

BSTV

http://bstvcentral.b0x.com

Instruction Set 3

This instruction set is a combination of set 1 and two. It is comprised of two boxes, probably a little closer in design to instruction set 1 but with a focussing board is another box to give it more stability. I have not yet made a prototype of this one yet but it would look very similar to that shown below.



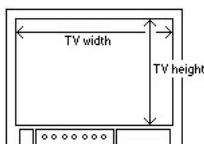
NOTE: To get the best picture you really need a "Fresnel lens".

Materials List

1. Thick Corrugated Cardboard (cardboard can be replaced with anything sturdy and not too heavy eg. thin fibreboard/wood paneling etc.)
2. Magnifying Glass (a Fresnel Lens is recommended)
3. Black paint
4. Duct Tape
5. Satiny knife or Sharp knife
6. Ruler
7. Pencil or Texta

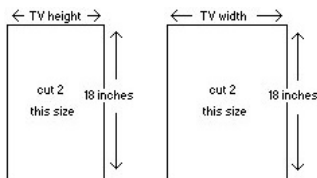
Step 1.

First measure the height and width of your TV screen. Make sure to measure just the screen and not the box around it.



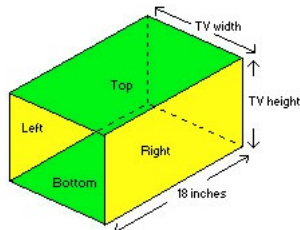
Step 2.

Then on the cardboard/wood etc. mark out your measurements for the screen height and width and set the depth to 18 inches. Cut 2 of each with your Stanley knife. (Where I have written "TV height" and "TV width" I am referring to screen size.)



Step 3.

You will then have 4 individual pieces that will form the sides of the cube, top, bottom, left and right. When we put it together it will look like this. I have coloured the diagram only to help you visualise the box better.



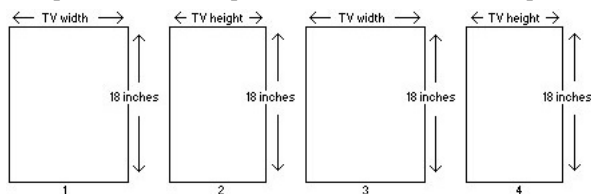
BSTV

http://bstvcentral.b0x.com

Instruction Set 3 - page 2

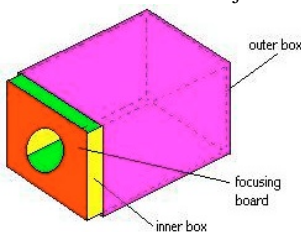
Step 4.

So here we are with 4 individual pieces that make up the outside of the box. Don't put them together just yet.



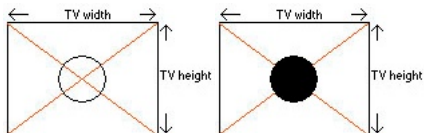
Step 5.

We now have to cut the "focusing board" for the focussing box. This is basically the screen height and width and will form the front of another box that fits snugly inside the one we have just made.



Step 6.

Start by marking out the measurements on the cardboard/wood with a ruler and then cut out the focusing board. Create a straight line from one corner to opposite corner to form a cross on the focusing board. Centre the magnifying lens with help from the cross. Now trace around the magnifying lens so that you have a drawn circle on the focusing board and now cut out the circle. NOTE: The magnifying lens must fit snugly into the hole.

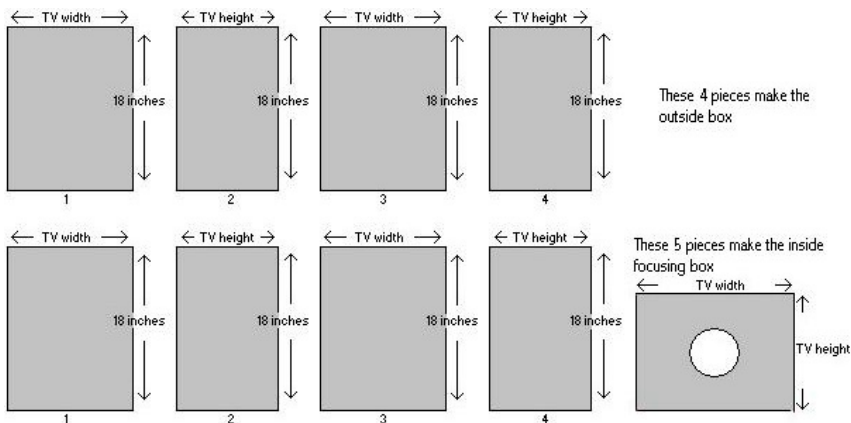


Note: If you are making this from cardboard, you can angle the Stanley knife when cutting the circle so that the hole in back side of the cardboard is slightly larger than the front. I have tried to demonstrate this in the picture below.



Step 7.

Repeat step 2 to make the inside box and remember that the inside box will have to be slightly smaller and only 9 inches deep. Take all pieces paint them black. Both sides if you wish but painting the insides only is essential for a good picture. The Blacker the better. Make sure you use flat or matt black paint.





BSTV

<http://bstvcentral.b0x.com>

Instruction Set 3 - page 3

Step 8.

Once the pieces are dry, its time to stick them together. Using small pieces of duct tape, form the sides of the box (black on the inside) and stick the small pieces of duct tape on so it holds its shape. Repeat this for the inside box too.

Step 9.

Now that the box is held in place reinforce and close the gaps by running a strip of duct tape down each join.

Step 10.

Now take the focusing board and insert the magnifying lens in it. Stick it with duct tape to one end of the smaller focusing box.

Step 11.

Turn your TV upside down. (It won't do any major damage, if you don't want to do this there is an alternative). With duct tape attach the outside box to the screen of your TV making sure to close any gaps so that no light will escape. Then insert the focussing box inside the bigger box. You are now ready to use your projector.

Step 12.

Sometimes it is difficult to predict what the best position for the TV and focusing box should be to get a picture. I always start by lining up the outside end of the box about 2 inches from the wall, the picture is very small but at least you know its working. Then slowly move the TV and projector away from the wall until the desired screen size is achieved. Then use the focusing box to focus the image. It will take a little fiddling around with but you'll get it.

Don't want to turn your TV upside down? Here are the alternatives.

The first alternative is to put your TV on its back with the projector on facing the ceiling. This will then project the image into the ceiling. You could lay back and watch the movie on the ceiling our place a mirror at a 45 degree angle at the end of the projector. The image will then be projected onto the mirror and bounce off onto the wall reversing the image top to bottom.

The only other alternative is to watch the screen upside down. Adding another magnifying lens will not turn the image around the right way.