

## **Checking LOS**

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## About LOS Checking

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VASL provides an integrated tool you can use to check line of sight (LOS)

Version 6 and later boards support LOS checking. Check the release notes for a list of boards supported in the version. You can flip and crop boards, but boards must be cropped to half-hexes for LOS checking to work.

LOS checking can apply ETO terrain rules or PTO terrain rules. DTO terrain rules do not apply. ETO terrain transformations available in the board picker apply with the following exceptions

- Orchard to Crag
- Orchard to Shellholes
- Shellholes to Crag
- Shellholes to Orchard

PTO terrain rules are applied when you choose and apply the `PTO Transformations` option in the **Terrain Transformations** dialog. The following transformations are available:

- Dense Jungle
- Bamboo
- Palm Trees
- Swamp

The following transformation is not available:

- Wooden building to huts

If the **Dense Jungle** box is not checked when other boxes in the PTO Transformations are checked, woods are treated as Light Jungle.

LOS checking does not apply to overlays, but does apply to certain counters. LOS checking also does not detect hindrances along a Continuous Slope. LOS checking does not work correctly in board edge half-hexes where abutting half-hexes have different terrain types.

The LOS engine does not enforce the rule that terrain must be visible on both sides of the thread to affect LOS. If the thread touches an obstacle or hindrance, LOS will be affected.

## Checking Line of sight (LOS)

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To check LOS:

1. Click an LOS button.

All counters on the board are hidden. Note that the following types of counters will still affect the LOS check even though hidden:

- SMOKE (including smoke from blazes and burning wrecks)
- Rubble
- OBA FFE
- vehicles and wrecks

2. Click on the center dot of one of the hexes for which you want to check LOS.

This hex is considered the source or origin hex of the LOS.

3. Drag your mouse cursor to the other hex for which you want to check LOS.

This hex is considered the target hex for the LOS check.

The thread snaps to the either the center dot of the hex, or to the nearest hex vertex.

4. LOS is checked at the lowest level of the hex by default. If the source (origin) or target hex have additional levels, you can move the LOS thread to those levels using the following key combinations:

**Table 1: LOS keyboard shortcuts**

This table describes keyboard shortcuts used to adjust the level of the source (original) or target hex of a LOS check.

Keystroke	Moves...
Up arrow	the target location up.
Down arrow	the target location down.
Ctrl+up arrow	source location up.
Ctrl+down arrow	source location up

The LOS thread indicates the state of the line of sight

- Black: LOS is clear.
- Red: LOS is hindered.
- Blue: LOS is blocked.

A popup states the range between the source (origin) and target hexes.

## LOS checking configuration

Several configurations options are available for configuring LOS checking.

LOS configuration options are available on the **LOS** tab of the **Preferences** dialog (**File > Preferences**).

The following configuration options are available:

- Changing thread color

The default thread colors are:

- Clear: black
- Hindered: red
- Blocked: blue

You can change the thread color for each condition. Click the button for the condition for which you want to change the color. VASL displays a color picker. Pick the new color you want to use for the condition.

- Counter LOS hindrances

By default, all counters are removed from the board when you click a LOS button. Check the **Retain LOS-hindrance counters** box to retain counters that affect LOS on board when checking LOS. Counters that affect LOS include

- SMOKE counters, including Smoke Grenades
- blazes
- OBA counters
- Vehicles, wrecks, and burning wrecks
- rubble counters
- Snap to grid

By default, the thread snaps to the nearest hex center dot or hex vertex. Check the **Snap Thread to grid?** box to disable this behavior. When you uncheck this box, the thread stays at the drag point, and does not snap to the nearest center dot or hex vertex.

- Enable and disable LOS checking behavior

Checking this box enables LOS checking behavior. When this box is unchecked, you can still click the LOS buttons to draw LOS, but the color of the thread does not change to indicate condition of the LOS, and range and other information is not reported in the VASL interface.

- Verbose LOS checking

By default, LOS checking only reports the range and displays different threat colors depending on whether LOS is clear, hindered, or blocked. When you check the **Verbose LOS mode** box, LOS checking also reports:

- hex coordinates of the source hex and the target hex
- level of the source hex and target hex for which LOS is being checked
- range from the source hex to the target hex