



Hidden workshop

by [sinzu](#) on August 7, 2014

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Intro: Hidden workshop

I recently become a daddy ! That is definitively a good news. The bad news is that I had to quit my hobby workspace to change it into the baby's room. I wanted to keep a personal place to work on my hobby projects (mainly electronics). This place have to be nice viewing because it will not be in a dedicated room of my flat, and it also has to be children proof (espacially for dangerous tools).

My solution is to put (near) all my stuff in a single furniture.

In this instructable, I will show you how to convert a classic furniture into a nice hidden workshop. In other words how to keep compatible geekly life with family life !



Step 1: Find an old and cheap furniture

Looking for an old (by good quality) furniture. Nowadays, it is easy to find one for cheap because these 70's style furniture are out of fashion.

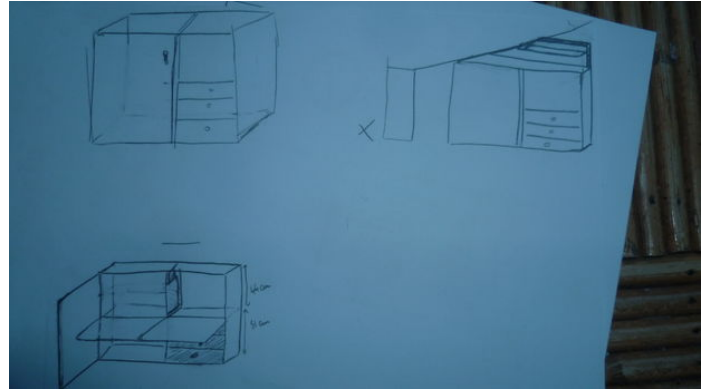
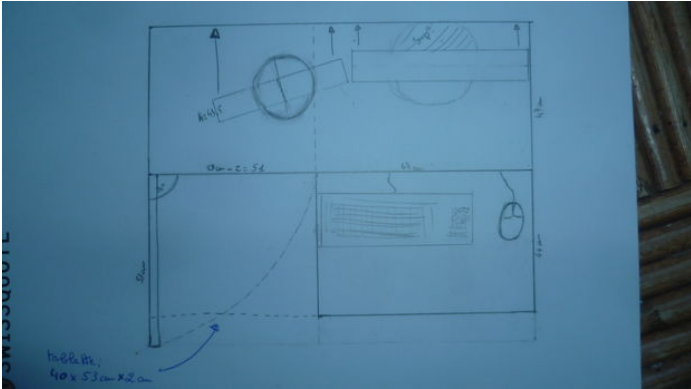
I found mine for 40€ (50\$). Dimensions are 170cmx128cmx50cm.



Step 2: Make your plan

Realize some drawing to organize the redesign of the furniture.

For mine, I wanted a workstation with two computer's screen but also a big enough place for electronic soldering and other various handling task. Because computer's screen take a lot of place, I think about a system to flip up a screen in order to get more space when I don't need two screens. To get a large place, I will have to delete the middle stand of the furniture.



Step 3: Redesign the furniture

According to your plan, saw, cut and sand your furniture in order to adapt it to your need.

I deleted the last "floor" of the furniture. I cut the middle stand. And I removed the leg to reduce to total height.









Step 4: Paint it

Now, it's time to paint it !

As, most of the furniture are made with laminated wood, you have to use a special paint for the undercoat. For the other layers, you can then use classical paint.

I painted all the outside in white, and I let the inside with it's natural color.





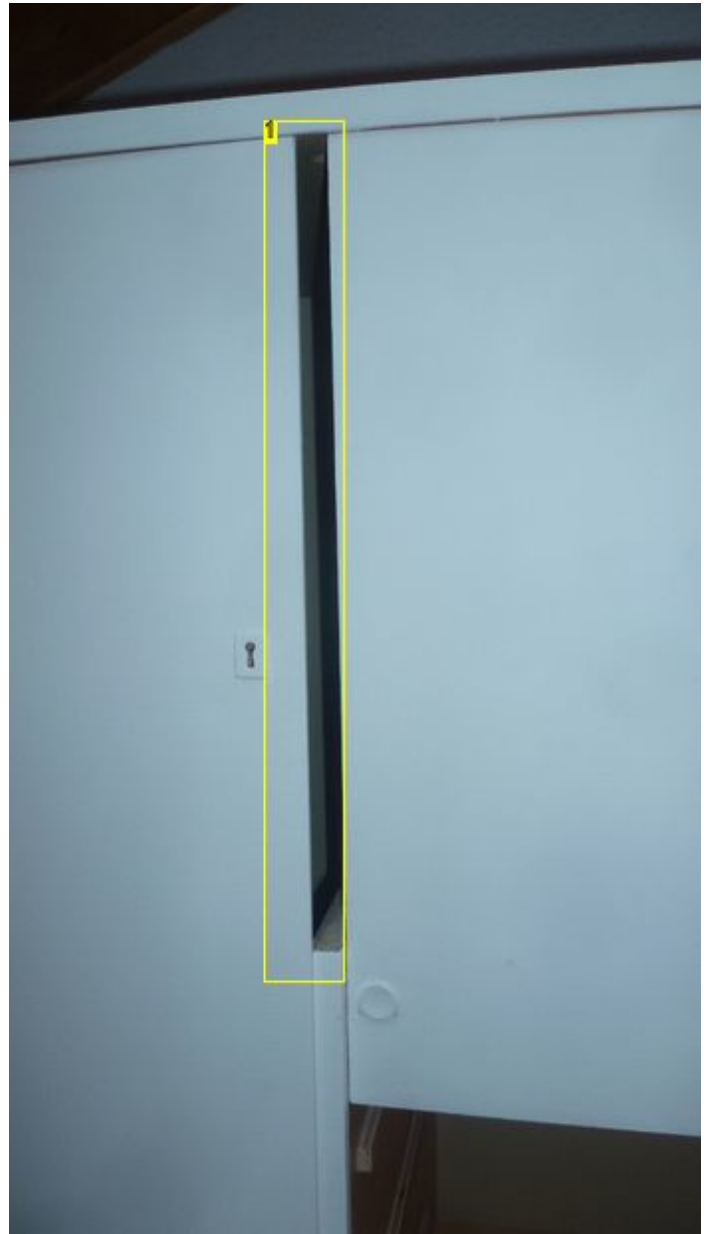
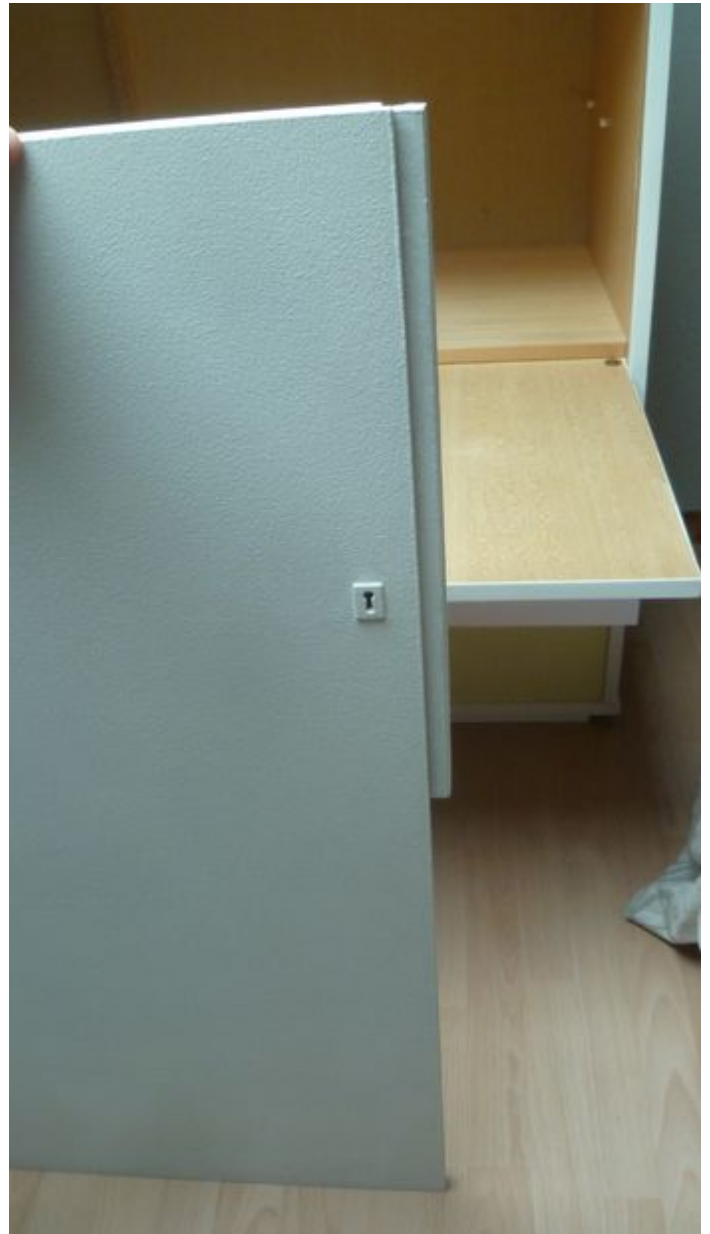


Image Notes

1. after removing the middle stand, there is a gap to fill





Step 5: Add decoration

After an undercoat and a white layer, I wanted to add some decoration and details (a tree with bird and cages). The easy way is to use wall stickers. But I don't want to use it because there are very expensive, they don't have a long lifespan, the visual aspect is not very nice and it is quite impossible to find a sticker that perfectly fit the size of your furniture. So instead, I decided to directly paint the decoration.

I started by designing the decoration with a drawing software like Photoshop. I get inspiration from wall stickers website and composed my model with different stickers. Because I am a bad drawer, I use the technique of the video-projector to project to drawing on the furniture. Then, it help me a lot to outline the model. After that, it is very easy to paint it with the appropriate colors.

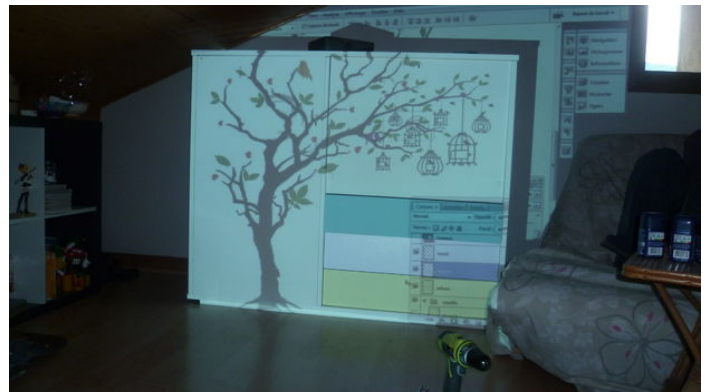
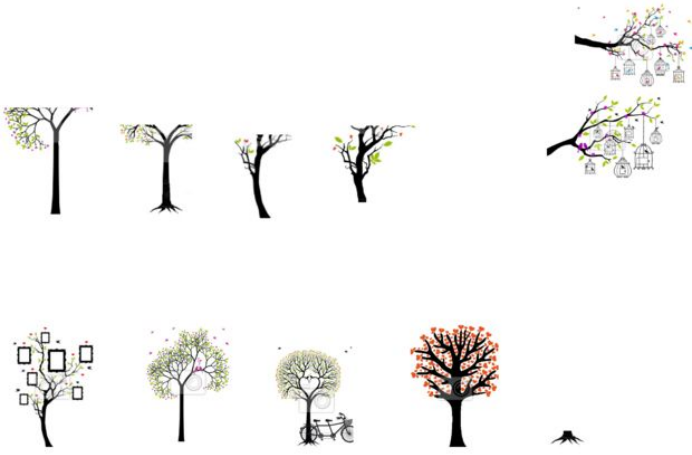
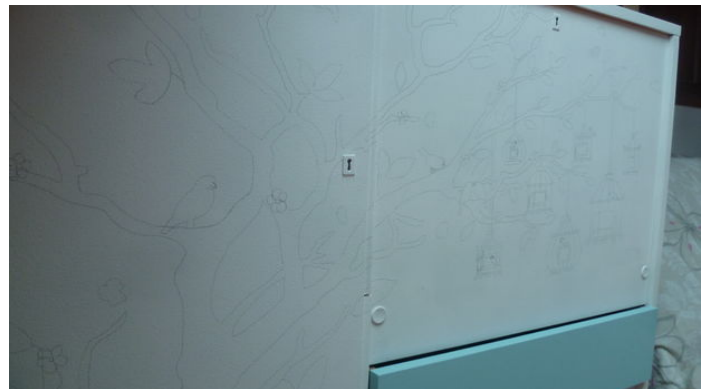
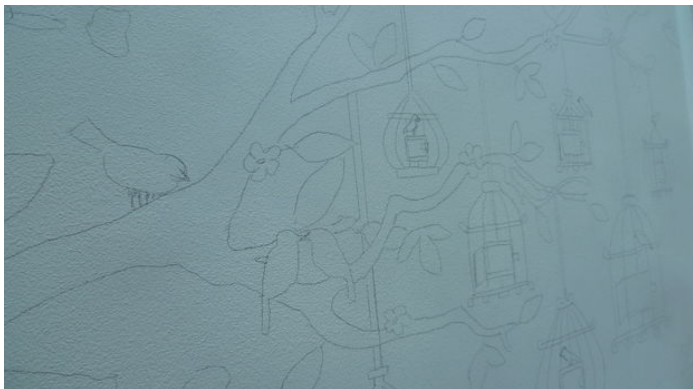
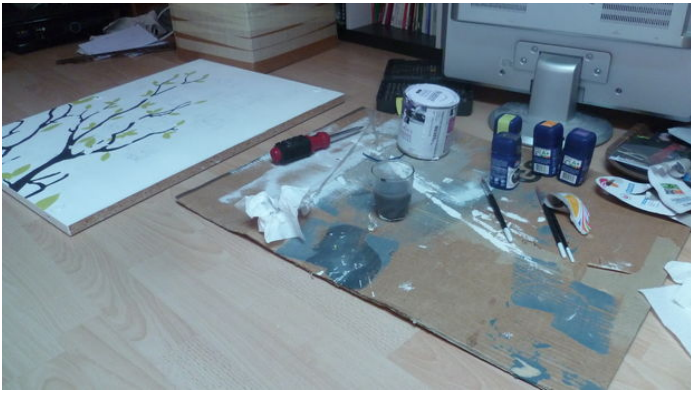


Image Notes
1. video-projector





Step 6: Add some details

After painting, I add some hardware details.

- I washed the handles (CoCa-Cola is good to remove the oxydization)
- I added some hardware stuff to consolidate the furniture
- I added a drawer to enlarge the working space.
- I added a pivoting screen support



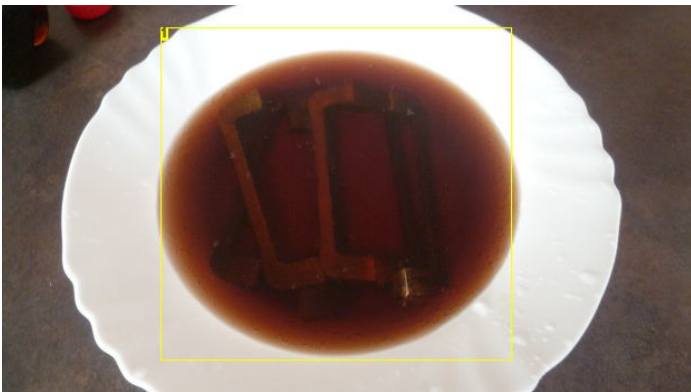
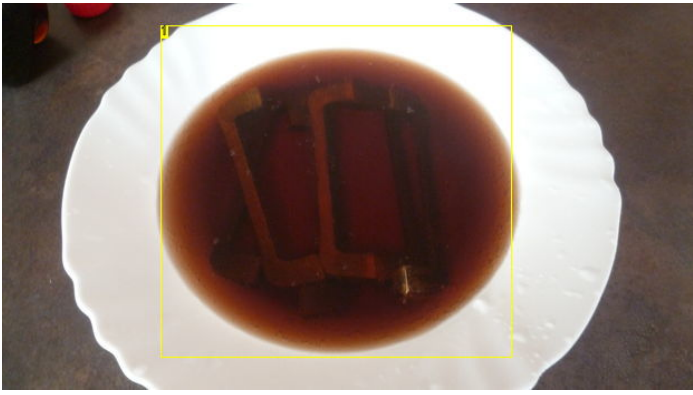


Image Notes

1. wait some hours, the CocaCola will remove oxidization.



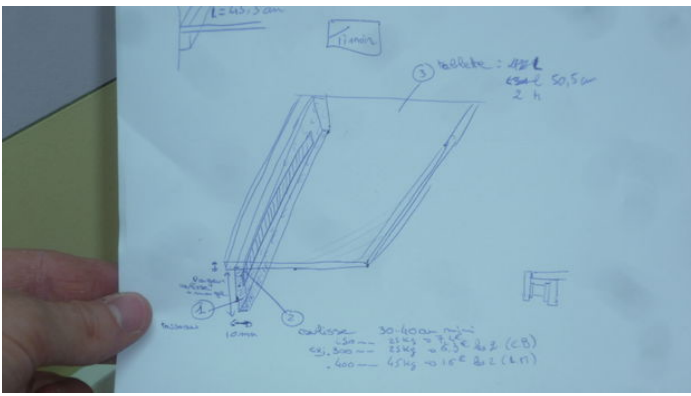




Image Notes

1. hardware stuff use to consolidate the drawer when it is out.



Image Notes

1. drawer close

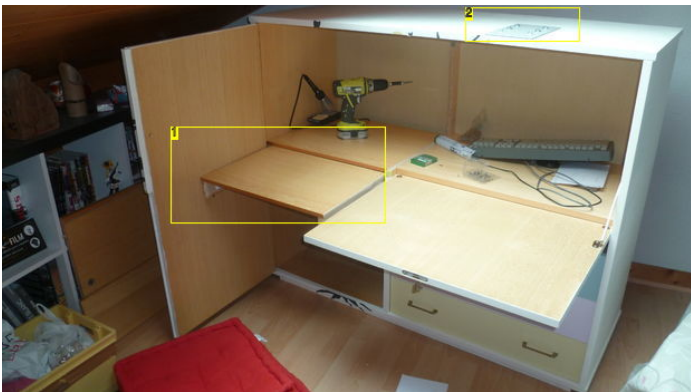


Image Notes

1. drawer open
2. consolidate the wood with metal sheet in order to fix the screen support.



Image Notes

1. screen support with 2 degrees of freedom



Step 7: Cleverly organise your workshop

Maybe the most important step: organize your workspace according to your needs.

For me, I use it for computer programming and DIY electronic projects. I need a computer, some soldering tools, screwdrivers, storage box, USB gadget, measurement equipment and box for electronic components. I had a look on other workshop organization instructables to get inspired. Magnet are wonderful to keep tools organised and accessible. For electronic components, I use storage box and large paper envelope.

A good light is an also important point for a workshop. I used led strip, and to add some fun, I chosen RGB led with a music IR remoter controller:

- 5meters RGB Led strip: 10\$
- Music IR remoter controller: 6\$
- Power supply (12V/72W) : 10\$

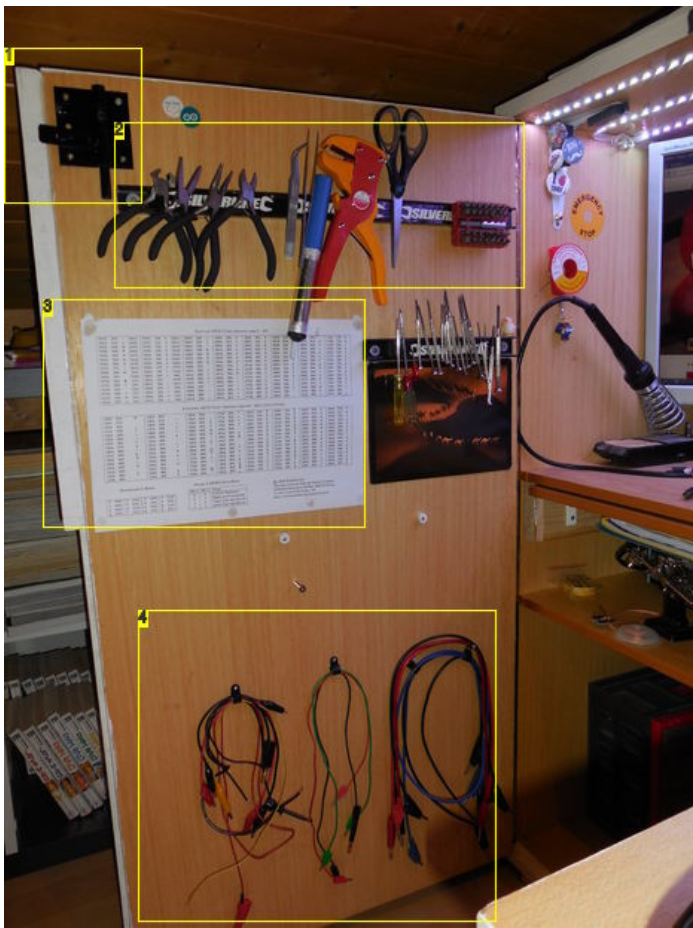


Image Notes

1. bolt to lock the furniture and be children proof
2. Magnets for hand tools
3. ASCII table, technical poster are always a nice to have
4. electric wires for quick testing and prototyping



Image Notes

1. soldering iron + soldering station
2. HomeMade multi-voltage power supply
3. soldering tools
4. soldering tin
5. removable storage box
6. electronic components and other stuff



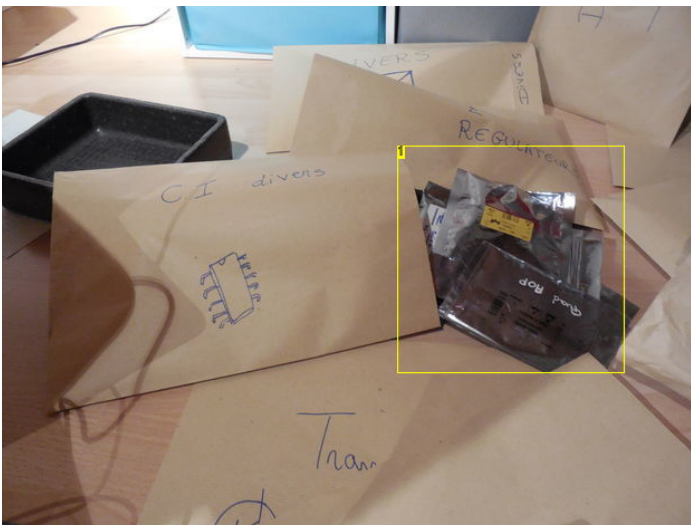


Image Notes

1. use paper envelope to group electronic components by categories



Image Notes

1. tidy the paper envelope inside these standard textile box

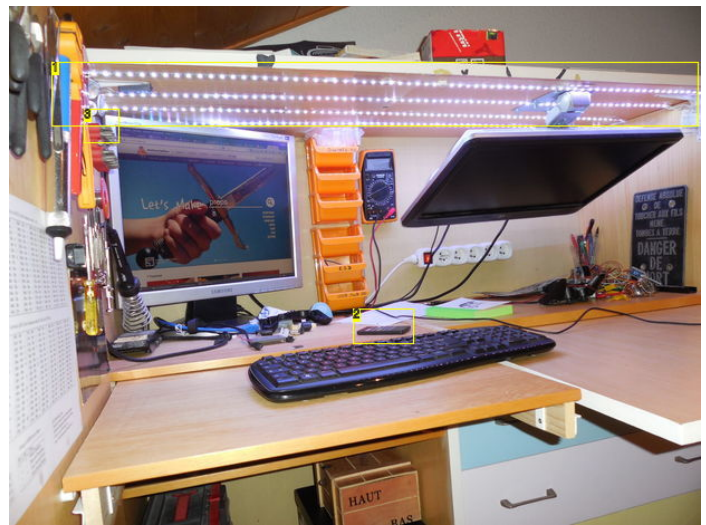


Image Notes

1. +12V power supply
2. Common ground for Green color
3. Common ground for Red color
4. Common ground for Blue color



Image Notes



1. Led strip
2. remote control for the led strip
3. IR receiver is hidden in the corner, behind the screen

Image Notes

1. color controller with music detection
2. IR remote control to select the color and light intensity

Step 8: The seat

Because I removed the foot of the furniture, the seat is now at a non stand height. So I built my own pouffe seat from the armrest of a old couch. I flipped the armrest and add 4 legs. I then added some wood to consolidate it, and I covered it with textile for a better visual aspect. Because the armrest was hollow, I can tidy some stuff inside.



Step 9: Enjoy it

The total price is about 150\$, including the furniture, the paint and additional hardware stuff.

If you like my work, please give me your vote !



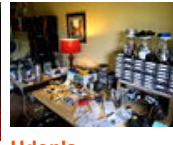
Related Instructables



Updated Desk with Hidden Storage by Cheapdiyproject



My Workspace 2014 by ASCAS



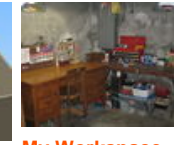
Udon's cafeteria/recycling centre/sweatshop by Udon



Secret Storage Floating Desk by EnJoneer



Ultimate Engineer's Bedroom by maximusprimepi



My Workspace by geo526468

Comments

45 comments

[Add Comment](#)



yonatan24 says:

Wow! That is one awesome workshop!

Dec 18, 2015. 6:20 AM [REPLY](#)

So many tools in such little space, I love the seat/couch storage, That's an excellent idea!



soclosetsandfurniture says:

Excellent! Very clever!

Nov 29, 2015. 1:18 PM [REPLY](#)



UHENIO says:

NICE!! , I need to build this for my patio. Thanks and congrats on being a new dad.

May 25, 2015. 11:32 AM [REPLY](#)

tilus.dang says:

its a perfect idea !!!

Feb 25, 2015. 6:47 AM [REPLY](#)



Fission_Chips says:

Whoa! This is super awesome and an awesome way for a tiny workshop to unfold into something bigger, perhaps. Great work!

Feb 21, 2015. 5:39 PM [REPLY](#)



andy.knote says:

Excellent work. Good use of reclaimed materials, and it looks like a nice efficient workspace. Nice Work!

Dec 11, 2014. 6:39 PM [REPLY](#)



b1tbang3r says:

Would work great for an apartment work area! Great job!

Nov 2, 2014. 11:01 AM [REPLY](#)



Dwargh says:
Great Idea and nice work! :)

Oct 16, 2014. 11:50 PM [REPLY](#)

But why is the 2nd Monitor facing downwards?!



sinzu says:
to save space inside the furniture when I don't need it. And when I need it, I just have to flip it in face thanks to it's rotary support (check the photos).

Oct 17, 2014. 12:20 AM [REPLY](#)



Dwargh says:
Aaah, yep! That makes sense! ;) thank you

Oct 21, 2014. 4:22 AM [REPLY](#)



shazni says:
This is a fantastic transformation! Oh a definite winner :-)
I see your baby is going to have a wonderful 'Maker Daddy' !
A question- how bright is the led? Is it bright enough as the only light for a kids study table?

Oct 18, 2014. 6:50 AM [REPLY](#)



sinzu says:
Yes, with a length of 5 meters (separated in 4 parts), the light is good enough. In addition, the controller and the remote allow you to set the luminosity of the leds. However, the important point is that you have to be careful when you select your strip: There is strip with 30leds/meter, 60leds/meter and 120leds/meter. Mine is 60leds/meter.

Oct 20, 2014. 2:09 AM [REPLY](#)



DR_UNIX says:
Where did you get the 5m LED strip? What's the model number/name?

Oct 17, 2014. 8:11 AM [REPLY](#)



sinzu says:
I bought it on Banggood Chinese website (But you can find equivalent almost anywhere, like DX.com, ebay, etc...
Here are the details:
* DC 12V 6A 72W Power Supply Adapter Charger for Led Strip Light (SKU078009) - €7.40
* 5M RGB Non-Waterproof 300 LED SMD 5050 LED Strip Light DC 12V (SKU127209) - €7.47
* 20 Key Music IR Remote Controller Sensor For 3528 5050 RGB LED Strip (SKU130816) €4.47

Oct 17, 2014. 9:49 AM [REPLY](#)

iaincwil says:
great idea I build model radio control boats and this would make life easier and also get the bread knife of my back in the kitchen

Oct 17, 2014. 4:45 AM [REPLY](#)



wobblers says:
Great idea and a good looking solution that fits in well in a home environment. I like this idea- it's a kind of secret Transformer shed!

Oct 17, 2014. 1:13 AM [REPLY](#)

geniesolver says:
Genius!

Oct 17, 2014. 12:57 AM [REPLY](#)



jott_1 says:
Do you any more specifics on the original furniture; maybe manufacture and model or dimensioned drawing in a CAD file? I realize you can make it anything you want but it'd be faster not to start from scratch.

Oct 16, 2014. 2:38 PM [REPLY](#)



sinzu says:
Sorry I did not use dimensioned drawing nor CAD file. Only some simple drawing and draft.

Oct 16, 2014. 11:44 PM [REPLY](#)



Tezcumpapa says:
I have to do the same for my art studio...Thank you for the great idea!!!

Oct 16, 2014. 10:10 PM [REPLY](#)

bonzoyl says:
got it: VOTED!

Oct 16, 2014. 7:31 PM [REPLY](#)

bonzoyl says:

Oct 16, 2014. 7:30 PM [REPLY](#)

I love this! very clever; creative thinking....finding appropriate and novel solution to having tools and a baby in the same space! GOOD for you! i want to make a kitchen like this! ...in a box! Where do I vote?

hminnich says:

Oct 16, 2014. 6:23 PM [REPLY](#)

Incredible. You are really very smart. I thought I was able to make something out of anything. The sofa armrest is fabulous! You have good vision, too. Keep up the good work! I am amazed at your ability to balance an array of different talents!

hbold says:

Oct 16, 2014. 5:01 PM [REPLY](#)

Very nice and original. An excellent presentation. Love the artistic look with the outer design, making it a feature whilst not in use.



alcurb says:

Oct 16, 2014. 3:10 PM [REPLY](#)

Okay. Bird cages are not my thing, but I love the concept. Well done.



gralan says:

Oct 16, 2014. 2:42 PM [REPLY](#)

I must agree that this is a great concept. Thanks.



dpiccine says:

Oct 16, 2014. 1:43 PM [REPLY](#)

great job!



Wild-Bill says:

Oct 16, 2014. 12:43 PM [REPLY](#)

I think of myself as a minimalist. That is a beautifully implemented concept ... congratulations on a very cool project.



MauriS69 says:

Oct 16, 2014. 12:30 PM [REPLY](#)

really nice Sinzu! very creative use of space

And congratulations on your baby!



JorgensonDE says:

Oct 16, 2014. 10:04 AM [REPLY](#)

I love this! Looks good, compact and practical.

My little work shop area is in desperate need of attention.

myamiphil says:

Oct 16, 2014. 8:38 AM [REPLY](#)

Great job... documented very well too.... Gave me lots of ideas.... a tiny radio shack - techy bench for an apartment dweller! ANd using the chair / seat for more storage! Nice touch..

magiceye says:

Oct 16, 2014. 7:56 AM [REPLY](#)

the baby might be another engineer in waiting.



billbillt says:

Oct 16, 2014. 7:33 AM [REPLY](#)

THE COOLEST!!.... Double plus good!!... Got my vote!!....



WhatTheHell83 says:

Oct 16, 2014. 6:10 AM [REPLY](#)

hey pretty cool. that is exactly what im lookin for since a long time. great work.



BayRatt says:

Oct 15, 2014. 7:14 PM [REPLY](#)

Beautifully done! And congratulations on being a dad!



SparkySolar says:

Oct 15, 2014. 6:35 PM [REPLY](#)

I am redesigning my little house to be more energy friendly and space saving

I love this idea



SparkySolar says:
Congratulations,

My baby will turn 18 in 6 months. ;)

Oct 15, 2014. 6:34 PM [REPLY](#)



Aries0412 says:
excellent and awesome idea! i want to have a workshop like this!

Oct 15, 2014. 6:26 PM [REPLY](#)



pucksurfer says:
impressive work for only \$150

Oct 15, 2014. 2:40 PM [REPLY](#)

Anzar Lee says:
awesome i luv it thanks paty

Oct 15, 2014. 8:45 AM [REPLY](#)



Silent_Shadow says:
One of the best projects I've ever seen on this site. Rock on!

Oct 15, 2014. 8:37 AM [REPLY](#)



NTT says:
This is just superb! I love it. Anything that tucks away discreetly yet retains its functionality is so cool.

Oct 15, 2014. 8:28 AM [REPLY](#)



pfred2 says:
I suppose considering all of the hardware you get it could be a good deal. But a 4x8' sheet of laminated particle board here the last time I bought one only goes for \$35USD. If you want to get really cheap about it OSB is almost free. Out of season that stuff drops to about \$5 and change for a sheet of 7/16s thick stock here. In season it is about \$7, which is still dirt cheap.

Oct 15, 2014. 6:43 AM [REPLY](#)



ruisantos10 says:
This is great, Sinzu! Very good work you've done there.
I like the fact that when closed, it could perfectly suit a baby's room! Then inside are the big boy's toys ;)
I'd vote for you, but there's no button for that yet! Maybe later
Keep up with the good work!

Oct 15, 2014. 4:12 AM [REPLY](#)



sinzu says:
Thanks,
About the contest, It's still under approving... should be available soon.

Oct 15, 2014. 5:45 AM [REPLY](#)