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**Operations**

**ELECTRONIC WARFARE INTEGRATED  
REPROGRAMMING PROCEDURES**

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This instruction implements Air Force Policy Directive (AFPD) 10-7, *Information Operations*. It extends the guidance of Air Force Instruction (AFI) 10-703, *Electronic Warfare Integrated Reprogramming*. It establishes procedures to accomplish Electronic Warfare Integrated Reprogramming (EWIR) in the event of a Serene Byte (SB) or Pacer Ware (PW). This instruction applies to all units assigned to the 442 d Fighter Wing (FW) involved with EWIR. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/>.

## **1. General**

1.1. The EWIR process reprograms Electronic Warfare (EW) systems rapidly and efficiently to meet changing threats. The 442 FW systems affected are the Airborne Integrated Receiver (ALR)-69 Radar Warning Receiver (RWR), the Airborne Integrated Transceiver (ALQ)-184 Electronic Countermeasures (ECM) Pod, the Airborne Integrated Dispenser (ALE)-47 Countermeasures Dispenser System (CMDS) and the ALQ-213 Countermeasures Set (CMS).

1.2. The Wing will be notified of EWIR actions through a PW for real world software changes affecting combat aircraft or a SB to exercise all or part of the EWIR process. PW messages are normally generated by a Reprogramming Center (RC), but a SB may be generated by any level of the EWIR process from the RC to an event coordinator to exercise all or portions of the EWIR process. Timeliness is a very critical element of EWIR, so the 442 FW goal is to have the first system reprogrammed within two hours of 442d Electronic Combat Pilot (ECP) approval.

1.3. The primary event coordinator for all 442FW EWIR is the Wing ECP. The Wing ECP's office is 303 Fighter Squadron, Wing Weapons and Tactics. Alternate event coordinators are designated by the Wing ECP. The event coordinator is authorized to coordinate directly with all affected base organizations to facilitate an efficient and effective EWIR process. See Attachment 2 for a phone contact list.

## **2. Responsibilities in Addition to Those Directed by AFI 10-703:**

2.1. The 442FW ECP:

2.1.1. Is designated as the 442 EW point of contact.

2.1.2. Acts as the primary EWIR event coordinator.

2.1.3. Ensures that all organizations participating in EW reprogramming have access to the Multi-Service Electronic Warfare Data Distribution System (MSEWDDS).

2.1.4. Ensures that all organizations participating in EW reprogramming have access to the PACER WARE Non-classified Internet Protocol Router Network (NIPRNET) notification system: <https://wwwmil.53wg.eglin.af.mil>.

2.1.4.1. Selects Pacer Ware Database in the links section of the web page to register for an account.

2.1.5. Maintains a list of alternate EWIR event coordinators and designates alternate(s).

2.1.6. Coordinates with Intel to brief all EWIR actions and ramifications to affected aircrews.

2.1.7. Works with associated Aircraft Maintenance Squadron (AMXS) Specialist flight personnel to reprogram EW systems.

2.2. AMXS Specialist Flight:

2.2.1. Maintains a working Secret Internet Protocol Router Network (SIPRNET) connection for use in the EWIR process.

2.2.1.2. When deployed, uses either SIPRNET laptop or deployed assets to accomplish connectivity.

2.2.2. Ensures that at least three individuals in the Specialist Flight have current SIPRNET access, and have accounts set up on the MSEWDDS system at Eglin AFB.

2.2.2.1. When deployed, ensures that sufficiently trained personnel are sent to support EWIR operations.

2.2.3. Ensures that MSEWDDS accounts have the libraries enabled for the following weapons systems: ALR-69, ALQ-184, ALE-47, ALQ-213, and PLM-4.

2.2.4. Maintains and/or has access to a secure telephone system (STU-III or STE).

2.2.4.1. When deployed, mobilize secure telephone assets for use in EWIR.

2.3. Maintenance Squadron ECM Pod Shop:

2.3.1. Maintains a working SIPRNET connection for use in the EWIR process and to use as a backup to the Specialist Flight.

2.3.1.1. When deployed, uses either SIPRNET laptop or deployed assets to accomplish connectivity.

2.3.2. Ensures that at least three individuals in the ECM Shop have current SIPRNET access, and have accounts set up on the MSEWDDS system at Eglin AFB.

2.3.2.1. When deployed, ensures that sufficiently trained personnel are sent to support EWIR operations.

2.3.3. Ensures that MSEWDDS accounts have the libraries enabled for the following weapons systems: ALR-69, ALQ-184, ALE-47 and ALQ-213.

2.3.4. Maintains and/or has access to a STU-III or STE.

2.3.5. Helps the AMXS with reprogramming of EW systems when needed to accomplish the mission.

### **3. EWIR Flow and Sequence of Events:**

3.1. A EWIR event normally starts with the arrival of a SB or PW message through either the Command Post and/or the PACER WARE notification system (NIPRNET). The Command Post provides 24-hour coverage for message notification either through 442 FW personnel or Host Base coverage. The Command Post will notify the Wing ECP, the Specialist Flight, and the ECM Pod Shop (if applicable). In the event that the ECP is unavailable to take the message, an alternate event coordinator shall assume those duties.

3.2. The normal flow of EWIR messages is as follows:

3.2.1. System Impact Message (SIM): EWIR message that describes parametric changes to threats and details what effect the changes will have on a particular aircraft EW system. Maintenance organizations should prepare to reprogram the identified EW systems by gathering the required equipment and ensuring they have access to SIPRNET and the MSEWDDS.

3.2.2. Reprogramming Impact Message (RIM): EWIR message that normally follows a SIM that details how the Reprogramming Center plans to compensate for the change in the threat and how the reprogramming actions affect a particular EW system. A Time Compliance Technical Order (TCTO) or Maintenance Instruction Message (MIM) may also arrive to provide detailed reprogramming procedures for maintenance personnel. Maintenance organizations should follow the procedures contained in the MIM (if applicable) and load the software identified in the RIM, MIM, and TCTO into their reprogramming equipment.

3.2.3. Implementation Message: EWIR message providing authorization from higher headquarters to reprogram the affected EW systems. However, maintenance organizations will not reprogram aircraft and ECM pods without approval from the Wing ECP or alternate event coordinator. The Wing ECP or alternate event coordinator will brief the 442d Operations Group Commander (442 OG/CC) on the effect of the EWIR and determine the appropriate time to load the affected EW system based on current real-time conditions. The 442 OG/CC approval will be disseminated by the event coordinator.

3.3. The interval between messages can vary from a few hours during a SB exercise to several months for a PW dealing with a routine software upgrade. Following the RIM, reprogramming software will be available on the MSEWDDS.

3.4. The event coordinator will monitor the reprogramming process. All 442 FW EWIR organizations will follow instructions given by the event coordinator and applicable EWIR messages provided to them. Verbal instructions from the event coordinator are all that are required to perform steps in the EWIR process.

3.5. Time permitting, the event coordinator will make an effort to provide a copy of the EWIR messages to all 442 FW EWIR organizations. Both the AMXS Specialist flight and the ECM Pod Shop, as a backup, should download a copy of the appropriate reprogramming software in case of a system failure at either location.

3.6. The 442 FW EWIR process is designed to be flexible and survivable, and as such, maintenance organizations will be prepared to aid other sections with their reprogramming activity by providing extra equipment and personnel that are trained and compatible with the affected EW system.

3.7. All units will compile their reprogramming times, pertinent actions and problems encountered when reprogramming ceases and pass this information to the Wing ECP and/or event coordinator as soon as possible. The event coordinator will inform Maintenance Operations and Control (MOC) and/or the Ramp Supervisor of results and times.

3.8. The event coordinator will use the compiled data to generate the Unit Loading Message (ULM). For a PW, the ULM should be generated when the readily available aircraft or ECM pods are reprogrammed. A statement will be included in the ULM explaining why the remaining units were not reprogrammed and when the reprogramming is projected to be complete. For a SB, the ULM will be composed when the required number of systems is reprogrammed. The event coordinator will inform the OG/CC and MOC when reprogramming is complete. (Sample ULM message format can be found in AFI 10-703).

#### **4. Adopted Form:**

AF Form 847, *Recommendation for Change of Publication*

ROBERT S. ARTHUR, Colonel, USAFR  
Commander

**Attachment 1**  
**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION**

***References***

AFI 10-703, *Electronic Warfare Integrated Reprogramming*, 31 October 2001

AFPD 10-7, *Information Operations*, 06 September 2006

AFMAN33-363, *Management of Records*, 1 March 2008

***Abbreviations & Acronyms***

AF – Air Force

AFI – Air Force Instruction

AFMAN – Air Force Manual

AFPD – Air Force Policy Directive

ALE – Airborne Integrated Dispenser

ALR – Airborne Integrated Receiver

ALQ – Airborne Integrated Transceiver

AMXS – Aircraft Maintenance Squadron

CMDS – Counter Measures Dispenser System

CMS – Counter Measures Set

ECM - Electronic Counter Measures

ECP – Electronic Combat Pilot

EW – Electronic Warfare

EWIR – Electronic Warfare Integrated Reprogramming

FW- Fighter Wing

FWI – Fighter Wing Instruction

IMP – Implementation Message

IMT – Information Management Tool

MIM – Maintenance Instruction Message

MOC – Maintenance Operations and Control

MSEWDDS – Multi-Service Electronic Warfare Data Distribution System

MXS – Maintenance Squadron

NIPRNET - Non-classified Internet Protocol Router Network

OG/CC – Operations Group Commander  
OPR – Office of Primary Responsibility  
PW – Pacer Ware  
RC – Reprogramming Center  
RDS - Records Disposition Schedule  
RIM – Reprogramming Impact Message  
RWR – Radar Warning Receiver  
SB – Serene Byte Exercise  
SIM – System Impact Message  
SIPERET – Secret Internet Protocol Router Network  
STE – Secure Telephone System  
STU-III - Secure Telephone System  
TCTO – Time Compliance Technical Order  
ULM - Unit Loading Message

### *Terms*

**ELECTRONIC WARFARE INTEGRATED REPROGRAMMING (EWIR)** - The process that fully integrates operations, intelligence, communications, logistics, and other support functions to provide changes to reprogrammable electronic warfare equipment hardware and software, tactics, and equipment settings. EWIR gives the Air Force a clear and comprehensive picture of tasks, data, staffing, and the interrelationships between the agencies that reprogram EW equipment. This process forms the basis for developing Air Force procedures, organizations, facilities, and expertise to ensure responsive EW reprogramming during peacetime, wartime, and contingencies.

**PACER WARE** - Term for actual electronic warfare system changes issued during peacetime, contingencies, or wartime operations. PACER WARE actions can be at the routine, urgent, or emergency level as required.

**SERENE BYTE** - Acronym for exercising Air Force electronic warfare system changes.

**Attachment 2  
Telephone Listing**

Agency	Number(s)
442 OG/CC	660-687-3291 DSN 975-3291
442 FW ECP	660-687-4660 DSN 975-4660
442 FW Command Post	660-687-3564 DSN 975-3564
AMXS Specialist Flight	660-687-2757 DSN 975-2757
ECM Pod Shop	660-687-3930 DSN 975-3930
MOC	660-687-1250 DSN 975-1250
AMX/MXA Superintendent	660-687-3898 DSN 975-3898
MXS Superintendent	660-687-7174 DSN 975-7174