

## Module 2. Advanced Operations

### Rule 45 Electronic Warfare

Electronic warfare (EW) is designed to disrupt enemy command and control through disintegration of opposing communications networks through the jamming of signals. It also aids in intelligence gathering through radio interception and suppression of enemy air defense with radar jamming. The advent of frequency hopping communications equipment, such as the U. S. SINCGARS radios, in the late 80s and early 90s, has somewhat lessened the effects of electronic jamming of communications. Generally, Western equipment tends to be somewhat more sophisticated than Eastern-bloc.

Though there were many types of electronic warfare available to NATO and the WP; the focus here will be on tactical application of Active Jamming (A-JAM) and Electronic Intelligence (ELINT). EW units are identified by the Lightning Bolt symbol. EW occurs during all spotting attempt portions of Movement and Airmobile Reaction Phases.

#### A. Electronic Counter Measures

1. EW Units may not move and conduct Active Jamming or ELINT.
2. Once a unit moves, remove the A-JAM or ELINT marker.
3. The active player determines which action the EW unit will perform in the **First Movement Phase**. The unit may conduct A-JAM, ELINT or other operations, but only 1 operation per turn.( if a unit is not selected to perform an A-JAM or ELINT operation in may move or perform other operations in the First and Second Movement Phases. It may not be selected to perform A-JAM or ELINT in the Second Movement Phase)
4. Once an A-JAM marker or ELINT marker is placed on an EW unit, it cannot be changed until the next game turn.
5. **Electronic Line of Sight (ELOS):** ELOS differs from physical LOS in that electronic warfare is dependent on being able to “see” the target unit. ELOS is determined by fixed numberof hexes in the forward arc of the unit conducting EW.
  - a. Wood and urban strip hexes have no effect on the ELOS
  - b. A-JAM is affected only by higher terrain which blocks the jamming signal (as with physical LOS); i.e. hill or mountain but not urban or city hexes.
  - c. ELINT is affected by higher terrain including hills, mountains, and city hexes that blocks ELOS (as with physical LOS).

## 6. Combat Electronic Warfare & Intelligence (CEWI): Aircraft

EW warfare aircraft include EW helicopters and EW Drone units. The non-phasing player designates the unit's function in the Airmobile Phase.

**a. Active Jamming:** Active jamming takes place during all spotting attempt portions of the movement and airmobile phases.

**Procedure:** Place an A-JAM marker on the unit conducting jamming.

1. Any enemy HQ or TOC unit in the forward arc, and within an ELOS of 20 hexes of the aircraft, may only use operations points for units within 3 hexes.

2. Enemy radar equipped SAM units do not automatically detect aircraft within an ELOS of 14 hexes. Search may still be conducted for aircraft through normal spotting means. Place a JAMMED radar marker on affected radar equipped SAM units. A +2 modifier to the *Radar Spotting Die Roll* is applied to any jammed active Radar unit attempting to search.

3. Jammed SAM units that were equipped with RADAR/IR missiles may still fire at aircraft, radar only missile SAM units may fire but suffer a +5 modifier on the **TO HIT die roll**.

**b. Electronic Intelligence:** ELINT takes place during all spotting attempt portions of the movement and airmobile phases.

**Procedure:** Place an ELINT marker on the unit conducting electronic intelligence gathering.

1. The Phasing player designates the area that within the forward arc and ELOS of 30 hexes of the EW Aircraft conducting ELINT.

2. The non-Phasing player must identify the location hex of any HQ or TOC unit within the area but does not reveal the unit.

3. The EW Aircraft conducts spotting attempt using a -2 die roll modifier (this is to the die roll itself and not the base chance).

4. The unit is only spotted on a successful spotting attempt.

## 7. Combat Electronic Warfare & Intelligence (CEWI): Ground-based EW

**1. Ground-based ELOS:** EW units have a more restricted ELOS than airborne units. ELOS is blocked by all terrain as with physical LOS, except woods hexes which have no effect.

**a. Active Jamming:** Active jamming takes place during all spotting attempt portions of the movement and airmobile phases.

**Procedure:** Place an A-JAM marker on the unit conducting jamming.

1. Any enemy HQ or TOC unit within an ELOS of 16 hexes of the jamming EW unit, may only use operations points for units within 2 hexes.

2. Jammed SAR units may still search but have a +4 die roll modifier to the spotting die roll. Search may still be conducted for aircraft through normal spotting means. Place a JAMMED radar marker on affected radar equipped units.

3. Jammed SAM units that were equipped with RADAR missiles may still fire at aircraft but RADAR guided missiles suffer a +3 to hit modifier. Infra-red missiles are NOT affected.

4. GSR equipped units within an ELOS of 16 hexes are jammed as in 2 above and may not electronically search by ELINT.

**b. Electronic Intelligence:** ELINT takes place during all spotting attempt portions of the movement and airmobile phases.

**Procedure:** Place an ELINT marker on the unit conducting electronic intelligence gathering.

1. The Phasing player designates the area that within forward arc ELOS of 20 hexes of the EW unit conducting ELINT.

2. The non-Phasing player must identify the location hex of any HQ or TOC unit within the area but does not reveal the unit.

3. The EW unit conducts spotting attempt using a -1 die roll

modifier to the spotting attempt die roll.

4. The unit is only spotted on a successful spotting attempt.

### C. Electronic Counter Counter-Measures (ECCM)

Units conducting active EW warfare are vulnerable to detection by enemy EW units that are conducting ELINT. EW Drone units perform as EW Aircraft units. Units that are marked with A-JAM markers conducting active jamming are automatically detected if within ELOS range as shown on the ECCM table below:

<b>Detecting Unit</b>	<b>Detection Range</b>
<b>NATO EW Aircraft</b>	<b>16</b>
<b>NATO EW Unit</b>	<b>12</b>
<b>Mi-8PP</b>	<b>12</b>
<b>WP EW Aircraft</b>	<b>10</b>

Detection must be within the forward arc of the detecting aircraft.

#### **Duration and Effects**

**a.** Units that are being jammed are until the Spotting Attempt section of the Second Friendly Movement Phase or Non-phasing Player Airmobile Phase (depending on the unit) of the next turn, regardless of what phase they were actually jammed. Remove the marker.

**b.** Units that were spotted by ELINT remain spotted until they move from the spotted hex; however, units that are also under direct observation remain spotted as per normal spotting rules (*see Rule 9*).