

A Pocket Guide to Making Bandsawn Boxes

The How To and 14 Hints

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Selection of the block.

Select a block matching the size described in the Making Art Sculpted Bandsawn Box Plan. Remember the block must be of a suitable size (depth and length) to fit onto your bandsaw table.

Block selection criteria.

Dry and properly seasoned, solid with a minimal of splits or cracking. Ideally it is a block which has a distinctive grain pattern.

Preparation of the block.

Ensure the block has at least one flat side, to begin with. The easiest way to obtain flat side is to use a jointer or a hand plane, or a belt sander. Generally this flat side will be the back of your box, so select the side of the block with the least attractive grain.

Use the flat side to bandsaw the base of the block, making sure the base is square to the back.

» *Hint (1) - Where to commence*

When selecting the front, back and sides of your box, an important consideration is the location of the bandsaw blade entry point. Remember a cut along the grain will be less obvious when the Entry Point is glued closed than a bandsawn entry point which cuts across the grain.

Often is it useful to place a pencil mark across the bandsaw blade entry point to enable re-alignment of the grain when gluing. This is also important when gluing the a cabinet with a number of drawers.

Preparation of the bandsaw.

Ensure the bandsaw is set up according to manufacturer's specifications. Follow manufacturer's safety procedures. Fit the recommended bandsaw blade (Refer to the Plan). As a priority ensure the bandsaw blade is properly installed and the bandsaw table and fence are properly aligned (vertical to) the bandsaw blade.

Always use a sharp blade, blunt blades may mean your work will be roughly cut. Blunt blades often end in unpredictable results, with your work ending up as firewood. If in doubt, practice with a scrap block. Have a new bandsaw blade at the ready as insurance.

Cutting the Outline shape of your box.

Copy, trace or draw the Outline Shape Plan of the box onto the face of the block. Remember the best quality drawing / tracing will make the bandsawing of the Outline shape easier.

If you are working with dark coloured timbers use a fine tip whiteout pen to provide the outline and drawer bandsawing lines.

Place the block onto the bandsaw table and visualise the path of the bandsaw blade before bandsawing the Outline shape from the block.

» ***Hint (2) – Use of bandsaw blades***

When using a small bandsaw blade to cut a thick block a slower rate of feed is required. Forcing the bandsaw blade will result in a rough cut (creating unnecessary sanding). Aim for a steady smooth rate of feed, it is an acquired skill.

A good bandsaw blades break only because of improper use and when blunt.

When a bandsaw blade breaks check whether the break occurs at the weld point, if so consider an alternative supplier.

» ***Hint (3) - Cutting the outline/ drawer shape***

If the bandsaw blade accidentally strays from the plan lines, do not attempt to sudden correct the bandsaw path, rather gently steer it back on course. You may wish to consider re-drawing the drawer shape to fit with the new Outline shape.

» ***Hint (4) – Maximising use of the timber.***

Do not discard the scrap pieces from the block, put them aside as they may later be used to create new interesting shaped boxes, drawer runners or stock to carve drawer handles. The scrap may also be used to “square up” a complex shaped box when gluing. *Refer to Hint No. 6.*

Cutting the back of the box.

The back of a bandsawn box is generally sawn at 8mm to 10mm.

If it is intended to later round over the box edges then it is wise to increase the thickness of the back

It is important, when cutting off the back section, to use a smooth steady rate; do not force the bandsaw blade. A rough cut back is difficult to glue to the cabinet and an obvious glue line spoils and devalues the appearance of the finished box.

» ***Hint (5) – Fences***

If your bandsaw is not equipped with a fence, an alternative is to use a length of straight edge timber secured to the bandsaw table with G Clamps or a similar device, to act as a guide fence.

It is paramount that you make sure the fence is aligned with the bandsaw blade. To test, cut 1mm thick veneer slices.

» ***Hint (6) – Use of scrap as a jig***

When bandsawing an intricate shaped box or drawer it is often useful to use the scrap from the block as a jig / rest, this will assist in achieving a vertical alignment to the bandsaw blade. A jig will also reduce the chance of the block kicking back, or becoming difficult to keep hold of because of the downward force of the bandsaw blade.

Cutting the drawer block from the block.

Place the sawn back to one side. Place the block on the bandsaw table on it's back, in preparation to cut the drawer blocks from the block. Adjust the bandsaw blade support to a position the just above the top of the block. Visualise the path of the bandsaw blade. Again it is important that you use a smooth steady rate; do not force the bandsaw blade. Bandsaw the drawer blocks, following the plan lines. When the drawers are bandsawn from the block, it is one step closer to becoming the cabinet.

Gluing

Whenever possible glue the bandsaw entry point. Closing the entry point (by glue) means a better containment of the drawer in the cabinet and any movement of the timber (because of climate changes) will be less apparent.

Glue the entry point and then the back.

When gluing the back match the grain of the back with the cabinet grain using top of the box as the starting point.

» ***Hint (7) – Additions to G-Clamps***

Suitable additions to the G Clamps, include strong elastic bands; car or bike inner tubes cut into strips; picture framer's strap; or the humble woodworker's bench vice.

Bandsawing the drawers.

The first step is to pencil mark the front and back, and matching lines on the top of each drawer blank. Unfortunately more than once I have bandsawn the hollowed section of the drawer only to realise it has been sawn to face downwards!

Bandsaw two sections from the front and back of the drawer blank, these will become the front and back of the drawer. The thickness of the back of the drawer may generally be set at 5mm or so. The thickness of the front section is dependent upon the type of handle or access device you will use. For example if you intend to glue a handle to the drawer front then it should be about the same size as the back. If you intend to sculpt a handle then the front section should be thicker.

» ***Hint (8) – Working with complexed shape drawers***

Prior to marking the plan lines for the cut out section of the drawer block, place the drawer block into the cabinet and mark a vertical line on the face of the drawer block. Use this vertical line to determine where the plan line of the cut out section should be located.

When the bandsawing has been completed, lightly sand the interior of the drawer. If you intend to using flocking or any other means of lining the drawer, then minimal sanding is required, otherwise smooth sand the cavity.

» ***Hint (9) – Bandsawing small objects***

When bandsawing small objects rest the largest flat section on the bandsaw table. This will provide greater control of the work piece and reduce the chance of the downward pressure of the bandsaw blade from spoiling your work or cause physical injury.

Consider using a jig or clamps to assist.

» ***Hint (10) – Sanding the cavities***

Resist the temptation to sand the block cavities (cabinet drawer spaces), light sanding is rarely required and is only necessary to reduce any heavy bandsaw machine marks.

» ***Hint (11) – Sanding aids***

Whilst a oscillating drum sander is ideal, the following alternatives although requiring more physical effort work just as well.

1. wrap sand paper around a length of suitable size dowelling; wrap sand paper around a length of dowelling and mount it between the centres of a wood lathe (use masking tape to hold the sheet in place);
2. use a drum sander in a drill press;
3. use a drum sander in a flexible cable driven by a drill or similar device.
4. use an electric carving knife, attaching the sanding paper either with masking tape, glue or hook and loop
5. a Dremel type tool

Preparing interior drawer front and rear sections.

Care should be exercise when sanding the drawer the interior of front and rear sections. If the during the sanding process the edges are rounded over then the surface area available to glue the drawer components will be reduced, thereby weakening the strength of the glued joints. In addition unsightly gaps will appear in the butt joints. When sanding drawer front and rear sections ensure a smooth even stroke is used, resist the temptation to use the sandpaper in a back and forth motion, instead stroke in one direction only.

» ***Hint (12) – Block plane***

Use a small block plane or a similar tool to remove machine marks and to provide smooth even surfaces once the drawer front and back sections have been bandsawn and before bandsawing the hollowed section.

Drawer sleepers

As you are aware it is an inevitable consequence of working with a bandsaw that the saw will create a kerf, the amount of loss of timber is critical, excess loss means the drawer will flop about in the cabinet cavity and spoil your good work. One way of minimise this effect is to use drawer sleepers, also known as runners.

These may be prepared from the block scrap. They are thin strips about 5mm (¼ inch), cut to the length of the drawer then glued to the base of the drawer.

The placement of the sleepers is important. To determine where they should be placed involves seven steps,

1. Place the drawer into the cabinet and lay the cabinet on its back.
2. Adjust the position of the drawer in the cabinet so that it is centred within the cavity, that is to have an equal space around the drawer in the cavity.
3. Move the drawer towards the base of the box and pencil mark where it contacts the cabinet cavity.
4. Then remove the drawer from the cavity and glue the sleepers to the drawer using the pencil mark as the location guide.
5. Gently place the drawer in the cavity, if it does not fit, then lightly sandpaper the sleepers, until the drawer slides smoothly into the cabinet.
6. If the drawer wobbles from side to side then it may be necessary to use sleepers strategically placed on the side of the drawer.
7. When fitted lightly sand, to taper each end, of the sleepers, simply to remove the squared edges.

» ***Hint (13) – Super glue***

Use of fast setting glue, such as super glue, is ideal when fitting drawer runners as it reduces the completion time.

» ***Hint (14) – Time out***

Now that you have completed the construction phase of your bandsawn box it is time to stand back and proudly admire your work!

Before proudly showing you work to your family and friends, sign your work with a pencil or fine tipped biro. Consider also recording a sequential number.

To complete the job, finish the box by using your preferred finishing method, e.g. wood oil etc.

Explanation of Terms Used.

Block

The piece of timber from which the box is bandsawn.

Outline

Used to describe the line drawing / Plan for the outer shape of the box and drawers.

Scrap

The timber left after the outline has been bandsawn from the block. Often a resource to make more boxes.

Entry Point

The place where the bandsaw enters the block, when bandsawing the drawer blanks.

Cabinet

After the outline and the drawers are bandsawn from the block, it is then the cabinet and is completed when the back is glued in place.

Drawer Blanks

The sections bandsawn from the block, which are later bandsawn into drawers.

Sleepers

Thin strips of timber, obtained from the scrap; used to position the drawer in the centre of the cabinet cavities. Also known as Runners.

Remember:

New Art Sculpted Bandsawn Box Plans are continually being added to
www.tonyward.org.

Thank you,
Tony Ward