

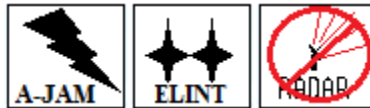
## Rule 45: Electronic Warfare

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.

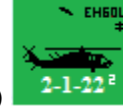
Though there were many types of electronic warfare available to NATO and the WP; the focus here will be on tactical application of Active Jamming (A-JAM) and Electronic Intelligence (ELINT). EW units are identified by the Lightning Bolt symbol. EW occurs during all spotting attempt portions of Movement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

### I. 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. An EW unit may conduct A-JAM or ELINT in a single game turn but not both.
4. Once an A-JAM marker or ELINT marker is placed on an EW unit, it cannot be changed until the next game turn.



- A. 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 number of hexes in the forward arc of the unit conducting EW.
1. Wood and urban strip hexes have no effect on the ELOS
  2. 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.
  3. ELINT is affected by higher terrain including hills, mountains, and city hexes that blocks ELOS (as with physical LOS).



## **B. EH-60L Blackhawk EW Helicopter (NATO)**

- 1. Active Jamming:** Active jamming takes place during all spotting attempt portions of the movement and airmobile phases.
  - a. 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 EH-60L, 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.
    - 3) Jammed SAM units that were equipped with RADAR/IR missiles may still fire at aircraft, radar only missile SAM units may not fire.
- 2. Electronic Intelligence:** ELINT takes place during all spotting attempt portions of the movement and airmobile phases.
  - a. 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 12 hexes of the EH-60L 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 EH-60L conducts spotting attempt using a -4 die roll modifier (this is to the die roll itself and not the base chance).
    - 4) The unit is only spotted and revealed on a successful spotting attempt.



### C. Mi-8PP EW Helicopter (Warsaw Pact)

1. **Active Jamming:** Active jamming takes place during all spotting attempt portions of the movement and airmobile phases.
  - a. **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 15 hexes of the Mi-8PP, may only use operations points for units within 6 hexes.
    - 2) Enemy radar equipped SAM units do not automatically detect aircraft within an ELOS of 12 hexes. Search may still be conducted for aircraft through normal spotting means. Place a JAMMED radar marker on affected radar equipped SAM units.
    - 3) Jammed SAM units that were equipped with RADAR/IR missiles may still fire at aircraft, radar only missile SAM units may not fire.
  
2. **Electronic Intelligence:** ELINT takes place during all spotting attempt portions of the movement and airmobile phases.
  - a. **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 10 hexes of the Mi-8PP 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 Mi-8PP 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 and revealed on a successful spotting attempt.

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

**A. Ground-based ELOS:** CEWI units have a more restricted ELOS than airborne units. CEWI units ELOS is in a 360° radius around the CEWI unit.

1. ELOS is blocked by all terrain as with physical LOS, except woods hexes which have no effect.



### B. NATO CEWI (includes Swedish and Austrian CEWI units)

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

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

- 1) Any enemy HQ or TOC unit within an ELOS of 15 hexes of the CEWI unit, may only use operations points for units within 2 hexes.
- 2) Enemy radar equipped SAM units do not automatically detect aircraft within an ELOS of 12 hexes. Search may still be conducted for aircraft through normal spotting means. Place a JAMMED radar marker on affected radar equipped SAM units.
- 3) Jammed SAM units that were equipped with RADAR/IR missiles may still fire at aircraft, radar only missile SAM units may not fire.

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

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

- 1) The Phasing player designates the area that within ELOS of 10 hexes of the CEWI 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 CEWI unit 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 and revealed on a successful spotting attempt.



### C. WP CEWI (includes Yugoslavian and Finnish CEWI units)

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

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

- 1) Any enemy HQ or TOC unit within an ELOS of 15 hexes of the CEWI unit, may only use operations points for units within 6 hexes.
- 2) Enemy radar equipped SAM units do not automatically detect aircraft within an ELOS of 12 hexes. Search may still be conducted for aircraft through normal spotting means. Place a JAMMED radar marker on affected radar equipped SAM units.
- 3) Jammed SAM units that were equipped with RADAR/IR missiles may still fire at aircraft, radar only missile SAM units may not fire.

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

a. **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 8 hexes of the CEWI 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 CEWI unit conducts spotting attempt using a -1 die roll modifier (this is to the die roll itself and not the base chance).
- 4) The unit is only spotted and revealed on a successful spotting attempt.

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

Units conducting ECM warfare are vulnerable to detection by enemy ECM units that are conducting ELINT. 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>EH-60L</b>	<b>16</b>
<b>NATO CEWI</b>	<b>12</b>
<b>Mi-8PP</b>	<b>12</b>
<b>WP CEWI</b>	<b>10</b>

Detection must be within the forward arc of the EH-60L and Mi-8PP.

### IV. Duration and Effects

1. Units that are being jammed are until the Spotting Attempt section of the Second Friendly Movement Phase of the next turn, regardless of what

phase they were actually jammed. Remove the  marker.

2. 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).
3. Spotted units are subject to indirect artillery fire or direct fire if a combat unit has direct LOS to the spotted unit. Artillery does not need an OP/FIST nor does the hex need to be under observation if the firing Artillery unit is enhanced (see Rule 18.E.1.).