

Lightburn tutorial

Setup Screen

Click on EDIT

SETTINGS

EDITOR SETTINGS

- Turn off "beginner mode"

UNITS AND GRIDS

- Turn on "snap to objects"

- Turn on "snap to grid"

I also set the grid to 3.00 mm visual grid spacing

Right click on the icon band at the top of the screen.

- Turn off "arrange"

- Turn on "arrange long"

I have all other items on except "file list" and "variable text"

Click on Laser

then "optimization settings"

Enable

- "optimization and output reordering"

and set to

- "order by priority"

- "order by layer"

- "order by group"

Set to

- "from bottom"

all additional options to be on except

- "hide backlash"

I then "set to default"

As I will mainly be creating objects for my 00 gauge layout on 3 mm stock.

These settings are fine for that.

On the position bar

position the alignment button to the bottom left

Create Objects

Create Wall

Create a rectangle 60 x 39

(the size should be a multiple of 3 x 1.5) (the rough size of a brick in 00 gauge)

Position the rectangle to xpos 10 x ypos 10
(this will save time later)

Create Door

Create a rectangle 12 x 26

Highlight both rectangles

Position the rectangle to xpos 48 x ypos 10

This moves the door into position

Create Window

Create a rectangle 20 x 15

Position the rectangle to xpos 22 x ypos 21

Create the lintels window

Create a rectangle 24 x 2

Position the rectangle to xpos 20 x ypos 36

door

Create a rectangle 14 x 2

Position the rectangle to xpos 47 x ypos 36

Create Sill

Create a rectangle 24 x 2

Highlight sill and window

click (align Middle)

highlight sill and move to vertical position

Create interlocking tabs

create a rectangle 2 x 3
position at 10 x 10

Click Array
then change the vertical settings to
y spacing 3.000
y rows to 7
"shift by half" switch off
click OK

Click on the array of tabs
then CTL + D
move the duplicate to position 68 x 10

Click on the first array of tabs then hold the CTL key and click on the wall
Click CTL + B (this brings up the Boolean screen)
(you can hover over each button to see what they do)
we want the Subtract B - A
Click OK

Click on the second array of tabs then hold the CTL key and click on the wall
Click CTL + B (this brings up the Boolean screen)
we want the Subtract B -A
Click OK

Select all and group
CTL +D and drag copy off work area
Click on wall on work area and ungroup

Now we need to put the wall and the window and door onto the layers for the laser to cut or engrave.

The outline of the wall is already on the layer "00" which is where we want it
highlight the door and the window and click the "02" layer.

Highlight the lintels and the sill and put it on to layer "01".

Set Layer 00 to line

Set Layer 01 to Fill

Set Layer 02 to line

Then set the priority to 01,02,00

Highlight all and group and move off the work area.

We now have the wall shape complete.

Create the Bricks

create a rectangle 3 x 1.5
position 10 x 10
And move to Layer 5

Click Offset
direction = inward
offset distance = .1
Press OK

Highlight inner rectangle
Click radius and set to .1
Click on each corner of the rectangle

Click on both rectangles
Click Array
then change the settings to
Horizontal

X columns = 2
X spacing = 0

Vertical

y columns = 2
y spacing = 0

"shift by half" on
you should have 4 bricks separated by mortar now.

Create a rectangle
make a rectangle 3 x 3
position 11.5 x 10
select all by clicking bottom right and dragging to top left
click CTL + B
Select "intersection A and B"
you have now created a brick and two half bricks with mortar.
Select all
click CTL + D and move off the work space.

Select the bricks on the workspace
click Array
then change the settings to
Horizontal

X columns = 22
X spacing = 0

Vertical

y columns = 14
y spacing = 0

"shift by half" off
click OK

move to position 10 x 10

Highlight the wall
then CTL + D
then position 10 x 10

select the wall and the bricks
then CTL + B
Select "intersection A and B"
press OK

change layer to fill
move off workspace

Create the Texture

Now to create some texture
highlight the bricks you moved of the workspace
then CTTL +D
move it to position 10 x 10
then move to layer 7
then ungroup
Click on the outer line and delete
take the inner rectangle from your bricks (The one with the radiused corners)
move it to position 10 x 10

Select the Jpg or PNG of the surface you wish to make.
Import your image (it will probably be too large so make its size 10 x 10 and its position 10 x 10)

Select both brick and image
Right Click and select
"Apply mask to image"
Select both again
Right click and select
"Flatten image mask"

Click Array
then change the settings to
Horizontal
X columns = 24
X spacing = 0.1
Vertical
y columns = 28
y spacing = 0.1
"shift by half" on
Click OK

Right click
Select "convert to bitmap"
move off workspace

Click wall
CTL + D
and move to 10 x10
then place the wall on to layer "00"

click on bitmap
CTL + D
and move to position 7.1 x 10.1
select both wall and image and right click
Select "apply mask to image"
right click again
Select "flatten image mask"
then move to layer 9
move off workspace

Now to assemble

Click on the wall
Press Press CTL + D
move to position 10 x 10

click on the bricks
Press Press CTL + D
move to position 10 x 10

click on the texture
Press Press CTL + D
move to position 10 x 10

Layer Order

C05,01,09,02,00

layer 07 is not output

Setting the Power and Speed

this will depend on your laser

as a guide here are my settings for the Ortur LM3

C05	3000/30
C01	5000/80
C09	4000/40
C02	600/80
C00	600/80