

Liebherr R945 v18 (SM2)

Axes movable by the user

1. Rotation

Rotates the main part, faces forwards when slider is at 50%.

2. Arm 1

Rotates the long part of the boom, reaches vertical position at 100%.

3. Arm 2

Rotates the short part of the boom, becomes nearly in line with Arm 1 at 100%.

4. Bucket

Rotates the bucket, becomes fully open at 100%.

Cargo level

Sets the amount of material within the bucket, full at 100%.

Cargo type

Sets the type of cargo within the bucket:

0 – 25% sand,

25 – 50% dirt,

50 – 75% gravel

75 – 100% coal.

Operator

Controls the visibility of the human operator, visible at 100%.

Protective grate

Controls the visibility of the front protective grate, visible at 100%.

Door

Opens the cabin door, fully open at 100%.

Lights – work

Controls the intensity of work lights, max intensity at 100%.

Lights – warning

Switch for flashing warning light, turned on at 100%.

Helpers' visibility

Controls the visibility of the source and target aides, visible at 100%.

Source 1. Rotation

For scripts, sets the main rotation for digging source (green).

Source 2. Arm 1

For scripts, sets the rotation of Arm 1 for digging source (green).

Source 3. Arm 2

For scripts, sets the rotation of Arm 2 for digging source (green).

Target 1. Rotation

For scripts, sets the main rotation for digging source (blue).

Target 2. Arm 1

For scripts, sets the rotation of Arm 1 for digging source (blue).

Target 3. Arm 2

For scripts, sets the rotation of Arm 2 for digging source (blue).

Max speed

For scripts, sets maximum allowed speed when performing an action. 1 km/h at 0%, 15 km/h at 100%.

Individual actions have their own travel speeds, this axis is used to further limit them.

Scripted actions

0. None

Resets the rotation of the main part and the entire boom to a neutral position, keeps the contents of the bucket if present, stops the vehicle and script. The excavator can now operate like a traditional, not scripted machine.

1. Hold

Resets the entire boom to a neutral position, keeps the contents of the bucket, stops the script. The excavator maintains current speed and main part rotation, but otherwise functions like a traditional, not scripted machine.

2. Dig

Indefinitely digs at source location and dumps the bucket's contents at target location. Vehicle drive settings remain unchanged, so any forward and backward motion can be freely controlled by the user. Originally intended for basic digging in place.

3. Dig moving forward

Digs at source location, dumps at target location, then moves forward at 2 km/h briefly. Intended to simulate ditch digging as the excavator slowly moves forward performing digging action every 1.5 meters or so.

4. Dig moving backwards

Digs at source location, dumps at target location, then moves backwards at 2 km/h briefly. Intended to simulate ditch digging as the excavator slowly moves backwards performing digging action every 1.5 meters or so.

5. Dig then unload ahead

Digs at source location, moves forward at 15 km/h briefly, dumps at target location, moves backwards at 15 km/h briefly. Speed can be limited by the Max Speed axis. Driving is governed by a timer, so the distance traveled depends on speed. Intended to simulate extensive excavation work where large amounts of moved material might get in the way.

6. Dig then unload behind

Digs at source location, moves backwards at 15 km/h briefly, dumps at target location, moves forward at 15 km/h briefly. Speed can be limited by the Max Speed axis. Driving is governed by a timer, so the distance traveled depends on speed. Intended to simulate extensive excavation work where large amounts of moved material might get in the way.

7. Dig then unload ahead; on stop

Digs at source location, rotates the main part to neutral position and moves forward at 8 km/h until stopped. This can be either the order to stop (set speed to 0) or end of track. Then the cargo is dumped at target location, the main part is rotated to neutral position and the excavator moves backwards at 10 km/h until stopped. Speed can be limited by the Max Speed axis. Similar to action 5, but allows to choose specific source and target points along a track.

8. Dig then unload behind; on stop

Digs at source location, rotates the main part to neutral position and moves backwards at 8 km/h until stopped. This can be either the order to stop (set speed to 0) or end of track. Then the cargo is dumped at target location, the main part is rotated to neutral position and the excavator moves forwards at 10 km/h until stopped. Speed can be limited by the Max Speed axis. Similar to action 6, but allows to choose specific source and target points along a track.

Note

Values for source, target and maximum speed are read at the beginning of every work cycle. While this allows the excavator to change its operating area while executing a script, the changes will take effect when the machine begins to rotate towards the source.

Scripted actions can be executed either via object properties in the editing mode or by triggering them through contact points.

