

**BY ORDER OF THE COMMANDER
BEALE AIR FORCE BASE**

**DEPARTMENT OF THE AIR FORCE
MANUAL 10-703**



**BEALE AIR FORCE BASE
Supplement**

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Operations

**ELECTROMAGNETIC WARFARE
INTEGRATED PROGRAMMING**

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((Added-BEALEAFB)) This instruction extends the guidance the Department of the Air Force Manual (DAFMAN) 10-703, Electromagnetic Warfare Integrated Reprogramming. It extends local responsibilities, outlines procedures for the Electromagnetic Warfare Integrated Reprogramming (EWIR) process after a PACER WARE/SERENE BYTE (PW/SB) event, and applies to all organizations assigned or attached to the 9th Reconnaissance Wing. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, Management of Records, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Route suggested changes to this document using AF Form 847, Recommendation for Change of Publication, through functional chains of command to 9th Reconnaissance Wing Weapons and Tactics branch (9 RW/A3W)

SUMMARY OF CHANGES

((Added-BEALEAFB)) This document has been substantially revised and a complete review of its contents is necessary. It supplements AFMAN 10-703, Electromagnetic Warfare Integrated Reprogramming and it supersedes AFI10-703_Beale Supplement, 8 Jan 14, Certified Current 3 Apr 19. This instruction applies to personnel responsible for reprogramming U-2 EW systems at 9 RW and all overseas/deployed U-2 units. This supplement clarifies wing duties with regards to

the Electromagnetic Warfare Integrated Reprogramming (EWIR) process, alerting procedures, and reporting requirements.

2.4.1.3. **(Added-BEALFAFB)** 9 RW is designated by Headquarters Air Combat Command (HQ ACC) as the focal point of all U-2 operations, tactics and policy worldwide. This instruction defines the responsibilities, tools and procedures required to accomplish reprogramming of all U-2 EW systems. 9 RW Commander (9 RW/CC) has delegated responsibility for all EWIR actions to the 9 OG Director of Operations (9 OG/CC) and 9th Maintenance Group Commander (9 MXG/CC) and their overseas/deployed equivalents as outlined in this supplement. The U-2 AN/ALQ-221 EWS system is supported through cooperation between British Aerospace Engineering (BAE) Systems (prime EWS contractor), Lockheed Martin Aerospace (prime platform integrator) and Air Force Lifecycle Management Center WIA U-2 EW Program Office at Warner Robins Air Logistics Center.

2.4.1.4. **(Added-BEALFAFB)** 9 OG/CC is responsible for validating requirement(s), as recommended by the 9 RW EW POC, EWIR action team in conjunction with 36th Electronic Warfare Squadron (36 EWS), for reprogramming of U-2 AN/ALQ-221 system. 9 OG/CC is also the final approval authority for all U-2 EW reprogramming actions after applicable Implementation Message (IMP) and/or Reprogramming Impact Message (RIM) is received.

2.4.1.4.1. **(Added-BEALFAFB)** 9 OG/CC has passed oversight and management responsibility for EWIR actions to the 9 RW/A3 Director of Operations. This responsibility is fulfilled by the 9 RW EW POCs assigned to 9 RW/A3W (Wing Weapons and Tactics Flight) & 99 RS/DOK (Squadron Weapons and Tactics). The 9 RW EW POCs may be an AF officer, AF civilian, or qualified contractor, as determined by the 9 OG/CC.

2.4.2.1.1. **(Added-BEALFAFB)** 9 RW EWIR Action Team members will include 9 RW EW POCs (9 RW/A3W, 99 RS/DOK), 9 AMXS/MXAAS (including CFSR), 9 OSS/IN and 9 CS/CSBBS/SCBBD. The team will meet as required.

2.4.2.1.2. **(Added-BEALFAFB)** 9 RW EWIR Action Team members responsible for reprogramming actions will ensure the current guidance from HQ ACC and 350th SWW is known and followed. 9 RW EW POC is responsible for maintaining copies of HQ ACC and 350th SWW guidance/directives and forwarding this information to U-2 EWIR Team members.

2.4.2.5.1. **(Added-BEALFAFB)** 9 RW EW POC is responsible for forwarding all U-2 EWIR messages to the forward operating locations. These messages will be sent to the deployed/overseas units EW organizational accounts (not individuals) to avoid lost communications due to rotating personnel. 9 RW EW POC maintains a list of all U-2 unit EW organizational e-mail addresses.

2.4.2.6.1. **(Added-BEALFAFB)** 9 RW EW POC will notify 9 OG/CC of all U-2 EW reprogramming actions and coordinate reprogramming activities with 36th EWS per. Coordination with 330 ISRG occurs per their configuration management processes.

2.4.2.7.1. **(Added-BEALFAFB)** For all U-2 EW reprogramming actions, 9 RW EW POC will request and forward 9 OG/CC approval for reprogramming to Maintenance Production Superintendent (or deployed equivalent), CFSRs and U-2 deployed/overseas unit commanders. 9 RW EW POC will submit a Unit Loading Message (ULM) reporting reprogramming actions/results at all U-2 units (home and deployed/overseas). Individual U-2 units will not submit ULMs to HHQ; instead the 9 RW PACER WARE/SERENE BYTE After Action Worksheet is sent from each unit to the 9 RW EW POC for incorporation into one comprehensive ULM.

2.4.2.8.1. **(Added-BEALEAFB)** 9 RW EW POC will contact BAE CFSRs and/or 36 EWS/SWB for data on the current EW software versions.

2.4.2.9. **(Added-BEALEAFB)** 9 RW EW POC is the technical advisor to 9 RW/A3 and 9 OG/CC. This position may be supplemented by a qualified contractor. 9 RW EW POC responsibilities encompass wing, group, and squadron-level support to both home and deployed/overseas U-2 units.

2.4.2.9.1. **(Added-BEALEAFB)** 9 RW EW POC provides training for EWIR Team members on roles and responsibilities IAW with this supplement and AFI 10-703.

2.4.2.9.2. **(Added-BEALEAFB)** 9 RW EW POC will review aircrew feedback and intelligence inputs, including U-2 Mission Reports (MISREPs) to identify possible EW system deficiencies and coordinate with 36 EWS/SWB to prepare System Impact Message (SIM) and/or Operational Change Request (OCR) messages.

2.4.2.9.2.1. **(Added-BEALEAFB)** 9 RW EW POC will maintain an account on the 350th Electronic Warfare Group (EWG) PACER WARE Database (PWDB) system. PWDB is a secure NIPRNET method of accessing PW message notification information. It ensures that when PW messages are released on SIPRNET, NIPRNET e-mail notification is sent to 9 RW EW POC.

2.4.2.9.2.2. **(Added-BEALEAFB)** 9 RW EW POC will maintain unclassified and secret-level "9RW-PW" e-mail accounts. Additionally, 9 RW EW POC will maintain a SIPRNET user account and have 24/7 access to a secret-level (SIPRNET) computer.

2.4.2.10. **(Added-BEALEAFB)** 9 RW EW POC will maintain an account on MSDDS and will facilitate requests to 36 EWS/SWB for 9 RW EWIR Action Team member MSDDS access.

2.4.3.5. **(Added-BEALEAFB)** 9th Maintenance Group Commander (9 MXG/CC) is responsible for coordinating and facilitating reprogramming actions on U-2 EWS and providing the required personnel to accomplish these actions.

2.4.3.5.1. **(Added-BEALEAFB)** 9 MXG/CC directs 9 AMXS support of U-2 EWS reprogramming. 9 MXG/CC has passed the maintenance control of reprogramming actions to BAE Contractor Field Service Representatives (CFSR) assigned to support 9 AMXS and deployed/overseas equivalents.

2.4.3.5.2. **(Added-BEALEAFB)** 9 MXG/AFETS, where available, may assist during reprogramming activities upon request by BAE Contractor Field Service Representatives (CFSRs) (O-level/on-equipment/aircraft only).

2.4.3.6. **(Added-BEALEAFB)** 9th Aircraft Maintenance Squadron (9 AMXS) and overseas/deployed equivalents will:

2.4.3.6.1. **(Added-BEALEAFB)** Maintain continuity books and training programs reflecting the responsibilities and tasks to support EWIR notification processes and reprogramming actions.

2.4.3.6.2. **(Added-BEALEAFB)** Establish recall and notification procedures within the section to ensure qualified personnel are available in the event that reprogramming is required during other than normal duty hours.

2.4.3.6.3. **(Added-BEALEAFB)** For PW/SB message notification, maintain and monitor(daily) an organizational "EW" e-mail account. The minimum requirement is an unclassified (NIPRNET) account, and the goal is to have an additional secret-level classified (SIPRNET) organizational

account. If communications support restrictions do not allow organizational e-mail boxes, an alternate plan will be coordinated with and approved by the 9 AMXS and 9 RW EW POC.

2.4.3.6.5. **(Added-BEALFAFB)** Procure and maintain equipment for secure file downloads from MSDDS. Ensure CFSRs have access to these methods as needed. The primary means available for downloading files from MSDDS include, but are not limited to:

2.4.3.6.5.1. **(Added-BEALFAFB)** Access via SIPRNET; download files to appropriately marked/labeled media, and transfer to support equipment used for reprogramming.

2.4.3.5.4.2. **(Added-BEALFAFB)** Data transfer via Secure Telephone Unit-III (STU-III) or Secure Telephone Equipment (STE) from MSDDS to a classified computer.

2.4.3.5.4.3. **(Added-BEALFAFB)** Direct data transfer on support equipment with CFSR assistance.

2.4.3.5.4.4. **(Added-BEALFAFB)** If files/data is not accessible from MSDDS, it can be sent as an attachment to secure e-mail via SIPRNET, or it can be sent on appropriately marked/labeled media using authorized classified shipping and handling procedures.

2.4.3.6.6. **(Added-BEALFAFB)** Coordinate reprogramming schedule and requirements with the Production Superintendent (or equivalent), CFSRs, and unit commander. See the U-2 EW Reprogramming Flowchart, [Attachment 5](#).

2.4.3.6.7. **(Added-BEALFAFB)** Ensure a 9 RW PACER WARE/SERENE BYTE After Action Worksheet is completed. This reporting function should be coordinated with the CFSRs. Only one report per location/per reprogramming event is required. Forward the report to the 9 RW EW POC within 48 hours of reprogramming completion. Retain one copy for records.

2.4.3.7. **(Added-BEALFAFB)** Contract Field Service Representatives (CFSRs) will:

2.4.3.7.1. **(Added-BEALFAFB)** Establish recall and notification procedures within the section to ensure qualified personnel are available in the event that reprogramming is required during other than normal duty hours.

2.4.3.7.2. **(Added-BEALFAFB)** Coordinate reprogramming schedule and requirements with the Production Superintendent (or equivalent), maintenance supervision, and/or the unite commander (as required). See the U-2 EW Reprogramming Flowchart, [Attachment 5](#). Per current CFSR contract guidelines, accomplish O-level/on-equipment/aircraft and I-level/off-equipment/backshop reprogramming. The CFSR will not begin reprogramming systems until authorization is received via Reprogramming Impact Message (RIM) or Implementation Message (IMP) and approval from 9 RW/OG.

2.4.3.7.3. **(Added-BEALFAFB)** Establish an account on MSDDS and coordinate accountadministration actions with appropriate unit security manager.

2.4.3.7.4. **(Added-BEALFAFB)** Complete a 9 RW PACER WARE After Action Worksheet. This reporting function should be coordinated with 9 AMXS or overseas/deployed equivalents.

2.4.4.1.1. **(Added-BEALFAFB)** 9th Operations Support Squadron Intelligence Section (9 OSS/IN) supports U-2 EWIR functions for all home station and deployed/overseas U-2 locations.

2.4.4.2.1. **(Added-BEALEAFB)** Deployed/overseas U-2 aircrew support intelligence personnel will forward all U-2 Mission Reports (MISREP) to the 9 RW EW POC, 36 EWS/SWB and other recipients as directed by HQ ACC and theater-specific reporting guidance.

2.4.4.4.1. **(Added-BEALEAFB)** 9 OSS/IN will train all home and deployed/overseas U-2 aircrew support intelligence personnel on their EWIR-related responsibilities.

2.4.4.4.2. **(Added-BEALEAFB)** All U-2 aircrew support intelligence personnel will have access to MSDDS. MSDDS accounts will be established with assistance and training from 9 RW EW POC.

2.4.4.4.3. **(Added-BEALEAFB)** U-2 aircrew support intelligence personnel will download messages or data from the MSDDS via SIPRNET and pass to CFSR or maintenance personnel when required.

2.5. 25 **(Added-BEALEAFB)** 350 SWW/350 SWG provides direct support for EWIR actions for U-2 EWS. 36 EWS/SWB is designated by ACC as the technical and managerial focal point for U-2 EWS mission data reprogramming.

GEOFFREY I. CHURCH, Col, USAF
Commander

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

AFI 10-703, *Electronic Warfare Integrated Reprogramming*, 19 October 2010

AFMAN 33-363, *Management of Records*, 1 March 2008

Prescribed Forms

There are no prescribed to this publication.

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AMHS—Air Force Message Handling System

AVP—U-2 Avionics Processor

BAE—British Aerospace Engineering

CFSR—Contractor Field Service Representative

DMS—Defense Message System

IMP—Implementation Message

MISREP—Mission Report

OCR—Operational Change Request

ORM—Operational Risk Management

PWDB—PACER WARE Database

RIM—Reprogramming Impact Message

SIPRNET—Secret Internet Protocol Router Network

TASO—Terminal Area Security Officer

ULM—Unit Loading Message

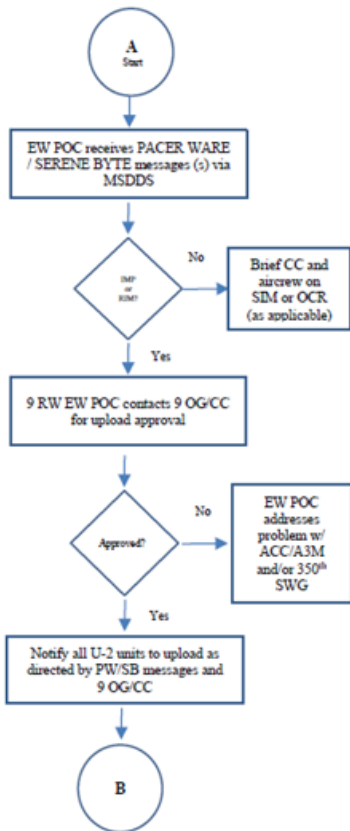
Attachment 4

U-2 EW REPROGRAMMING FLOWCHARTS

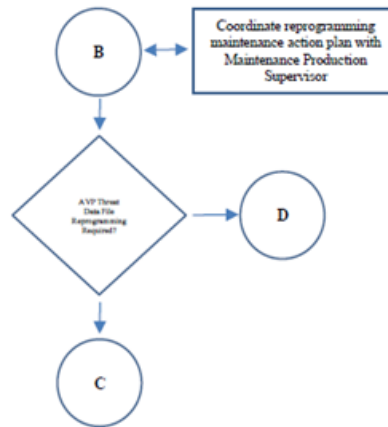
A4.1. (Added-BEALAFB) These flowcharts shall be used by the 9 RW EW POCs, 9 AMXS, BAE Contractor Field Service Representatives (CFSR), and equivalent deployed/overseas personnel during all PACER WARE/SERENE BYTE events.

Figure A4.1. (Added-BEALAFB) Notification & Maintenance Action Planning Procedures.

EW POC Procedures:



9 AMXS/MXAAS Procedures:



Reporting (required final step for all procedures)

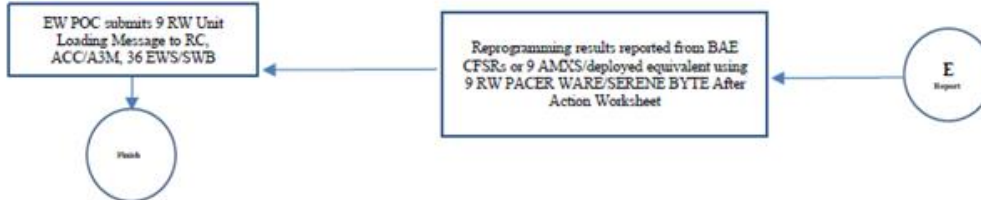


Figure A4.2. (Added-BEALAFB) On and Off-Equipment Reprogramming Procedures.
On and Off-Equipment Reprogramming Procedures

These procedures are normally accomplished by CFSRs.

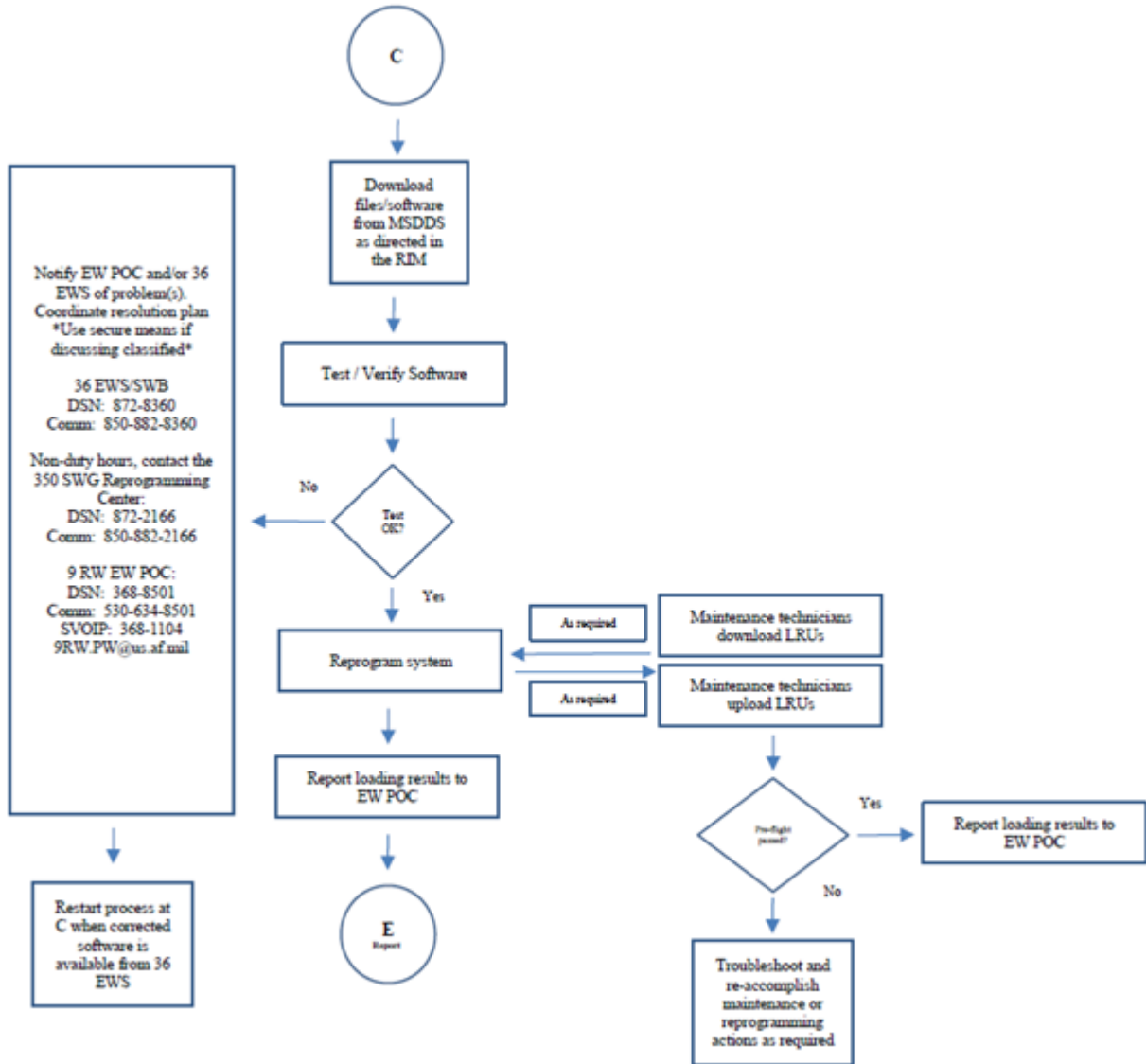
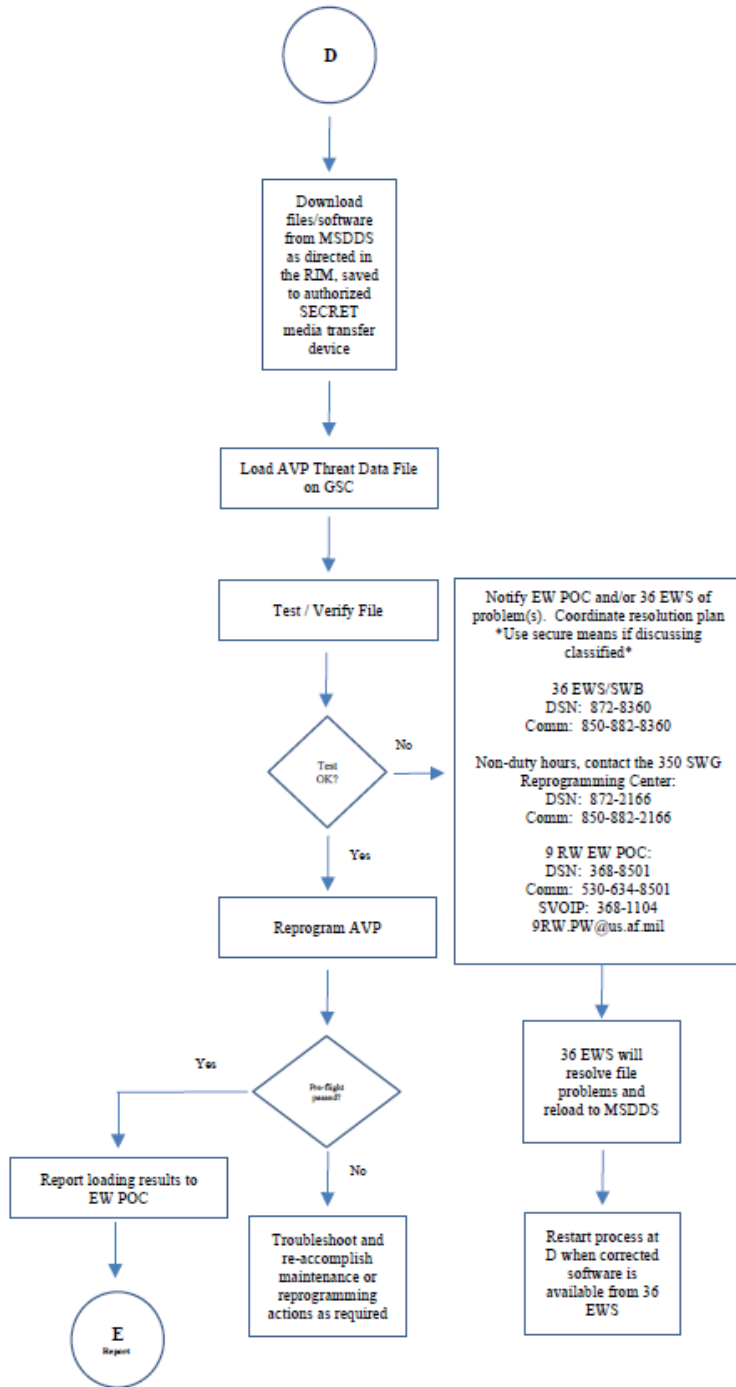


Figure A4.3. (Added-BEALAFB) AVP Threat Data File (for AN/ALQ-221) Reprogramming Procedures.

AVP Threat Data File (for AN/ALQ-221) Reprogramming Procedures

9 AMXS/MXAAS or deployed/overseas equivalent procedures:

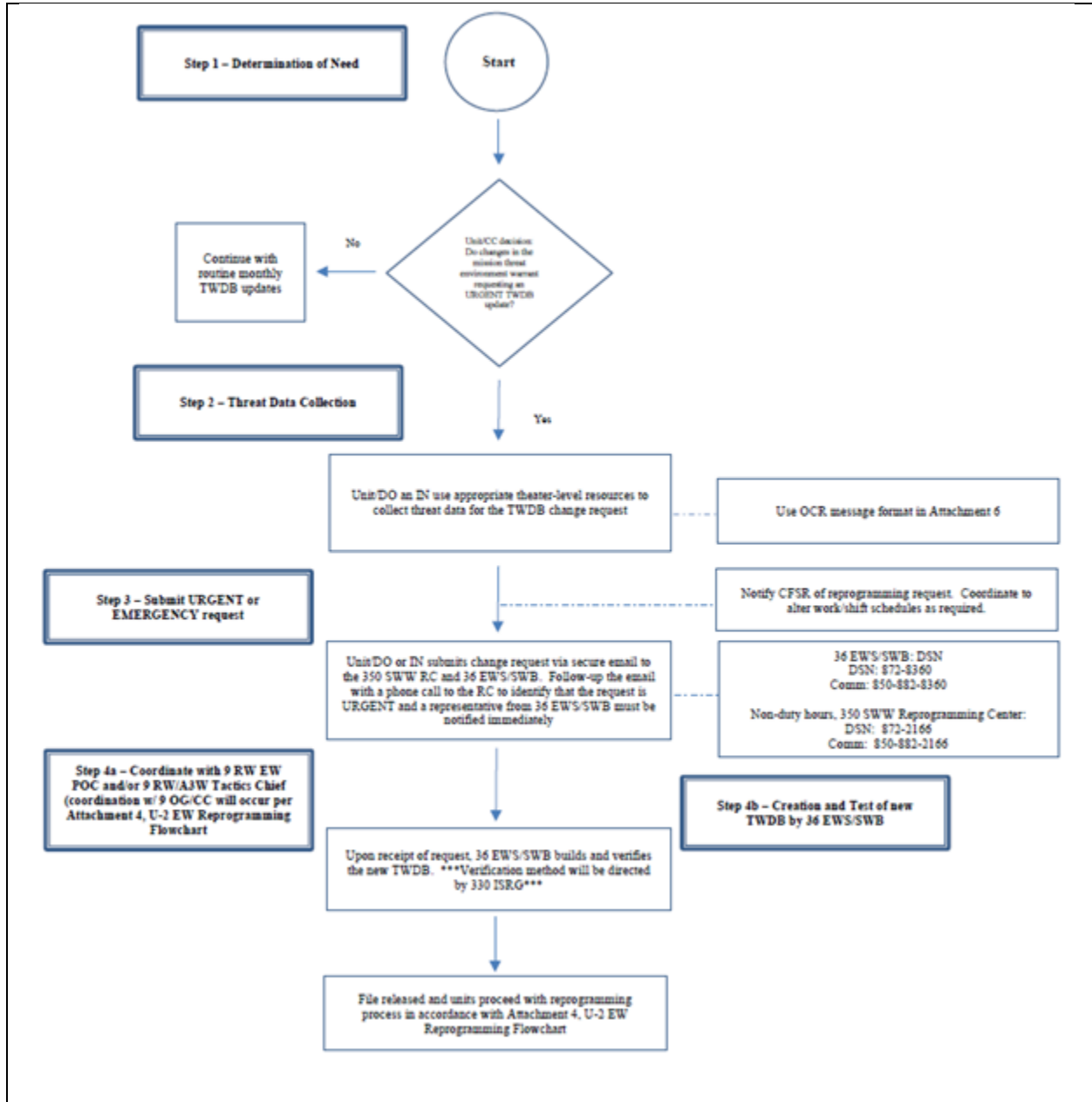


Attachment 5

U-2 URGENT OR EMERGENCY THREAT WARNING DATABASE: FLOWCHART

A5.1. (Added-BEALAFB) This flowchart will be used by the 9 RW EWIR Action Team, and equivalent deployed/overseas commanders to execute URGENT or EMERGENCY Threat Warning Database (TWDB) updates.

Figure A5.1. (Added-BEALAFB). Executing URGENT or EMERGENCY TWDB Updates.



Attachment 6**U-2 URGENT OR EMERGENCY THREAT WARNING DATABASE: EXAMPLE OCR MESSAGE FORMAT**

A6.1. (Added-BEALEAFB) This message format will be used by any U-2 unit (including deployed/overseas) to request an URGENT or EMERGENCY Threat Warning Database (TWDB) update.

A6.2. (Added-BEALEAFB) INSTRUCTIONS: Fill in the information shown in *bold italics*. Reference the current TWDB to determine ADD/DELETE/MODIFY changes in the mission area of interest. Attach a spreadsheet containing the data with column headers as given in the message format. Submit both the message and spreadsheet file via classified e-mail to the addresses given in the message format.

Figure A6.1. (Added-BEALAFB) OCR Message Format.

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+++++++ EXAMPLE MESSAGE FORMAT STARTS HERE ++++++
FROM: (Organization sending the message)

TO: 350SWW/EW Helpdesk (usaf.eglin.acc.mbx.350-sww.ew-help-desk@mail.smil.mil)
36 EWS (usaf.eglin.acc.list.36-ews-u-2-alq-221@mail.smil.mil)
HQ ACC/A3MU (usaf.jble.acc.a3.mbx.acc.a3mu-u-2-operations-branch@mail.smil.mil)

CC: 36 EWS/SWB (michael.h.oleksuk.ctr@mail.smil.mil)
    36 EWS/SWB (terry.w.gragg.ctr@mail.smil.mil)
    36 EWS/SWB (kevin.l.miltz.ctr@mail.smil.mil)

SUBJECT: (U) PACER WARE OCR AN/ALQ-221 Urgent (or Emergency) Threat Warning Database Request
PW 12 BBXX (fill in the digits following "PW" as two-digit fiscal year, and use exactly "BBXX")

SECRET (Properly classify the message according to the intelligence sources used. Adjust the DECL line as necessary.)

REF/A/DOC/AF/A5RF/30 NOVEMBER 2007
REF/B/DOC/AFI 10-703 BEALE AFBSUP DD MMM YYYY
GENTEXT/REMARKS/

(U) REF A IS AFMAN 10-703, PROVIDES POLICY AND PROCEDURES FOR ELECTROMAGNETIC
WARFARE INTEGRATED REPROGRAMMING (EWIR).
(U) REF B IS THE BEALE AFB SUPPLEMENT TO AFMAN 10-703.
(U) POC/(rank and name of author, office symbol, telephone number and e-mail address)

1. (U) THIS IS AN AIR FORCE PACER WARE MESSAGE.

2. (S) MISSION REQUIREMENTS NECESSITATE AN UPDATE TO THE CURRENT THREAT WARNING
DATABASE (TWDB). THE ATTACHED EXCEL SPREADSHEET PROVIDES THE REQUIRED CHANGES. THE COLUMN HEADINGS ARE (IN THIS ORDER, LEFT TO
RIGHT): ELNOT, LATITUDE (003000N), LONGITUDE (030000E), ELEVATION (FT), COUNTRY CODE,
SITE NAME, PIN (IF APPLICABLE FROM CURRENT TWDB), CHANGE (USE APPLICABLE TERM:
ADD, DELETE, MODIFY).

A. (U) PRIORITY: (EMERGENCY (24 HRS) or URGENT (72 HRS))

B. (U) SYSTEM: AN/ALQ-221

3. (U) REQUEST MAJCOM APPROVAL OF THE REQUESTED CHANGE AND DIRECT THE
APPROPRIATE REPROGRAMMING CENTER TO BEGIN WORK BASED ON THE PRIORITY IN 2A.

4. (U) (contact instructions if other than POC of message, otherwise not required).

5. (U) THIS IS AN AIR FORCE PACER WARE MESSAGE.
SECRET (Properly classify the message according to the intelligence sources used. Adjust the DECL line as necessary.)

DECL: (Insert the proper classification source.)
+++++++ END OF EXAMPLE MESSAGE FORMAT ++++++

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Attachment 7
EWIR PHONE LIST

Figure A7.1. (Added-BEALEAFB) EWIR Phone List.

AGENCY	CONTACT	OFFICE SYMBOL	PHONE
9 Operations Group CC	Same	9 OG/CC	DSN: 368-9366
9 Maintenance Group CC	Same	9 MXG/CC	DSN: 368-9351
Beale Command Post	Shift Supervisor	Console	DSN: 368-5700
Maintenance Operations Center	MOC Senior Coordinator	9 MXG/MXOOM	DSN: 368-5750
EW Systems (Back shop)	Shift Supervisor	N/A	DSN: 368-8273
Wing Tactics EWO	EWO	9RW/A3W	DSN: 368-8501
99 RS Tactics EWO	EWO	99 RS/DOK	DSN: 368-3256
Wing Intelligence	Chief	9 RW/A2	DSN: 368-9657
Wing Intelligence Analyst	Same	9 OSS/TN	DSN: 368-2044
U-2 EWS Engineers	Same	36 EWS/SWB	DSN: 872-8360