Animation Student's Guide to Animation Desks

compiled by

David Nethery

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For the traditional animator having a solid , functional animation desk is a must . The desk should be adjustable in height & angle , and should have a hole cut in the top to fit a standard size animation disc. A back-light unit is attached under the desk which can be turned on and off with a switch on the table within easy reach of the animator or a footswitch which can turn the back light on and off as needed. Storage space for paper and other supplies is important too, so plan to have at least a small side work table , but preferably shelves ("scene stackers") placed to one or both sides of your animation tablet and/or wall-mounted shelving over top of the desk. Various types of side-tables, tabourets, and shelving from Art Supply stores can be adapted for use as scene stackers. Stacked up "milk crates"can also be used as inexpensive scene stackers.

The following photos will give you some ideas of how animation desks can range from the very elaborate, heavy studio desks to light-weight portable table-top desks. The emphasis on the smaller, light-weight tables which are easier to set up and transport. I have included plans at the end for Build-It-Yourself portable animation desks.

About Animation Discs :

Traditional animation discs often had one or two sets of ruled, sliding peg bars because at one time it was customary for animators to figure out their own camera pan moves and it was necessary to have the sliding peg bars on the discs to do so.   As almost all scene planning and camera movement is now done in the computer with digital compositing software it is not necessary to use the heavier metal or black plastic discs with the sliding peg bars. Many animators much prefer to use a simpler, one-piece white plexiglass disc with a taped-down thin metal peg bar . These plexiglass discs turn easily in the hole and are even light-weight enough to hold on one's lap to animate using ambient light to see through a few layers of paper. Richard Williams is an advocate of the plexiglass animation disc in his book 'The Animator's Survival Kit' and at one point relates how he animated scenes from "Who Framed Roger Rabbit" while sitting in a hotel room in Wales with a plexiglass animation disc propped up on his knees. (pg. 82 - 83)

Traditional metal and wooden discs with sliding peg bars

Translucent Plexiglass (aka "Perspex")
disc with inset plastic peg bar .
The plastic bars are ok, but much better
to have a thin metal peg bar because
the metal pegs hold the paper in
better registration and the tape down
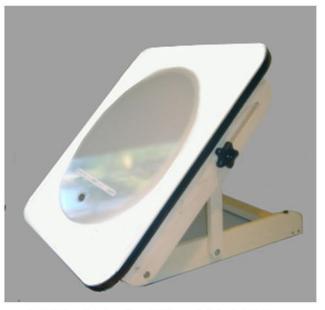bars can be easily repositioned

Popular plastic 16 Field disc with sliding peg bars (actual pegs are metal), distributed by Chromacolour International (they also sell a 12 Field version of this disc)

Lightfood Animation Ltd. portable table-top Animation Desk with plexiglass disc

Richard Williams is shown here animating on an over-sized Plexiglass animation disc.
Most Plexiglass animation discs are around 18.5" in diameter , allowing one to work on standard sized 12 Field and 16 Field animation paper, but the disc Richard Williams is using here will take larger 24 Field paper if necessary (or double-wide 12 field pan paper) . 24 Field paper is rarely used , so for almost all normal work 12 or 16 Field paper is used. (Many people even use smaller "10 Field" paper which is standard 8.5" x 11" letter sized paper which has been punched with Acme peg holes . This smaller paper has the advantage of being somewhat less expensive than 12 Field paper and it will run through standard office scanners which are much less expensive than large format 11" x 17" scanners)

Richard Williams was an early advocate of using the one-piece Plexiglass disc rather than the older style heavier metal discs with sliding metal peg bars and now a days many animators prefer the Plexiglass disc .

Here are Director/Animator Sylvain Chomet (top left and right) and Supervising Animator Hugues Martel (left) animating on the Academy Award nominated animated feature "The Triplets of Belleville". They are both using the Plexiglass disc. Chomet is shown with a portable animation desk sitting on top of a larger work table, while Martel uses a drafting table adapted to hold an animation disc (cut hole and backlight unit underneath)

The only disadvantage to the Plexiglass discs are that they need to be cleaned frequently as graphite dust tends to accumulate on the surface of the disc. The traditional animation discs have a thin layer of glass over the plexiglass window and are easier to keep clean.

Veteran studio and independent animator Borge Ring is shown here using a table-top animation desk, with a traditional style 16 Field disc. (note how his disc is offset to one side to allow room for clipping on an exposure sheet or model sheets on the right hand side of the table)

Most of the availablle table-top portable desks from ChromaColour, Lightfoot Ltd., Cartoon Supplies and Cartoon Colour Co. are very similar in construction and price . Pictured below are some of the currently available models :

ChromaColour Portable Table with Disc

LightFoot new style portable animation table

Alternative light box design from Cartoon Supplies

Another portable table-top model from ChromaColour , front and back views.

Colin Johnson model of portable table.
(Mr.Johnson's version is somewhat less expensive than similar models from ChromaColour and others)

Each of these table-top models of animation desk truly have the advantage of being portable and easy to set up and to take down. As you can see most of the designs are quite simple and if you are at all handy with tools you could make one for yourself and save some money. **The desks built by Colin Johnson of Vancouver, BC are quite a bit less expensive than similar models that are on the market** , and Mr. Johnson's come with the plexiglass disk and flourescent back-light unit included . Some of the others do not necessarily include the back-loight unit in the main price and you will uusally have to pay extra for the disc as well . But again, if you have a few tools you could make one for yourself. In the following pages I've included a couple of different examples of plans for a Do-It-Yourself-Portable-Animation-Desk.

The commercially available portable animation desks work well enough for almost any situation, but **they all share a slight design flaw:the hole for the disc is cut in the exact center of the table, so there is not usually room on either side of the disc to clip on an Exposure Sheet or a character model sheet.** If you make one for yourself then follow the suggestion on the plans by Jim MacCauley (former teacher at Sheridan College) and off-set the hole so you have space for an Ex-sheet on the right hand side of the table (or if you are left-handed , reverse the plans so the offset allows a larger space on the left hand side of the desktop .) If you have one made to order by Colin Johnson or some other carpenter definitely request that they **off-set the hole as shown on Jim MacCauley's plans** and as in the table-top model Borge Ring is shown using on page 3 of this manual . It's seemingly as small point, but in actual fact it is a necessity to have adequate room for your Exposure Sheet on the desktop so you have room to comfortably write on it.
If you use a drafting table as shown on the next few pages , then also make sure the hole is cut so that it is offset enough to leave room for your Ex-sheets or model sheets, or else use a drafting table with a large enough surface that you have plenty of room around the disc to clip on your ex-sheet, model sheets, post-it notes, etc.

(Note: standard animation disc will fit a hole 16 3/8" to 16 1/2". 16 1/2" gives the disc a bit more room to turn smoothly but 16 3/8" should be fine , too.

Just be sure the hole is cut as smoothly and precisely as possible so the disk will not stick when you turn it

add a wood strip along the bottom edge to hold pencils

HOLE TO SUIT STANDARD DISC. (OFFSET TO ONE SIDE TO LEAVE SPACE FOR PLACING EXPOSURE SHEET.)

MASONITE — CORNER GUSSETS (NAILED & GLUED)

Briefcase Animation Table
by Cartoon Carpentry

- 24" x 30" x 4"
- 14 Adjustable positions
- Integrated Handle
- Integrated Backlight
- Plexiglass disk included
- Also accepts 12/16 field disks, which may be purchased separately from Central Tool
- Natural Birch finish

If you custom-make a table you may choose to replace the wooden table supports with modern cabinetry hardware as seen in the table Borge Ring is using on page 3 (detail above) or in the Briefcase Animation Table design formerly made by Cartoon Carpentry shown on the left. These are easy to adjust and supply good support to the table top. However , the wooden slat system is easy to make and provides three or four different angle adjustments to the table.

While the more portable table-top models of animation desk have some advantages, one drawback they have is that you can only adjust the angle but not the height of the table. You're stuck with whatever height of table or bench the animation table is resting on top of . For the ultimate in ergonomic comfort , to be able to **make fine adjustments in both angle and height** a free-standing drafting table is ideal. These tables can be purchased with the hole for the disc pre-cut from Cartoon Colour Co. and Alan Gordon Enterprises , or you can buy a table and cut the hole yourself or hire a local carpenter to cut the hole (again: it's better to have the hole offset to one side , so you have room for your Ex-sheet or model sheets) .

This animator is shown working on a larger size drafting table. Notice how the larger size allows plenty of room around the disc area to pin up model sheets, notes, ex-sheet, etc.

A 4ft. folding table to the right side of the animation desk and a low scene stacker/ tabouret partially seen in the lower left foreground provide space for the animator to organize his work .

In your home studio set up you can use any kind of low side table with some stacked up "milk crates" as improvised scene stackers.

More examples of animation desks:

Your desk doesn't have to be a super-expensive full-sized "Disney desk" to be functional. (although the big desks are nice, but also very heavy and very expensive) Even with a simpler, inexpensive drafting table arrangement you can maximize your work space by the addition of a few well place shelving units.

You can see a scene stacker over to the right side of this animator's table.. A "Scene Stacker" is a cabinet that is divided up into multiple levels of shelves, with space to hold individual sheafs of drawings or scene folders . It's a good way of storing and organzing your drawings . (this artist also has a smaller scene stacker on her left hand side but it is out of camera frame)

Organizing the work space around your animation desk is essential for keeping track of your work.

Scene stacker. One or two of these placed on either side of your table-top desk or drafting table will help keep your animation scenes organized.
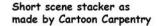
These scene stackers used to be available from Cartoon Carpentry and other animation desk manufacturers , but in recent years are not as readily available . You could adapt other types of shelving for this purpose or have a scene stacker custom made along the lines of the examples shown in this pamphlet. A good low-budget alternative is to use stacked up "milk crates" or file crates as shown:

These crate stackers can be further sub-divided into more slots as shown on the other scene stackers using sturdy cardboard or masonite panels.

The typical crate is only good for 12 Field size paper unless you can find the extra wide crates.

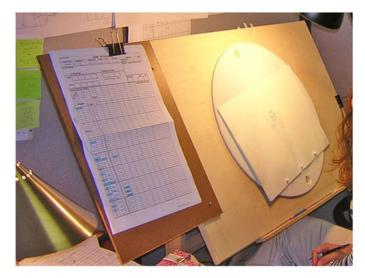Short scene stacker as
made by Cartoon Carpentry

Winsor & Newton tabouret functions as a
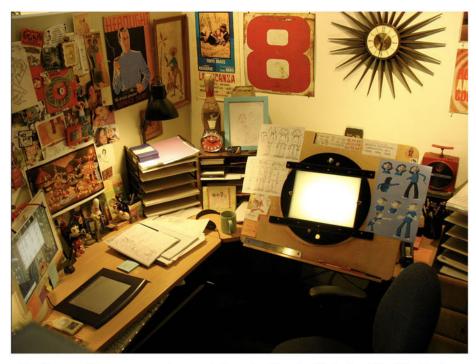good side table for your animation desk.

The adapted drafting table style of animation desk available from Cartoon Colour Co. or Alan Gordon Ent. can be improved by adding extensions to the top of the desk. In the first two photos you can see how the artists have added masonite panels screwed on along one edge of the desk to provide a place to clip on their Exposure Sheets or model sheets.

In the third photo to the left, this animator has added custom desk extensions to hold his pencil sharpner, pencils, tape and other small items, so these are always within easy reach.

You'll notice that this artist also has his desk adjusted to a lower angle and is actually drawing while standing up rather than seated. This again demonstrates the versatility of using a drafting table since the legs can be adjusted for height, as well as the top adjusted for angle.

On/Off Light switch for backlight located in easily reached area on top or to the side of the animation board is useful.

One other customizable option that is nice to have with any style of animation desk is an On/Off switch located in an easy to reach area on the top or to the side of the desk area, so you can switch the backlight on and off without fumbling for the switch on the cord underneath the table. An alternative would be to use a foot switch to switch the backlight on and off by simply clicking on the switch with your foot .

Here's another fine example of an animator's work space for you to consider as you build your own. Traditional animation disc in a table-top desk from ChromaColour on the right and over to the left of the L-shaped table is a Wacom tablet and computer monitor . Just a matter of swiveling in your chair and you're transported from classic 20th century technology to the cutting edge. The Best of Both Worlds.

You can also just make out the flatbed scannerin the lower left corner near the Wacom tablet.

Note the economical use of office letter trays as scene stackers to hold animation drawings. Low-profile, and practical . Plenty of room on the walls for inspirational artwork !

(by the way, this snazzy work space belongs to Director/Animator Ward Jenkins)

This beautiful , custom-made desk belongs to animator Ronnie Williford. Ronnie made this desk himself to maximize his work area in the least amount of space necessary.
The desk comes out from the wall only about 24" inches and utilizes good shelf space up above , with paper, pencil sharpener, peg strips and other necessities easily accessible.

Note that Ronnie's animation disc is properly off-set to one side so he has room on his right for an Ex-sheet or other notes

Although the purpose of this little pamphlet is to show you how you can get set up to animate at home with ready-made, inexpensive equipment , I hope that some of you who read this will be inspired to custom-craft your own animation desks based on designs like these that are both functional and beautiful.

On the next few pages I will give you some simple plans for building your own portable animation table.

Portable Animation Desk
(design by Jim MacCauley)

(Note: standard animation disc will fit a hole 16 3/8" to 16 1/2". 16 1/2" gives the disc a bit more room to turn smoothly but 16 3/8" should be fine, too.

Just be sure the hole is cut as smoothly and precisely as possible so the disk will not stick when you turn it

add a wood strip along the bottom edge to hold pencils

HOLE TO SUIT STANDARD DISC. (OFFSET TO ONE SIDE TO LEAVE SPACE FOR PLACING EXPOSURE SHEET.)

24"

34½

3"

3" Hinge + ¾"

16½"

¾"

½" × 23¼

6½"

3¼
3¼

3¼
3¼

¾

¾ × 23¼

2"

34½

3¼

¾ × 3/4 HINGE

½" × HINGE

2¾¼"

½" dowells

1½"

¼"

MASONITE CORNER GUSSETS (NAILED & GLUED)

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Photos of the
Do-It-Yourself-Portable-Animation-Table

(refer to the other photos of portable tables I've shown earlier in this booklet and
to the plans for the table designed by Jim MacCauley. Those are your basic dimensions.)

1.) Carefully measure lines for hole to be cut
16 3/8" "Measure twice, cut once" .This photo shows
it centered. Personally, I'd make it offset a bit, to
leave room on the side for Ex-sheet. See the
plans by Jim MacCauley included in this pamphlet.

2.) use tools (router and or jigsaw) to carefully cut
out a perfect circle 16 3/8" .. After the hole is cut
you can sand down the inside edges to make
it even smoother so your disc will turn smoothly.

3. Finished table-top with hole cut out for disc.

4.) Attach legs. (see MacCauley Plans for basic layout;
The ones pictured here are slightly different)

5.) If you've come this far ok then you know what
you are doing . If this is becoming frustrating you
may want to contact Colin Johnson (see contact
page at the end)

6) Fluorescent light unit you'll find at Home Depot
or some such place.   Use metal strapping to
attach it to backside of the table.

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7) Back light unit attached.

8.) view from the back side.

9. Completed table from front

10.) completed table from side.

Happy Animating !

Sources for Animation Desks and Accessories

Colin Johnson Animation Desks - http://www.animationdesks.com/
These desks are well-made and quite a bit less expensive than similar portable desks sold by other companies. As of 09/07/2007 Mr. Johnson is selling these desks for $250.00 Canadian + $40.00 shipping . (he has a currency converter on his website so you can check what $250.00 Canadian is equal to in your currency.) As of 09/07/07 $250.00 Canadian = $243.50 United States dollars. Mr. Johnson's desks include a fluorescent backlight unit and the plexiglass animation disc.

ChromaColour International - Sells a variety of traditional animation supplies. Their paper is excellent . They sell a portable animation table which is also very well-made . See their website for details : **http://www.chromacolour.com/**

Lightfoot Ltd. Animation Supplies - Lightfoot has their own design of portable, table-top animation desk . They also sell paper and other animation supplies. **http://www.lightfootltd.com/**

Cartoon Colour Co. - This venerable animation supply company has been around since the 1940's . Their specialty is their "Cel-Vinyl" line of paints . They also sell discs, pencils, paper, tables, and other animation supplies. They sell a compact drafting table with a pre-cut hole for an animation disc. (model # 1416) . **http://www.cartooncolour.com/**

Alan Gordon Enterprises - A large film equipment rental company in Hollywood, which also sells some animation equipment. They make a relatively inexpensive traditional animation disc from wood with metal peg bars and they also sell back-light units and a compact drafting table with pre-cut hole for an animation disc (similar to the version sold by Cartoon Colour Co.) . **http://www.alangordon.com/s_animation.html**

Central Tool Co. - They manufacture traditional metal animation discs with precision ruled sliding peg bars. They also make a thin metal tape-down peg bar which is ideal for taping down to a scanner or on a plexiglass animation disc. **http://www.centraltool.com/products.html**

Drafting Steals - This company sells various models of drafting tables , including the wooden "Pavillion" model of table which is similar to the model sold by Cartoon Colour Co. and Alan Gordon Enterprises, but without the hole pre-cut. If you have the tools to cut out a hole you could buy one of these tables and save some money by cutting the hole yourself. **http://www.draftingsteals.com/artist-tables.html**

Utrecht Art Supplies - the official art supply store of the Academy of Art University. They also sell suitable drafting tables if you want to cut the hole yourself rather than buy one of the pre-cut tables from Cartoon Colour Co. or Alan Gordon. If you buy one of the Alvin Pavillion wooden drafting tables, I recommend that you get the larger 31" x 42" tables if you have the space for it . You'll appreciate the extra table space for pinning up your model sheets or exposure sheets. **http://www.utrechtart.com/Studio_Furnishings/Tables.cfm**