

Quick P96 new res guide

By john mansfield

For screen calculation use

<http://www.arachnoid.com/modelines/index.html>

**THIS GUIDE IS TO MAKE A NEW RESOLUTION IN PICASSO96MODE ON A VODOO3 OR
OTHER RTG CARD**

The Calculator

those who are in a hurry and who know what a "modeline" is, here's the documentation is below.

Required inputs:

Horizontal resolution pixels	<input type="text" value="1600"/>
Vertical resolution pixels	<input type="text" value="1200"/>
Refresh rate Hz	<input type="text" value="60"/>

Options:

FB output mode (default is xf86 mode)	<input type="checkbox"/>
Interlaced mode	<input type="checkbox"/>
Image margin (to correct overscan)	<input type="checkbox"/>
Computation details	<input checked="" type="checkbox"/>

Results:

```
# 1600x1200 @ 60.00 Hz (GTF) hsync: 74.52 kHz; pclk: 160.96 MHz
Modeline "1600x1200_60.00" 160.96 1600 1704 1880 2160 1200 1201 1204
```

Type in screen mode you want

We want 1600x1200 for this guide

to know what a "modeline" is, here's the calculator.

Options:

FB output mode (default is xf86 mode)	<input type="checkbox"/>
Interlaced mode	<input type="checkbox"/>
Image margin (to correct overscan)	<input type="checkbox"/>
Computation details	<input checked="" type="checkbox"/>



hsync: 74.52 kHz; pclk: 160.96 MHz
50.96 1600 1704 1880 2160 1200 1201 1204 1242 -HSync

Tick computation details box

Required inputs:

Horizontal resolution pixels	1600
Vertical resolution pixels	1200
Refresh rate Hz	60

Options:

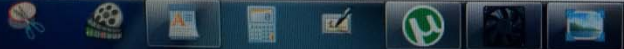
FB output mode (default is xf86 mode)	<input type="checkbox"/>
Interlaced mode	<input type="checkbox"/>
Image margin (to correct overscan)	<input type="checkbox"/>
Computation details	<input checked="" type="checkbox"/>

Results:

compute

```
# 1600x1200 @ 60.00 Hz (GTF) hsync: 74.52 kHz; pclk: 160.96 MHz
Modeline "1600x1200_60.00" 160.96 1600 1704 1880 2160 1200 1201 1204 1242 -HSync
+Vsync
```

Details:



Here is the res spec

Details:

1: [H PIXELS RND]	:	1600.000000
2: [V LINES RND]	:	1200.000000
3: [V FIELD RATE RND]	:	60.000000
4: [TOP MARGIN (LINES)]	:	0.000000
5: [BOT MARGIN (LINES)]	:	0.000000
6: [INTERLACE]	:	0.000000
7: [H PERIOD EST]	:	13.419373
8: [V SYNC+BP]	:	41.000000
9: [V BACK PORCH]	:	38.000000
10: [TOTAL V LINES]	:	1242.000000
11: [V FIELD RATE EST]	:	59.999301
12: [H PERIOD]	:	13.419216
13: [V FIELD RATE]	:	60.000000

This calculator is available as a command-line Ruby program released under the [GPL](#):

- [Pretty-printed](#)
- [Plain-text](#)

The Document

10: [TOTAL V LINES] : 1242.000000 = vrt framesize

We need this to add to p96mode **vrt framesize**

Details:

14:	[V FRAME RATE]	:	60.000000
15:	[LEFT MARGIN (PIXELS)]	:	0.000000
16:	[RIGHT MARGIN (PIXELS)]	:	0.000000
17:	[TOTAL ACTIVE PIXELS]	:	1600.000000
18:	[IDEAL DUTY CYCLE]	:	25.974235
19:	[H BLANK (PIXELS)]	:	560.000000
20:	[TOTAL PIXELS]	:	2160.000000
21:	[PIXEL FREQ]	:	160.963200
22:	[H FREQ]	:	74.520000
17:	[H SYNC (PIXELS)]	:	176.000000
18:	[H FRONT PORCH (PIXELS)]	:	104.000000
36:	[V ODD FRONT PORCH (LINES)]	:	1.000000

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- [Pretty-printed](#)

20: [TOTAL PIXELS] : 2160.000000 = horiz framesize

We need this to add to p96mode **horiz framesize**

etails:

14:	[V FRAME RATE]	:	60.000000
15:	[LEFT MARGIN (PIXELS)]	:	0.000000
16:	[RIGHT MARGIN (PIXELS)]	:	0.000000
17:	[TOTAL ACTIVE PIXELS]	:	1600.000000
18:	[IDEAL DUTY CYCLE]	:	25.974235
19:	[H BLANK (PIXELS)]	:	560.000000
20:	[TOTAL PIXELS]	:	2160.000000
21:	[PIXEL FREQ]	:	160.963200
22:	[H FREQ]	:	74.520000
17:	[H SYNC (PIXELS)]	:	176.000000
18:	[H FRONT PORCH (PIXELS)]	:	104.000000
36:	[V ODD FRONT PORCH(LINES)]	:	1.000000

is calculator is available as a command-line Ruby program released under the

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- Plain-text

17: [H SYNC (PIXELS)] : 176.000000 = horiz syncsize

We need this to add to p96mode **horiz syncsize**

etails:

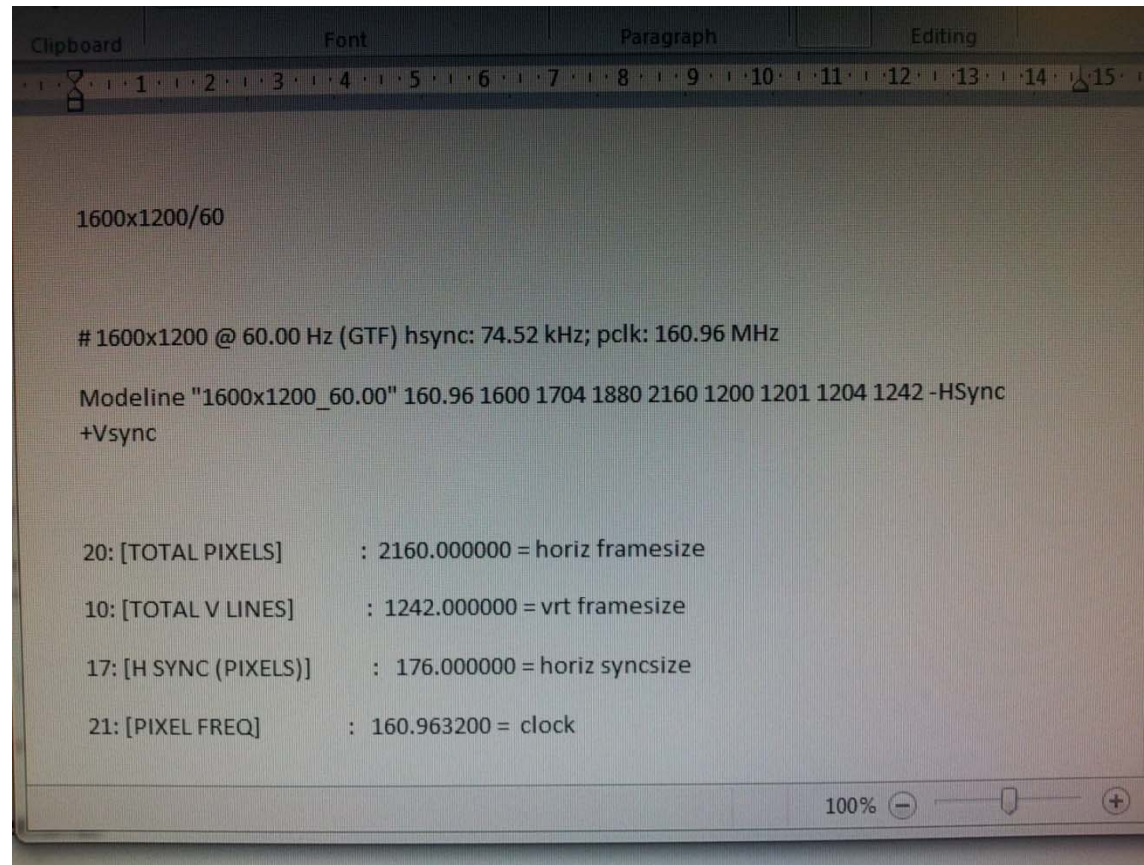
14: [V FRAME RATE]	:	60.000000
15: [LEFT MARGIN (PIXELS)]	:	0.000000
16: [RIGHT MARGIN (PIXELS)]	:	0.000000
17: [TOTAL ACTIVE PIXELS]	:	1600.000000
18: [IDEAL DUTY CYCLE]	:	25.974235
19: [H BLANK (PIXELS)]	:	560.000000
20: [TOTAL PIXELS]	:	2160.000000
21: [PIXEL FREQ]	:	160.963200
22: [H FREQ]	:	74.520000
17: [H SYNC (PIXELS)]	:	176.000000
18: [H FRONT PORCH (PIXELS)]	:	104.000000
36: [V ODD FRONT PORCH (LINES)]	:	1.000000

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21: [PIXEL FREQ] : 160.963200 = clock

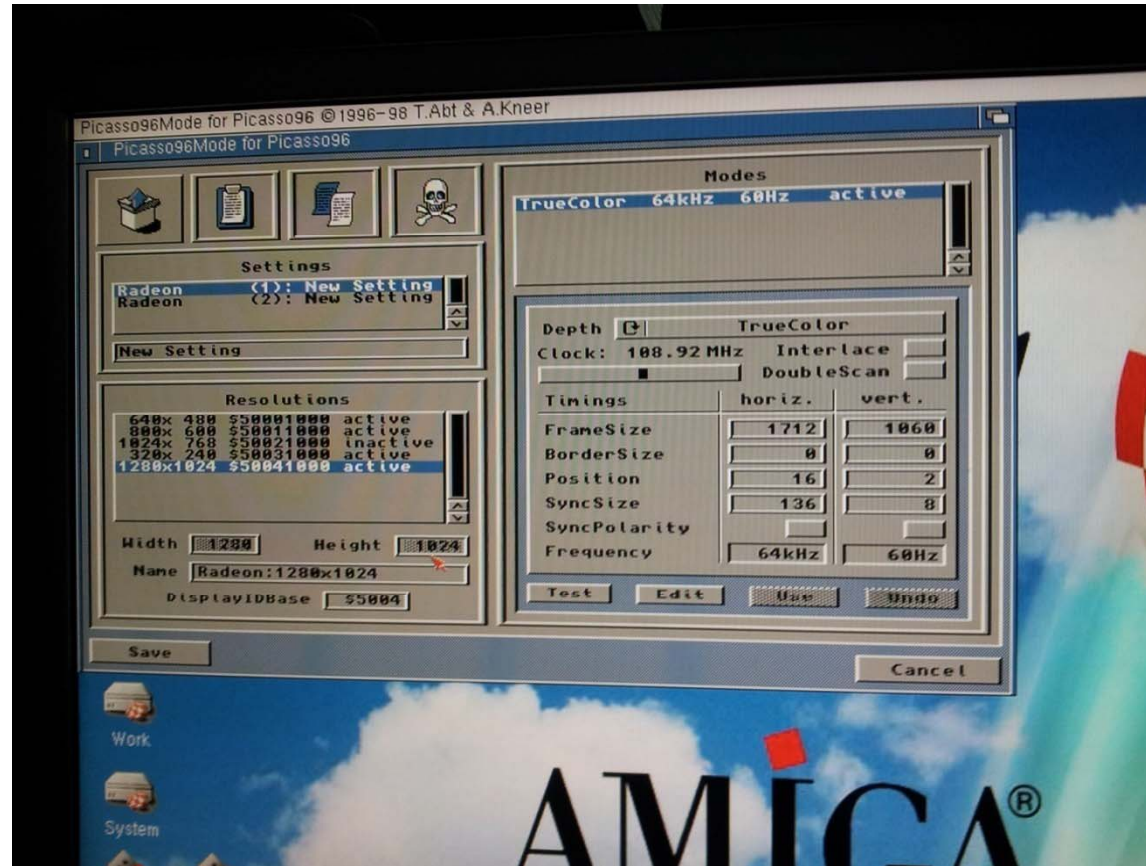
We need this to add to p96mode **clock**



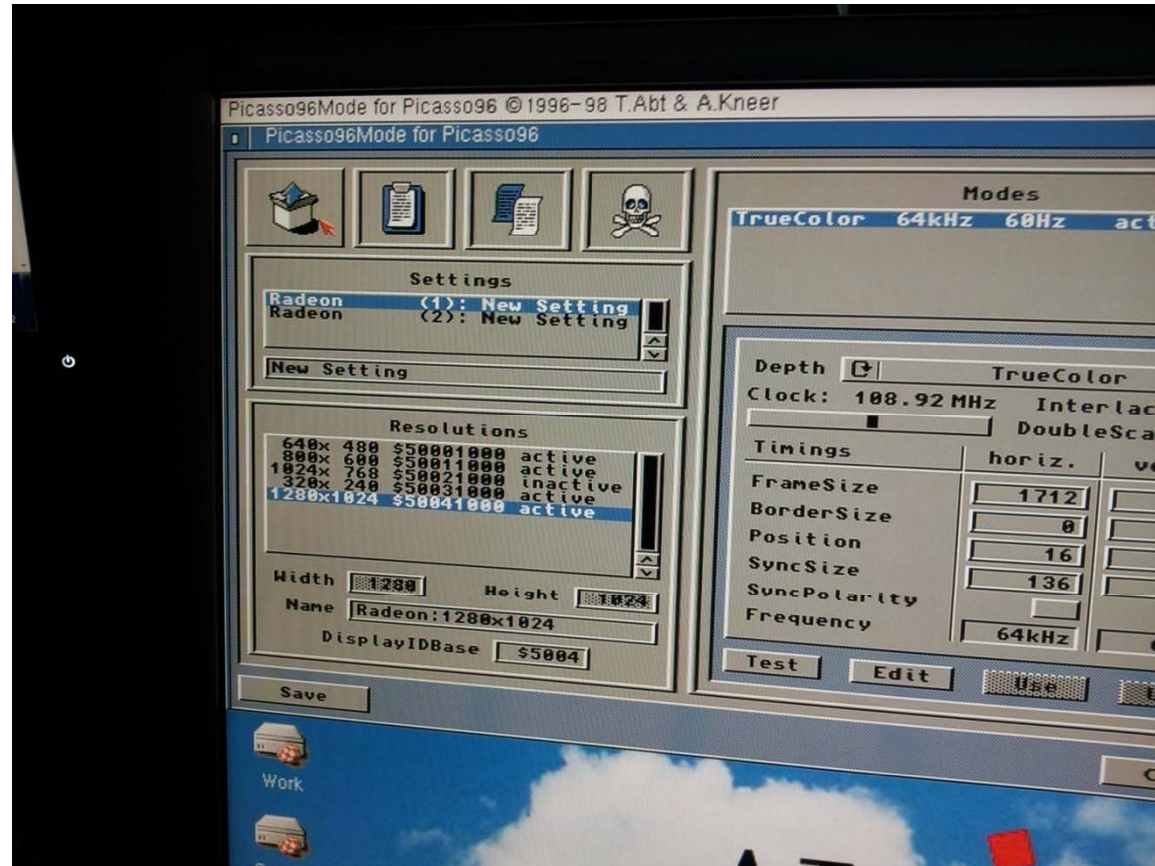
Full settings saved for future reference



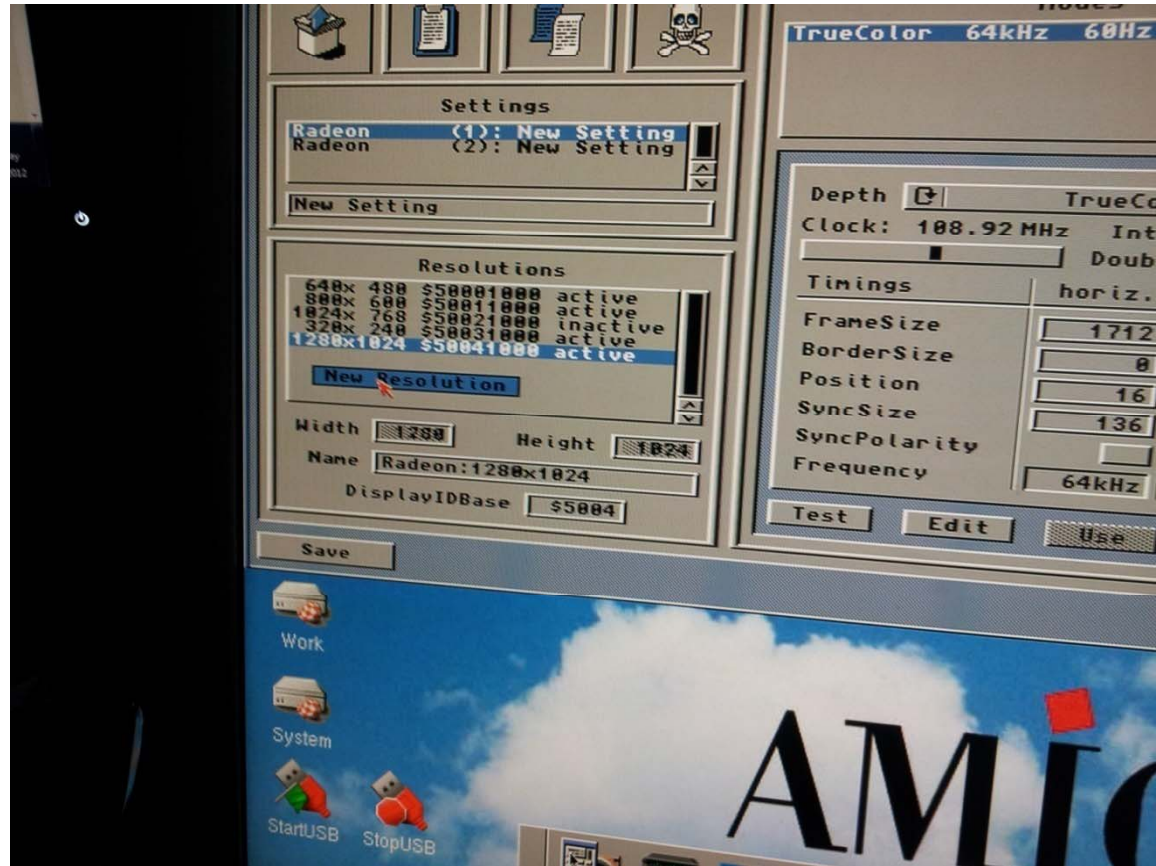
My wb@800x600



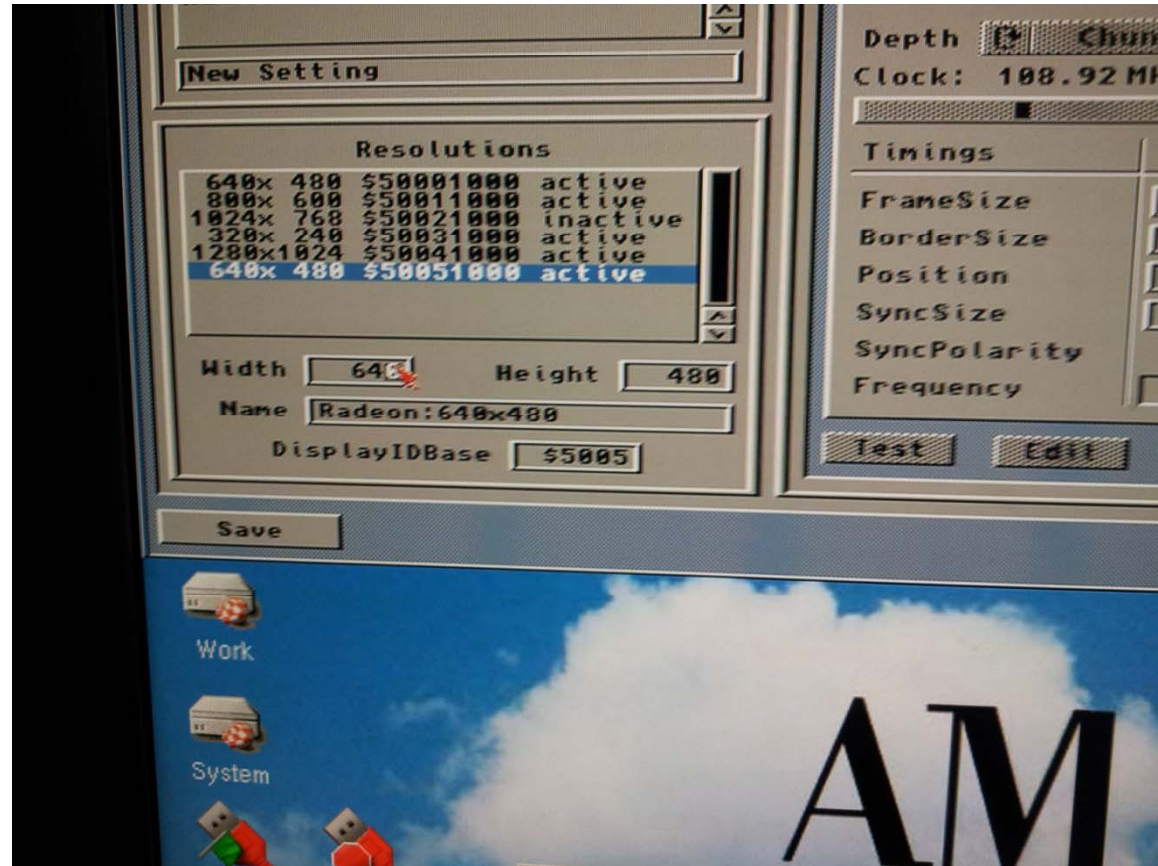
load p96mode



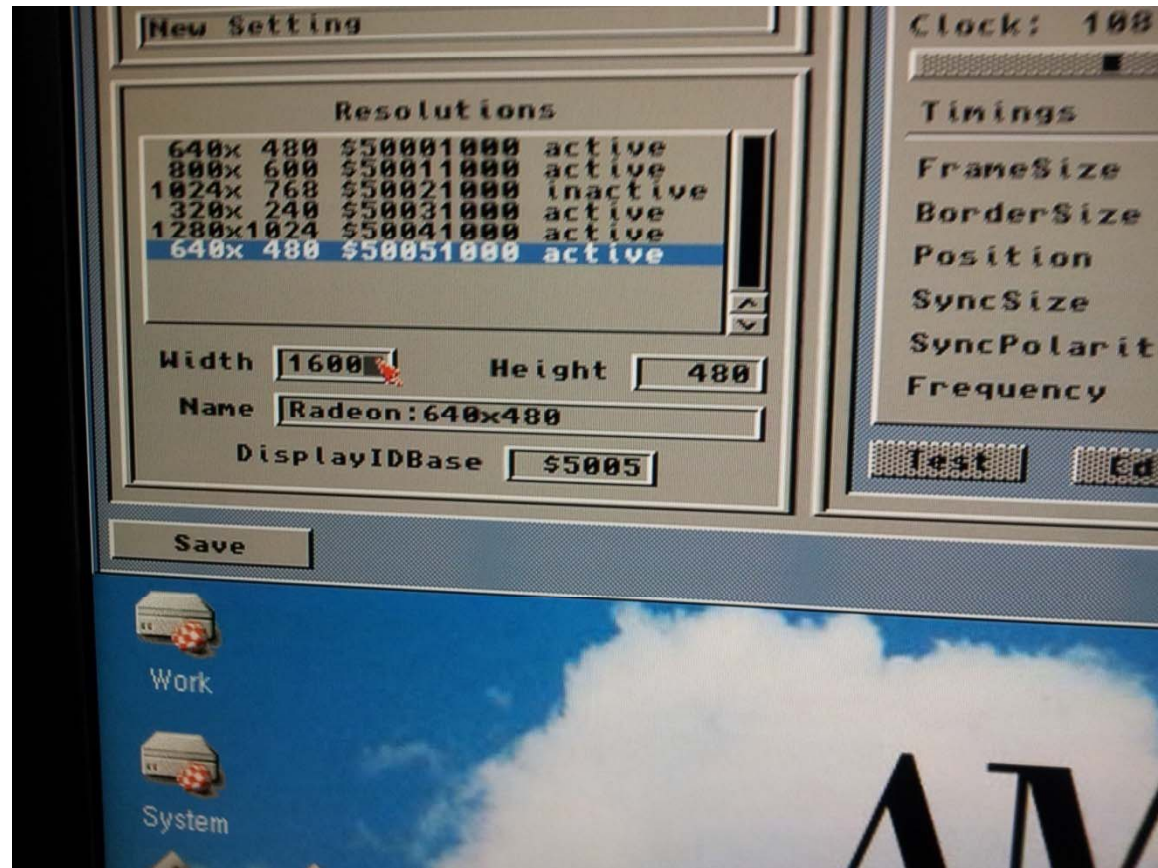
Click and drag new tool



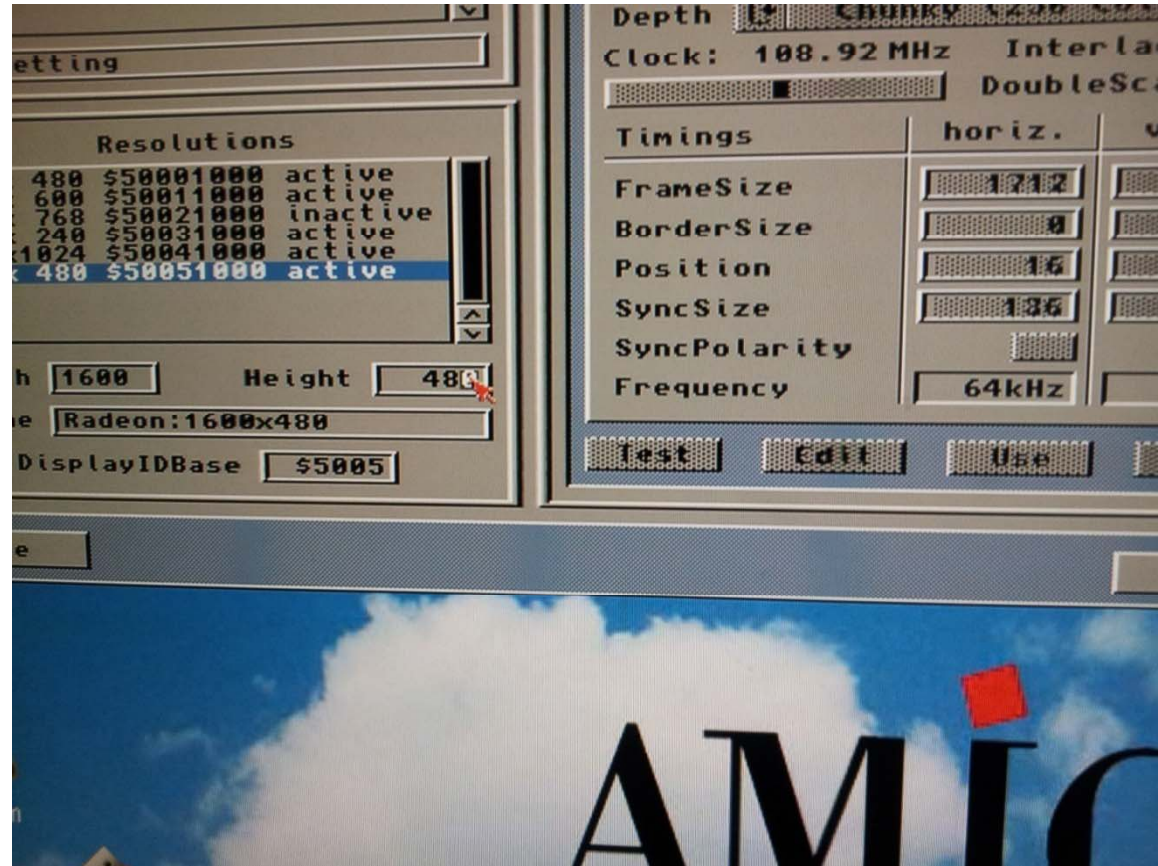
Drop to new res



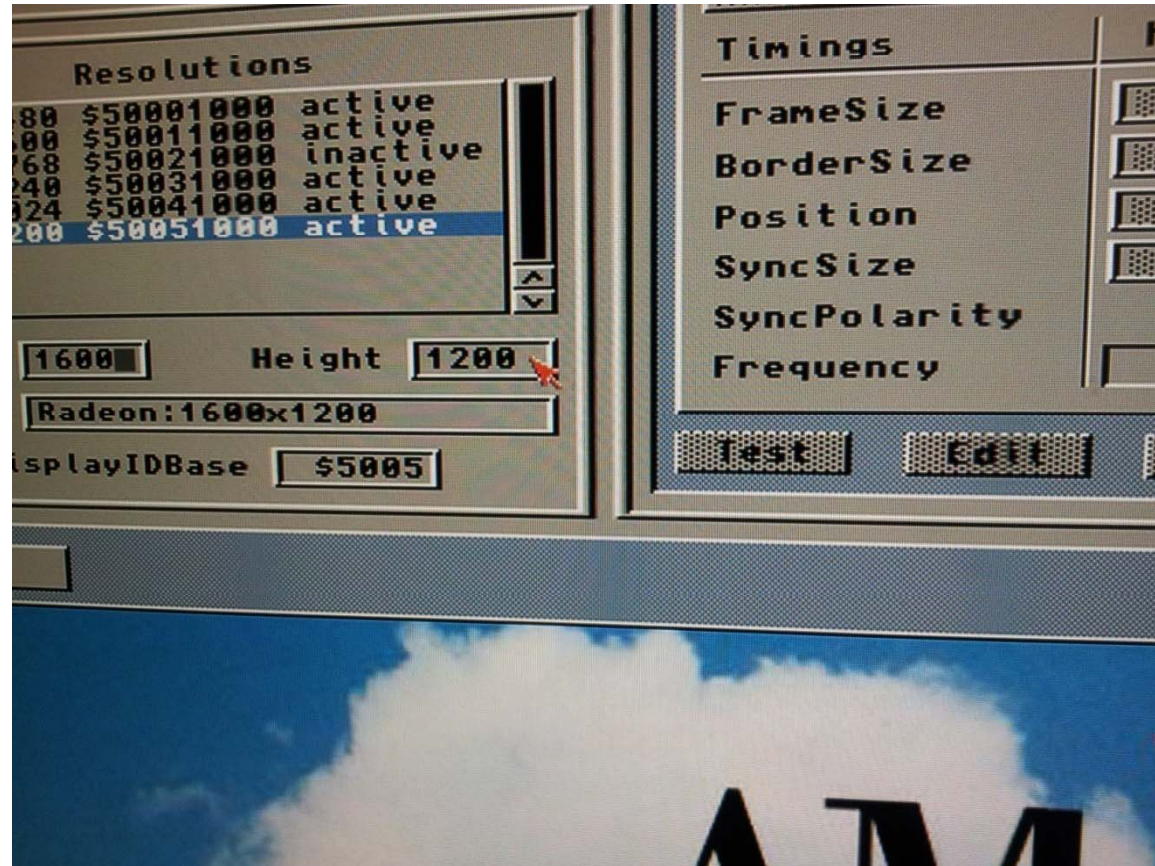
Click res box to change number



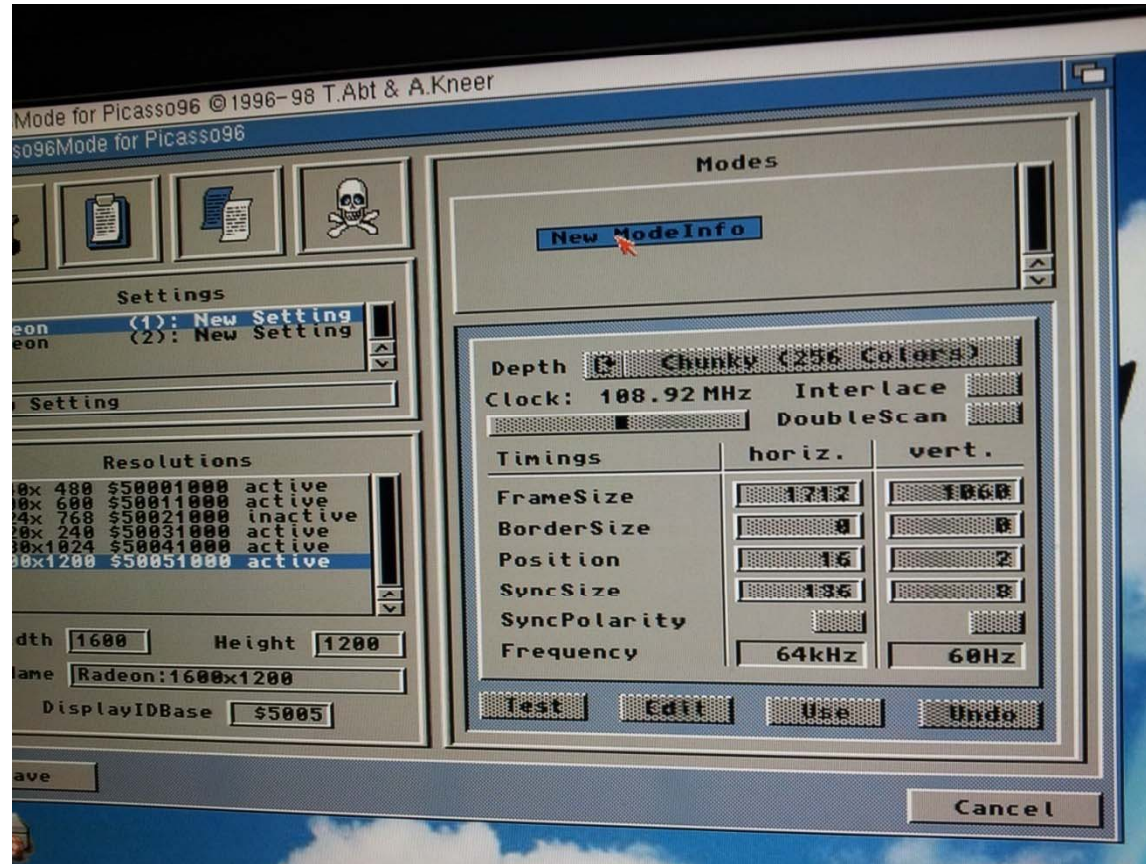
To new res of 1600



Change here too

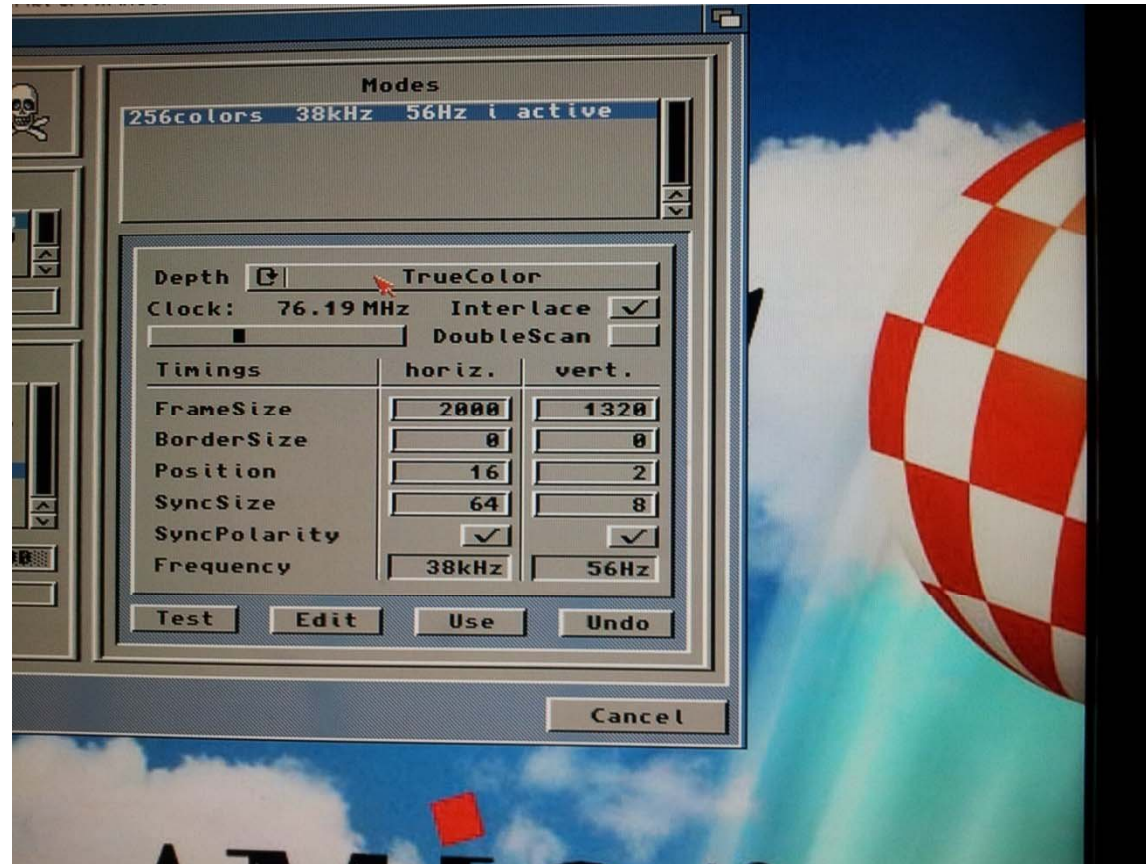


To 1200



Drag and drop new tool to here for depth

You can make new various depths here the same way



Click this to change to truecolour which is 24bit
and click use to keep setting



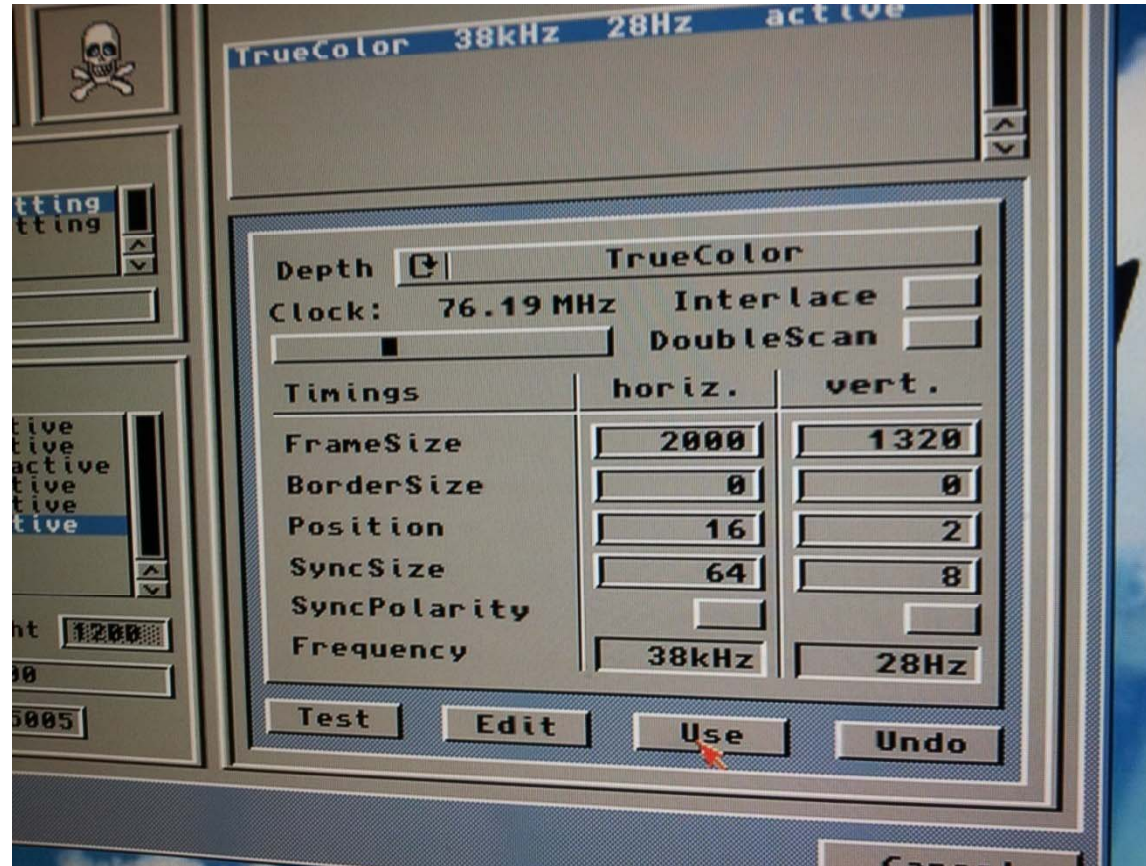
Untick interlace



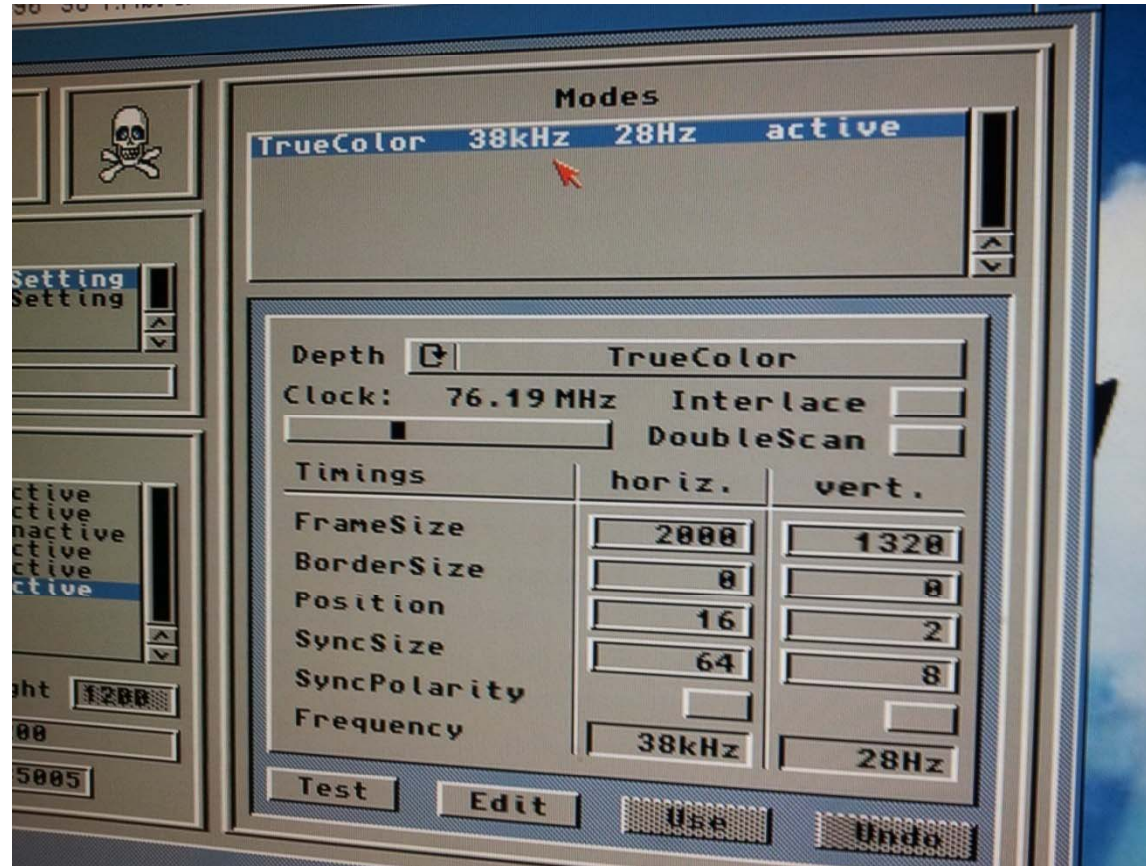
Untick syncplority horiz



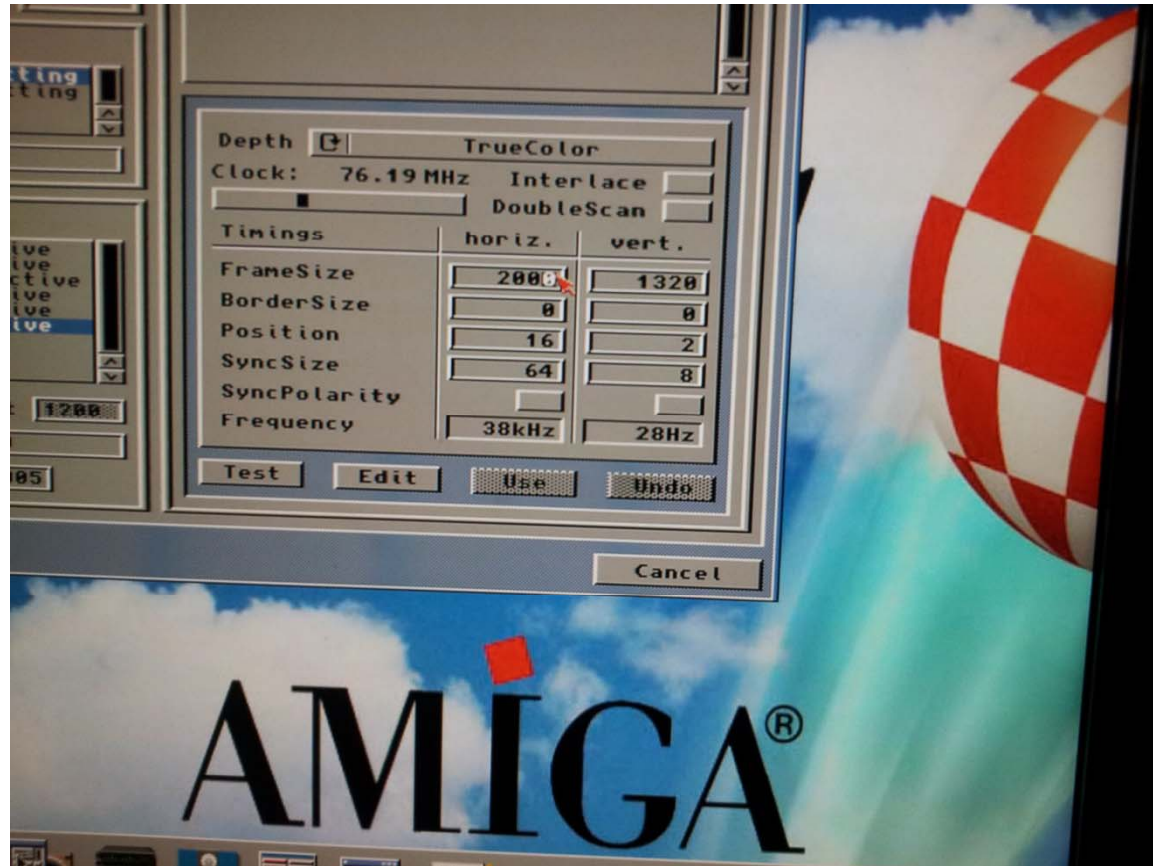
Untick syncpolarity vert



Click use to keep setting

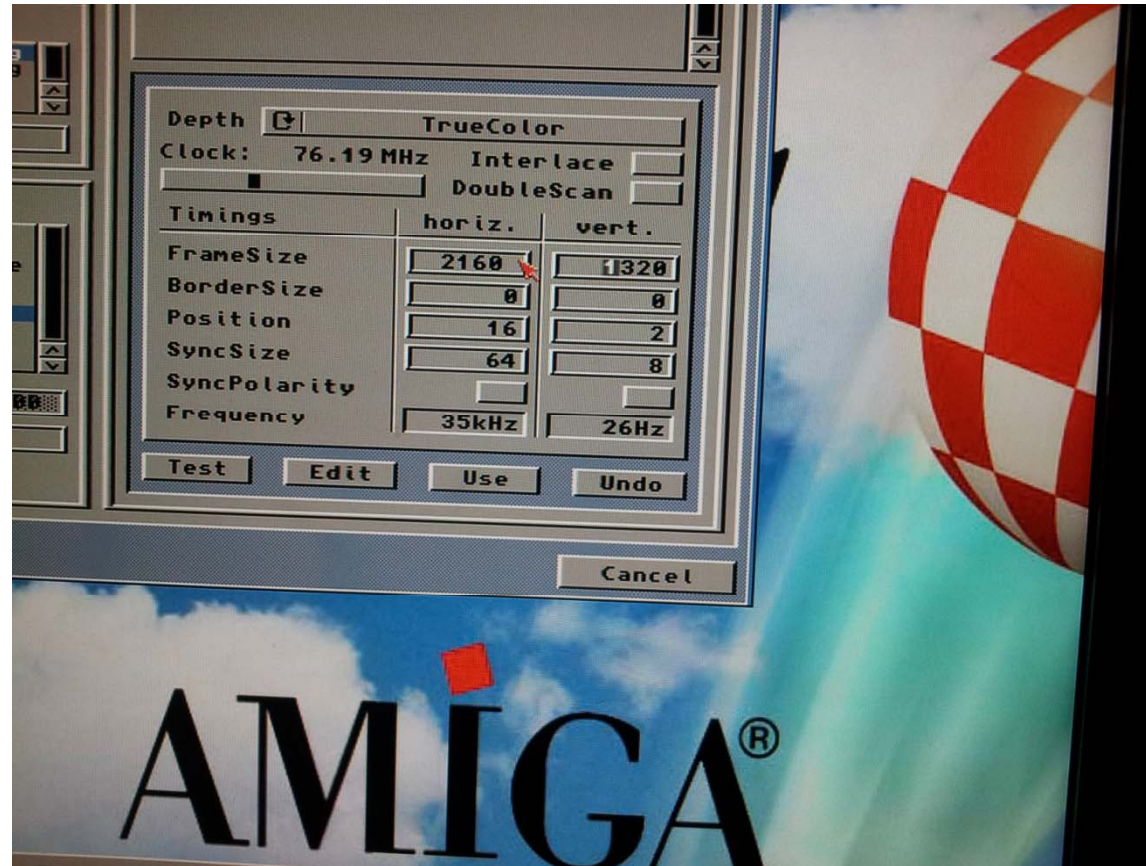


Now for editing



Click and change horiz framesize

press enter after each change



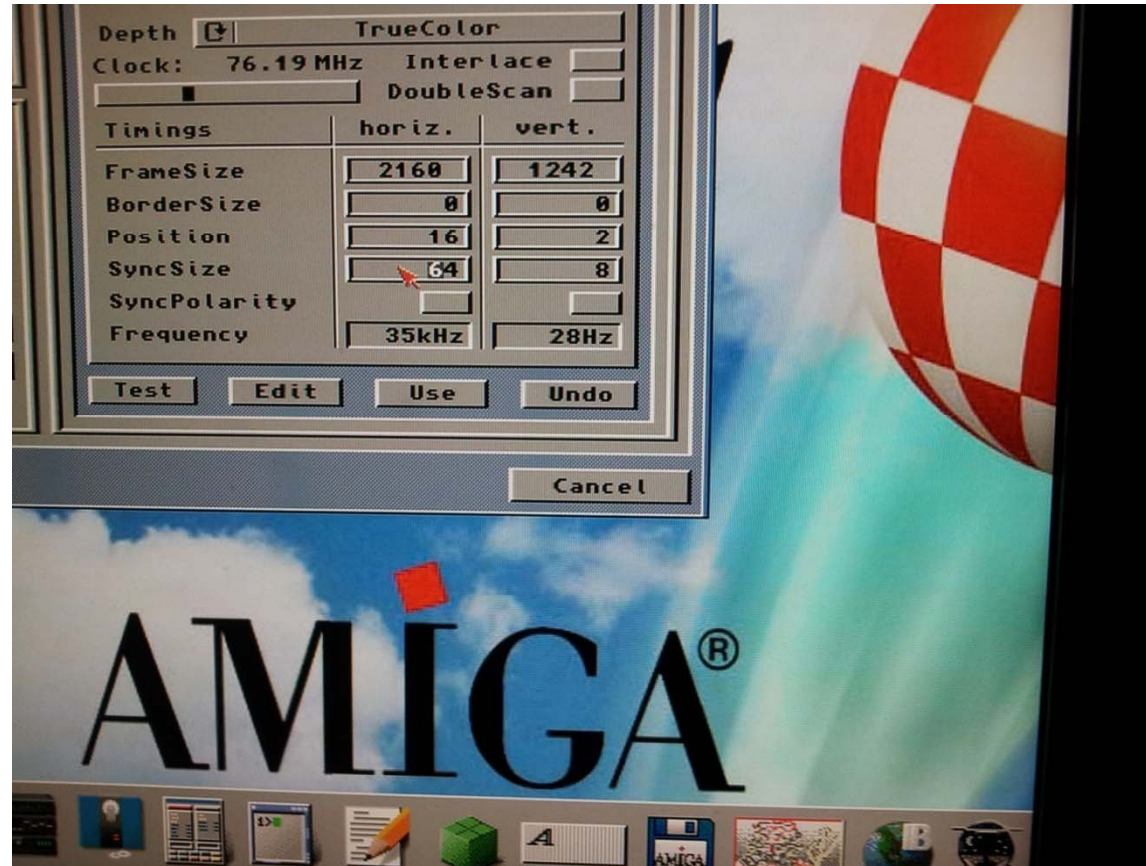
To new setting 2160



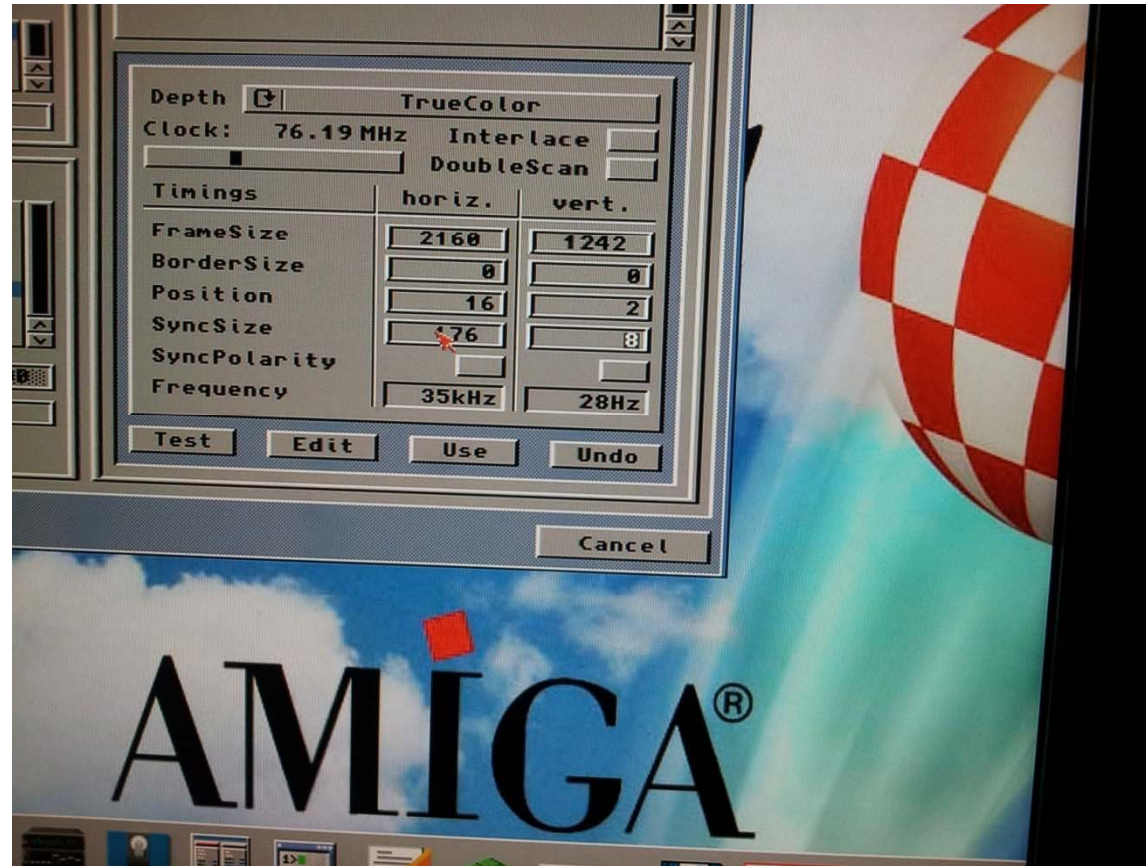
Click and change vert framesize



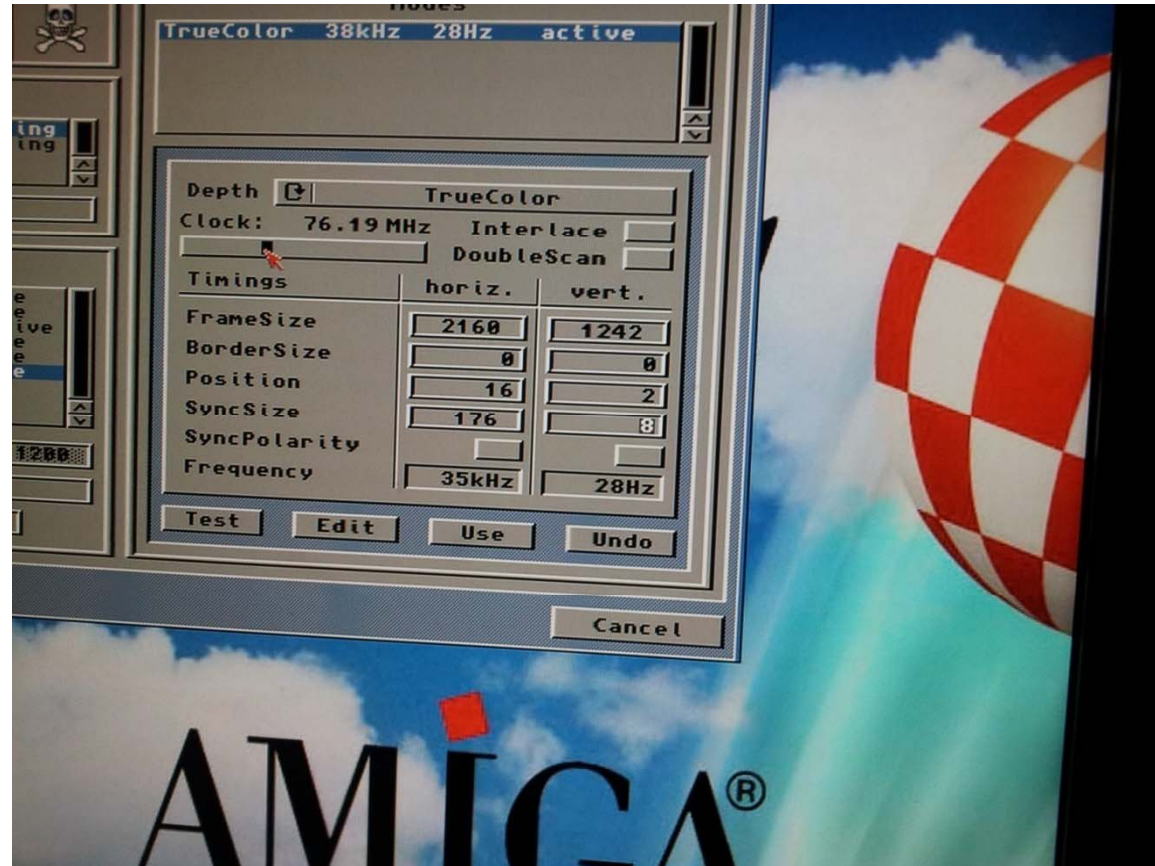
To new setting 1242



Click syncsize horiz to change



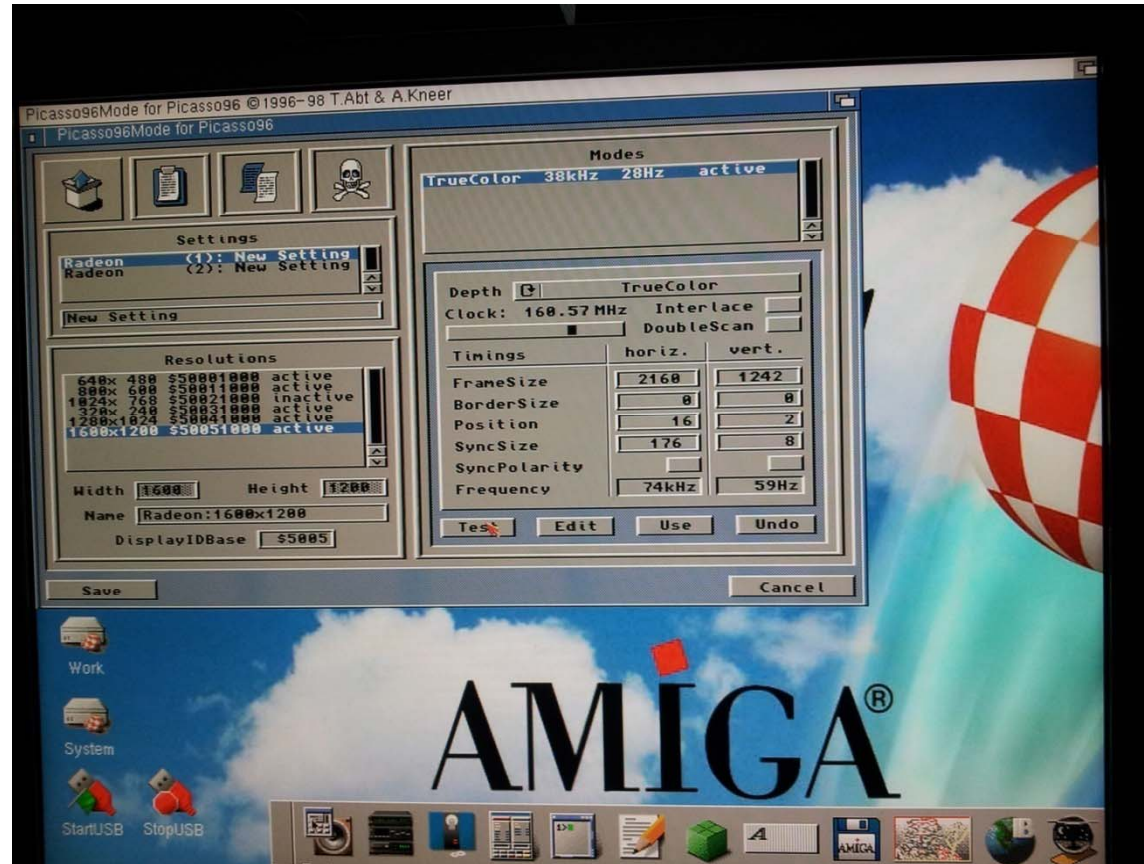
To 176 leave vert as is



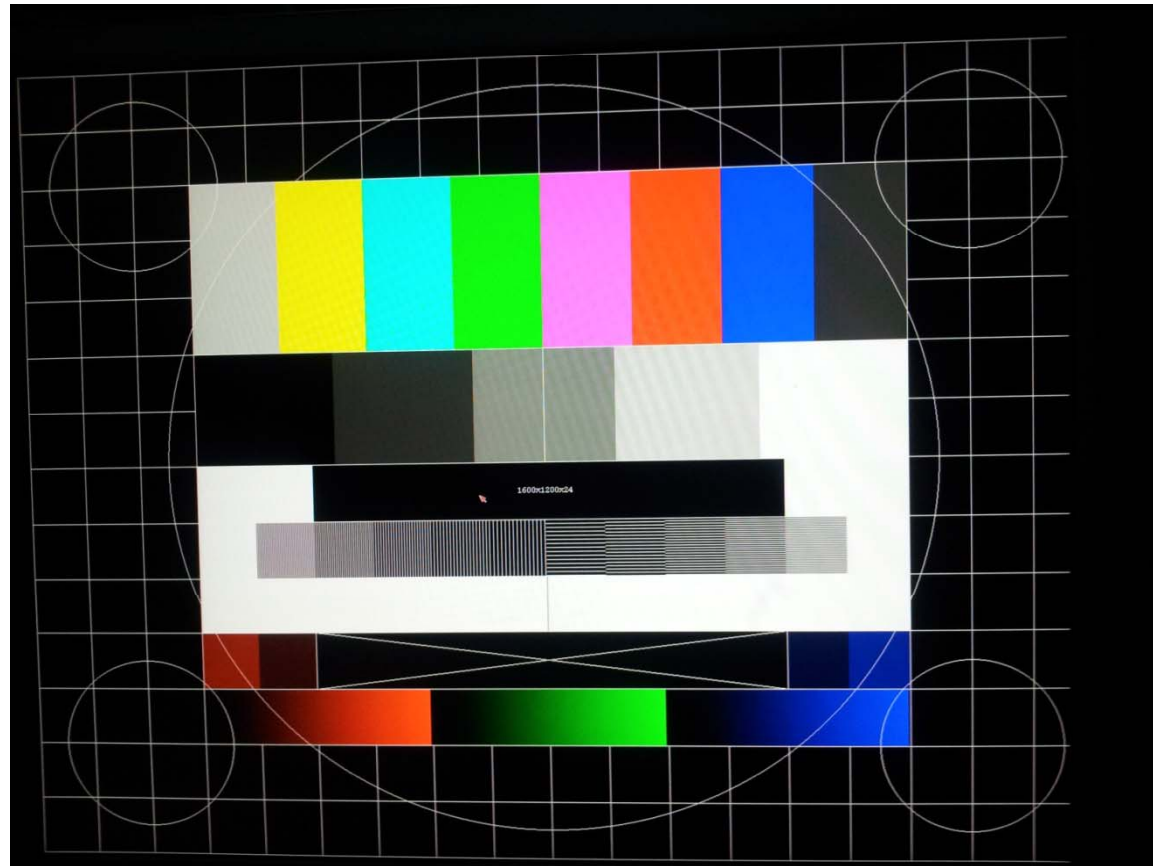
Drag clock bar



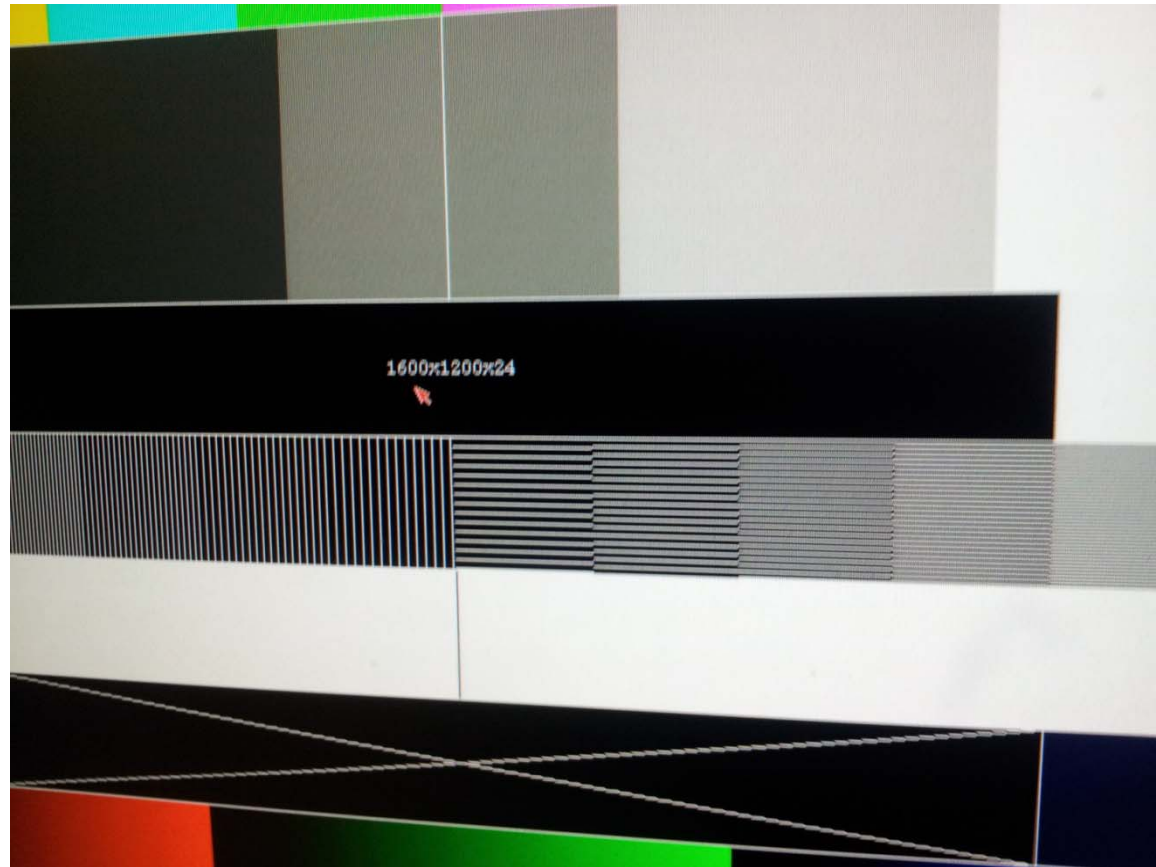
To 160.57 or closest to give freq



Press test

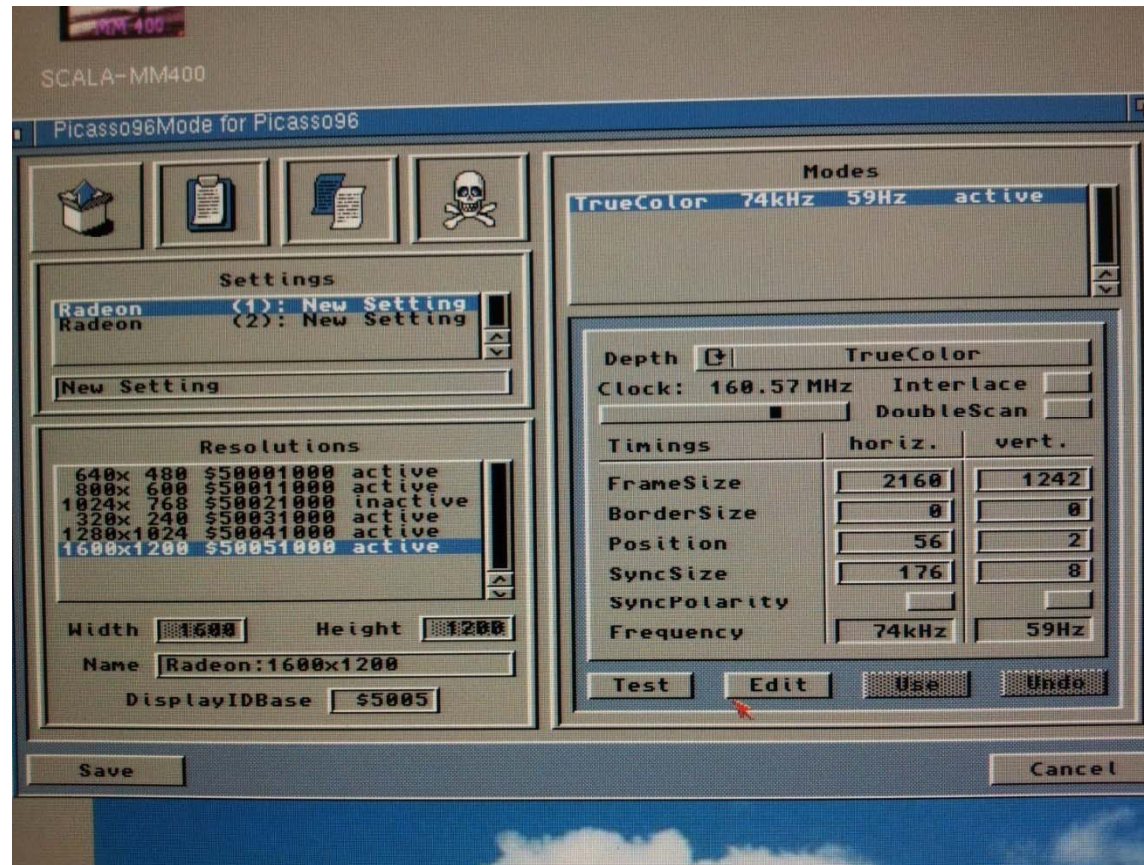


Wow 1600x1200 test picture

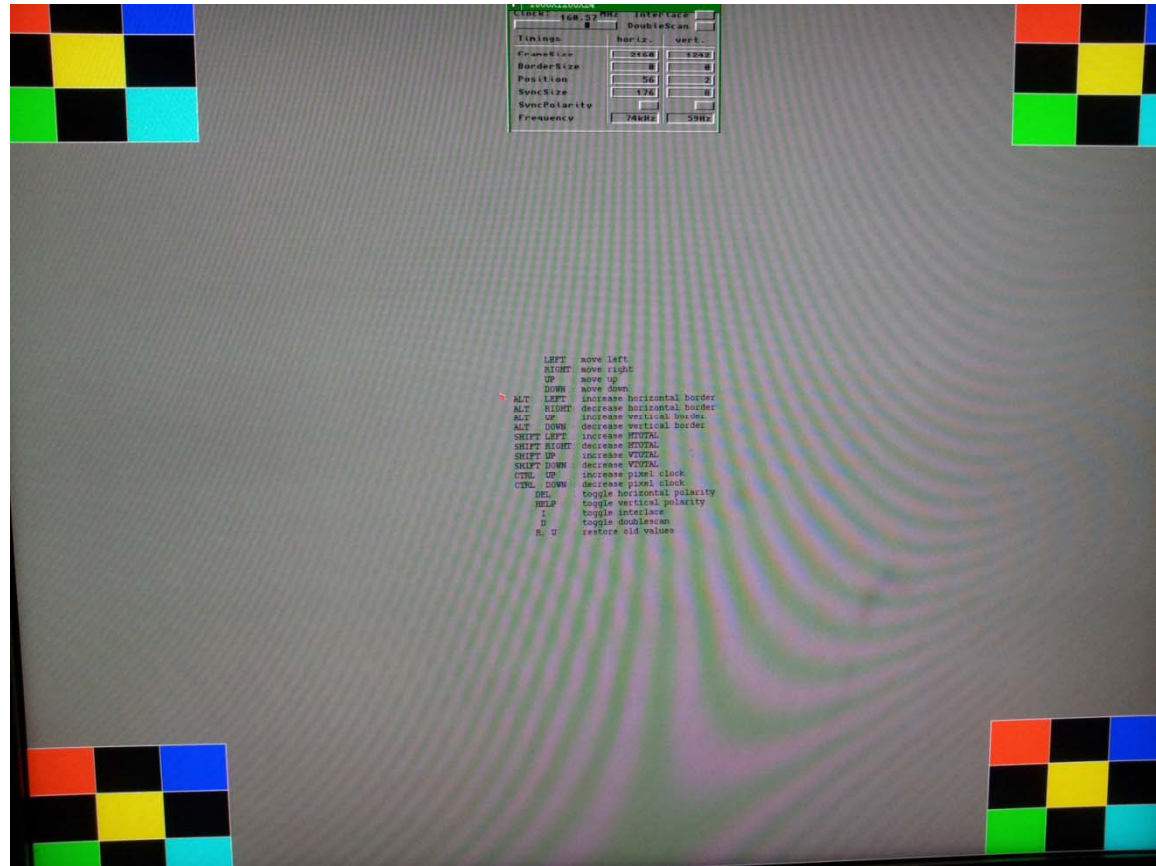


WOW

Press esc



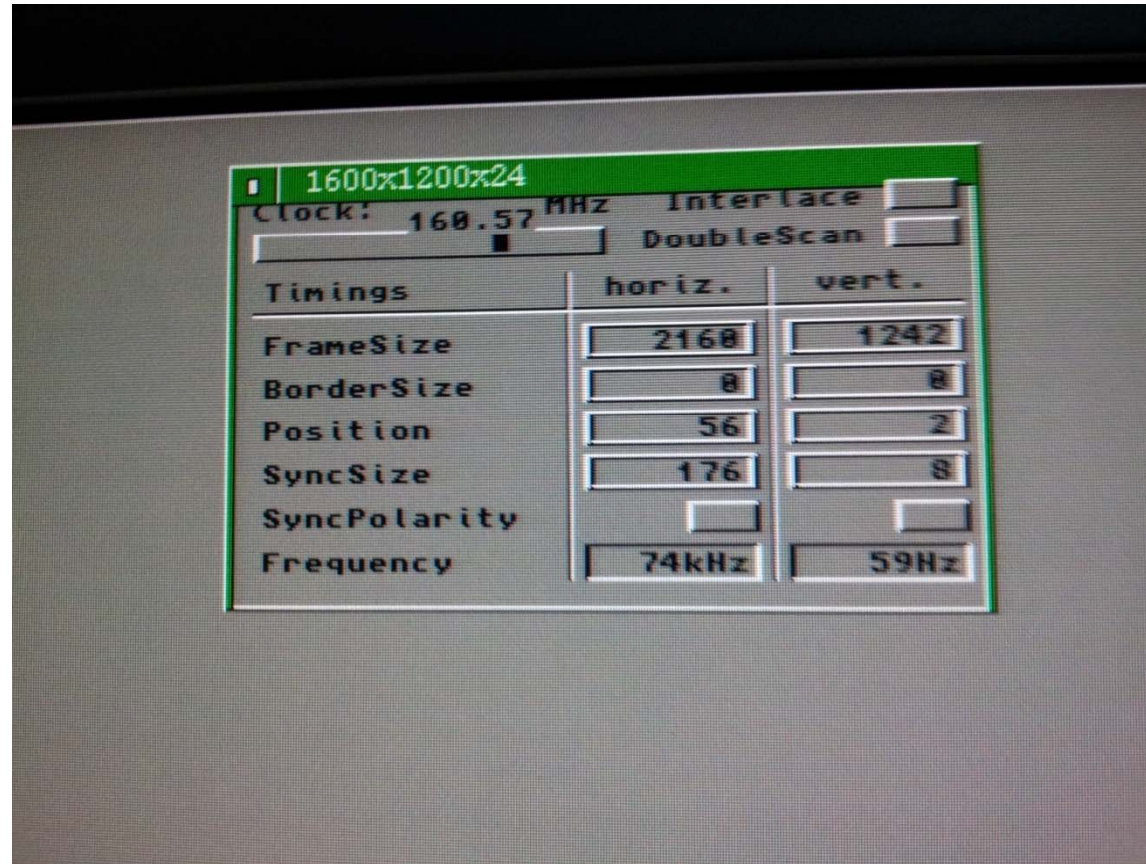
Press edit button



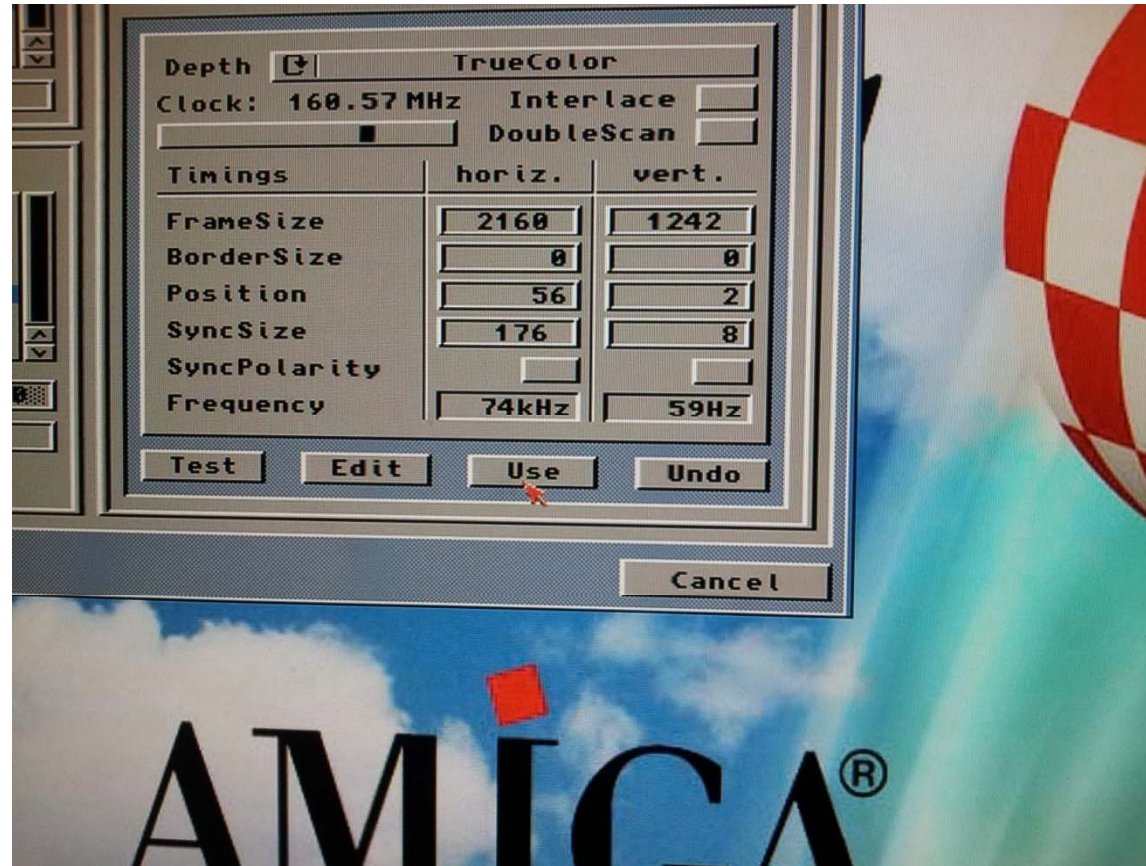
Edit screen see middle for options to edit

LEFT : move left
RIGHT : move right
UP : move up
DOWN : move down
ALT LEFT : increase horizontal border
ALT RIGHT : decrease horizontal border
ALT UP : increase vertical border
ALT DOWN : decrease vertical border
SHIFT LEFT : increase HTOTAL
SHIFT RIGHT : decrease HTOTAL
SHIFT UP : increase VTOTAL
SHIFT DOWN : decrease VTOTAL
CTRL UP : increase pixel clock
CTRL DOWN : decrease pixel clock
DEL : toggle horizontal polarity
HELP : toggle vertical polarity
I : toggle interlace
D : toggle doublescan
R, U : restore old values



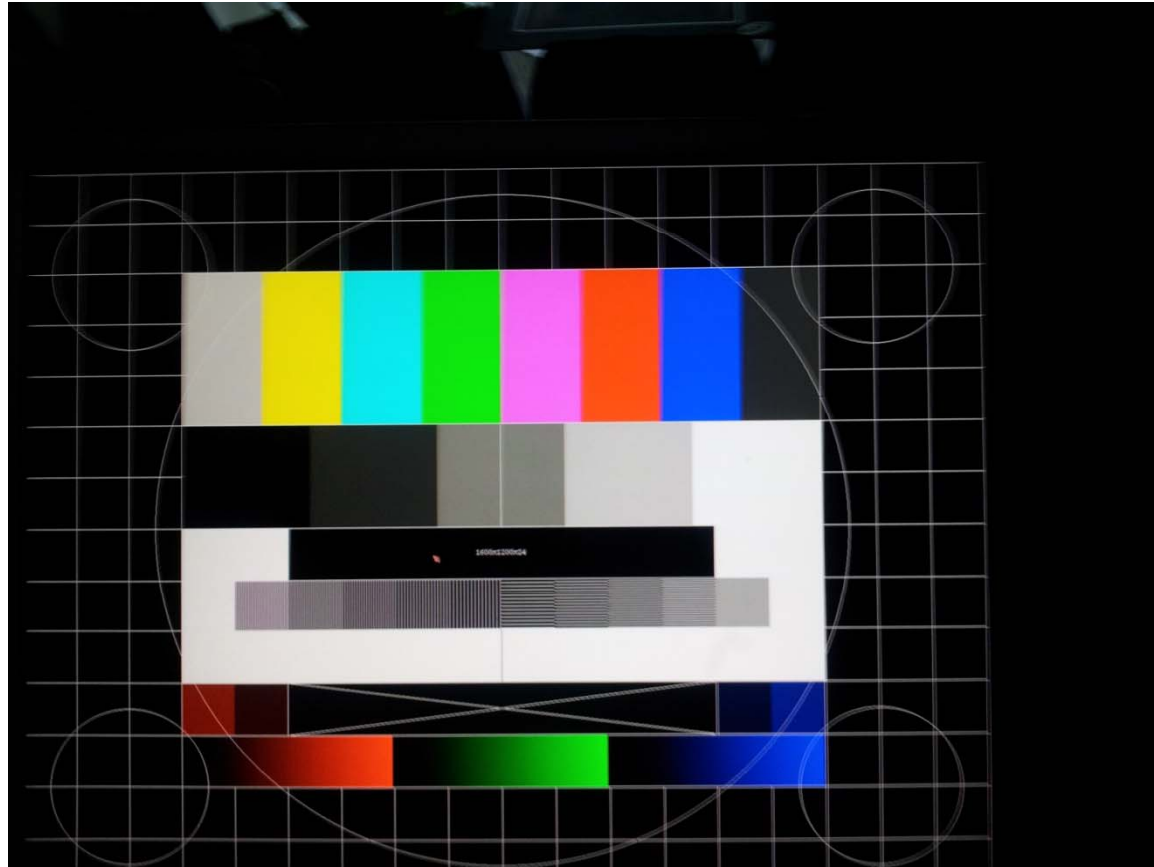


The screen options from top



Press use to make permanent

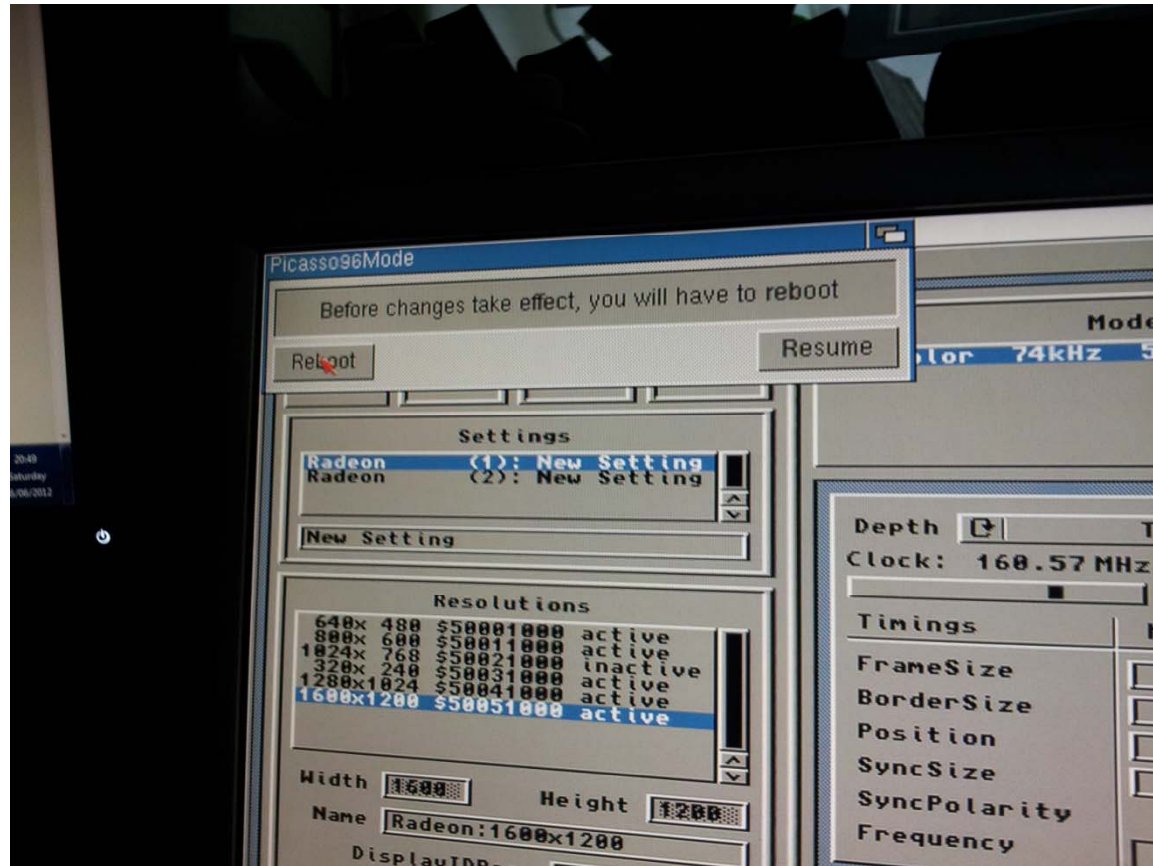
Then press test for quick test



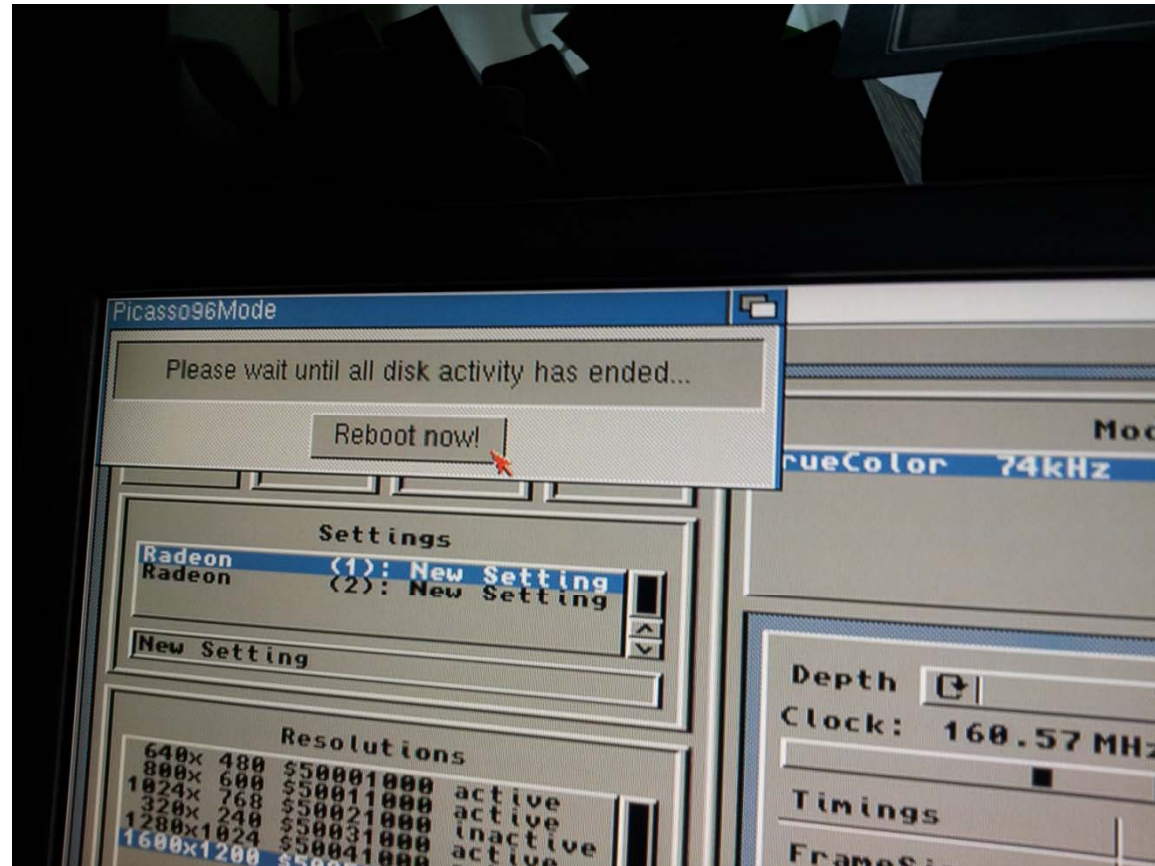
Test working



Click save to keep setting



And reboot



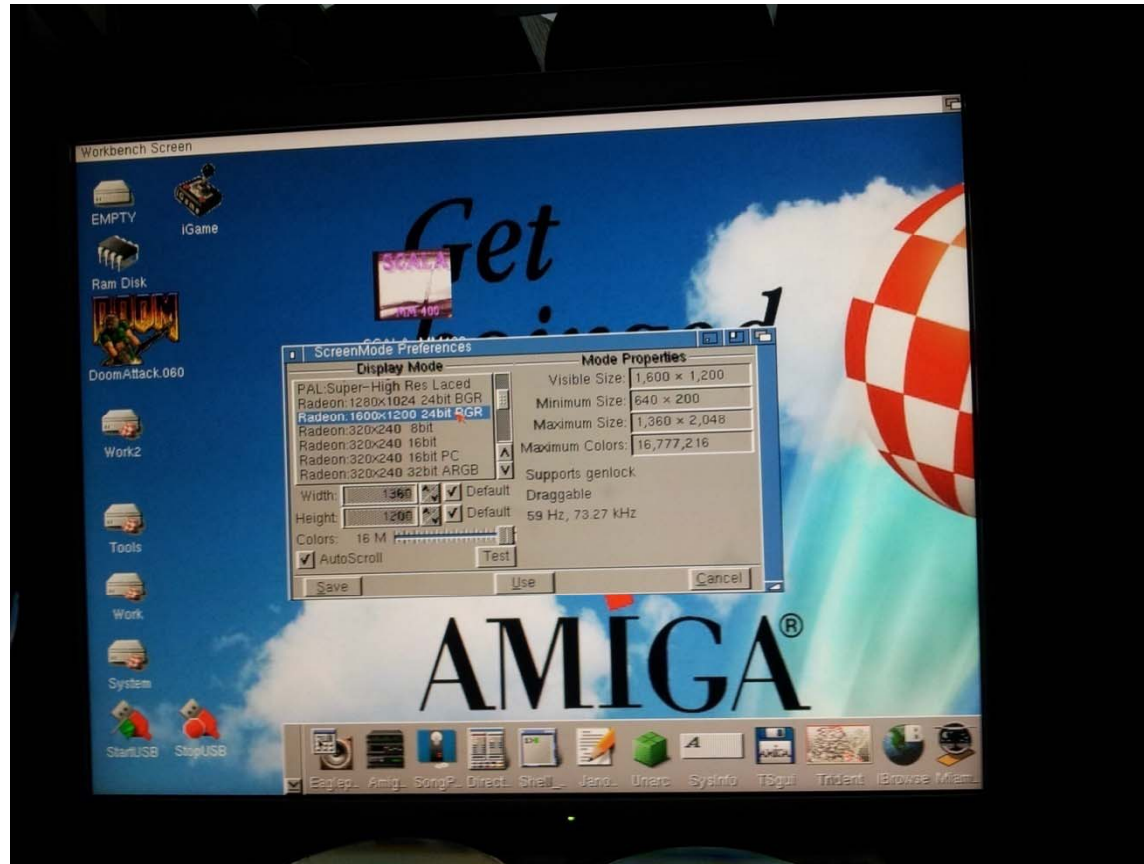
And click this



Back to wb



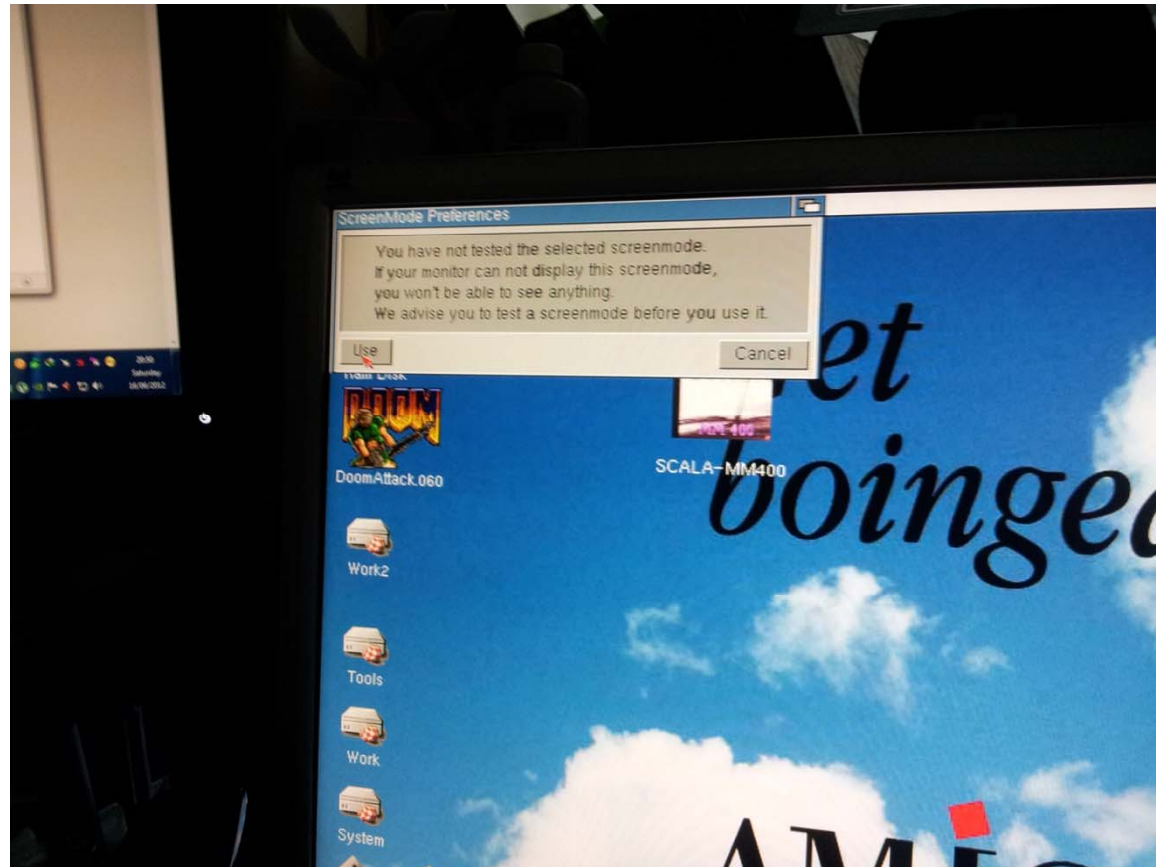
Run screenmode



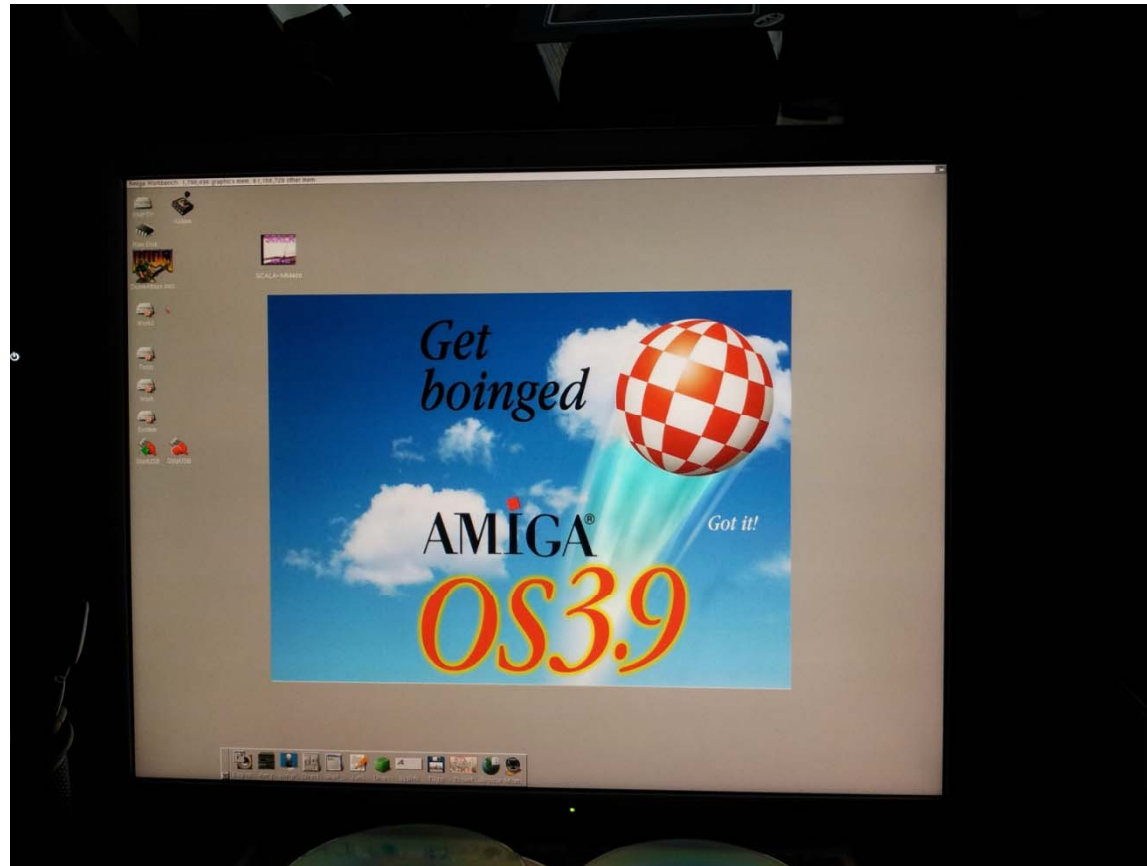
Click your new res



Click use to use



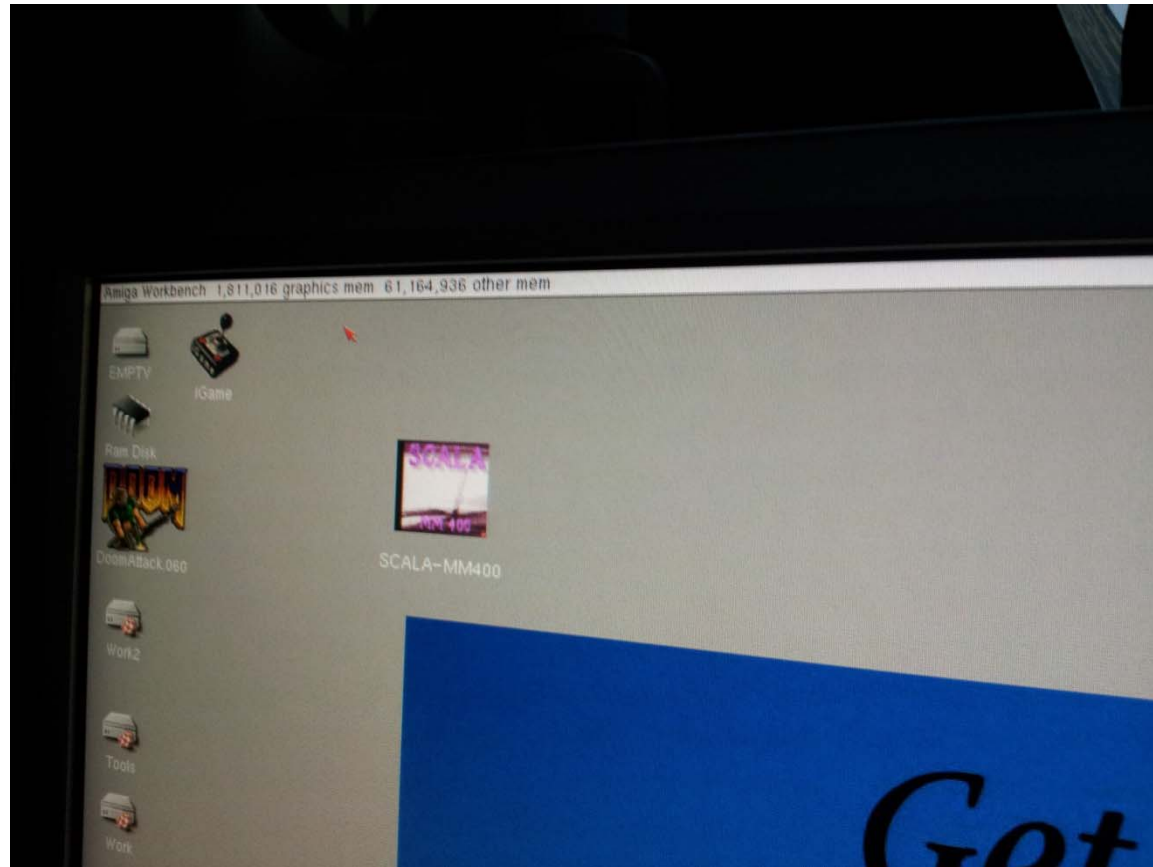
Click use



And here is your new 24bit 1600x1200 screen



WOW



Just for mem usage

Have fun

This is rough guide and can be used
for any screen resolution

Thanks john