USFK REGULATION 25-10

INFORMATION MANAGEMENT (25)

Communications-Electronics-Signal Operation Instructions

1 March 2010

UNCLASSIFIED

HEADQUARTERS
UNITED STATES FORCES, KOREA
UNIT #15237
APO AP 96205-0010

USFK Regulation
No. 25-10

1 March 2010

(Effective Date 25 September 1991)
Communications-Electronics
SIGNAL OPERATING INSTRUCTIONS

SUPPLEMENTATION. Issue of further supplements to this regulation by subordinate commands is prohibited unless prior approval is obtained from HQ USFK, Unit #15237, ATTN: FKJ6-O, APO AP 96205-0010.

1. **PURPOSE.** This regulation prescribes policies, responsibilities, and procedures for implementation of signal operating instructions (SOI), formerly the communications electronics operating instructions (CEOI), including SOI related support systems, for United States Forces, Korea (USFK).

2. **APPLICABILITY.** This regulation applies to all U.S. Forces stationed in the Republic of Korea (ROK) and to those forces augmenting U.S. Forces for exercises and contingencies, whether operating in single channel (SC) or spread spectrum modes, also called frequency hopping (FH).

3. **REFERENCES.** Required and related publications are listed in appendix A.

4. **EXPLANATION OF ABBREVIATIONS.** Abbreviations used in this regulation are explained in the glossary.

5. **RESPONSIBILITIES.**

a. The Assistant Chief of Staff (ACofS), J6, Operations Division, is responsible for staff supervision to ensure compliance with this regulation and the doctrine presented in FM 24-6/TACP 50-48/USMC FM FRP 3-352 (DRAFT).

(1) The USFK joint communications staff (J6) is a functionally organized staff that controls and coordinates joint signal services for all elements in a joint operation or exercise. As they apply to radio systems, these services normally include but are not limited to--

(a) Distributing required electronic counter-counter measures (ECCM) variables.

(b) Publishing standing operating procedures (SOPs) for communications.

(c) Providing frequency management.

***This regulation supersedes USFK Reg 105-1, 31 July 1989, and EUSA Suppl 1 to AR 105-64, 3 April 1986.**

(d) Coordinating with the host government for frequencies.

(e) Communications security (COMSEC) assignment and use.

(2) The USFK joint communications staff publishes the information below in operations plans, operations orders, or in SOPs.

(a) Preset channel functions (United States Air Force (USAF) uses mission sets).

(b) Operating procedures for SC and FH modes.

(c) Hopset use.

(d) Transmission security (TRANSEC) assignments and use.

(e) Applicable dates for net configurations.

(f) Clock time standards for networks.

(g) Emergency destruction plans.

Planning for ECCM/spread spectrum radio systems is much more complicated than for previous radios. Prior planning and frequency management are essential to each unit's COMSEC.

(3) In multiservice operations, all four services may use similar or compatible equipment within the same tactical operating area(s). To preclude interference from competing users, limited frequency resources must be managed at a multiservice command level. For effective management and operations of interservice communications systems (such as SINCGARS, HAVE SYNC, HAVE QUICK, etc.), a radio systems working group (RSWG) should be established. The RSWG should be chaired by J3, supported by staff personnel, and have J6 representation from the following areas:

(a) The USFK, J6, COMSEC custodian (FKJ6-OM-SS).

(b) The USFK, J6, SOI manager (FKJ6-OM-TS).

(c) The USFK, J6, communications planning officer (FKJ6-OP)

(d) The USFK, J6, Joint Frequency Management Office (JFMO), and if possible, representatives from the ROK Ministry of National Defense.

(4) Those who participate in the RSWG must be knowledgeable of--

(a) Service-unique communications requirements.

(b) The operation and management of SINCGARS/HAVE SYNC computer-based data management systems (basic generation unit (BGU), Key Distribution Management System (KDMS), etc.) and fill devices.

(5) The RSWG coordinates with the J2 and the J3 for planning electronic warfare (EW). The J3 establishes the joint EW staff (EWS) for planning EW operations. EWS normally consists of the--

(a) J2.

(b) J3.

(c) Electronic warfare officer.

(d) J6.

(e) Representatives from component services.

(6) The EWS coordinates all EW emissions in the joint arena. After coordination is complete, the J6 publishes a joint restricted frequency list (JRFL). The JRFL identifies those specific frequencies and/or bands which are designated solely for authorized users and are not to be used by exercise forces or forces performing the jamming mission. The Commander, USFK, has final approval of the JRFL, which must be continually updated to ensure maximum effectiveness of EW assets and communications systems.

(7) Working with host nation authorities, the JFMO (in coordination with the RSWG) builds the frequency list for mission sets. Once authorized frequencies are assigned, it is the operator's responsibility to build mission sets for operational use. To build a mission set, the operator must have all the equipment to produce a data set with COMSEC key, TRANSEC variable, and ECCM data. Equipment currently available to produce the data sets includes the Army Battlefield Electronic Communications Electronics Operating System (BECS), the Air Force KDMS and the Navy Automated Data Management System. BECS is widely used because it can generate SINCGARS fill data. In addition, the USAF's KDMS can read the BECS diskette. For COMSEC and TRANSEC key management, a local management device may be necessary.

(8) Plans must include provisions to prevent interference between collocated radios operating in the same frequency band. The potential for interference exists in both SC and FH modes. To help eliminate this interference, separate voice and data network hopsets will be allocated.

(9) When the multiservice frequencies, SINCGARS/HAVE SYNC ECCM variables, and other SOI are identified, J6 must provide these items to service communications liaison personnel.

(10) J6 planning for the SOI must include factors such as type of radios available in subordinate or allied units, cryptographic equipment, key lists, and frequency assignments available from the host nation for the particular area of operations. Additionally, all plans and decisions must comply with the host nation's applicable standardization agreements.

(11) J6 will consider equipment interoperability as a major issue in network planning for radio systems. Planning must cover FH, if applicable, and SC modes of operations. U.S. Forces use compatible FH radios, but allied nations may not have radios interoperable with those of U.S. Forces. Therefore, plans should address interfaces between SC and FH radios or lateral placement of interoperable radios in allied command posts.

(12) The J6 controls the use of cryptographic materials (key lists and devices) to ensure interoperability at all levels. Again, the allied forces may need to be augmented with US equipment and personnel for interoperability.

(13) Frequency assignments are area dependent, and net planning by J6 requires timely updates if units change their area of operation.

(14) The J6 coordinates with all assigned service components to consolidate input on their organizational and special communications needs to ensure that all contingencies are addressed in the SOI prior to dissemination. After the SOI is complete, it will be transferred to a central SOI controller (or publisher), such as United States Commander in Chief, Pacific (USCINCPAC) or National Security Agency (NSA), as directed by higher authority. If the SOI is used for in-theater requirements (including training), it will be transferred either electronically, by paper, or by electronic fill devices to the subscribers.

(15) The J6 staff will coordinate with air, ground, naval, and amphibious operations planners at the Command Center Seoul, tactical air control center, and battlefield coordination element. This coordination ensures that sufficient radio nets are reserved and available for essential air and ground communications. Once essential nets are identified, they are published by operations in the integrated tasking order and made available to aircrew and controlling agencies.

b. The Commander, United States Air Forces Korea, will ensure that this policy is disseminated to and implemented by all Air Force units assigned to or deployed to the ROK and that one copy of all SOI for Air Force units in the ROK is provided to HQ USFK, J6, Operations Division, prior to the SOI's use.

c. The Commander, United States Naval Forces Korea, will ensure that this policy is disseminated to and implemented by all Naval and Marine Forces assigned to or deployed to the ROK and that one copy of all SOI for Naval and Marine units in the ROK is provided to HQ USFK, J6, Operations Division, prior to the SOI's use.

d. The Commander, Eighth United States Army, will ensure that this policy is sent to and carried out by all Army units assigned to or deployed to the ROK and that one copy of all SOI for Army units in the ROK is provided to HQ USFK, J6, Operations Division, prior to the SOI's use.

6. POLICY.

a. All USFK operational control and assigned forces will adhere to the SOI implementation policies of their respective services when there are no definitive joint policies/guidelines. Policies contained in this regulation are governed by host nation needs and practices. Conflicts between this regulation and those of the four services will be referred to HQ USFK, J6, Operations Division, for resolution.

b. The purpose of the SOI is to support interoperable communications among surface and airborne command and control assets to the maximum extent possible. In conjunction with the SOI, the services have also addressed the availability, distribution, and management of ECCM variables and have developed the necessary SOI/ECCM system support equipment. The Army will use the Battlefield Electronic CEOI/SOI System (BECS/BESS). The Marine Corps will use a Micro-Soft Disc Operating System driven program. BECS, or modifications thereof, will be integrated into ground units to enhance the communications process. The Air Force's KDMS supports its HAVE SYNC radios. KDMS meets the particular needs of the Air Force, not only for interoperability with SINCGARS radios used by other services, but also for the USAF-unique communications between 88-151.975 MHz.

c. All units operating radio nets, radio teletype nets, and multichannel systems (primarily in the high frequency and ultra high frequency frequency ranges) are required to have SOI, authentication tables, and supplemental instructions, as described in service doctrine. After the multiservice requirements have been met, each service representative can then develop a frequency listing for lower echelon distribution. As lower echelon nets are identified, frequencies, call signs, and other SOI, ECCM, and COMSEC information must be provided to the J6 so that theater nets can be properly managed on behalf of joint and service users.

d. Frequencies for SOI used in the ROK will be assigned by the JFMO (ACofS, J6, Operations Division). Frequencies will change daily to provide increased operational and communications security.

e. Unit daily operational SOI are used to support operational requirements during armistice/peacetime, and will be utilized to transition to war. Wartime and contingency SOI are held by units in a reserve status, and issued to support actual plans. Activation of reserve editions of SOI will be coordinated with HQ USFK, J6, Operations Division (FKJ6-OM-TS).

f. Augmentation/mobilization units identified in time-phased force deployment data will limit use of wartime SOI, designed for worldwide support, to initial reception and staging locations until JFMO and host nation concurrence is obtained for further use, or a replacement SOI is issued. All SOI will be coordinated with HQ USFK, J6, Operations Division, prior to use in Korea.

g. All SOI will be classified at least CONFIDENTIAL in accordance with each service's Information Security Program.

h. As directed by Chief of Staff, USFK, U.S. message text formats (USMTF) will be used for all USFK message traffic. Therefore, all message traffic forwarded to HQ USFK, J6, Operations Division, including coordination relating to SOI and/or frequency management, must conform to USMTF standards.

i. The deployment and use of spread-spectrum technologies in this theater will be coordinated with J6 to ensure proper allocation of frequency band resources, deconfliction, integration where necessary, and continuous support of host nation, combined, and joint requirements.

j. Provide ACofS, J6 Operations Division, one copy of all manually produced SOI.

k. Include the ACofS, J6, and the ACofS, J2, on all SOI related insecurity reports.

l. Situations in which nonchanging FM frequencies may be required include, but are not limited to cellular, multiunit, multisystem relay, air traffic control, and safety related nets.

m. All USFK units will submit proposed SOI to the ACofS, J6, Operations Division, for validation before requesting USCINCPAC, Joint Chiefs Staff, or the NSA to centrally produce them.

n. HF assignments will not normally be subject to daily change. Short-haul (less than 20 miles) or line-of-sight systems are candidates for daily changing. All other HF nets will normally be changed periodically in response to changing propagative conditions only. All approved HF frequencies will be listed in the SOI.

o. Once hostilities commence, personal computers/BGUs, floppy disks, and other transfer media are vulnerable to battlefield effects such as electromagnetic pulse and other electronic and nuclear, biological, or chemical threats. Additionally, the battlefield condition may not permit manual distribution of transfer media to all net control stations and net members uniformly. To ensure theater-wide uniformity of ECCM variables once hostilities commence, all nets should continue to use the variables loaded into their radios until the tactical situation permits or dictates an exchange of transfer media (fill devices, floppy disks, etc). Based on a recommendation from the communications staff, the commander is responsible for determining when such an exchange should take place.

p. To support radio system compatibility and interoperability between all tasked mission aircraft and ground elements, air and ground planners must, prior to operations, coordinate with USFK, J6, and subordinate component levels to ensure all combat and combat support elements have the following:

(1) All required electronic fill data authenticators.

(2) An appropriate tasking order which includes:

(a) Electronic fill data tags, cue and manual frequencies, and net identification documents for all radio nets.

(b) Authentication procedures for accessing all essential radio nets.

q. For interoperability, joint force operations require frequency management at theater level. Combined operations may apply if allies use compatible radios. Inside the borders, airspace, or territorial waters of foreign countries, U.S. forces have no independent authority to use radio frequencies during peacetime. They are subject to existing international agreements. The U.S. State Department and theater Commander in Chief (specifically USCINCPAC) coordinate these agreements with allied governments.

The proponent of this regulation is the Office of the Assistant Chief of Staff, J6. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the Commander, USFK, Unit #15237, ATTN: FKJ6-O, APO AP 96205-0010.

FOR THE COMMANDER:

OFFICIAL:

JAMES R. TAYLOR
Major General, USA
Chief of Staff

JAY D. ALLEN
Lieutenant Colonel, USA
Assistant Adjutant General

Appendix
A. References

Glossary

DISTRIBUTION:
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SPECIAL DISTRIBUTION:
20 - CDR, USNFK, 96205-0023
20 - CDR, USAFK, APO AP 96278

APPENDIX A

REFERENCES

RELATED PUBLICATIONS

AFR 700-14 (Radio Frequency Spectrum Management).

AFR 700-18 (Land Mobile Radio System Management).

AR 105-64 (US Army Communications--Electronics Operation Instructions (CEOI) Program.)

AR 380-5 (Department of the Army Information Security Program).

DA Pam 25-7 (Joint User Handbook for Message Text Formats).

FM 5-12 (Army Management of the Electromagnetic Spectrum)

FM 11-30 (MSE Corps/Division Signal Unit Operations).

FM 11-32 (Combat Net Radio Operations).

FM 24-1 (Signal Support in the Airland Battle).

FM 24-6/USMC FMFRP 3-352/LANTFLT TIP XX-XX/TACP 50-48/PACAFP 50-48 USAFEP 50-48/AACP 50-48/MACP 50-48 ("Talk II SINCGARS" Multi-Service Communications Procedures for Single Channel Ground and Airborne Radio System (SINCGARS)) (DRAFT).

FM 24-18 (Tactical Single-channel Radio Communications Techniques).

FM 24-35-1 (Signal Supplemental Instructions).

JCS Pub 0-2 (Unified Action Armed Forces).

JCS Pub 1-02 (Dictionary of Military and Associated Terms).

JCS Pub 3-01.2 (Joint Doctrine of Theater Counter Air Operation).

TC 11-37 (MSE Primer for Small-unit Leaders).

TC 24-35 (Signal Operating Instructions: "The SOI").

GLOSSARY

ACofS	Assistant Chief of Staff
BECS	Battlefield Electronic Communications Electronics Operating System
BGU	basic generation unit
CEOI	communications electronics operating instructions
COMSEC	communications security
ECCM	electronic counter-counter measures
EW	electronic warfare
EWS	electronic warfare staff
FH	frequency hopping
FM	frequency modulation
HF	high frequency
JFMO	Joint Restricted Management Office
JRFL	joint restricted frequency list
KDMS	Key Distribution Management System
NSA	National Security Agency
ROK	Republic of Korea
RSWG	radio systems working group
SC	single channel
SOI	signal operating instructions
SOP	standing operating procedures
TRANSEC	transmission security
UHF	ultra high frequency
USAF	United States Air Force
USINCPAC	United States Commander in Chief, Pacific
USFK	United States Forces, Korea
USMTF	U.S. message text format