## APPENDIX E. GLOSSARY

## **SECTION I. ACRONYMS AND ABBREVIATIONS**

AAAA antaircraft artillery AADC area air defense commander AAW antair warfare AAW antair warfare AAW antair warfare ABCC airborne battlefield command and control center CAA airspace control authority ACE aviation combat element ACI air combat intelligence ACO airspace control order ACP airspace control order ACP airspace control order ACP airspace control plan AEW airborne early warning AGM air-to-ground missile AH-IW attack helicopter (Cobra) AI air interdiction AO area of operations AOC air operations center (Air Force) AOC air operations center (Air Force) AOC area of responsibility APC armored personnel carrier ARA armed reconnaissance ARA armed reconnaissance ARA armed reconnaissance ARA armed reconnaissance area ARM antiradiation missile ASC(A) assault support comdinator (airborne) ASC(A) direct air support center (airborne) EA-C AWACS aircraft (Harrier) AVEC arrored personnel carrier ARA armed reconnaissance area ARM antiradiation missile ASC(A) direct air support center (Army) E-2C AWACS aircraft (Harrier) ACA eleope air support BWW expeditionary maneuver warfare EW electronic attack incraft (Farier) FAC forward aircontroller (arborne) FAC(A) forward air controller FAC(A) forward air controller FAC(B) forward arming and refueling point FAC(B) forward arming and refueling point FAC(C) force fires coordination center FAC(C	A-6 attack aircraft (Intruder)	COS current operations section
AAW airborne battlefield command and control center ACA airspace control authority ACE aviation combat element ACI air combat intelligence ACO airspace control plan AEW airborne early warning AGM air-to-ground missile AH-1W attack helicopter (Cobra) AI air interdiction AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations AOC air operations center (Air Force) AOR area of operations center (A		CRC control and reporting center
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BVR beyond visual range  C2 command, control, and communications C4I. command, control, communications		FOS future operations section
C2		FRAGO fragmentary order
C2	BVRbeyond visual range	FSCC fire support coordination center
C3		FSCL fire support coordination line
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CAS		GGW GPS guided weapon
CBU		GPS global positioning system
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requirements CEP. circular error probable CINC. commander in chief COA. course of action co		
CEP		
CINC		
COA helicopter support team		
COMINT		
	COMINTcommunications intelligence	HTS HARM targeting system

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HVThigh-value target	MRR minimum-risk route MSC major subordinate command
IFFidentification, friend or foe	Wisc major subordinate command
INS inertial navigation system	NATO North Atlantic Treaty Organization
IOC initial operational capability	NFAno-fire area
IPB intelligence preparation of the battlespace	NVD night vision device
IR infrared radiation	NVG night vision goggle
	NWP naval warfare publication
JAOCjoint air operations center	F
JDAMjoint direct attack munition	OAS offensive air support
JFACC joint force air component commander	OIR other intelligence requirement
JFCjoint force commander	OMFTS operational maneuver from the sea
JIPTL joint integrated prioritized target list	OODA loop observe, orient, decide, act;
JMEM/AS joint munitions effectiveness manual/	observation, orientation, decision, action
air to surface	OPLAN operation plan
JOA joint operations area	OPORD operation order
JSOWjoint standoff weapon	OPSEC operations security
JTARjoint tactical air strike request	OPT operational planning team
JTCB joint targeting coordination board	
JTLjoint target list	PD probability of damage
JSTjoint strike fighter	PGM precision-guided missile/munition
J	PGW precision-guided weapon
KC-130 aerial refueling/transport aircraft	PID positive identification
(Hercules)	PIR priority intelligence requirement
KTO Kuwaiti theater of operations	Pk probability of kill
LAADlow altitude air defense	RAFRoyal Air Force (UK)
LANTIRN low-altitude navigation and targeting	RAOC rear area operations center; regional air
infrared for night	operations center
LGB laser-guided bomb	RFI request for information; request
LGM laser-guided missile	for intelligence
LGWlaser-guided weapon	ROE rules of engagement
LOAC law of armed conflict	RR reattack recommendation
LOClines of communications	
LPD amphibious transport dock	SAAWC . sector antiair warfare coordinator (USMC)
LSTlaser spot tracker	SAMsurface-to-air missile
1	SBDattack aircraft (Dauntless)
MAAP master air attack plan	SCAR strike coordination and reconnaissance
MACCS Marine air command and control system	SEAD suppression of enemy air defenses
MACGMarine air control group	SERE survival, evasion, resistance, and escape
MAG Marine aircraft group	SLAM standoff land attack missile
MAGTF Marine air-ground task force	SPINS special instructions
MARFOR Marine Corps forces	STOM ship-to-objective maneuver
MARLO Marine liaison officer	r
MCDP Marine Corps doctrinal publication	TAC(A)tactical air coordinator (airborne)
MCPP Marine Corps Planning Process	TACAIR tactical air
MCRP Marine Corps reference publication	TACC tactical air command center (USMC);
MCWP Marine Corps warfighting publication	tactical air control center (USN/USAF)
MEA munitions effect assessment	TACP tactical air control party
MEFMarine expeditionary force	TADC tactical air direction center
METT-T mission, enemy, terrain and weather,	TAGS theater air ground system
troops and support available-time available	TALD tactical air-launched decoy
MISREP mission report	TAOC tactical air operations center
MOOTW military operations other than war	TARPS tactical airborne reconnaissance
MOS military occupational specialty	POD system

TBMCSTheater Battle Management Core System	UAV unmanned aerial vehicle
THS target hand-off subsystem	UH1 utility helicopter (Huey)
TLDHS target location, designation, and	UHFultrahigh frequency
hand-off system	USAUnited States Army
TLE target location error	USAF
TOTtime on target	USMC United States Marine Corps
TPFDD time-phased force and deployment data	USN United States Navy
TRAP tactical recovery of aircraft and personnel	VHFvery high frequency
TSS target selection standards	VMFA Marine fighter/attack squadron
TV television	, 1/11 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1
TVA target value analysis	WGS-84 World Geodetic System 1984

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## **SECTION II. DEFINITIONS**

air interdiction—Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (JP 1-02)

air operations center—The principal air operations installation from which aircraft and air warning functions of combat air operations are directed, controlled, and executed. It is the senior agency of the Air Force Component Commander from which command and control of air operations are coordinated with other components and Services. Also called AOC. (JP 1-02)

airspace control authority—The commander designated to assume overall responsibility for the operation of the airspace control system in the airspace control area. Also called ACA. (JP 1-02)

airspace control order—An order implementing the airspace control plan that provides the details of the approved requests for airspace control measures. It is published either as part of the air tasking order or as a separate document. Also called ACO. (JP 1-02)

airspace control plan—The document approved by the joint force commander that provides specific planning guidance and procedures for the airspace control system for the joint force area of responsibility/joint operations area. Also called ACP. (JP 1-02)

air superiority—That degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea and air forces at a given time and place without prohibitive interference by the opposing force. (JP 1-02)

antiair warfare—A US Navy/US Marine Corps term used to indicate that action required to destroy or reduce to an acceptable level the enemy air and missile threat. It includes such measures as the use of interceptors, bombers, antiaircraft guns, surface-to-air and airto-air missiles, electronic attack, and destruction of the air or missile threat both before and after it is launched. Other measures which are taken to minimize

the effects of hostile air action are cover, concealment, dispersion, deception (including electronic), and mobility. Also called AAW. (JP 1-02) AAW is one of the six functions of Marine aviation.

**antiradiation missile**—A missile which homes passively on a radiation source. (JP 1-02)

armed reconnaissance—A mission with the primary purpose of locating and attacking targets of opportunity, i.e., enemy materiel, personnel, and facilities, in assigned general areas or along assigned ground communications routes, and not for the purpose of attacking specific briefed targets. Also called AR. (JP 1-02)

aviation combat element—The core element of a Marine air-ground task force that is task-organized to conduct aviation operations. The aviation combat element provides all or a portion of the six functions of Marine aviation necessary to accomplish the Marine air-ground task force's mission. These functions are antiair warfare, offensive air support, assault support, electronic warfare, air reconnaissance, and control of aircraft and missiles. The aviation combat element is usually composed of an aviation unit headquarters and various other aviation units or their detachments. It can vary in size from a small aviation detachment of specifically required aircraft to one or more Marine aircraft wings. The aviation combat element may contain other Service or foreign military forces assigned or attached to the MAGTF. The aviation combat element itself is not a formal command. Also called ACE. (MCRP 5-12C)

battle damage assessment—The timely and accurate estimate of damage resulting from the application of military force, either lethal or non-lethal, against a predetermined objective. Battle damage assessment can be applied to the employment of all types of weapon systems (air, ground, naval, and special forces weapon systems) throughout the range of military operations. Battle damage assessment is primarily an intelligence responsibility with required inputs and coordination from the operators. Battle damage assessment is composed of physical damage assessment, functional damage assessment, and target system assessment. Also called BDA. (JP 1-02)

**close air support**—Air action by fixed- and rotary-wing aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. Also called CAS. (JP 1-02)

combat service support element—The core element of a Marine air-ground task force that is task-organized to provide the combat service support necessary to accomplish the Marine air-ground task force mission. The combat service support element varies in size from a small detachment to one or more force service support groups. It provides supply, maintenance, transportation, general engineering, health services, and a variety of other services to the Marine air-ground task force. It may also contain other Service or foreign military forces assigned or attached to the MAGTF. The combat service support element itself is not a formal command. Also called CSSE. (MCRP 5-12C)

**combined arms**—The full integration of combat arms in such a way that to counteract one, the enemy must become more vulnerable to another. (MCRP 5-12C)

command and control—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (JP 1-02)

command element—The core element of a Marine air-ground task force that is the headquarters. The command element is composed of the commander, general or executive and special staff sections, headquarters section, and requisite communications support, intelligence and reconnaissance forces, necessary to accomplish the MAGTF's mission. The command element provides command and control, intelligence, and other support essential for effective planning and execution of operations by the other elements of the MAGTF. The command element varies in size and composition and may contain other Service or foreign military forces assigned or attached to the MATF. Also called CE. (MCRP 5-12C)

concept of operations—A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. (JP 1-02)

direct air support center—The principal air control agency of the US Marine air command and control system responsible for the direction and control of air operations directly supporting the ground combat element. It processes and coordinates requests for immediate air support and coordinates air missions requiring integration with ground forces and other supporting arms. It normally collocates with the senior fire support coordination center within the ground combat element and is subordinate to the tactical air command center. Also called DASC. (JP 1-02)

**direct support**—A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance. See also general support. (JP 1-02)

**electronic warfare**—Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Also called EW. The three major subdivisions within electronic warfare are: electronic attack, electronic protection, and electronic warfare support. a. electronic attack. That division of electronic warfare involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. Also called EA. EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception, and 2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams). **b.** electronic protection. That division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of E-6 ------ MCWP 3-23

electronic warfare that degrade, neutralize, or destroy friendly combat capability. Also called EP. c. electronic warfare support. That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations. Thus, electronic warfare support provides information required for decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called ES. Electronic warfare support data can be used to produce signals intelligence, provide targeting for electronic or destructive attack, and produce measurement and signature intelligence. (JP 1-02)

**fire support coordination center**—A single location in which are centralized communications facilities and personnel incident to the coordination of all forms of fire support. See also supporting arms coordination center. Also called FSCC. (JP 1-02)

fire support coordination line—A fire support coordinating measure that is established and adjusted by appropriate land or amphibious force commanders within their boundaries in consultation with superior, subordinate, supporting, and affected commanders. Fire support coordination lines (FSCLs) facilitate the expeditious attack of surface targets of opportunity beyond the coordinating measure. An FSCL does not divide an area of operations by defining a boundary between close and deep operations or a zone for close air support. The FSCL applies to all fires of air, land, and sea-based weapon systems using any type of ammunition. Forces attacking targets beyond an FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide. Supporting elements attacking targets beyond the FSCL must ensure that the attack will not produce adverse effects on, or to the rear of, the line. Short of an FSCL all air-to-ground and surface-to surface attack operations are controlled by the appropriate land or amphibious force commander. The FSCL should follow well defined terrain features. Coordination of attacks beyond the FSCL is especially critical to commanders of air, land, and special operations forces. In exceptional circumstances, the inability to conduct this coordination will not preclude the attack of targets beyond the FSCL. However, failure to do so may increase the risk of fratricide and could waste limited resources. Also called FSCL. (JP 1-02)

**forward air controller**—An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support of ground troops. Also called FAC. (JP 1-02)

forward air controller (airborne)—A specifically trained and qualified aviation officer who exercises control from the air of aircraft engaged in close air support of ground troops. The forward air controller (airborne) is normally an airborne extension of the tactical air control party. Also called FAC(A). (JP 1-02)

forward arming and refueling point—A temporary facility, organized, equipped, and deployed by an aviation commander, and normally located in the main battle area closer to the area of operation than the aviation unit's combat service area, to provide fuel and ammunition necessary for the employment of aviation maneuver units in combat. The forward arming and refueling point permits combat aircraft to rapidly refuel and rearm simultaneously. Also called FARP. (JP 1-02)

**forward looking infrared**—An airborne, electrooptical thermal imaging device that detects far-infrared energy, converts the energy into an electronic signal, and provides a visible image for day or night viewing. Also called FLIR. (JP 1-02) See night vision device.

**forward operating base**—An airfield used to support tactical operations without establishing full support facilities. The base may be used for an extended time period. Support by a main operating base will be required to provide backup support for a forward operating base. Also called FOB. (JP 1-02)

**general support**—That support which is given to the supported force as a whole and not to any particular subdivision thereof. (JP 1-02) See also direct support.

ground combat element—The core element of a Marine air-ground task force that is task organized to conduct ground operations. It is usually constructed around an infantry organization but can vary in size from a small ground unit of any type, to one or more

Marine divisions that can be independently maneuvered under the direction of the MAGTF commander. It includes appropriate ground combat and combat support forces and may contain other Service or foreign military forces assigned or attached to the Marine air-ground task force. The ground combat element itself is not a formal command. Also called GCE. (MCRP 5-12C)

**immediate air support**—Air support to meet specific requests which arise during the course of a battle and which by their nature cannot be planned in advance. (JP 1-02)

intelligence preparation of the battlespace—An analytical methodology employed to reduce uncertainties concerning the enemy, environment, and terrain for all types of operations. Intelligence preparation of the battlespace builds an extensive data base for each potential area in which a unit may be required to operate. The data base is then analyzed in detail to determine the impact of the enemy, environment, and terrain on operations and presents it in graphic form. Intelligence preparation of the battlespace is a continuing process. Also called IPB. (JP 1-02)

**joint air operations center**—A jointly staffed facility established for planning, directing, and executing joint air operations in support of the joint force commander's operation or campaign objectives. Also called JAOC. (JP 1-02)

**joint force air component commander**—The joint force air component commander derives authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among subordinate commanders, redirect and organize forces to ensure unity of effort in the accomplishment of the overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation, and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other Service component commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. Also called JFACC. (JP 1-02)

**joint force commander**—A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. Also called JFC. (JP 1-02).

**list of targets**—A tabulation of confirmed or suspect targets maintained by any echelon for informational and fire support planning purposes. (JP 1-02)

maneuver warfare—A warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope. (MCRP 5-12C)

Marine air command and control system—A system which provides the aviation combat element commander with the means to command, coordinate, and control all air operations within an assigned sector and to coordinate air operations with other Services. It is composed of command and control agencies with communications-electronics equipment that incorporates a capability from manual through semiautomatic control. Also called MACCS. (JP 1-02)

Marine air-ground task force—The Marine Corps principal organization for all missions across the range of military operations, composed of forces taskorganized under a single commander capable of responding rapidly to a contingency anywhere in the world. The types of forces in the MAGTF are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a combat service support element. The four core elements are categories of forces, not formal commands. The basic structure of the MAGTF never varies, though the number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs to be assigned, and other Service and/or foreign military forces, to be assigned or attached to the MAGTF. Also called MAGTF. (MCRP 5-12C)

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**night vision device**—Any electro-optical device that is used to detect visible and infrared energy and provide a visible image. Night vision goggles, forward-looking infrared, thermal sights, and low light level television are night vision devices. Also called NVD. See also night vision goggle(s); forward looking infrared. (JP 1-02)

**night vision goggle(s)**—An electro-optical image intensifying device that detects visible and near-infrared energy, intensifies the energy, and provides a visible image for night viewing. Night vision goggles can be either hand-held or helmet-mounted. Also called NVG. See also night vision device. (JP 1-02)

offensive air support—Those air operations conducted against enemy installations, facilities, and personnel to directly assist the attainment of MAGTF objectives by the destruction of enemy resources or the isolation of the enemy's military forces. Also called OAS. (MCRP 5-12C) OAS is one of the six functions of Marine aviation.

**preplanned air support**—Air support in accordance with a program, planned in advance of operations. Also called air support. (JP 1-02)

**reasonable assurance**—During each close air support mission, an acceptable level of risk under which the supported ground commander allows aircrews to attack targets and release ordnance without positive control. (MCRP 5-12C) See fire support coordination center.

rules of engagement—Directives issued by competent military authority which delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. Also called ROE. (JP 1-02)

**seabasing**—The employment of aircraft from naval platforms, to include carriers and amphibious shipping. Applies only to aircraft organizations.

**sortie**—In air operations, an operational flight by one aircraft. (JP 1-02)

**strike coordination and reconnaissance**— A mission flown for the purpose of acquiring and reporting deep air support targets and coordinating armed recon-

naissance or air interdiction missions upon those targets. Also called SCAR. (MCRP 5-12C)

supporting arms coordination center—A single location on board an amphibious command ship in which all communication facilities incident to the coordination of fire support of the artillery, air, and naval gunfire are centralized. This is the naval counterpart to the fire support coordination center utilized by the landing force. Also called SACC. (JP 1-02)

**suppression of enemy air defenses**—That activity which neutralizes, destroys, or temporarily degrades surface-based enemy air defenses by destructive and/ or disruptive means. Also called SEAD. (JP 1-02)

tactical air command center—The principal United States Marine Corps air command and control agency from which air operations and air defense warning functions are directed. It is the senior agency of the US Marine air command and control system which serves as the operational command post of the aviation combat element commander. It provides the facility from which the aviation combat element commander and his battle staff plan, supervise, coordinate, and execute all current and future air operations in support of the Marine air-ground task force. The tactical air command center can provide integration, coordination, and direction of joint and combined air operations. Also called Marine TACC. (JP 1-02)

tactical air control center—The principal air operations installation (ship-based) from which all aircraft and air warning functions of tactical air operations are controlled. Also called Navy TACC. (JP 1-02)

tactical air control party—A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and for the control of aircraft. Also called TACP. (JP 1-02)

tactical air coordinator (airborne)—An officer who coordinates, from an aircraft, the action of combat aircraft engaged in close support of ground or sea forces. Also called TAC(A). (JP 1-02)

tactical air direction center—An air operations installation under the overall control of the tactical air control center (afloat)/tactical air command center, from which aircraft and air warning service functions

of tactical air operations in an area of responsibility are directed. Also called TADC. (JP 1-02)

tactical air operations center—The principal air control agency of the US Marine air command and control system responsible for airspace control and management. It provides real time surveillance, direction, positive control, and navigational assistance for friendly aircraft. It performs real time direction and control of all antiair warfare operations, to include manned interceptors and surface-to-air weapons. It is subordinate to the tactical air command center. Also called TAOC. (JP 1-02)

tactical recovery of aircraft and personnel—A mission performed by an assigned and briefed aircrew for the specific purpose of the recovery of personnel, equipment, and/or aircraft when the tactical situation precludes search and rescue (SAR) assets from responding and when survivors and their location have been confirmed. Also called TRAP. (MCRP 5-12C)

target list—The listing of targets maintained and promulgated by the senior echelon of command; it con-

tains those targets that are to be engaged by supporting arms, as distinguished from a "list of targets" that may be maintained by any echelon as confirmed, suspected, or possible targets for informational and planning purposes. (JP 1-02)

time on station—The time that an aircraft can actually spend performing its assigned mission. It does not include the time transiting to and from the operating site. Also called TOS. (MCRP 5-12C)

time on target—1. Time at which aircraft are scheduled to attack/photograph the target. 2. The actual time at which aircraft attack/photograph the target. 3. The time at which a nuclear detonation is planned at a specified desired ground zero. Also called TOT. (JP 1-02)

weaponeering—The process of determining the quantity of a specific type of lethal or nonlethal weapons required to achieve a specific level of damage to a given target, considering target vulnerability, weapon effect, munitions delivery accuracy, damage criteria, probability of kill, and weapon reliability. (JP 1-02)