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# Two Block Platform

## Advanced setups

### By EssGee

The Two Block Platform is a versatile object if used with a bit of imagination. In its original form in TR4 it was limited to variable ascent and a single-click descent (OCB=0). Example OCBs were detected in the original TR4 levels to set height and speed of ascent. Then the OCB formula was determined (see below). This means that you can set exactly the ascent height and speed of travel for the platform. The additional power of TRep adds even more dimension to the object, with full descent capability and control of the height, speed of depression and speed of repression.

In the examples that follow I have listed as many generalised combinations as I can think of, to show the outcome of each setup. Although the list is extensive, there may be others that I haven't thought of right now. Hopefully there are enough examples that will inspire you to think of your own unique setup for your game level.

### The Two Block Platform OCB formula

The OCB formula for raising the two block platform is as follows:

**(16 x the No of clicks to be raised) + Speed it travels (1-15)**

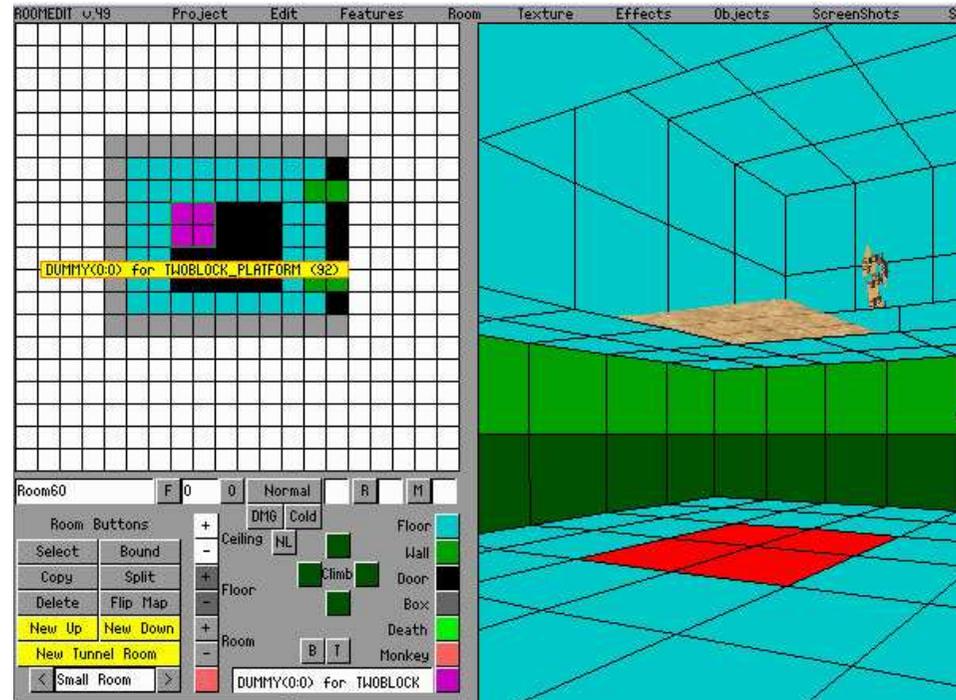
e.g.

to raise 4 clicks very slowly would be:

**(4 x 16) + 1 = 65**

to raise 12 clicks very fast would be:

**(12 x 16) + 15 = 207**



Example of Two Block Platform placed in upper room with Dummy Trigger placed in room beneath it.

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**Special conditions for use in original TRLE**
**NOTES:**

- TBP= Two Block Platform
- Suitable OCB formula - use TBP OCB formula to calculate how high and how fast you want to raise platform

In original TRLE OCB 0 +codebits 1-5 On, with no trigger, made platform depress 1 click only when stepped on and return back up when Lara steps off it. The platform could not be lowered continuously.

| Trigger Type applied under platform     | Timer setting  | OCB                  | Code bits | Stackable triggers on platform area | Outcome   |
|---|--|----------------------|-----------|-------------------------------------|---|
| Trigger for TBP                         | works on stacked trigger items but does not affect TBP | OCB = 0              |           | Yes                                 | Platform sinks down 1 click when Lara stands on it; returns back to original position when Lara steps off it  |
| No Trigger                              | no effect  | OCB = 0              | 1-5 On    | No                                  | Platform sinks down 1 click when Lara stands on it; returns back to original position when Lara steps off it  |
| Dummy for TBP                           | no effect  | Suitable OCB formula |           | No                                  | Lara can walk on platform; platform doesn't move; Platform can be raised with Normal Trigger placed elsewhere   |
| Trigger for TBP                         | works on stacked trigger items but does not affect TBP | Suitable OCB formula |           | Yes                                 | Platform will rise as soon as Lara stands on it. Stacked triggers will be activated too.  |
| Antitrigger or HeavyAntitrigger for TBP | No effect  | OCB = 0              | 1-5 on    | Yes                                 | Platform normally sinks down with Lara on it. Once platform is Antitriggered or Heavy Antitriggered, Lara can walk on platform; platform doesn't move. Stacked triggers will be activated/deactivated |

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### Special conditions for use in TRep

#### NOTES:

- TBP= Two Block Platform
- Suitable OCB formula - use TBP OCB formula to calculate how high and how fast you want to raise platform
- TBP will transport Rollballs, Pushable Objects (without special climbable OCBs), Enemies and Torch
- In the Heavy trigger examples that follow, a Pushable Object can be used in many of the situations to act as the Heavy trigger
- With all OCB=0 descending platform configurations, the default descent/ascent speed is constant. To alter depression and repression speed you must use TRep Object (Trap) Customizer section. In this section you can also set the depression distance. For suitable height values use multiples of 256 (= 1 click). e.g. 4 clicks descent would be 1024. (Thanks to Sapper for info about this and Aliases.txt).
- You can use eSSe Scripting to apply level-specific settings for these parameters (ensure you have the last released Aliases.txt file dated 19/11/2007). To do this, the following actions must be taken in TRep – Extend tomb4.exe size; Enable the following Custom patches: Enable eSSe add-on files loading; and Scripted parameters Episodes I/II/III. Note that the parameter TwoBlockGoUpOCB0 should be set to DISABLED. A script level example in Script2.txt for eSSe may look like this :  
[Level]  
TwoBlockDeprDist= 512  
TwoBlockGoUpOCB0= DISABLED  
TwoBlockDeprSpeed= 12  
TwoBlockReprSpeed= 6
- In the above example the platform lowers 2 clicks quite quickly when Lara steps on it and ascends at half the descent speed when Lara steps off the platform.
- In all the following examples that include Timed switches you must have the depression distance and speed set to take longer than the timed switch duration. For all examples where the platform sinks down, The depression distance will be determined by the TBP parameter settings you use in Trep and/or eSSe script.
- Platform doesn't have to use all 2x2 area - it can be one block, 2 diagonally opposite blocks, L-shaped block; Object mesh and Trigger areas must correspond to required shape of platform
- To have a variety of Platform shapes in one level, use TBP as Invisible object (textured magenta) and several Animating objects (without collision), note:
  - \* Requires setting up Animating object's animation to align exactly with TBP speed and height
- One Block Platform Slot can also be enabled in Trep and act as a second Platform setup.

| Trigger Type applied under platform | Timer setting  | OCB                                   | Code bits | Stackable triggers on platform area    | Outcome  |
|-------------------------------------|--|---------------------------------------|-----------|--|--|
| No Trigger                          | no effect  | OCB = 0                               | 1-5 on    | No                                     | Platform has no collision and Lara falls through it.   |
| Dummy for TBP                       | no effect  | OCB = 0                               | 1-5 on    | No                                     | Platform sinks down when Lara stands on it; returns back to original position when Lara steps off it   |
| Dummy for TBP                       | no effect  | OCB = 0                               |           | No                                     | Lara can walk on platform; platform doesn't move   |
| Dummy for TBP                       | no effect  | Suitable OCB formula                  |           | No                                     | Lara can walk on platform; platform doesn't move; Platform can be raised with Normal Trigger placed elsewhere  |
| Dummy for TBP                       | no effect  | Suitable OCB formula for height limit |           | No                                     | With a timed switch for platform placed elsewhere, you can raise platform up bit by bit by repeated use of switch. Platform will stop when it reaches Height limit |
| Trigger for TBP                     | works on stacked trigger items but does not affect TBP | OCB = 0                               |           | Yes                                    | Platform sinks down when Lara stands on it; returns back to original position when Lara steps off it   |
| Trigger for TBP                     | works on stacked trigger items but does not affect TBP | OCB = 0                               | 1-5 on    | Yes                                    | Lara can walk on platform; platform doesn't move   |
| Trigger for TBP                     | works on stacked trigger items but does not affect TBP | Suitable OCB formula                  |           | Yes                                    | Platform rises immediately Lara steps on it  |
| Trigger for TBP                     | works on stacked trigger items but does not affect TBP | Negative OCB                          |           | Yes                                    | Lara can walk on platform; platform doesn't move   |
| Trigger for TBP                     | Can't stack special triggers                           | Suitable OCB formula                  |           | Yes - when used with Switch for Switch | Lara can walk on platform; platform doesn't rise until Switch is operated  |

## Two Block Platform

| Trigger Type applied under platform | Timer setting   | OCB                  | Code bits | Stackable triggers on platform area                                     | Outcome  |
|-------------------------------------|---|----------------------|-----------|---|--|
| Trigger for TBP                     | Can't stack special triggers  | OCB = 0              |           | Yes - when used with Timed Switch for Switch                            | Lara can walk on platform; platform doesn't descend until Switch is operated. Platform descends for duration of Timed Switch. Platform does not rise back up to original position!   |
| Trigger for TBP                     | no effect   | Suitable OCB formula |           | Yes - with Pickup for Item  | Lara can walk on platform; platform doesn't rise until Item is picked up; other stacked triggers activated when Item is picked up.   |
| Trigger for TBP                     | works on stacked trigger items; works on TBP for Pickup timer duration when Lara is on platform | OCB = 0              |           | Yes - with Pickup for Item (Item OCB=64) on platform with Timer setting | Lara can walk on platform; platform doesn't descend until Item is picked up; other stacked triggers activated when Item is picked up. Stacked triggers last for duration of Pickup trigger Timer. If Lara stays on platform it descends for duration of Pickup Timer setting. If Lara moves off platform, it stops immediately. Platform does not rise back up to original position! |
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP  | Suitable OCB formula |           | Yes   | With a rollball triggered elsewhere and placed above platform, you can use the ball to heavy trigger the platform to rise up. Ball will rise with platform.  |
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP  | Suitable OCB formula |           | Yes   | With a Timed rollball triggered elsewhere and placed above platform, you can use the rollball to heavy trigger the platform to rise up. Ball will rise with platform. Ball will only rise for length of Roll ball timer, then it will fall through the platform and fall to ground as platform continues to rise. Platform will continue to rise for duration of OCB formula.        |
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP  | OCB = 0              |           | Yes   | With a rollball triggered elsewhere and placed above platform, you can use the rollball to heavy trigger the platform to descend. Ball will descend with platform when Lara steps onto the platform. Platform and ball will rise back up when Lara steps off platform.   |

## Two Block Platform

| Trigger Type applied under platform | Timer setting   | OCB                  | Code bits | Stackable triggers on platform area | Outcome   |
|-------------------------------------|---|----------------------|-----------|-------------------------------------|---|
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP                                | OCB = 0              |           | Yes                                 | With a Timed rollball triggered elsewhere and placed above platform, you can use the ball to heavy trigger the platform to descend. Ball will descend with platform when Lara steps onto the platform. Platform and ball will rise back up when Lara steps off platform. If Timed rollball trigger is shorter than time Lara stays on platform, Ball will stop descending and be suspended in mid air, until Lara steps off platform. Then ball will drop onto platform and rise back up with platform. |
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP                                | OCB = 0              | 1-5 on    | Yes                                 | With a rollball triggered elsewhere and placed above platform, you can use the ball to heavy trigger the stacked triggers. Lara can walk on platform; platform doesn't move.  |
| Heavy for TBP                       | works on stacked trigger items but does not affect TBP                                | Suitable OCB formula |           | Yes                                 | By placing an enemy and two AI Ambush on the platform, enemy can heavy trigger the platform to rise. Enemy will be transported upwards by platform  |
| Heavy for TBP                       | works on stacked trigger items; works on TBP when Lara and enemy are both on platform | OCB = 0              |           | Yes                                 | By placing an enemy and two AI Ambush on the platform, enemy can heavy trigger the stacked triggers. Platform does not descend with only enemy on it, but does descend for length of timer with both Lara and enemy on it   |
| Heavy for TBP                       | works on stacked trigger items; works on TBP when Lara and enemy are both on platform | OCB = 0              | 1-5 on    | Yes                                 | By placing an enemy and two AI Ambush on the platform, enemy can heavy trigger the stacked triggers. Platform does not descend with only enemy on it, but does descend all the time Lara is on Platform. Platform rises back up when Lara steps off platform. If enemy is still on platform he will be transported back up as well.   |
| Switch for TBP                      | no effect   | OCB = 0              |           | No                                  | Lara can walk on platform; platform doesn't move  |
| Pad for TBP                         | works on stacked trigger items but does not affect TBP                                | OCB = 0              |           | Yes                                 | Platform sinks down when Lara stands on it; returns back to original position when Lara steps off it  |

| Trigger Type applied under platform | Timer setting  | OCB                  | Code bits | Stackable triggers on platform area | Outcome  |
|-------------------------------------|--|----------------------|-----------|-------------------------------------|--|
| Combat for TBP                      | works on stacked trigger items but does not affect TBP | OCB = 0              |           | Yes                                 | Lara can walk on platform; platform doesn't move until Lara draws guns, then Platform sinks down whilst Lara stands on it; returns back to original position when Lara steps off it  |
| Combat for TBP                      | works on stacked trigger items but does not affect TBP | Suitable OCB formula |           | Yes                                 | Lara can walk on platform; platform doesn't move until Lara draws guns, then Platform rises  |
| Antitrigger for TBP                 | no effect  | OCB = 0              |           | Yes                                 | Lara can walk on platform; platform doesn't move; other stacked triggers are activated/deactivated when Lara steps on platform   |
| Pickup for TBP                      | no effect  | OCB = 0              |           | No                                  | Lara can walk on platform; platform doesn't move   |
| Heavy Antitrigger for TBP           | No effect  | OCB = 0              | 1-5 on    | Yes                                 | Platform normally sinks down with Lara on it. Once platform is Heavy Antitriggered, Lara can walk on platform; platform doesn't move. Stacked triggers will be activated/deactivated |



### EXAMPLE:

In Coyote Creek's Working Mine level, I used the TwoBlock Platform to create the old mine shaft elevator. The lift shaft was the same 2x2 area as the platform. The Lift object was a single mesh for the Two Block Platform with two Door objects at each entry/exit point. The sides and ceiling of the cage were slightly smaller than the room dimensions and had no collision, but were there for the visual illusion. You can't tell because the shaft is the same size as the moving object. The hanging starter rope for the lift was an additional dummy component of the elevator mesh (as it needed to move with the elevator). An invisible Pulley object was used as a Switch to give the illusion that the rope was pulled to start the elevator's ascent and to close the elevator doors. The exit doors were triggered by a delayed timer trigger set to open when the lift had arrived at the top of the shaft.