**Unit 3 Military Technology**

**Alpha Military inventions**

**【词汇点拨】 Words and Expressions**

**1. aircraft carrier** /ˈeəkrɑːft kæriə(r)/ *n.* a large ship that carries aircraft which use it as a base to land on and take off from 航空母舰

*An aircraft carrier is like an airport on the sea.*

**2. atomic** /əˈtɒmɪk/

① *adj*. connected with atoms or an atom 原子的；与原子有关的

② *adj*. related to the energy that is produced when atoms are split; related to weapons that use this energy 原子能的；原子武器的

*atomic structure* 原子结构

*atomic energy/power/bomb* 原子能/原子动力/原子弹

**3. jet** / dʒet/ *n.* a plane driven by jet engines 喷气式飞机

*a jet aircraft/fighter/airliner*喷气式飞机╱战斗机╱客机

*The accident happened as the jet was about to take off.*

**4. fighter** /ˈfaɪtə(r)/*n*. a fast military plane designed to attack other aircraft 战斗机；歼击机

*fighter pilot* 战斗机驾驶员

*Fighter pilots searched out and attacked enemy aircraft.*

**5. machine gun** /məˈʃiːn ɡʌn/ *n*. a gun that automatically fires many bullets one after the other very quickly 机关枪；机枪

*a burst/hail of machine-gun fire* 一阵猛烈的机关枪扫射

**6. radar** /ˈreɪdɑː(r)/ *n*. a system that uses radio waves to find the position and movement of objects, for example planes and ships, when they cannot be seen 雷达

*They located the ship by radar.*

**7. submarine** /ˌsʌbməˈriːn/ *n*. a ship that can travel underwater 潜艇

*a nuclear submarine* 核潜艇

*a submarine base* 潜艇基地

**8. portable** /ˈpɔːtəbl/ *adj*. that is easy to carry or to move 便携式的；手提的；轻便的

*Portable laser pointing devices are less expensive, more powerful, and more readily available than ever.*

**【词汇点拨】 Proper Names**

**1. Hiram Maxim** /ˈhaɪərəmˈmæksɪm/ 海勒姆·马克沁（美国发明家，第一支“马克沁”机枪的发明者）

**2. Matabele War** /ˌmætə’bi:li wɔː(r)/ 马塔贝莱战争

**3. Battle of Cambrai** / kɑmˈbrɛ / 康布雷战役

**4. Battle of Flers-Courcelette** 弗莱尔－库尔瑟莱特之战

**5. Leonardo da Vinci** /ˌliːəˈnɑːdəʊˌdəˈvɪntʃi/ 列奥纳多·达·芬奇

**6. Paul Cornu** /pɔ:lˈkɔːnjuː/ 保罗·科尔尼

**Bravo Aircraft, vehicles and naval Ships**

**【词汇点拨】Words and Expressions**

**1. bomber** /ˈbɒmə(r)/ *n.* a plane that carries and drops bombs 轰炸机

*The bomber scored a direct hit on the bridge.*

**2. destroyer** /dɪˈstrɔɪə(r)/ *n.* a small fast ship used in war, for example to protect larger ships 驱逐舰

*The latest Royal Navy Type 45 destroyer, HMS Defender, has been formally commissioned into the fleet.*

**3. frigate** /ˈfrɪɡət/ *n.* a small fast ship in the navy that travels with other ships in order to protect them （小型）护卫舰

*The crew from the Type 23 frigate was undergoing combat training at the time.*

**4. transport aircraft** /ˈtrænspɔːtˈeəkrɑːft/ *n*. [航] 运输机

*It is a version of the C-130 Hercules transport aircraft and flies at less than 300mph (482 kph).*

**5. fixed-wing** /ˌfɪkst ˈwɪŋ/ *adj*. used to describe aircraft with wings that remain in the same position, rather than helicopters , etc. 固定机翼的

*Fixed-wing aircraft may be built with many wing configurations.*

**6. rotary-wing** /ˈrəʊtəriˈwɪŋ/ *adj*. used to describe aircraft with an airfoil that rotates about an approximately vertical axis, as that supporting a helicopter or autogiro in flight 旋翼的

*Pakistan Army Aviation Corps flies a mixture of fixed and rotary-wing aircraft in close support of ground operations.*

**7. armoured** /ˈɑːməd/ *adj*. (especially of a military vehicle尤指军用交通工具) protected by metal covers 有装甲的

*an armoured car* 装甲车

*The cruiser was heavily armoured.*

**8. naval** /ˈneɪvl/ *adj*. connected with the navy of a country 海军的

*a naval base/battle* 海军基地/海战

*He accepted a commission as a naval officer.*

**9. underwater** /ˌʌndəˈwɔːtə(r)/ *adj&adv*. situated, occurring, or done beneath the surface of the water 水下的；供水下用的；水下生长的；水下操作的；在水下，在水中

*There are underwater volcanoes in the region.*

*The seal spent a lot of time underwater.*

**10. vertical** /ˈvɜːtɪkl/ *adj*. going straight up or down from a level surface or from top to bottom in a picture, etc. 竖的；垂直的；直立的

*a plane with vertical take-off and landing capabilities*

**11. column** /ˈkɒləm/ *n*. a long, moving line of people or vehicles （人或车辆排成行移动的）长列，纵队

*a long column of troops and tanks*

**12. stealth** /stɛlθ/ *n*. the act or characteristic of moving with extreme care and quietness, esp so as to avoid detection 秘密行动; 暗中活动

*stealth bomber* 隐形轰炸机

**【词汇点拨】Proper Names**

**1. IFV (Infantry Fighting Vehicle)** 步兵战车；步战车

**2. APC (Armoured Personnel Carrier)** 装甲运兵车

**3. H-6K bomber** 轰-6K型轰炸机

**Charlie Military technology now and then**

**【词汇点拨】****Words and Expressions**

**1. knot** /nɒt/ *n.* a unit for measuring the speed of boats and aircraft; one nautical mile per hour 节（速度单位，等于1海里/小时）

*Some days the vessel logged 12 knots.*

**2. nautical mile** /ˌnɔːtɪkəlˈmaɪl/ *n.* a unit for measuring distance at sea; 1 852 metres 海里（合 1852米）

*The record-breaking 9, 000 nautical mile (16, 668km) trip took the PacX Wave Glider just over a year to achieve.*

**3. convert** /kənˈvɜːt/ *v.* ~ (sth) (from sth) (into/to sth) to change or make sth change from one form, purpose, system, etc. to another （使）转变，转换，转化

*What rate will I get if I convert my dollars into euros?*

**4. multiply** /ˈmʌltɪplaɪ/ *v.* to add a number to itself a particular number of times 乘；乘以

*2 multiplied by 4 is/equals/makes 8.*

*Multiply 2 and 6 together and you get 12.*

**5. divide** /dɪˈvaɪd/ *v.* to find out how many times one number is contained in another 除；除尽

*Measure the floor area of the greenhouse and divide it by six.*

**6. dive** /daɪv/ *v.* to go to a deeper level underwater 下潜；潜到更深的水下

*The fish dive down to about 1400 feet and then swim south-west.*

**7. armament** /ˈɑːməmənt/*n*. [C usually pl.]

① a general term for a weapon 武器；装备

② the process of equipping with weapons 武装；战备

*armaments factory* 军工厂

*The main innovation in the new vehicle was the turret and its armament.*

**8. crew /**kruː/ *n.* a team of people who man a ship, aircraft or vehicle; a team of people who operate a weapon or equipment 机组人员；炮班（自行火炮等）；车组（人员）

*None of the passengers and crew were injured.*

**9. torpedo** /tɔːˈpiːdəʊ/ *n.* a long narrow bomb that is fired under the water from a ship or submarine and that explodes when it hits a ship, etc. 鱼雷

*But most observers believe that the most likely explanation was that a torpedo misfired, stuck in the tube and exploded.*

**10. tube** /tjuːb/ *n.* a long hollow pipe made of metal, plastic, rubber, etc., through which liquids or gases move from one place to another （金属、塑料、橡胶等制成的）管，管子

*torpedo tube* 鱼雷发射管

**11. cannon** /ˈkænən/ *n.*

① an old type of large heavy gun, usually on wheels, that fires solid metal or stone balls （通常装有轮子并发射铁弹或石弹的旧式）大炮

② an automatic gun that is fired from an aircraft （飞机上的）自动机关炮

*Police turned water cannon on the rioters*.

*Twenty people were killed when German planes attacked Newport with bombs and cannon fire in April 1943.*

**12. Mach** /mɑːk/ *n.* a measurement of speed, used especially for aircraft. Mach 1 is the speed of sound. 马赫，马赫数（速度单位，常用于计算飞行速度，1马赫等于音速）

*a fighter plane with a top speed of Mach 3 (= 3 times the speed of sound)* 最高速度为3马赫的歼击机

**【词汇点拨】****Proper Names**

**1. Royal Navy** /ˈrɔɪəl ˈneɪvi/（英）皇家海军

**2. German** /ˈdʒɜːmən/ 德国的；德国人；德语

**Delta Armoured vehicles**

**【词汇点拨】****Words and Expressions**

**1. hull** /hʌl/ *n.* the outer covering of a ship or boat; the lower part of an armoured fighting vehicle（坦克、舰艇等）壳体；车体

*The explosion penetrated the hull.*

**2. main gun** 主炮

*This photo is of a parade with the main gun reversed to face the rear of the vehicle.*

**3. track** /træk/*n.* a moving band of metal links fitted around the wheels of a tank or other armoured vehicle, enabling it to move over soft or uneven ground 履带

*The tank came off the road when it lost a track.*

**4. turret** /ˈtʌrɪt/*n.* a small metal tower on a ship, plane or tank that can usually turn around and from which guns are fired（战舰、飞机或坦克的）回转炮塔；旋转枪架

*She began to talk to the man in the turret of the car.*

**5. specification** /ˌspesɪfɪˈkeɪʃn/ *n.* a detailed description of how sth is, or should be, designed or made 规格；技术参数；技术指标

*The barracks have been built exactly to our specifications.*

**【词汇点拨】Proper Names**

**1. Leopoard** **2** /ˈlepəd/ 德制“豹”2型主战坦克

**2. Austria** /ˈɒstriə/ 奥地利

**3. Germany** /ˈdʒɜːməni/ 德国

**4. Greece** /griːs/ 希腊

**5. Holland** /ˈhɒlənd/ 荷兰

**6. Poland** /ˈpəʊlənd/ 波兰

**7. Spain** /speɪn/ 西班牙

**8. Sweden** /ˈswiːd(ə)n**/** 瑞典

**9. Switzerland** /ˈswɪtsələnd/ 瑞士

**Echo Integrated skills: describing and defining**

**【词汇点拨】Words and Expressions**

**1. fabric** /ˈfæbrɪk/ *n.* material made by weaving wool, cotton, silk, etc., used for making clothes, curtains, etc. and for covering furniture 织物；布料

*The military uniform is made of fabric.*

**2. helmet** /ˈhelmɪt/ *n.* a protective head covering头盔

*He locked his helmet into position with a click.*

**3. mortar** /ˈmɔːtə(r)/ *n.* a simple indirect-fire weapon, which is designed to fire projectiles at very high trajectories 迫击炮

*The 120mm mortar has a range of 18,000 yards.*

**4. tracksuit** /ˈtræksuːt/ *n.* a warm loose pair of trousers/pants and matching jacket worn for sports practice or as informal clothes 运动服

*The soldier reached into the wardrobe and extracted another tracksuit.*

**5. cruise** /kruːz/

① *n.* a journey by sea, visiting different places, especially as a holiday/vacation乘船游览；航行

*The aim of the cruise was to awaken an interest in and an understanding of military cultures.*

② *v.* [usually + adv./prep.] ( of a car, plane, etc.) to travel at a steady speed 以平稳的速度行驶;巡航

*This light aircraft is cruising at 4,000 feet.*

**6. equip** /ɪˈkwɪpt/ *v.* to provide yourself/sb./sth. with the things that are needed for a particular purpose or activity 配备；装备

*to be fully/poorly equipped* 装备齐全/简陋

*The centre is well equipped for canoeing and mountaineering.*

**7. rotor blade** /ˈrəʊtə(r) bleɪd/ *n.* the long airfoil that rotates to provide the lift that supports a helicopter in the air旋翼叶片；旋翼桨叶

*The Black Hawk helicopter has four rotor blades.*

**8. logistical** /ləˈdʒɪstɪk(ə)l/ *adj.(or logistic)* of or relating to logistics后勤的

*WHO provided technical and logistic support.*

**9. assault** /əˈsɔːlt/

① *n.* the act of attacking an enemy position in order to take control of it攻击；袭击；突击

*A third brigade is at sea, ready for an amphibious assault.*

②*v.* to use force in order to occupy an enemy position攻击；袭击；突击

*The enemy assaulted the small town.*

**10. evacuation** /ɪˌvækjuˈeɪʃn/ *n.* the act of removing people from their homes because of danger and making them stay elsewhere until that danger is over 撤离；疏散

*The evacuation is being organized at the request of the United Nations Secretary General.*

**11. calibre** /ˈkælɪbə(r)/ *n.* the internal diameter of a gun barrel; the external diameter of a projectile 口径

*The soldier was hit in the head by a.22-calibre bullet.*

**12. mount** /maʊnt/ *v.* to fix sth. into position on sth., so that you can use it, look at it or study it 安 置

*The machine gun was mounted to the top of the truck.*

**【词汇点拨】Proper Names**

**1. GPS (Global Positioning System)** 全球定位系统

**2. Sikorsky** /sɪˈkɔːskɪ/ **Aircraft Corporation** 西科斯基飞行器公司

**3. Connecticut** /kəˈnetɪkət/ 康涅狄格州（美国）

**4. UHF (Ultra High Frequency)** 超高频

**5. VHF (Very High Frequency)** 甚高频

**Foxtrot Review**

**【词汇点拨】Words and Expressions**

**1. rotary** /ˈrəʊtəri/ *adj.* moving in a circle around a central fixed point 旋转的；绕轴转动的

*Invented in 1951, the rotary engine is a revolutionary concept in internal combustion.*

**2. blade** /bleɪd/ *n.* one of the flat parts that turn around in an engine or on a helicopter （机器上旋转的）叶片；桨叶

*rotor blades on a helicopter* 直升机的旋翼

**3. rotate** /rəʊˈteɪt/ *v.* to move or turn around a central fixed point; to make sth. do this（使）旋转；转动

*Stay well away from the helicopter when its blades start to rotate.*

**4. manoeuvrable** /məˈnuːvərəbl/ *adj.* capable of moving easily over all types of terrains 可调动的；机动的

*These jet fighters were extremely manoeuvrable.*

**5. reconnaissance /**rɪˈkɒnɪsns/ *n.* an examination or survey of ground or a specific location, in order to plan an operation or task 侦察

*The helicopter was returning from a reconnaissance mission.*

**6. paratrooper** /ˈpærətruːpə(r)/ *n.* soldiers who are trained to be dropped by parachute into battle or into enemy territory伞兵

*The paratroopers descended slowly through the air*.

**7. humanitarian** /hjuːˌmænɪˈteəriən/ *adj.* concerned with reducing suffering and improving the conditions that people live in人道主义的

*They are calling for the release of the hostages on humanitarian grounds*.

**8. relief** /rɪˈliːf/ *n.* an act of providing assistance or support 救济；救助

*A UN spokesman said that the mission will carry 20 tons of relief supplies.*

**9. aerial** /ˈeəriəl/

① *n.* a metal wire, rod, mast or structure used in the receiving and transmission of radio signals

天线

② *adj.* in the air; existing above the ground空中的

*The aerial doesn’t look very secure to me.*

*Weeks of aerial bombardment had destroyed factories and motorways.*

**10. refuel** /ˌriːˈfjuːəl/ *v*. to fill sth., especially a plane, with fuel in order to continue a journey; to be filled with fuel （尤指给飞机）补充燃料，加燃料；加油

*His plane stopped in Hawaii to refuel.*

**11. patrol** /pəˈtrəʊl/

① *n.* an act of walking or driving around an area on a regular basis in order to deter or prevent illegal or hostile activity 巡逻；巡查

② *v.* to carry out a patrol 巡逻；巡查

*Highway patrol officers closed the road.*

*Guards patrol the perimeter of the estate.*

**12. versatile** /ˈvɜːsətaɪl/ *adj.* having many different uses 多用途的；多功能的

*He’s a versatile actor who has played a wide variety of parts.*

**13. escort**

① /ˈeskɔːt/ *n.* a person, vehicle or aircraft of ship which accompanies an individual or group in order to protect them 护送者；护卫队；护卫舰（或车队、飞机）

*Armed escorts are provided for visiting heads of state.*

② /ɪˈskɔːt/ *v.* to act as an escort 护卫；护送

*Policemen had to escort the referee from the football field.*

**14. engage** /ɪnˈɡeɪdʒ/ *v.* to begin fighting with sb. 与（某人）交战；与（某人）开战

*It could engage the enemy beyond the range of hostile torpedoes.*

**15. ballistic** /bəˈlɪstɪk/*adj.* connected with ballistics 弹道（学）的

*Ballistic tests have matched the weapons with bullets taken from the bodies of victims.*

**16. warhead** /ˈwɔːhed/ *n.* the explosive part of a missile（导弹的）弹头

*The missile warhead hit the target, effecting a nuclear explosion.*

**17. configuration** /kənˌfɪɡəˈreɪʃn/ *n.* an arrangement of the parts of sth. or a group of things; the form or shape that this arrangement produces 结构；构造

*Configuration and functions of the digital TV receiver are introduced.*

**18. bulldozer** /ˈbʊldəʊzə(r)/ *n.* a powerful vehicle with a broad steel blade in front, used for moving earth or knocking down buildings推土机

*The bulldozer leveled the mountain.*

**【词汇点拨】Proper Names**

**1. The** **US *B-2 Spirit*** 美制“幽灵”B-2隐形轰炸机

**2. The *Eurofighter 2000/Typhoon*** /taɪˈfuːn/ 欧制“台风”2000型战斗机

**3.The US *C-130 Hercules*** /ˈhɜːkjəliːz/ 美制“大力神”C-130型运输机

**4. The US** ***Spruance*-class destroyer /**ˈsprʊːəns**/** 美军“斯普鲁恩斯”级驱逐舰

**【参考译文】**

**飞机、车辆和海军舰船**

空军、陆军和海军在执行任务时使用的飞机、地面车辆和军舰多达几十种。下面是一些主要的分类。

**飞机**

飞机主要分为固定翼飞机和旋翼飞机两大类。固定翼飞机的机翼不能移动，比如客机和喷气式飞机；旋翼飞机通过飞机的桨叶或机翼的旋转升空，比如直升机。飞机也可以根据执行任务的类型进行分类。

**固定翼飞机**

轰炸机：通常能够长距离飞行，携带重型武器装备。最著名的现代轰战机之一是美国的B-2“幽灵”轰炸机。因为其较难被雷达发现，也被称为“隐形轰炸机”。

战斗机：具有快速及高机动性的特点，通常执行作战和侦察任务。一个例子就是由英国、德国、意大利和西班牙联合制造的欧洲2000/台风战斗机。

运输机：用于执行多样运输任务，从敌后空投伞兵到提供人道主义救援。比如美国C-130“大力神”运输机。

空中加油机：用于飞机空中加油。

**旋翼飞机**

攻击直升机：具有快速及高机动性的特点，通常装备机枪和导弹。

运输直升机：能够运送部队，有时运送大型车辆。

**海军舰船**

海军舰船可以分为水面舰船和水下潜艇。

**水面舰船**

水面舰船的形状和大小各不相同，大到航母，小到河流巡逻艇。

航空母舰：设计目的是用于运输战斗机和直升机，并为舰载机提供起降平台。

护卫舰：多用途、多功能舰船，可执行反潜作战、护卫和巡逻任务。

驱逐舰：主要用于发现和打击高速潜艇，但是也可以与其他舰船和岸基目标交战，比如美国的“斯普鲁恩斯”级驱逐舰。

**潜艇**

弹道潜艇：可携带核弹头远程导弹。

舰队或攻击潜艇：可携带常规导弹，用于发现、击毁敌方潜艇。比如美国“海浪”号潜艇。

**地面车辆**

地面车辆在形状、大小和构造上千差万别，比如装甲或非装甲、攻击型或运输型，轮式或履带式（比如推土机和拖拉机上的传送带）。下面是一些常见的类型:

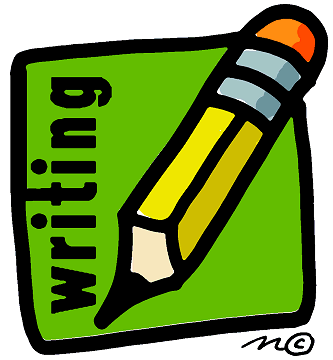
吉普：轻型、非装甲、四人运输车辆，通常配有车载式机枪。

卡车（truck为美式英语，lorry为英式英语）：用于运送较重型的货物或部队。

装甲运兵车：战斗中用于运送部队（通常被叫做“战场的士”），比如英国FV432装甲运兵车。装甲运兵车有装甲车身和车载式机枪，通常可以运送八到十人。

步兵战车：装甲步兵营使用，被认为是轻型坦克，也可以运送少量士兵，比如英国“勇士”步兵战车。

主战坦克：装备较大型火炮的重型坦克，火力更为强悍且可以承受较严重的损伤，比如“豹”型主战坦克。

**词汇表**

**Alpha Military inventions**

aircraft carrier 航空母舰

atomic 原子的；与原子有关的；原子能的；原子武器的

jet 喷气式飞机

fighter 战斗机；歼击机

jet fighter 喷气式战斗机

machine gun 机关枪；机枪

radar 雷达

submarine 潜艇

portable 便携式的；手提的；轻便的

explode 爆炸；爆破；爆裂

**Bravo Aircraft, vehicles and naval ships**

bomber 轰炸机

destroyer 驱逐舰

frigate （小型）护卫舰

transport aircraft [航] 运输机

fixed-wing aircraft 固定翼飞机

rotary-wing aircraft 旋翼机

armoured 有装甲的

armoured vehicle 装甲车辆

naval 海军的

naval ship 军舰

underwater 水下的；在水下、在水中

vertical 竖的；垂直的；直立的

vertically 垂直地

column （人或车辆排成行移动的）长列，纵队

stealth 秘密行动; 暗中活动

stealth bomber 隐形轰炸机

Infantry Fighting Vehicle (IFV) 步兵战车；步战车

Armoured Personnel Carrier (APC) 装甲运兵车

**Charlie Military technology then and now**

foot 英尺

inch 英寸

knot 节（速度单位，等于1海里/小时）

nautical mile 海里（合1 852米）

convert （使）转变，转换，转化

multiply 乘；乘以

divide 除; 除尽

dive 下潜；潜到更深的水下

armament 武器；装备

torpedo 鱼雷

tube （金属、塑料、橡胶等制成的）管，管子

cannon 大炮；（飞机上的）自动机关炮

Mach 马赫，马赫数（速度单位，常用于计算飞行速度，1马赫等于音速）

**Delta Armoured vehicles**

hull （坦克、舰艇等）壳体；车体

main gun 主炮

tracks 履带

turret （坦克的）炮塔

specification 规格；技术参数；技术指标

**Echo Integrated skills**

fabric 织物；布料

helmet 头盔

mortar 迫击炮

tracksuit 运动服

cruise 航行；巡航

equip 配备；装备

rotor blade 旋翼叶片；旋翼桨叶

logistical 后勤的

assault 攻击；袭击；突击

evacuation 撤离；疏散

calibre 口径

mount 安置

**Foxtrot Aircraft, vehicles and naval ships**

rotary 旋转的；绕轴转动的

blade （机器上旋转的）叶片；桨叶

rotate （使）旋转；转动

manoeuvrable 可调动的；机动的

reconnaissance 侦察

paratrooper 伞兵

humanitarian 人道主义的

relief 救济；救助

aerial 空中的；天线

refuel （尤指给飞机）补充燃料；加燃料；加油

patrol 巡逻；巡查

versatile 多用途的；多功能的

escort 护卫；护送；护送者；护卫队

engage 与（某人）交战；与（某人）开战

ballistic 弹道的

warhead （导弹的）弹头

configuration 结构；构造

bulldozer 推土机