200ER taking off from Narita Airport near Tokyo, Japan, last year

The story of Malaysia Airlines flight MH370 is a mystery for sure, but information is now starting to emerge that allows us to join some of the dots.

We know the aeroplane was fitted with a satellite system that enabled it to pass information to the ground during its journey.

This system, called "Classic Aero" and operated by London's big satellite telecommunications company Inmarsat, can transmit a range of data, even voice calls.

In its official statement, all Inmarsat will say is that it did indeed receive signals over its network from the plane, and that these were automated "pings".

All this has been shared with the Malaysian authorities.

What my sources tell me is that flight MH370 continued to ping for at least five hours after the aircraft left Malaysian airspace.

There is simply no way such a signal can be sent unless a plane is intact and powered.



he search, including here in the Malacca Strait, has been widened

Automated pings are essentially just an "I'm live" message.

Nonetheless, their receipt alone should make it possible to work out not just an approximate position for the aircraft at the time of transmission, but also an altitude.

All this may explain why the Americans have now suggested the search should be extended to the Indian Ocean.

None of this explains, of course, what happened to the aircraft, and, if confirmed, why it deviated so far from its planned route.

Priority

In this day and age, it seems remarkable that we do not know precisely where every plane in the sky is at any given moment. After the tragic loss of Air France flight 447 in 2009, equipping planes with everywhere-tracking equipment was supposed to be a priority.

The technology exists in a range of forms. Systems like that operated by Inmarsat could be used; and the European and German space agencies are even testing a sensor in orbit that can track signals from ADS-B (Automatic Dependent Surveillance-Broadcast) transmissions.

ADS-B is a situational awareness system that alerts planes to the proximity of other planes, but with the right equipment placed on a constellation of spacecraft in orbit, it

would be possible to track these signals in even the remotest locations, such as over the poles.

Space companies are already doing something similar with ships on the open ocean.

All aircraft entering European airspace will have to be equipped with ADS-B by 2015.

One of the issues is always cost, which will have to be borne most likely by the airlines. But the distress of the families with missing loved ones on flight MH370 tells us these technologies have to be put in place, and soon.

Malaysia flight MH370: Theories swirl around disappearance



dozens of aircraft are taking part in a region-wide search

MH370 mystery

The investigation into the disappearance of Malaysia Airlines flight MH370 has produced many false leads, and each one spawns a new theory.

Did the pilot make a mistake? Could an electrical fault have caused an explosion? Was it the target of a terror attack? Here are some of the main theories.

Pilot error



The Malaysia Airlines plane disappeared less than one hour after taking off

Aviation experts are shocked that an aircraft with a safety record as blemish-free as the Boeing 777-200ER could just vanish. So it is inevitable that attention turns to the previous incidents, and to the possibility of pilot culpability.

Pilots were blamed for the Air France flight 447 disaster in 2009. Investigators say the autopilot switched itself off after the speed sensors became blocked, and the pilots then steered the plane at too steep an angle before it stalled and crashed into the Atlantic, killing all 228 people on board.

But the weather on the day of MH370's flight was clear and sunny, so experts say it is unlikely that an experienced pilot could have caused a crash through unintentional error.

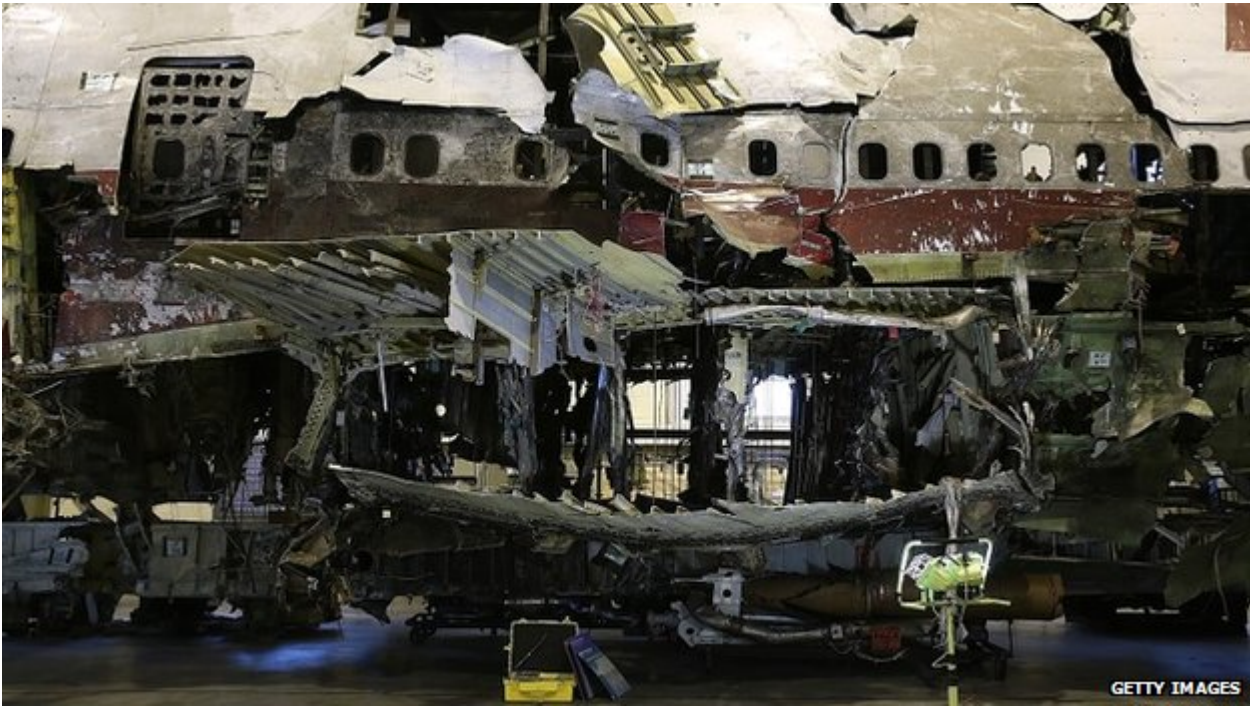
Another theory is a deliberate crash. The Aviation Safety Network says there have been eight plane crashes linked to pilot suicide since 1976.

Egypt Air flight 990 in 1999 and Silk Air flight 185 in 1997 are both thought to have been caused by a suicidal or vengeful pilot, though the claims can never be fully confirmed.

But with flight MH370 there is nothing to suggest that either the pilot, Capt Zaharie Ahmad Shah, or First Officer Fariq Abdul Hamid had any motive to end their lives or those of the passengers on board.

The passengers on board MH370

Mechanical failure



single technical fault was blamed for bringing down TWA flight 800 in 1996

"All right, goodnight." The last communication between flight MH370 and Malaysian air traffic control provides no clues as to why the aircraft vanished just a few minutes later.

Initial reports suggested all signals had been lost simultaneously, bolstering the idea that the plane might have exploded or disintegrated at high altitude.

The closest investigators have come to a sign that a technical fault might have brought the plane down was a statement from a worker on an oil rig off the coast of Vietnam, who claimed to have seen a "burning" object.

TWA flight 800 exploded over the Atlantic in 1996, killing all 230 people on board. Investigators blamed that blast on an electrical short circuit near a fuel tank on the Boeing 747.

Doubts over the likelihood of this happening on MH370 have been raised by the lack of debris found in the huge search operation. But investigators might just be looking in the wrong place.

Some aviation experts have also raised the possibility that the aircraft might have suffered a power failure. If this had been the case the plane would have switched to a back-up generator. But it could explain why there have been mixed messages about the plane possibly changing course.

Another suggestion was that a sudden decompression of the cabin and cockpit had taken place, knocking the pilot and passengers unconscious. This could have meant the flight was able to continue on autopilot for some time - but again, the lack of debris casts doubt on this theory.

How do you track a plane?

Terrorist attack



terpol chief Ronald Kenneth Noble has said terrorism is an unlikely cause

The presence of two passengers travelling on stolen passports raised questions about a breach of security. But officials quickly identified both individuals as two young Iranian men hoping to emigrate to Europe and said they had no known links to terrorism.

Social media networks in China have been abuzz with fears that the 153 Chinese nationals on board the plane were the target of terrorists.

The disappearance came just a week after a knife attack blamed on separatists from Xinjiang province that left at least 29 people dead.

Malaysian officials have consistently said that they are not ruling out any theory.

But the head of Interpol, Ronald Kenneth Noble, has said: "The more information we get, the more we're inclined to conclude that it was not a terrorist incident."

Mystery of flight MH370 raises fears of passport fraud

A change of destination



rumours that the engines sent data after the disappearance were quashed by Malaysian officials

Several reports have claimed that the plane was giving off signals for hours after it apparently disappeared, suggesting it could have flown as far as India or Australia.

The first report in the Wall Street Journal based its claims on data that Boeing said it had received from the aircraft's engines as part of a routine maintenance and monitoring programme.

It raised fears that the pilot or someone else on board could have intentionally switched off the transponder - which emits an identifying signal - and diverted the plane.

But Malaysia's transport minister said Malaysia Airlines and Rolls-Royce, the engine's manufacturer, both said the WSJ report was "inaccurate".

Later, unnamed US officials told several media outlets that the plane's equipment continued to ping data to satellites up to five hours after the apparent disappearance.

They said the data was inconclusive, but the US and India moved the focus of their search westwards into the Indian Ocean apparently in response to the claims.

Malaysia plane: Why black boxes can't always provide the answers

By Tom de Castella BBC News Magazine



The mystery of flight MH370 is unlikely to be solved until the flight recorder - known as a black box - is found. There are actually two boxes - a cockpit voice recorder and a data recorder. But these devices have their limitations.

The voice recorder only captures the final two hours

Listening to the last moments of Air France flight 447, which crashed into the Atlantic in 2009, gives a chilling insight into the confusion that had overcome the pilots. Such a record of what went on in the cockpit would be a priceless tool for investigators trying to work out whether the Malaysia Airlines plane was the victim of foul play or a mechanical fault. But it's not that simple even if the black box is found. The cockpit voice recorder continually records over itself as the flight goes on. US firm Honeywell Aerospace says the black box on the missing airliner - which it provided - only retains two hours of recording. That's the length of time that regulations demand. The principle is in place because it is normally the last section of a flight that determines the cause of the crash. But in the case of the Malaysia Airlines 777 it might well be the case that the key events happened long before the actual crash. On the other hand, Steve Buzdygan, a former BA 777 pilot, says the data recorder would provide a wealth of useful information. "You can almost reconstruct the flight path from it."

Why is a 'black box' orange?

- The original flight recorders were painted black but the colour was changed to orange to make them easier to find by investigators
- The flight data recorder records a stream of flight information
- The cockpit voice recorder stores conversations and other noises made in the cockpit

The battery life is short

The black box sends out a ping - activated by immersion in water - that can be picked up by a microphone and a "signal analyser". There's another beacon - the emergency locator transmitter - which transmits a distress signal on impact. But these don't work in water. Both the voice recorder and the data recorder each have their own pinger. But there's a problem - the battery of the pinger on MH370 will only last for 30 days, says Steve Brecken, media director at Honeywell. Some pingers last for 90 days. The variation stems from the fact the rules changed after Air France flight 447. It took nearly two years to find its black box and new guidelines were issued that the ping should last for 90 days to give search teams longer to find it. Some planes have since been updated, but apparently not the MH370. Even after the batteries for the pinger run out, the recorded data remains intact.

Black Box Flight Recorder

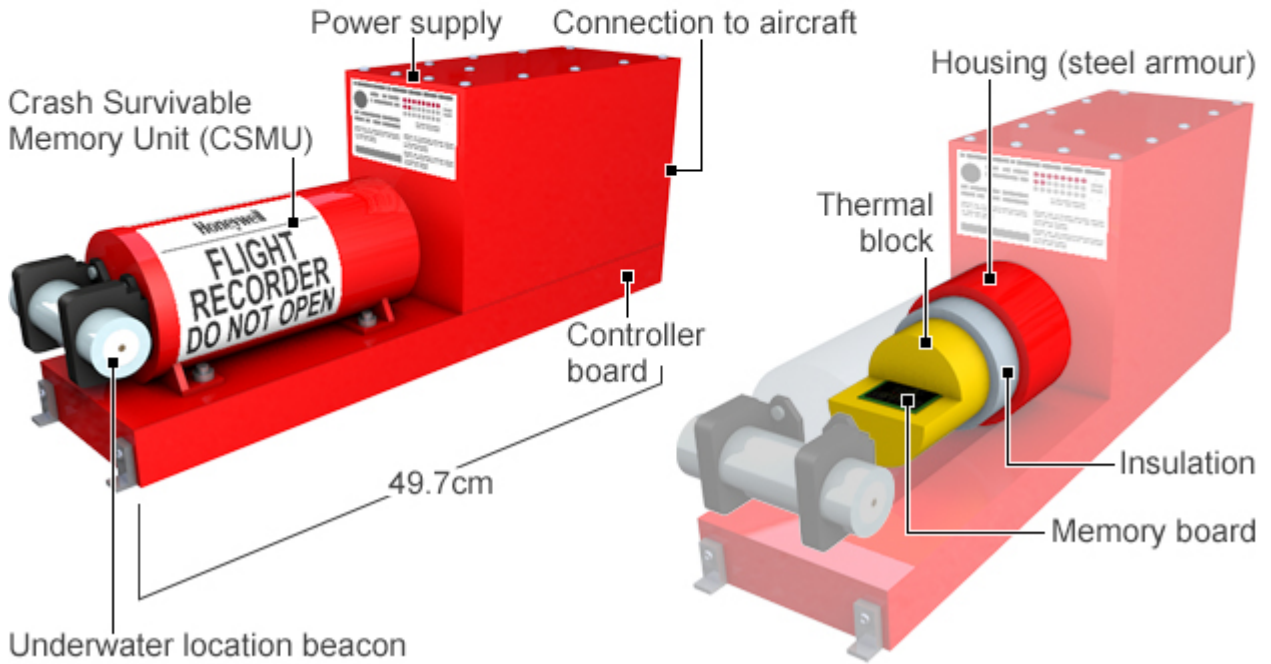
It is a small object to find

The black box is bolted into the tail of the aircraft to avoid damage in a head-on crash. It is small - about the size of a shoe box, says Dr Guy Gratton of Brunel University's Flight Safety Lab. Contrary to the name, it is bright orange. But it's not easy to see it in the middle of the ocean. The search will aim to try to locate the wreckage before moving in to pinpoint the black box by picking up the ping. If the pinger has expired then other techniques - such as magnetic detection - are going to be necessary.

It doesn't float

The box is made out of aluminium and designed to withstand massive impact, fierce fire or high pressure. That means it's heavy - about 10kg for what is a small box - and will sink quickly. The Indian Ocean has very deep sections. The search area ranges between 1,150m (3,770ft) and 7,000m (23,000ft) deep, media reports suggest. So investigators will have to consider the prospect of it being out of reach of many sonar devices. "You have to ask if there's terrain in the way. The seabed could be as mountainous as the Alps," says David Barry, an expert on flight data monitoring at Cranfield University.

Black box flight recorder



The pinger's range is only a few miles

Honeywell, who made MH370's pinger, say the signal can typically only be picked up a mile away. David Mearns, director of Blue Water Recoveries, says this means aircraft really needs to be almost directly on top of the black boxes to hear the ping. There are also factors that may diminish the signal. Wreckage on the surface, or if the black boxes are submerged in mud or sediment on the seabed, he adds. But if the pinger is deep on the ocean floor navies have hydrophone technology that has a better chance of locating it than conventional detectors. The Air France black box was not found until after its ping had expired. It was eventually located by slow moving unmanned underwater vehicles. A modern submarine - such as one of the Royal Navy's hunter-killer models - could potentially at least hear a ping from many miles away, Gratton says. The US, China and Australia all have similar submarines, he says. "By now there will be a submarine down there. I'm certain the Chinese will have put something out there." The US has deployed a ship that will tow a special black box locator through the water. According to the Associated Press, "the Towed Pinger Locator, which is pulled behind a vessel at slow speeds, has highly sensitive listening capability so that if the wreck site is located, it can hear the black box pinger down to a depth of about 20,000ft (6,100m)". However, there is a further complication, says Barry. The black box may be giving off pings from the ocean floor. But if those pings hit a layer of warmer or colder water above, the signal might be refracted or reflected.

Black box finder: Towed pinger locator

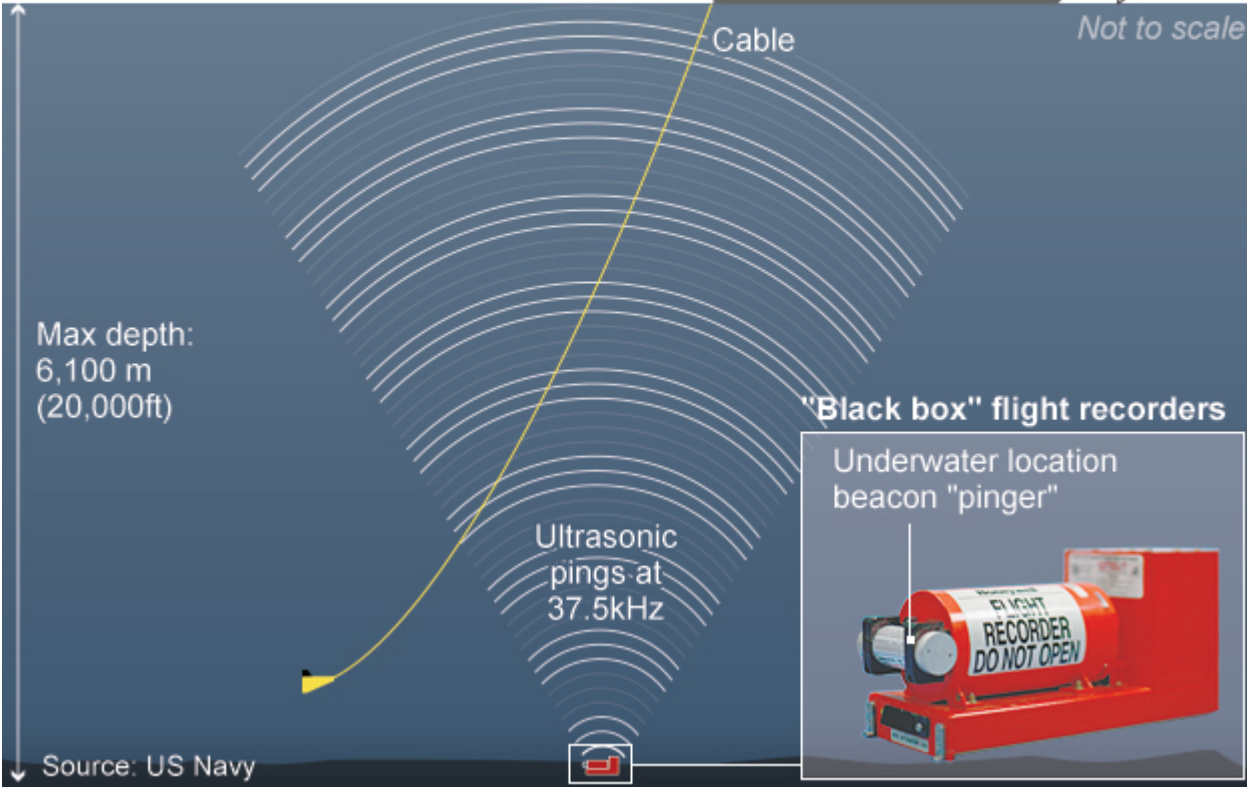


Sensitive listening equipment

Diagnostic equipment on board analyses data

Speed: 1-5 knots

Not to scale



РОМАНОВСКАЯ Нэля Владимировна

ЧЕРНЯЕВА Елена Витальевна

ЗЕЛЕНКОВА Светлана Константиновна

ПРОФЕССИОНАЛЬНЫЙ АНГЛИЙСКИЙ ЯЗЫК

Учебное пособие по профессионально-ориентированному английскому языку

Подписано в печать 29.09.14 г.

Печать офсетная
3,26 усл.печ.л.

Формат 60x84/16
Заказ № 1878/

3,07 уч.-изд. л.
Тираж 140 экз.

Московский государственный технический университет ГА

125993 Москва, Кронштадтский бульвар, д. 20

Редакционно-издательский отдел

125493 Москва, ул. Пулковская, д.6а