

Boxcutter

BIG LITTLE TIPS

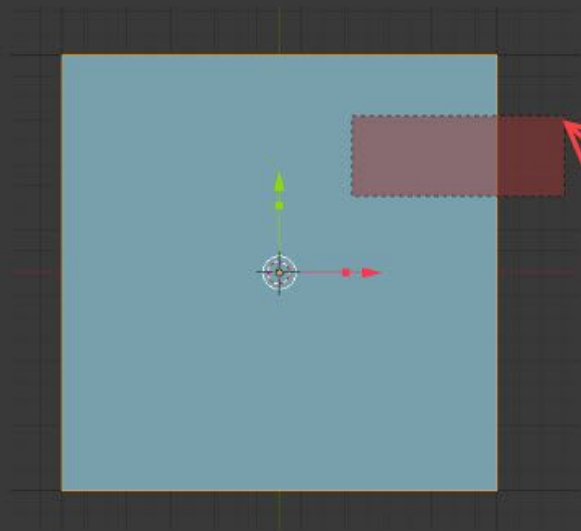
Chipp Walters 9/2018

## Boxcutter 2D

### BOXCUTTER 2D OBJECT MODE

#### SUBTRACT THROUGH AND THROUGH

1

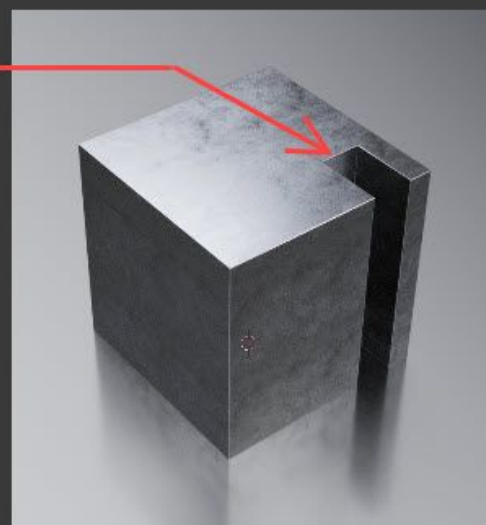


WITH THE OBJECT  
SELECTED, VIEW ORTHO  
'CTRL+CLICK+DRAG' WITH  
THE STARTING POSITION  
•OFF• THE OBJECT. THIS  
CREATES A RED  
RECTANGLE.

CLICK STARS HERE.

WHEN YOU LET UP ON THE  
MOUSE BUTTON, THE CUT IS  
MADE COMPLETELY  
THROUGH THE OBJECT.

( NOTE: RENDER HAS  
RENDERED BEVELS AND IS  
NOT PART OF BOXCUTTER )



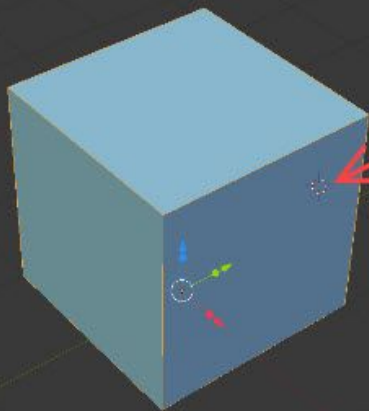
2

# BOXCUTTER 2D

## OBJECT MODE

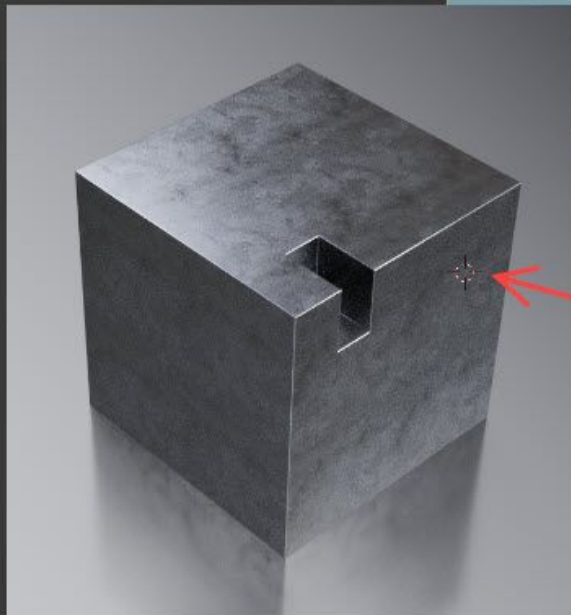
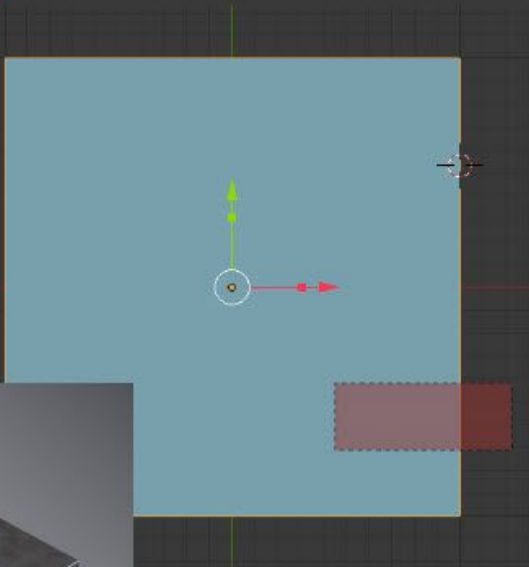
### SUBTRACT ONLY TO DEPTH

LEFT-CLICK ANYWHERE ON THE OBJECT TO **SET** THE CURSOR POSITION.



DRAW STARTING OUTSIDE THE SELECTED OBJECT AND BEFORE RELEASING...

PRESS THE **ALT** KEY.



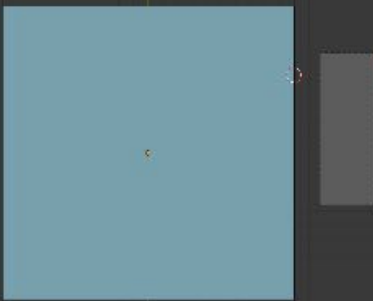
THE NEW CUT WILL ONLY GO AS DEEP AS THE CURSOR POSITION.

# BOXCUTTER 2D

## OBJECT MODE

### CREATE NEW CUBE OBJECT

WITH **NOTHING** SELECTED, **CLICK+DRAG** TO PLACE A **GRAY** RECTANGLE.

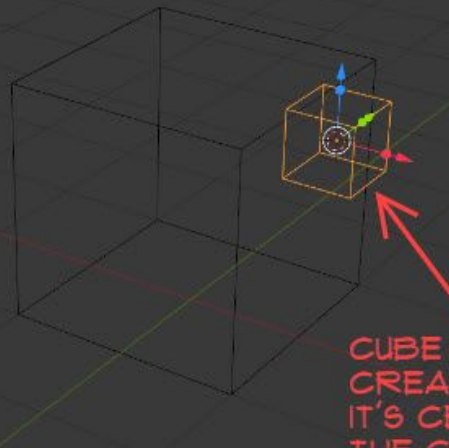


A BOX OBJECT IS CREATED HERE.



YOU CAN CREATE **CUBE** AT THE CURSOR POSITION BY '**CRTL+SHIFT+DRAG**'

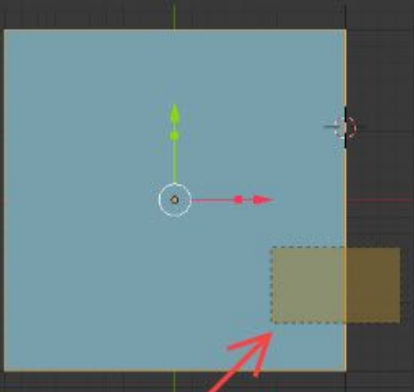
CURSOR



CUBE IS CREATED WITH IT'S CENTER AT THE CURSOR

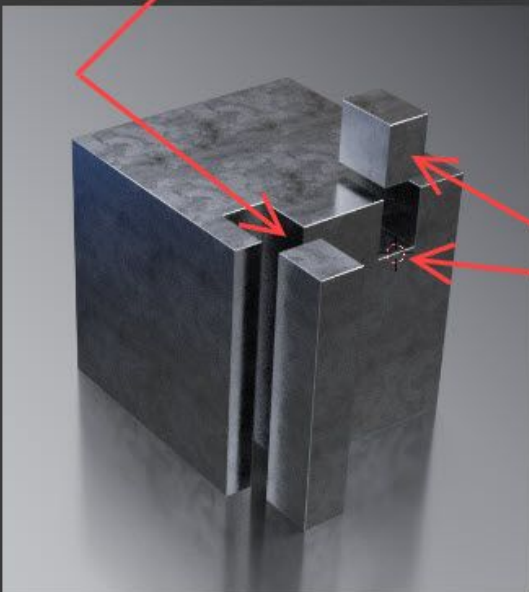
## BOXCUTTER 2D OBJECT MODE

SLICE & REBOOL-- YELLOW BOX



THE **YELLOW** BOX DELETES GEOMETRY (LIKE THE RED BOX) BUT ALSO KEEPS THE DELETED PORTION AS A NEW OBJECT.

TO USE IT, PRESS '**CTRL+SHIFT**' **BEFORE** YOU CLICK+DRAG THE BOX.



THE RENDER SHOWS THE BOXCUT SHOWN ABOVE-- THE DELETED PORTION MOVED OUT SO YOU CAN SEE THE EFFECT.

PRESSING THE '**ALT**' KEY BEFORE RELEASING THE MOUSE BUTTON ALLOWS FOR A BOXCUT TO ONLY THE CURSOR POSITION AS SHOWN.

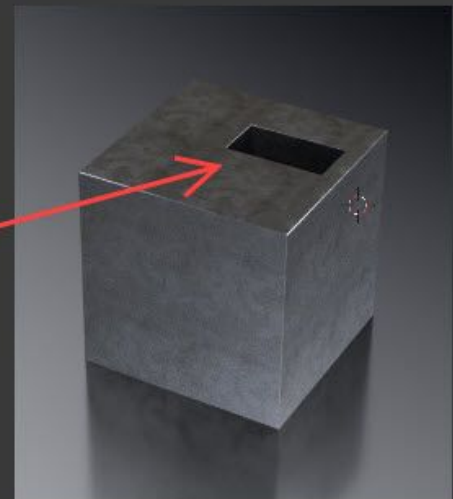
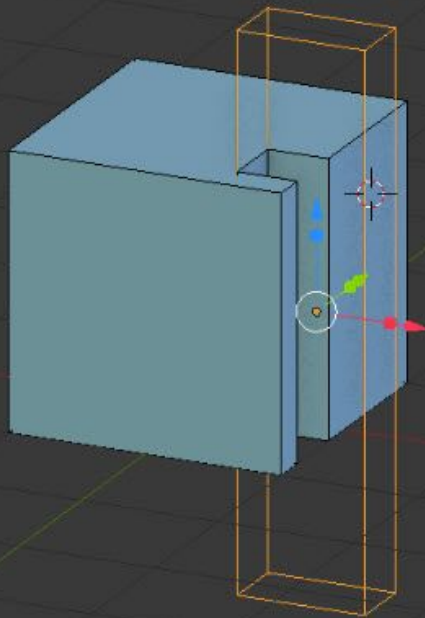


# BOXCUTTER 2D

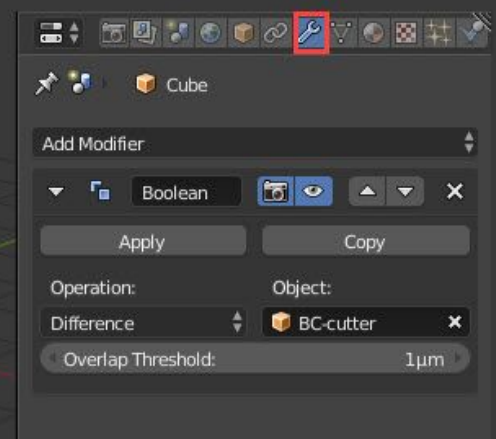
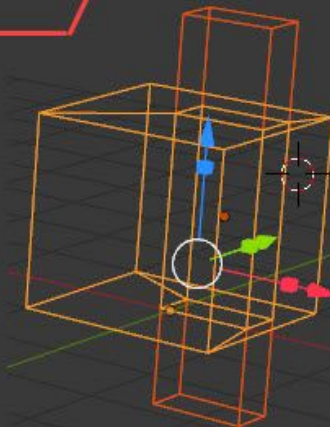
## OBJECT MODE

### KEEP LIVE BOOLEAN

WHEN SUBTRACTING ( 'CTRL+DRAG' ), YOU CAN HOLD THE 'SHIFT' KEY BEFORE FINISHING THE DRAG TO KEEP THE BOOLEAN 'LIVE'



IN THE RENDERED EXAMPLE, THE LIVE BOOLEAN (OUTLINED IN ORANGE ABOVE) WAS MOVED INSIDE THE CUBE. BECAUSE IT STAYS A BOOLEAN MODIFIER, IT CAN BE TREATED JUST LIKE ANY OTHER MODIFIER.



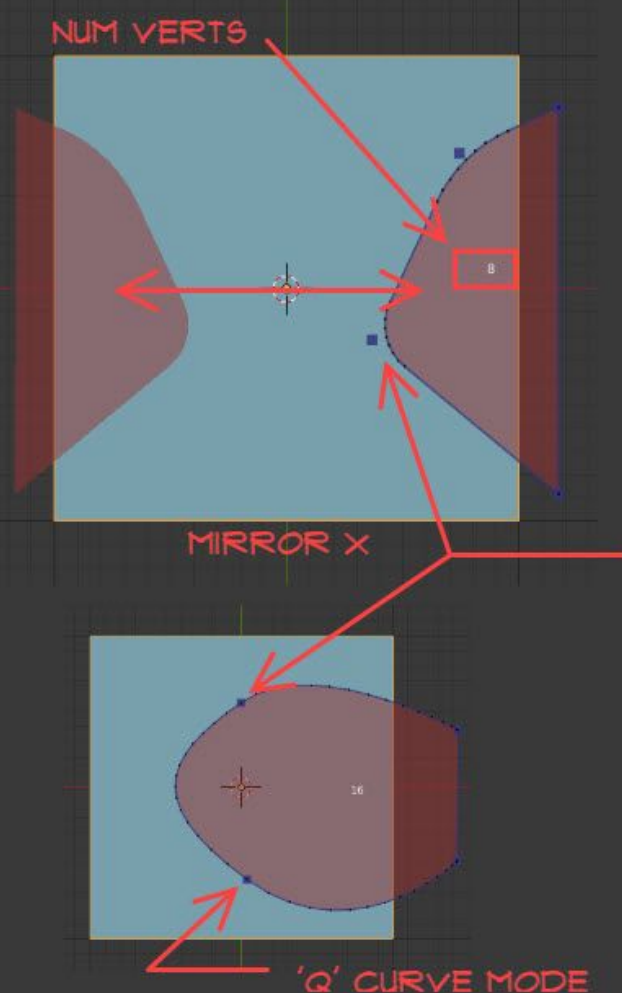
# BOXCUTTER 2D

## OBJECT MODE

### REALTIME MODS FOR BOXCUTTER

THERE ARE MANY REALTIME MODIFICATIONS YOU CAN MAKE TO THE BOXCUTTER OBJECT DURING THE CUTTING PROCESS.

THESE INCLUDE RESIZING, ROTATING, MOVING, THE APPLICATION OF BEVEL AND CURVES, MIRRORING AND MOVING POINTS. TO ENABLE REALTIME CUTTER MODS, PRESS 'TAB' BEFORE YOU RELEASE THE MOUSE BUTTON.



USE 'R', 'S', & 'G' KEYS TO ROTATE, SCALE AND MOVE THE CUTTER AROUND.

'CLICK+DRAG' TO MOVE VERTS

BY DEFAULT, VERTS ARE SET TO BEVEL. USE 'Q' TO TOGGLE TO CURVE.

'MIDDLE-MOUSE BUTTON+CLICK+DRAG' TO BEVEL/CURVE ALL CORNERS. IF YOU DO THIS DIRECTLY ON TOP OF A VERT, IT WILL ONLY BEVEL THAT VERT.

'SCROLL WHEEL' TO CHANGE THE NUMBER OF BEVELS IN A CORNER

USE '1' OR '2' (ABOVE THE KBD) TO TOGGLE MIRROR MODE ON AND OFF (X AXIS AND Y AXIS RESPECTIVELY)

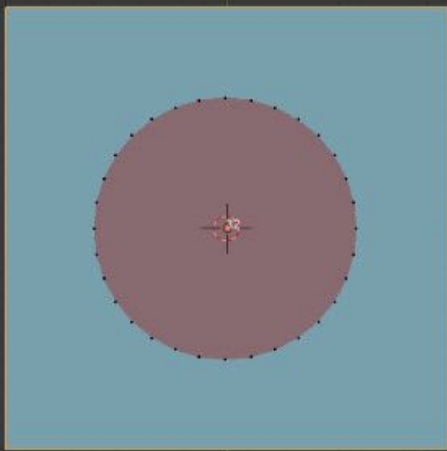
'ENTER' OR 'DOUBLE-CLICK' TO APPLY AND EXIT

'ESC' TO EXIT

## BOXCUTTER 2D USING THE CIRCLE CUTTER

### OBJECT MODE

USE THE PIE MENU 'D' TO CHOOSE CIRCLE. WITH THE MOUSE OVER THE SELECTED OBJECT, 'CTRL+DRAG' TO CREATE WITH THE CENTER POINT BEING THE STARTING CLICK.



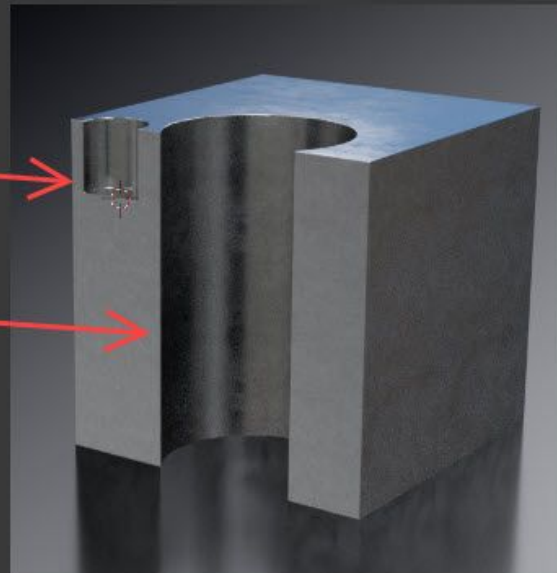
THERE ARE TWO WAYS TO REPOSITION THE CIRCLE.

YOU CAN PRESS TAB AND GO INTO REALTIME MODIFICATION MODE, OR;

JUST TAP THE SPACEBAR TO TOGGLE MOVE MODE. A SIMPLE SPACEBAR TAP EXITS THE MOVE MODE.

PRESSING 'ALT' WHEN EXECUTING THE CUT WILL CUT THE CIRCLE DOWN TO THE CURSOR POSITION.

OTHERWISE THE CIRCLE WILL COMPLETELY CUT THROUGH THE ENTIRE OBJECT.





# BOXCUTTER 2D USING THE NGON CUTTER

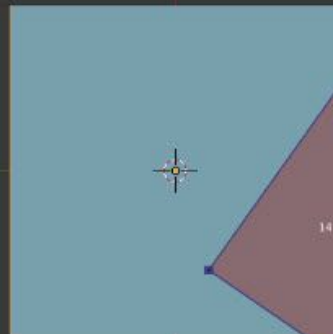
## OBJECT MODE

USE THE PIE MENU 'D' TO CHOOSE NGON.



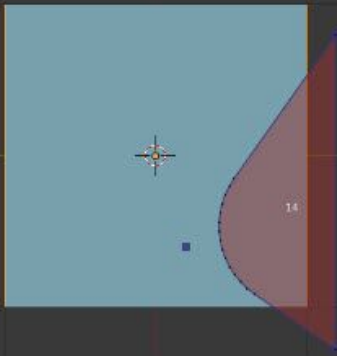
1

WITH 'CTRL' KEY  
PRESSED, CLICK AND  
DRAG FROM 1 TO 2  
THEN LET THE MOUSE  
BUTTON UP.



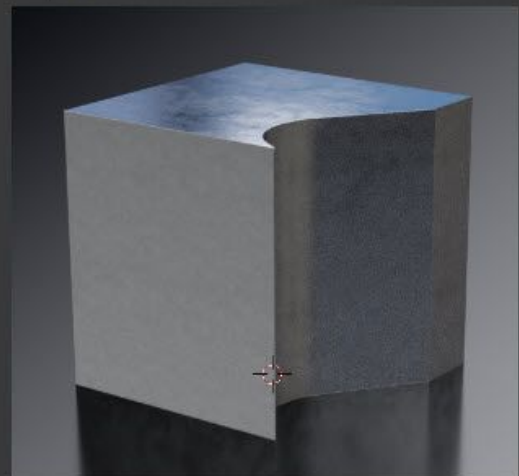
3

WITH 'CTRL' KEY  
PRESSED, THE NGON  
NOW RUBBERBANDS  
TO THE MOUSE  
LOCATION. A CLICK (AT  
3) SETS THE POINT. ANY  
SUBSEQUENT 'CTRL'  
KEY CLICKS ADDS NEW  
POINTS TO THE END OF  
THE NGON.



BECAUSE OF THE  
NATURE OF THE  
NGON CUTTER, YOU  
ARE  
AUTOMATICALLY PUT  
IN REALTIME  
MODIFICATION  
MODE, WHICH MEANS  
YOU CAN BEVEL,  
ROTATE, MOVE,  
SCALE, ETC.

'ENTER' OR DOUBLE-CLICK TO  
CONFIRM THE ACTION.

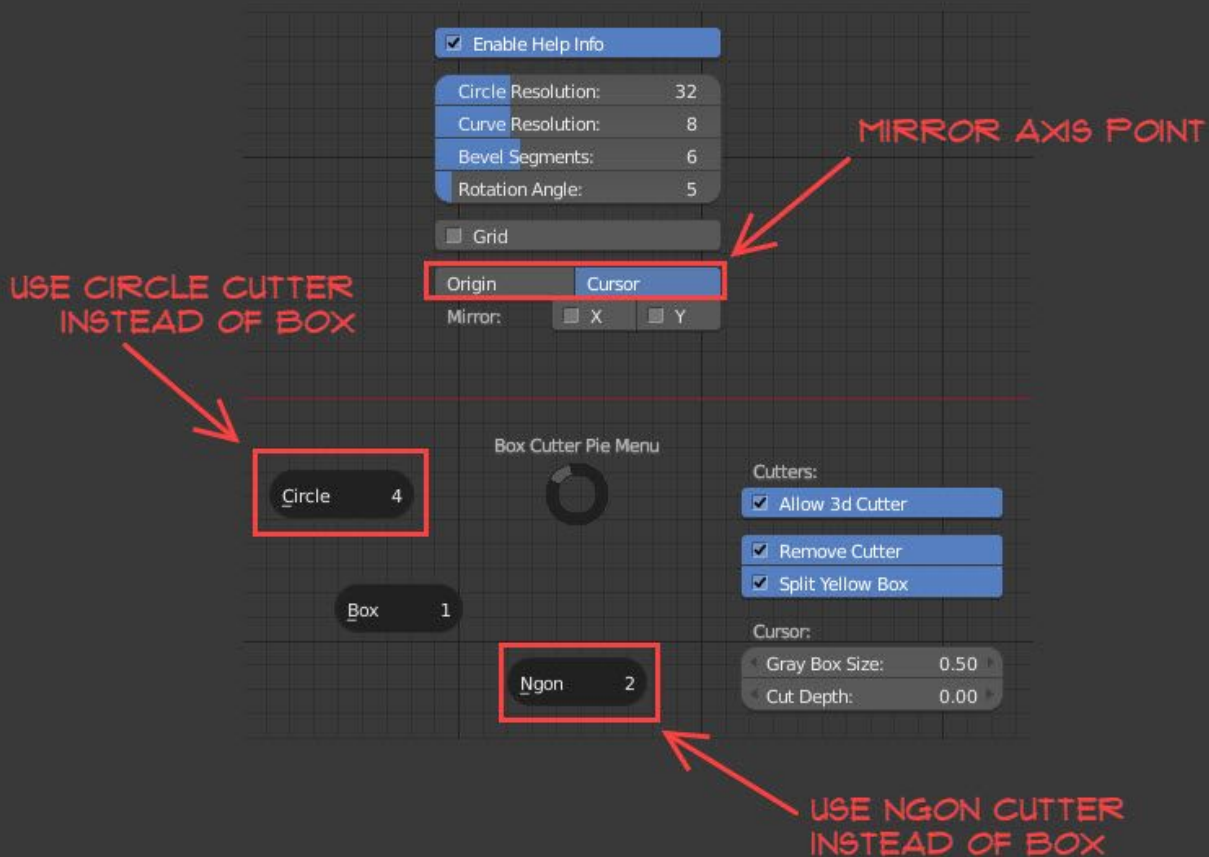


# BOXCUTTER 2D THE 'PIE' MENU

## OBJECT MODE & EDIT MODE

THERE ARE A NUMBER OF FEATURES IN **BOXCUTTER 2D MODE** WHICH ARE ONLY ACCESSED BY PRESSING 'D' AND ACCESSING THE PIE MENU.

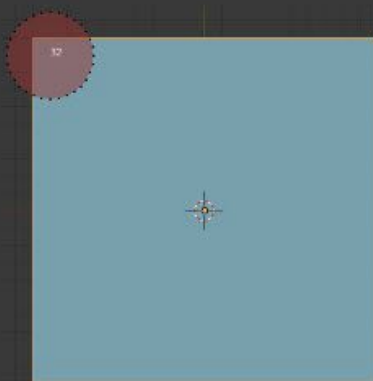
HERE ARE THE MOST IMPORTANT SETTINGS FOR 2D MODE.



## BOXCUTTER 2D QUICK MOVE OF THE CUTTER

### OBJECT MODE & EDIT MODE

THERE ARE TIMES WHEN ALL YOU WANT TO DO IS MOVE THE CUTTER A BIT, AND DON'T NECESSARILY WANT TO GO INTO REALTIME MODIFICATION MODE. THIS IS ACHIEVED SIMPLY BY TAPPING THE SPACEBAR WHILE KEEPING THE MOUSE BUTTON PRESSED WHILE IN THE MIDDLE OF THE BOX CUTTING PROCESS.



IN THIS EXAMPLE, THE CIRCLE IS DRAWN FROM THE MIDDLE, BUT IS NOT IN THE CORRECT POSITION.

PRESSING THE SPACEBAR ONCE, WITH THE MOUSE BUTTON STILL PRESSED, TOGGLES TO MOVE MODE AND ALLOWS THE CIRCLE TO BE REPOSITIONED.

PRESSING THE SPACEBAR AGAIN TOGGLES OFF THE MOVE BEHAVIOR AND YOU CAN CONTINUE RESIZING YOUR CIRCLE (OR BOX, OR NGON).





# BOXCUTTER 2D

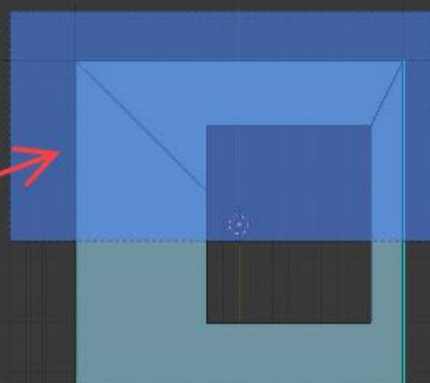
## KNIFING TO HELP FIX GEOMETRY

### EDIT MODE

CONSIDER THIS OBJECT CREATED BY BOXCUTTER USING 2D OBJECT MODE. NOTE THE DIAGONAL EDGE AT THE CORNER.

SEE THE POOR TOPOLOGY AFTER EDITING AND BEVELING.

USING 'CTRL+DRAG' IN EDIT MODE, WE KNIFE THROUGH THE OBJECT.



WE CAN DISSOLVE THE DIAGONAL EDGES WITH BLENDER COMMAND 'CTRL+X' AND THEN ADD A NEW BEVEL AND IT WORKS MUCH BETTER.

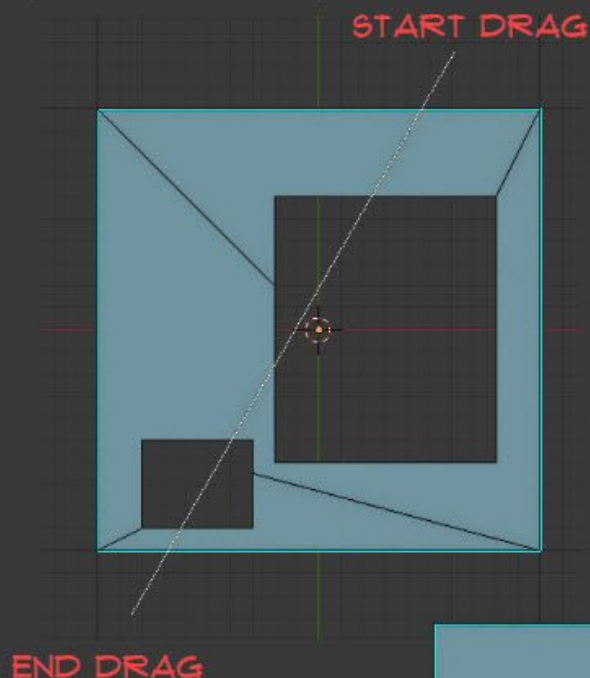
USING 'CTRL+DRAG' IN EDIT MODE KNIFES THROUGH THE ENTIRE GEOMETRY OF THE BOX. PRESSING 'ALT' BEFORE FINISHING ONLY SLICES THROUGH THE VISIBLE GEOMETRY.



# BOXCUTTER 2D

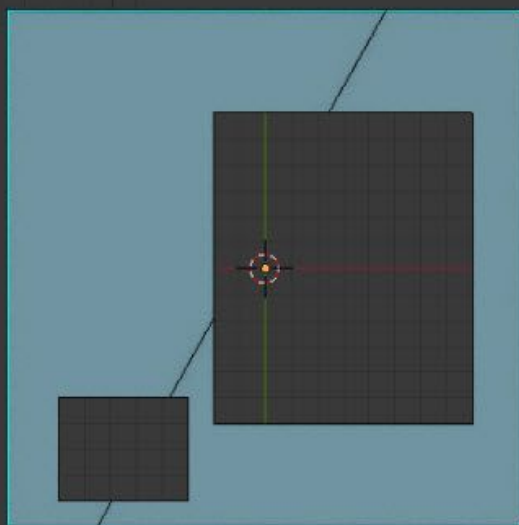
## FAST BISECT TO FIX GEOMETRY

### EDIT MODE



SOMETIMES THE BOX (WHICH ONLY CUTS HORIZ AND VERT) DOESN'T WORK AS WELL FOR FIXING GEOMETRY IN EDIT MODE.

IN THESE CASES, USE '**CTRL+D**' AND MOUSE DRAG TO KNIFE THROUGH THE ENTIRE MESH



THEN, USE BLENDER'S DISSOLVE EDGES ('**CTRL+X**') TO CLEAN UP ANY NON WANTED EDGES AND YOUR MODEL IS READY FOR MORE CUTTING.