

**BY ORDER OF THE COMMANDER  
442D FIGHTER WING**



**DEPARTMENT OF THE AIR FORCE  
MANUAL 10-703\_442 FIGHTER WING  
Supplement**

**22 SEPTEMBER 2022**

**Operations**

**ELECTRONIC WARFARE  
INTEGRATED REPROGRAMMING  
PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**ACCESSIBILITY:** Publications and forms are available on the e-publishing website at <http://www.e-publishing.af.mil/Product-Index/> for downloading or ordering

**RELEASABILITY:** There are no releasability restrictions on this publication.

---

OPR: 442MXS/MXMVE

Certified by: 442 OG/CC  
(Col. Mark A. Orek)

Supersedes: 442FWI10-703  
2 February 2021

Pages: 7

---

This instruction implements Department of the Air Force Policy Directive (DAFPD) 10-7, *Information Operations*. It extends the guidance of Department of the Air Force Manual (DAFMAN) 10-703, *Electromagnetic 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 442d Fighter Wing (FW) involved with EWIR. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF 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 Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS).

**SUMMARY OF CHANGES**

This document has been revised and must be completely reviewed.

## 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, therefore, 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 DAFMAN 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 Data Distribution System (MSDDS).

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: Email address registered with PACER WARE Database (PWDB). [53ewg.ew.ewhelpdesk@us.af.mil](mailto:53ewg.ew.ewhelpdesk@us.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 MSDDS 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 MSDDS 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 MSDDS 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 MSDDS 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 MSDDS.

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 MSDDS.

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 DAFMAN 10-703).

STEPHEN J. NESTER, COL, USAF  
Commander, 442d Fighter Wing

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

AFI 33-322, *Records Management and Information Governance Program*, 28 July 2021

DAFPD 10-7, *Information Operations*, 21 June 2021

DAFMAN 10-703, *Electronic Warfare Integrated Reprogramming*, 02 June 2021

***Adopted Forms***

DAF 847, *Recommendation for Change of Publication*

***Abbreviations and Acronyms***

**AF**—Air Force

**AFI**—Air Force Instruction

**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

**DAF**—Department of the Air Force

**DAFPD**—Department of the Air Force Policy Directive

**DAFMAN**—Department of the Air Force Manual

**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

**MIM**—Maintenance Instruction Message

**MOC**—Maintenance Operations and Control

**MSDDS**—Multi-Service 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

**PWDB**—PACERWARE Database

**RC**—Reprogramming Center

**RDS**—Records Disposition Schedule

**RIM**—Reprogramming Impact Message

**RWR**—Radar Warning Receiver

**SB**—Serene Byte Exercise

**SIM**—System Impact Message

**SIPRNET**—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**

**Table A2.1. Telephone Listing.**

Agency	Number(s)
442 OG/CC	660-687-3291 DSN 975-3291
442 FW ECP	660-687-2716 DSN 975-2716
442 FW Command Post	660-687-3564 DSN 975-3564
AMXS Specialist Flight	660-687-2757 DSN 975-2757
ECM Pod Shop	660-687-3903 DSN 975-3903
MOC	660-687-1250 DSN 975-1250
AMX/MXA Superintendent	660-687-3898 DSN 975-3898
MXS Superintendent	660-687-7174 DSN 975-7174