If you've ever been on a press check at a printing company, you've seen those neutral gray proofing booths with the special lighting. These booths can be found at the delivery end of any press and in other locations of the plant where folks need to have a critical look at press sheets. They cost several thousand dollars each.

I'd like to share with you some simple plans on how I put together a great proofing station and it's very easy and not that expensive. A viewing booth like this is excellent for looking at proofs, press sheets, prints and color comps without being subtly distracted by your surroundings.

The booth itself is simple, designed to sit on top of an existing table, old desk, etc., with a footprint of 43 x 28". It's large enough to look at big 26 x 40" proofs or press forms, or to spread things out for comparison. The booth itself can be easily made with just one single 4x8' sheet of white Melamine® board (a type of particle board with a plastic coating; strong and easy to clean).

Why bother?

If your work involves looking at prepress proofs, then you need to make sure you’re in the proper lighting: the one that the proofs were prepared to be viewed under, and the same that they use at the printing company. Any lighting other than this can cause unpredictable shifts in the color and tone, and risk making your observations invalid or any revision requests baseless. Some people boldly object: “My printed piece is going to be viewed under regular office lighting, so I’m just going to look at these proofs under my office fluorescent lights”.

The problem is that these proofs, special papers and pigments weren’t designed to be viewed under other lighting. They don’t behave the same as a press sheet and printing press ink, so you can also forget comparing the two under the wrong lights. ISO 3664:2009 specifies viewing conditions with standard D50 lighting for critical color proofing and comparison.

Begin to see daylight

Many experts agree that the SoLux 4700K is the light that best simulates the D50 standard. Used in many galleries and museums, SoLux is the only daylight simulation product emitting a full and even spectral power distribution equivalent to daylight. Color Rendering Index (CRI) is a rating of the ability to simulate daylight, and a CRI of 100 is considered perfect. The SoLux 4700K Natural Daylight Lamp has a nearly perfect CRI 99. This makes SoLux the best light for our project.
I've seen the light!

For the lighting hardware, I recommend simply purchasing the “The Color Proofing Light Kit” from Tailored Lighting, Inc., and select the SoLux 4700K (D50) bulbs option. Kit is available in black or white. It consists of a cord, a four-foot section of low voltage 12 volt track-lighting, SoLux 4700K (D50) 50 Watt MR16 type bulbs and four track lamp heads. Standard in this kit, you get the special bulbs featuring the black back (BB), which helps eliminate the escape of stray light of the wrong color. Though not required, I also bought four of their optional “Plano Plano Diffusers” which go inside the lamp heads to give a wonderful soft lighting.

The four-foot track is not attached, but merely rests on top of the booth.

Everything (except the SoLux Color Proofing Light Kit and optional diffusers) came from my local Home Depot. Luckily, the folks there were happy to make the two cuts needed on the big sheet of Melamine and it fit right into my car. While you’re there, you’ll want to pick up the screws, a quart of neutral gray paint for the inside of the booth, and the other items listed below. I checked a bunch of their paint swatches (using a spectrophotometer), and went with Glidden® “Winter Evening” which was the closest in terms of brightness and neutral color.

I am no handyman, but it was a very easy project. This booth can be easily disassembled for moving or storage. If you don’t need a viewing booth this large, you can easily change the final size according to your needs and available space.

THE VIEWING BOOTH PLANS

Thank you for your interest in my plans. Please read and understand all directions before proceeding, and you’ll only have one trip to the store. You can make any changes to suit your own circumstances. Be sure you have a bench, table or desk available to seat the finished unit.

Prices are current as of the time of this writing (2/2011). Total cost of materials came to $302 plus $27 for the optional swing-up-out-of-the-way shelf (recommended).

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About me...

I founded Colorprep in 2003 after many years experience preparing print images at printing companies, color trade shops, and service bureaus; serving ad agencies, graphic designers and photographers. If you’re not fully satisfied that your print images are the best they can be, please consider trying out my guaranteed services on your next important project. If you have questions about anything in these plans, or would like to learn more about Colorprep, please email or call.

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Copies of these plans are available for direct download: http://www.rgbcmyk.net/proofingbooth.pdf

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SHOPPING LIST:

SoLux online:    http://www.solux.net

1  SoLux Color Proofing Light Kit    $219.95 +shipping
4  “Plano Plano Diffusers” $30.00 (optional)

Big-box home improvement store:

1  metal switch box BW2-S with faceplate & switch    $6.97
2  clamp connectors (to fit switch box)    $1.54
1  3/4 in. x 49 in. x 97 in. S11 White Thermally-fused Melamine® board $34.58
1  8' piece of white molding OR Melamine iron on tape: $5.32/roll
8  7mm x 50mm Connecting Screws (uses 4mm hex key)    $7.54
1  48 in. x 3/4 in. x 1/8 in. x 1/16 in. Aluminum Offset Angle    $5.48
1  quart Glidden® Gripper White GL3210 Primer, $9.98
1  quart Glidden® “Winter Evening” latex paint    $9.87
8  small wood screws to mount the switch box and stabilizer bar

For optional shelf:

1  3/4 in. x 24 in. x 48 in. White Melamine Shelf    $12.67
2  round wooden closet dowels 1-1/4 x 48”    $7.74
6  round head wood screws #10 x 1-3/4”    $1.25
4*  plastic closet pole sockets $4.76 (only use the open “U” shaped socket from each set; see note below)

*If you don’t want to be able to swing the shelf up and out of the way, you can still lift it completely out if you only buy and use 2 sets of plastic closet pole sockets.

Primary tools, supplies needed:

• paint rollers and pan
• drill and bits
• hack saw
• corner clamps (2, very helpful)
• 4mm Allen wrench/hex key
• tape measure
• screwdriver
• sandpaper
The first thing to do is pre-drill the eight holes (four per side) for later bolting of left and right side panels to the back panel. Clamp, then drill one side at a time. Be sure to mark them on the top edge so you'll know which side to paint and so panels can be assembled the same way later with holes lining right up.

Pre-drill holes for the connecting screws, temporarily clamping with corner clamps

I recommend clamping (attach corner clamps to top and bottom) to firmly hold the panel temporarily in position, and at 90 degrees. Measure and mark carefully, then drill as straight as possible through one side into the back panel. There are four bolt holes per side. Be sure that you are drilling through squarely into the center of the 3/4" thickness of the back panel board.

Surface prep: Remember, you only need to prep and paint what will be the “business side” (inside) of booth. Use 80 to 120 grit sandpaper to rough up the melamine surface to help
promote primer adhesion. Wear a dust mask, and be sure to get every bit of surface area. Wipe off dust with a dampened rag.

Prime the three prepared surfaces and allow to dry according to directions on the can. Then paint with Glidden “Winter Evening” latex paint. Use two coats or more as needed to look nice and smooth, allowing dry time as per directions. I used one of those “hotdog” paint rollers.

When fully dry, bolt the two side panels onto the back panel.

With hacksaw, cut your 48” piece of Aluminum Offset Angle to 42-3/4” (or whatever exact size you need to span the top front of booth) for use as a brace, as per the illustration. Mark and drill the mounting holes on each end. Using small woodscrews, screw it onto the top front corner of booth for a little added stability.

Drill two holes, add woodscrews

The aluminum angle bracket up top helps stabilize the booth.

To cover the cut edges showing on the front sides of the side panels: If you bought the Melamine iron-on tape, attach it per instructions. I just bought an 8' length of white plastic molding, and cut it exactly in half, nailing each piece on (flush to the bottom) to nicely cover the cut Melamine on the front (not shown).

With help, (unit weighs about 95lbs.) lift and position the booth on top of existing bench or desk where you want it. The track lighting rests on top of the booth, up next to the aluminum brace (which will help prevent it from ever slipping off the front).
You’ll want to mount a light switch for the track lighting; I recommend one of those complete metal switch boxes, or one of those smaller gray plastic boxes, mounting it on the outside at a convenient height (I mounted it on the very bottom, right). Optionally, you might want to just find a thumb switch that installs right on the cord. Check the SoLux website.

**OPTIONAL SHELF:**

Though not necessary, I’d recommend adding an angled, raised “podium-style” shelf to hold proofs up at a convenient height and angle. I used an old 24 x 36" wooden drawing board, also priming and painting it neutral gray. You can buy a small sheet of 3/4" Melamine (size listed in optional materials), or other board and get it cut to fit, or use something you have on hand. Prep, prime and paint it neutral gray at the same time you do the main booth panels.

I bought two round wooden closet dowels 1-1/4 x 48" and cut the length to fit into plastic closet pole sockets. You can determine the position of these pole sockets according to how you’d like the shelf to rest. The pair of dowels were centered both ways, 17-1/2 inches apart, and screwed into the underside of the board which can be swung up and out of the way or lifted right out.
For my purposes, I positioned the four closet pole sockets inside the booth to provide a conveniently tilted shelf. Their center mounting screws are at these coordinates: see diagram below right.

Closet dowels cut to length (shown in place without shelf)

INSIDE RIGHT

Mounting locations for open “U” rod sockets (right side only shown)
The shelf creates a handy space underneath; I have my large scanner under there. I would recommend also adding a “lip” on the front edge of the shelf to catch drifting items. A pre-cut piece of 36 in. x 1 in. x 1/16 in. aluminum angle does the job well. Screw it onto the front of shelf.

The final viewing booth, with optional shelf