CREW 101

- When properly used, a CREW system prevents the enemy's RCIED transmitter from communicating with the RCIED receiver. It prevents the RCIED from being detonated.
- 2. Four critical factors influence the effectiveness of CREW:

FREQUENCY: Operators must ensure that their system is programmed with the proper threat load prior to departing

POWER: Conducting proper PMCS helps to ensure that nothing degrades the CREW transmission signal.

LINE OF SIGHT (LOS): All obstacles (natural and man-made) degrade the protection that a system provides. Every reasonable effort should be made to maximize a system's effective coverage area to provide overlapping protection with adjacent CREW systems.

DISTANCE: CREW effectiveness is inversely proportional to the distance from the device being jammed.

- 3. It is critical that all PMCS is properly performed and operational checks are conducted for CREW and comm systems prior to starting any mission. Ensure that mission planning includes time for these checks.
- LEAVE YOUR CREW SYSTEM ON. IT DOES NOT PROVIDE ANY PROTECTION IF IT IS NOT ON.

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CAC registration and login. NOTE: Access to the JCREW website requires from the menu on the left side of the page. website https://jcrew.jfcom.mil and select CREW Smart Card Changes or improvements to the Card, go to the JCREW To get an electronic copy of the Smart Card or to propose

it by any means possible as dictated by local TTPs. abandoned, ZEROIZE the system immediately, and destroy It the system is in danger of being captured or must be

PERSONNEL ON THE SCENE. MODE UNLESS DIRECTED BY HIGHER AUTHORITY OR EOD

DO NOT TURN OFF OR SET CREW SYSTEM INTO STANDBY Conduct thorough checks before going on any mission.

away from fueling operations. systems 25 feet away from unsafe ordinance and 50 feet

 To prevent risk of explosion or fire, keep active CREW prevent antenna damage.

• Use caution near obstacles and in limited clearance areas to

Do not connect or disconnect antennas when the system is ON.

Do not touch antennas when the system is ON.

systems. Remain clear of active antennas on mounted or fixed-site

Maintain proper separation between antennas to prevent

Safety Considerations

Symphony



Symphony Remote Control Unit (RCU)

Vehicle-Based System (VBS)

TURN ON PROCEDURE

The VBS and the RCU contain identical controls and they display identical information on their LCDs. These procedures can only be performed from the RCU $\,$ when the RCU is connected to the VBS.

- 1. On the back of the VBS, turn the red switch SW-1 ON.
- 2. On the RCU or VBS, press and hold **STANDBY** for 3 seconds.
- 3. The LCD displays **SYMPHONY RUNNING TESTS**.
- **4.** When the tests end, the display shows the name of the threat load on the top line and **SYSTEM OK** on the bottom line.
- **5.** To select a different threat load, press **FILL** until the proper threat load is displayed.

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6. Press and hold **RUN** for 3 seconds. The system is jamming when the Active LED is on.

STANDBY MODE

- 1. To enter Standby mode, press and hold **STANDBY** for 1 second.
- **2.** When the Active LED is off, the system is in Standby mode.
- 3. To return to active jamming, press and hold RUN for 3 seconds. The system is jamming when the Active LED is on.

WARNING: There is NO JAMMING when in Standby mode.

TURN OFF PROCEDURE

- 1. On the RCU, press and hold **OFF** for 3 seconds. **NOTE:** Electricity remains on in the VBS to maintain the threat load.
- **2.** To turn the power completely OFF, on the back of the VBS, turn the red Power switch SW-1 **OFF.**

When SW-1 is turned off, the system zeroizes.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

To **ZEROIZE** the system, on the back of the VBS, turn the red Power switch SW-1 OFF.

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TROUBLESHOOTING

RCU Inoperable – The RCU is not working.

1. Turn the power OFF.

reloaded.

2. Check the RCU cable connections.

3. Follow the TURN ON PROCEDURE.

Bad Fill Data Error Message The system has lost its threat load. The threat load must be

Bad T/Out Error Message

Each Threat Load is only valid for a defined time span.

Reload Symphony with the current Threat Load.

Bad GPS Aerial Error Message Turn the power OFF. Check the GPS cable connections.

Follow the TURN ON PROCEDURE. GPS Ref Lost Error Message

If this message doesn't clear within a few minutes of entering Standby Mode:

Check the antenna for proper placement, clearance from obstructions, and a clear signal path. The system continues to operate, but loses accuracy over time. This message will automatically appear when the **Bad GPS Aerial** Error Message is also present.

Bad Ch A or Bad Ch B Error Message

Press and hold **OFF** for 3 seconds. After one minute, press and hold STANDBY.

- 1. If the error cleared, press and hold RUN for 3 seconds. 2. If the error still displays, follow the complete
- TURN OFF PROCEDURE. Wait one minute, follow the TURN ON PROCEDURE and reload the threat load.
- **3.** If the error still displays, return the system to an FSR. FOR OFFICIAL USE ONLY

Duke Indicator Lights

DONE FAU	DONE FAULI INDICALOR LIGHLS	GIUDI.	
SYSTEM STATE	GREEN ON LED	GREEN ON LED AMBER XMIT LED RED FAULT LED	RED FAULT LED
System is transmitting Active and reactive jamming GPS System Fault	ON	Blinking	ON
System is transmitting Active and reactive jamming Antenna Fault	ON	Blinking	Blinking
System is zeroized	Blinking	Blinking	Blinking

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	RED FAULT LED	0FF	9FF	
NDICATOR LIGHTS	AMBER XMIT LED	340	Blinking	
	GREEN ON LED	ON	NO	
NORMAL OPERATING INDICATOR LIGHTS	SYSTEM STATE	System is transmitting Active jamming only No Fault	System is transmitting Active and reactive jamming No Fault	

FOR OFFICIAL USE ONLY

	RED D FAULT LED	0FF	ON	N O
	AMBER XMIT LED	OFF	OFF	OFF
OK LIGHIS	GREEN ON LED	Blinking	Blinking	Blinking
STANDBY INDICATOR LIGHTS	SYSTEM STATE	System in standby Not jamming No Fault	System in standby Not jamming GPS/System Fault	System in standby Not jamming Antenna fault

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Duke V2



TURN ON PROCEDURE WITH RCU

- 1. Start the vehicle.
- **2.** On the RCU, set the Run/Standby switch to **STANDBY**, and set the Power switch to **OFF** (Fig. 1).
- 3. On the Primary Unit, set the Power switch to **REMOTE**, and set the Run/Standby switch to **RUN** (Fig. 2).
- **1.** Return to the RCU and set the Power switch to **ON** (Fig. 1) NOTE: The unit performs a diagnostic test. When finished, if lights show green blinking, amber off, and red off, go to step 5. If not, see the Duke Indicator Lights charts on this card to determine

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5. On the RCU, set the Run/Standby switch to **RUN** (Fig. 1). The green light is ON, indicating that the system is active jamming. The amber light blinks when the unit is reactive jamming.

what is wrong.



Fig. 1: RCU Power switch

and Run/Standby switch.

Fig. 2: Primary Unit Power and Run/Standby switches

TURN ON PROCEDURE WITHOUT RCU

- 1. Start the vehicle.
- 2. Set the Primary Unit Power switch to PWR OFF, and set the Run/Standby switch to **STANDBY** (Fig. 2).
- **3.** Set the Primary Unit Power switch to **PWR ON** (Fig. 1). **NOTE:** The unit performs a diagnostic test. When finished, if the lights show green blinking, amber off, and red off, go to step 4. If not, see the Duke Indicator Lights charts on this card to determine what is wrong.
- **4.** Set the Run/Standby switch to **RUN**. The green light is ON, indicating that the system is active jamming. The amber light blinks when the unit is reactive jamming.

- 1. To enter Standby mode, set the Run/Standby switch to STANDBY. **2.** To return to active jamming, set the Run/Standby switch to **RUN**.
 - WARNING: There is NO JAMMING when in Standby mode.

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TURN OFF PROCEDURE WITH RCU

- 1. On the RCU, set the Run/Standby switch to STANDBY.
- 2. On the RCU, set the Power switch to OFF.
- **3.** On the Primary Unit, set the Run/Standby switch to **STANDBY**.
- 4. On the Primary Unit, set the Power switch to OFF.

TURN OFF PROCEDURE WITHOUT RCU

- **1.** On the Primary Unit, set the Run/Standby switch to **STANDBY**.
- 2. On the Primary Unit, set the Power switch to OFF.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- **1.** Ensure that system power is **ON**. Power is required to zeroize or emergency erase the system. **2.** Lift the red cover and press
- and hold down the **ZEROIZE** switch (Fig. 3) until all three LEDs blink simultaneously. indicating that the threat load is being erased.
- Fig. 3: Hold down ZEROIZE switch 3. Turn **OFF** the power after 2 minutes.

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Duke V3



Duke V3 Remote Control Unit (RCU)

Duke V3 **Primary Unit and Secondary Unit**

TURN ON PROCEDURE WITH RCU

- 1. Start the vehicle
- 2. On the RCU, set the Run/Standby switch to STANDBY, and set the Power switch to **OFF**.
- **3.** At the Primary and Secondary Units, set the Power switch to **REMOTE**, and set the Run/Standby switch on the Primary Unit to RUN
- 4. Return to the RCU and set the Power switch to ON **NOTE:** The unit performs a diagnostic test. When finished, if lights show green blinking, amber off, and red off, go to step 5. If not, see the Duke Indicator Lights charts on this card to determine what is wrong. On the Secondary Unit, there is a blue indicator light for the GPS. If on, there is GPS lock; if off, there is a lost signal or no GPS lock.

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5. On the RCU, set the Run/Standby switch on the RCU to **RUN**. The green light is ON, indicating that the system is active jamming. The amber light blinks when the unit is

TURN ON PROCEDURE WITHOUT RCU

- 1. Start the vehicle
- **2.** At the Primary Unit, set the Power switch to **0FF**, and set the Run/Standby switch to STANDBY.
- 3. At the Secondary Unit, set the Power switch to **REMOTE**.
- 4. At the Primary Unit, set the Power switch to ON.
- **NOTE:** The unit performs a diagnostic test. When finished, if lights show green blinking, amber off, and red off, go to step 5. If not, see the Duke Indicator Lights charts on this card to determine what is wrong. On the Secondary Unit, there is also a blue indicator light for the GPS. If on, there is GPS lock, if off, there is a lost signal or no GPS lock.
- 5. Set the Run/Standby switch to RUN. The green light is ON when the system is active jamming. The amber light blinks when the unit is reactive jamming.

STANDBY MODE

- 1. To enter Standby mode, set the Run/Standby switch to STANDBY. The green LED blinks.
- 2. To return to active jamming, set the Run/Standby switch

WARNING: There is NO JAMMING when in Standby mode.

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TURN OFF PROCEDURE WITH RCU

- 1. On the RCU, set the Run/Standby switch to STANDBY.
- 2. On the RCU, set the Power switch to PWR OFF. The green LED turns off.
- **3.** On the Primary Unit, set the Run/Standby switch to
- **4.** On the Primary Unit, set the Power switch to **OFF**.

TURN OFF PROCEDURE WITHOUT RCU

- 1. On the Primary Unit, set the Run/Standby switch to **STANDBY**.
- **2.** On the Primary Unit, set the Power switch to **OFF**.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- **1.** Ensure that system power is **ON**. Power is required to zeroize or emergency erase the system.
- **2.** Lift the red cover of any of the Zeroize switches. Press and hold down the switch in the **ZEROIZE** position until all three lights blink simultaneously, indicating the threat load is being erased.

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3. Turn **OFF** the power after 2 minutes.

CREW Systems























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Thor III

Distribution authorized to Department of Defense and U.S. DoD Contractors only. Further distribution only as directed by Program Executive Office Littoral and Mine Warfare, EOD/CREW Program Manager, 614 Sicard St. SE, Washington Navy Yard, DC 20376-7003 or higher authority.

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Duke/Jukebox

Jukebox Remote Control Unit (RCU)

Duke V2 Remote Control Unit (RCU)



Jukebox Primary Unit

CAUTION: Duke V2 must be powered on before powering

- 2. Follow the steps for Duke V2 TURN ON PROCEDURE (with or without the RCU)
- 3. Set the BLANKING switch to **BLANKING** on the Jukebox
- Primary Unit and on the RCU (if installed).
- **4.** With Duke RCU installed, set the RCU Run/Standby switch to **RUN**. With no RCU, set the Primary Unit Run/Standby switch

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5. Set the Jukebox main Power switch to **0N**, and set the

NOTE: Jukebox performs a diagnostic test. When finished, the green power light is on, the green blanking light blinks

- 2. On the Duke V2 [front panel or RCU], set the Duke V2 RUN / STANDBY switch to **STANDBY**.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- zeroize or emergency erase the system.
- hold down the switch in the **ZEROIZE** position until all three lights blink simultaneously, indicating that the threat load is being erased.

Duke V2 Primary Unit

TURN ON PROCEDURE

1. Start the vehicle.

on Jukebox to avoid inducing a Duke V2 fault.

NOTE: Jukebox should always operate in BLANKING mode.

Jukebox RCU (if installed) Power switch to **ON**. and the blue transmit light is on. If the lights are on as

TURN UFF PRUCEDURE

- 1. On the Jukebox RCU, set the Power switch to OFF.
- **3.** On the Duke V2 [front panel or RCU], set the Duke V2 Power switch to OFF.
- 4. On the Jukebox front panel, set the Power switch to OFF.

- 2. Lift the red cover of the Duke **ZEROIZE** switch. Press and
- 3. Turn OFF the power after 2 minutes.

indicated, the Jukebox is jamming.

1. Ensure that system power is **ON**. Power is required to

Note: JUKEBOX cannot be zeroized.





















ANTENNA CONNECTIONS

When installing the antenna, confirm that the number of rings on the antenna is the same as the number of rivets on the corner of the carry handle of the Guardian Unit (Fig. 1).

CAUTION: Improper antenna connections (ring and rivet mismatch) will damage equipment and may cause serious injury.



Fig. 1: Proper Antenna Matching FOR OFFICIAL USE ONLY

TURN ON PROCEDURE

- **2.** Determine which Guardian Unit you have (B, B1, or C).
- **3.** Set the Unit in the pack and secure it with the webbing straps.
- 4. Connect the antenna to the antenna socket on the Unit.
- **5.** Connect the pigtail cable **(A)** to the Remote Socket on the
- Unit (see close-up in Fig. 3). 6. Connect the RCU and the Timing
- Reference System / Code Plug to the pigtail cable (Fig. 2).
- button. If there is no RCU, on the Unit, lift and set the On/Off switch to **ON**. The Unit performs a diagnostic test and beep twice if it is operational. A lit green LED on the RCU and on the Unit indicates it is operational.

Fig. 2: Guardian Unit



Fig. 3: Closeup of Guardian Front Panel Controls and Indicators

TURN OFF PROCEDURE

- 1. On the RCU, press the **On/Off** button, or on the Unit, lift and set the On/Off switch to OFF.
- 2. Disconnect the RCU and the Timing Reference System/Code Plug from the pigtail.
- **3.** Disconnect the pigtail from the Unit.
- **4.** Disconnect the antenna from the socket.
- **5.** Remove the Unit from the pack.
- **6.** Remove the batteries and recharge them.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- **1.** Ensure that system power is **ON**. Power is required to zeroize the system.
- 2. On the RCU, press and hold both ZEROIZE buttons for 10 seconds.

NOTE: The Unit cannot be zeroized without the RCU connected and operational.

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FAULTS & TROUBLESHOOTING

Three Beeps, **Pause**, **Three Beeps** – Indicates system failure.

- **1.** Turn the power **OFF** using *either* the RCU *or* the Unit: • ON THE RCU: press the **ON/OFF** button; or
- ON THE UNIT: lift and set the On/Off switch to OFF. 2. Check all connections and replace faulty equipment.
- 3. Follow the TURN ON procedure to turn the unit ON

Constant Beeping and Flashing LED - Indicates low battery

- **1.** Turn the power **OFF** using *either* the RCU *or* the Unit: • ON THE RCU: press the **ON/OFF** button; or
- ON THE UNIT: lift and set the On/Off switch to OFF.
- 2. Replace the batteries.
- 3. Follow the TURN ON procedure to turn the Unit ON.

Constant Tone and Solid LED - Indicates zeroized Unit, or Unit internal failure

- **1.** Turn the power **OFF** using *either* the RCU *or* the Unit: • ON THE RCU: press the **ON/OFF** button; or
- ON THE UNIT: lift and set the On/Off switch to OFF.
- 2. Check all connections and replace the batteries. 3. Follow the TURN ON procedure to turn the Unit ON.
- 4. If the fault reoccurs, bring the Unit to an FSR or an EWO for reload or repair.

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PMCS

WARNING: Conduct all PMCS with the power turned off.

Primary areas of focus: Antennas, Main Unit, Remote Control Unit

Antennas: Check all antennas for physical damage, and check all connections for damage, mis-threading, worn or frayed wiring, and proper connection tightness. Make sure antennas are properly separated from each other.

Primary Unit or Receiver/Transmitter (R/T): Inspect the unit for signs of physical damage, verify proper antenna connections and fittings (rivets or notches), check for damaged wiring, and verify proper connection tightness. Check all switches. Make sure power cables are properly connected and tightened. Ensure that all fan ducts are obstruction free.

Remote Control Unit (RCU) or Remote Display Unit (RDU): Check cables for damage, fraying, excessive wear, proper connection, and tightness.

Batteries: Battery replacement must be done with power OFF, except for the Thor III System which permits battery replacement while the Unit is operating.

General: Make sure antennas and the main unit are free from obstructions. Clean all equipment with a dry clean cloth or a

Problems: If equipment problems or failures are discovered, return the equipment to the FSR for repair in accordance with unit TTP/SOP.



Remote Control Unit (RCU)

Receiver/Transmitter (R/T)

TURN ON & OPERATING PROCEDURE WITH RCU

1. Start the vehicle.

CVRJ

- 2. On the RCU, press and hold PWR for 1 second. The system performs a diagnostic test and enters Standby mode. The RCU displays **STBY**.
- 3. Press OPR. The system is jamming when the RCU displays OPR.

CAUTION: If OPR or STBY is flashing, there is NO GPS lock The Unit will interfere with other nearby CREW devices.

CAUTION: Do not disconnect the RCU when in Operate mode

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TURN ON & OPERATING PROCEDURE WITHOUT RCU

- 1. Start the vehicle.
- 2. On the R/T, set the Power switch to **ON**. The system performs a diagnostic test and begins jamming

STANDBY MODE

WARNING: There is NO JAMMING when in Standby mod

- 1. On the RCU, press STBY/RCV. The system is in Standby mode when STBY displays on the RCU.
- **2.** If **STBY** is flashing, there is no GPS lock.
- **3.** To return to Operate mode, press **OPR**. The system is jamming when **OPR** is displayed.

TURN OFF PROCEDURE

CAUTION: You must enter Standby mode before shutdown. Failure to do so degrades unit capability

- 1. On the RCU, press STBY/RCV. The RCU displays STBY.
- 2. On the RCU, press PWR.
- 3. Without the RCU, set the Power switch on the R/T to OFF.

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ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- 1. Ensure that system power is ON. Power is required to zeroize the system.
- 2. On the RCU, press and hold the **ZERO** button for 1 to 2 seconds until the RCU displays **ZEROIZE SFLT**, confirming
- **3.** Without the RCU, on the R/T, lift the red cover and hold the **ZEROIZE** switch **UP** for 1-2 seconds until the SYS FAULT light is on, confirming erase.
- 4. After confirming erase, turn the Power switch OFF.

FAULTS & TROUBLESHOOTING

- System or Antenna Fault The system enters Fail mode. Get permission before turning power off. Turn power **OFF**, check all connections and cables, and turn power **ON**. If the system enters Fail mode again, return to the FSR for repair.
- **RCU Inoperative** The system continues processing under its current mode
- **Bad Fill or Zeroized** Do not load or change the threat load in Operate mode. Put the Unit in Standby mode before loading.

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MMBJ-2.1



MMBJ-2.1

Remote Display Unit (RDU)



MMBJ-2.1 **DC Power Supply**



MMBJ-2.1 Receiver/Transmitter (R/T)

TURN ON PROCEDURE

- **1.** Turn the DC Power Supply on by pulling the PWR ON switch (A) out and up (Fig. 1).
- 2. Turn the R/T on by pulling the PWR ON switch out and **up**. The Unit performs a diagnostic test. Ensure that all cooling fans are operating.



Fig. 1: DC Power Supply

- 3. On the RDU, select RF ON.
- 4. On the RDU, push YES to confirm.

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NOTE: If the display reads **UNIT ZEROIZED**, the system is not working. Return the Unit to an FSR or EWO for reprogramming

TURN OFF PROCEDURE

- 1. On the RDU, select RF OFF.
- 2. On the RDU, push YES to confirm.
- 3. Turn off the R/T by pulling the PWR ON switch out and
- **4.** Turn off the DC Power Supply by pulling the PWR ON switch out and down (Fig. 1).

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

- **1.** Ensure that system power is **ON**. Power is required to zeroize
- 2. Lift the guard on the **ZERO** or **ZEROIZE** button. Press and hold the button for 4 seconds.
- **3.** The RDU displays **ZEROIZING** and the R/T ZEROIZE LED

ZEROIZED, and the R/T zeroized status LED lights solidly.

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NOTE: When zeroized, the RDU displays **UNIT**

FAULTS & TROUBLESHOOTING

- **No Power** The system does not operate. Turn power OFF. Check power cables for cuts or breaks, and tighten connections on the Unit and Power Supply. Retry the TURN ON PROCEDURE.
- **RCU Inoperative** The system continues processing under its current mode.
- System causing interference with other units GPS is not locked. The system continues processing under its current
- **Unit Zeroized** The system is not working. Return the Unit to an FSR or EWO for reprogramming.

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Thor III Thor III

TURN ON PROCEDURE

Remote Control Unit (RCU)

1. Install two fully charged BB-2590 or UBI-2590 batteries. Either type of battery may be used, but they may not be mixed.

Thor III Unit

CAUTION: Do not use any battery which shows signs of damage, such as bulging, swelling, disfigurement, brown liquid in the plastic wrap, swollen plastic wrap, etc.

- 2. Connect the GPS antenna cable to jack J3 on the Unit
- 3. Verify that you have the correct antenna (Fig. 2), and connect the Rx/Tx antenna cable to jack J5 on the Unit (Fig. 1, \bigcirc).

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- **4.** Connect the RCU cable to jack J4 on the Unit and to the RCU (Fig. 1, (F)).
- **5.** Press **POWER** on the Unit (Fig. 1, **©**). The Unit performs a diagnostic test and the RCU displays STBY after approximately 90 seconds.
- **6.** On the RCU or on the Unit, press the **MODE** button. The system begins jamming and the blue OPR light is on, unless there is an alarm, a lit fault LED, or another indication of a problem.

If no threat load is present, the RCU displays FAIL: BIT. and the red FAULT LED lights. Return the unit to the EWO/FSR.

TURN OFF PROCEDURE

- 1. On the RCU, or on the Unit, press the MODE button once. The Unit stops jamming.
- 2. On the Unit, press the POWER button. The Unit turns off.

ZEROIZE / EMERGENCY ERASE

If the system is in danger of being captured or must be abandoned, ZEROIZE the system immediately, and destroy it by any means possible as dictated by local TTPs.

The system DOES NOT need power to be zeroized.

1. On either the Unit or the RCU, press and hold the ZEROIZE button for 5 seconds. Once zeroized, all LEDs blink continuously

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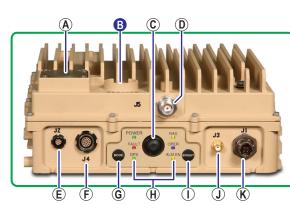


Fig. 1: Thor III Front Panel Controls and Indicators

- (A) Speaker
- B ZEROIZE button
- © Power button Press to turn ON
- D J5 Rx / Tx antenna cable connection (E) J2 comm cable connection
- F) J4 RCU cable connection (G) MODE button – Toggles between Standby and Operate modes. (H) Indicator LEDs – POWER, RAD, FAULT, OPER, GPS, ALM EN

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- (1) **BRIGHT button** See the BRIGHT button table under Fig. 3.
- (J) J3 GPS antenna cable connection
- (K) J1 power cable connection

ANTENNA CONNECTIONS

When installing the antenna, use the notches (Fig. 2) as a guide to ensure that the correct antenna is mated to the correct Unit.

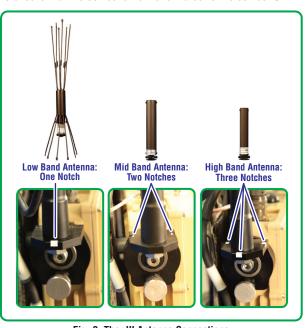


Fig. 2: Thor III Antenna Connections

CAUTION: Each Rx/Tx antenna is engineered to connect to one of the Units (low, mid, or high band). Attempts to connect a mismatched antenna to a Unit can damage the antenna and prevent the Unit from operating properly.

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FAULTS & TROUBLESHOOTING

NOTE: If there is a system fault and the alarms have been enabled, the system sounds an audio tone, vibrates, or displays the fault on the RCU.

RCU Inoperative – *Low battery, broken cable, or loose* connection. The Unit continues to operate. Check the RCU cable and connections.

GPS LED Blinking – *No GPS lock*. GPS synchronization may take up to 17 minutes from power on. During this time, the Thor III unit operates normally. If the GPS loses synchronization at any time, the GPS LED blinks on the RCU and the R/T. When the GPS is synchronized, the GPS LEDs on the RCU and the R/T light solidly and the fault indication is

the RCU readout to identify the fault. Check antenna and cable connections. Return the Unit to an FSR if the problem persists. **FAULT LED On** – *HPA failure*. Inspect antenna cable. Reboot

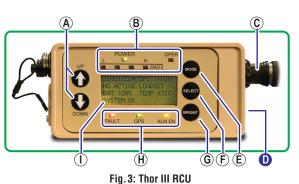
FAULT LED Blinking – *System over-temp or VSWR fault.* Check

the system. If the problem persists, return the Unit to an FSR. **POWER LED Blinking** – *Power is below 30% and the RCU* stopped operating. Replace batteries one at a time so the Unit continues operating.

CAUTION: Equipment uses two batteries. Batteries must be replaced one at a time and always replaced in

complete sets.

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A UP/DOWN – Scroll display up or down.

(B) Indicator LEDs – POWER, RAD, OPER

(E) MODE button – *Toggles between Standby and Operate modes.*

F SELECT – Button selects display line. **G** BRIGHT button

(C) RCU cable connection

D ZEROIZE button

1 time	Bright	Enabled	-
2 times	Dim	Enabled	_
3 times	Off	Enabled	_
4 times	Bright	Disabled	-
5 times	Dim	Disabled	_
6 times	Off	Disabled	_
Hold for 2 sec.	_	_	Enabled
Hold for 2 sec	_	_	Disabled

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PUSH BRIGHT... LED STATE VIBRATOR ALARM

(H) Indicator LEDs – FAULT, GPS, ALM EN (I) Four-line illuminated LCD display

SYSTEM

1. Install two fully charged batteries.

Verify that you have the correct antenna (Fig. 1).

7. On the RCU, press the On/Off

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FOR OFFICIAL USE ONLY

DATE:

OPERATIONS:

9F

SYSTEM

DOWNLOADED: DATE:

OAD. JPL

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