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Picture Framing

Ilona Sherratt

CONTENTS

Picture Framing

Suitable for Framing

Your Work Area

Basic Tools

Supplies and Hardware

Matting and Framing Materials

Basic Matting Techniques

Mounting Artwork

Building the Frame

Glazing

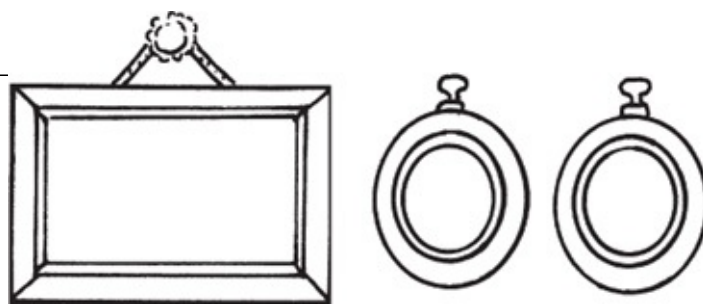
Installation

Sealing and Wiring

Hanging the Picture

Glossary

Suppliers



Picture Framing

When you admire a piece of artwork hanging in a museum or in someone's home, chances are that the picture framing and matting around the artwork are not the first things you will notice. This is as it should be. Good picture framing brings out the best in art without distracting from it, just as a good sauce brings out the flavor in a dish without masking it. Whether simple or elaborate, well-designed picture framing is an important element in the decor of any room.

If you are an artist or craftsman, have an interest in antiques, or enjoy decorating your home, picture framing can be a very useful and satisfying skill to learn. Doing your own picture framing will allow you to "fine tune" each piece to suit your own taste and budget. Mail order catalogs catering to the interests of do-it-yourselfers, home centers, art, craft, and woodworking stores all carry picture framing supplies.

All the latest materials, tools, and knowledge available to professional galleries and frame shops are available from the same mail order suppliers for anyone who wants to do his or her own picture framing. Most have 800 numbers and offer express package delivery as well.

This bulletin will help you to purchase the specialized tools you will need and give you some ideas about how to set up your work area. You will learn how to choose the right mat and frame, and determine the size of the finished piece. Step-by-step instructions are given for framing many different pieces. If you have worked with simple hand tools and can measure and cut accurately, you can learn to frame your own pictures — and save money.

Suitable for Framing

Just about anything drawn, painted, or printed on paper, fabric, or glass can be successfully framed and displayed. This bulletin covers the basics of framing artwork on paper:

Original artworks — watercolors, and drawings in pencil, pen, crayons, charcoal, and pastels
Reproductions (limited editions) — etchings, serigraphs
(silk screen prints), and lithographs, signed and numbered by the artist; offset prints
Words — diplomas, certificates, letters, and newspaper clippings
Photographs — both recent and antique
Maps and blueprints

When to Get Professional Help

Certain jobs may present too great a challenge for the beginning framer. Consider having a professional picture framer do the job:

If you believe the artwork may have monetary value or may increase in value in the future.

If the piece is very old or delicate, or has great sentimental value and is irreplaceable.

If the piece is too large, heavy, or complicated to handle easily. Start with picture frames in the 5"×7" to 18"×24" range until you feel confident in your abilities — mistakes are costly when framing large pieces!

If the framing requires specialized equipment that you don't have.

Picture Framing Terms

Now is a good time to familiarize yourself with some commonly used picture framing terms. A glossary begins on [page 29](#).

Your Work Area

Picture framing supplies and equipment can be hazardous! When setting up your work area, keep safety in mind:

Keep your work area off-limits *at all times* to young children.

Keep the area clean and free from pins, broken glass, razor blades, open containers of flammable materials, and electrical cords.

Wear safety glasses and use gloves when necessary.

Keep the area well ventilated, especially when using paints, glues, and solvents.

Unplug power tools when not in use.

Do not leave paper, matboard, or picture frames on or near heaters or radiators.

Dispose of your trash properly.

Setting Up Shop

Ideally, you should have two separate areas in which to work: a “clean” area for cutting mats and installing artwork in the frames, and a “dirty” area for sawing, sanding, and finishing frames, and cutting glass. An area already set aside for sewing or crafts is a good place for matting and fitting. The best place for messy work is the garage or basement. Try to give yourself enough room to work around a table that will accommodate at least a piece of matboard 32” × 40”.

Work Table. The larger the better for matting and fitting. An old kitchen or dining room table with sturdy legs works well. A 4’×8’ sheet of plywood on sawhorses also works.

Since you will be constantly cutting on the table, it will need a renewable covering. Corrugated cardboard cannot be used for this purpose. Large sheets of inexpensive cardboard, commonly called chip board or mounting board, work best. This cardboard is available in several thicknesses and is sold in 32”×40” and 40”×60” sheets. Try to keep at least a 1/8” thick layer where you cut. When the boards get cut up, you can turn them over and move them around to extend their usefulness.

Work Bench. If you already have a home shop, this is a good place to cut, finish, and join your frames. An old door on saw horses makes an acceptable substitute.

Lighting. Bright, indirect lighting is best. Fluorescent (shop) lights are the most effective and economical to use. These should be hung directly over the work table to avoid casting shadows on the work. Many picture framers like to use both warm and cool bulbs to approximate daylight conditions.

Storage. Metal utility shelves, bookcases, and old kitchen cabinets are great for storing supplies. Matboard is shipped in sturdy cardboard boxes and can be stored in them. Picture frame moldings should be stored horizontally — leaning them up against the wall will cause them to warp.

Maintenance. A hard-surfaced floor in your framing area will be much easier to keep clean than carpeting. Sweep up regularly, and vacuum to keep the dust down. A bench brush is essential for keeping your work table free of dust and dirt.

Basic Tools

Because picture framing as a craft has much in common with carpentry and woodworking, many of the basic hand and power tools that you may already own can be used to get started. You will also need to purchase some specialized tools. These are available through the suppliers listed on page 31, or at craft and hobby or hardware stores.

Measuring Tools

Metal ruler – 48” for measuring and cutting large boards and glass; as a straightedge for mat cutting

16”×24” carpenter’s framing square – excellent for smaller measuring tasks and marking mat openings

Plastic ruler (2”×18” C-Thru ruler) – a clear plastic ruler with a 1/8” ruled grid for fine measurements

Tape measure – a 12’ tape is sufficient

Cutting Tools

Utility knife –
and plenty of blades!

Single-edged razor
blades

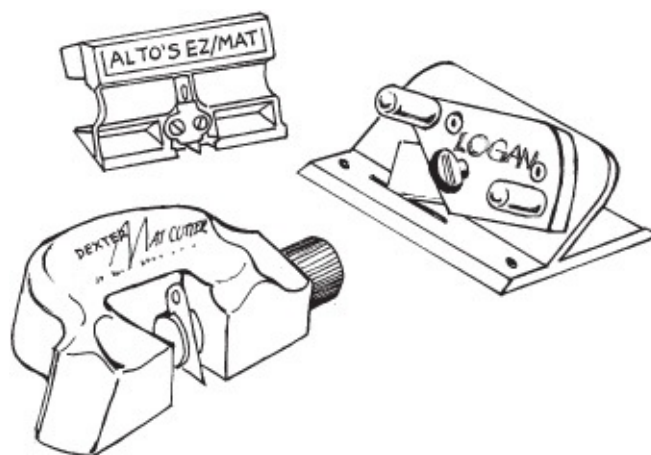
Scissors

Wire-cutting pliers

Hand-held mat cutter

Glass cutter

Miter-cutting back
saw and miter box



Some common hand-held mat cutters

Joining Tools

Screwdrivers – small-bladed: Phillips and flat head

Scratch awl – for starting screws, marking frames

Hammer – a 7 oz. light-duty hammer is best

Nail set – small diameter (1/32"-1/16")

Pliers

Brad driver or point driver – some hold brads, others shoot diamond points or special framer' points

Miter vise or miter clamps – many types are available

Spring clamps – a pair of clamps with a 1¾" opening to hold the straightedge in place when cutting the matboard;

C-clamps are also handy

Drill with a ¼" chuck – a light-duty cordless drill is useful, but a hand drill will also do

Supplies and Hardware

To get started matting and framing pictures, you will need to purchase some supplies which are unique to the trade. Some will be used constantly, while others have very limited applications. Since supplies can be expensive, they should be purchased *as needed*. A local picture framer may be willing to sell you just enough materials to frame a few pictures.

Supplies for the Shop

Pencils – thin lead, and a good sharpener

Erasers – art gum, Pink Pearl, drafting, kneaded rubber

Paper towels – strong, lint-free ones

Glass cleaner in spray bottle – Windex or equivalent

Water in spray bottle – distilled water is preferred

Drafting brush or a wide, soft-bristled *new* paint brush – for cleaning the artwork and glass

Cotton jersey work gloves and rubber gloves

Safety goggles

Rags

Weights – small, heavy objects; wrap in paper towels

Cotton swabs

Emery boards

Burnishing tool – for smoothing rough edges on mats

Palette knife – flexible-bladed knife for mixing paint

Tapes, Adhesives, and Solvents

Linen tape – a strong fabric tape with pH-neutral, water-activated adhesive; 1” wide is best; can be purchased in rolls from 20 to 300 yards long

ATG (adhesive transfer tape) – a special adhesive that can best be described as double-sided tape without the tape:

when applied, the adhesive sticks and the backing paper peels off; available in rolls, it can easily be applied by hand, but the 3M Company makes a handy applicator tool (usually called an “ATG gun”)

Scotch “Magic” tape – can be used on small pieces, but is not easily removed; does not yellow

Masking tape – for sealing frames, and other utilitarian purposes; *never use for matting artwork*

Scotch “Super 77” Spray Adhesive – all-purpose, high-tack spray glue for mounting many materials

White glue or carpenter’s yellow glue – for frames

Adhesive Release – solvent for removing tapes and spray adhesives; evaporates quickly and doesn’t stain

Paint thinner or turpentine

Rubbing alcohol

Tapes and adhesives to avoid. Cellophane and masking tape yellow and stain artwork permanently; rubber cement dries out and loses its bond, also stains badly; white glue and other glues are permanent and therefore damaging to artwork.

Picture Framing Hardware

Wire brads – available in various thicknesses (gauges) and lengths; for joining frames, cement coated brads grip best

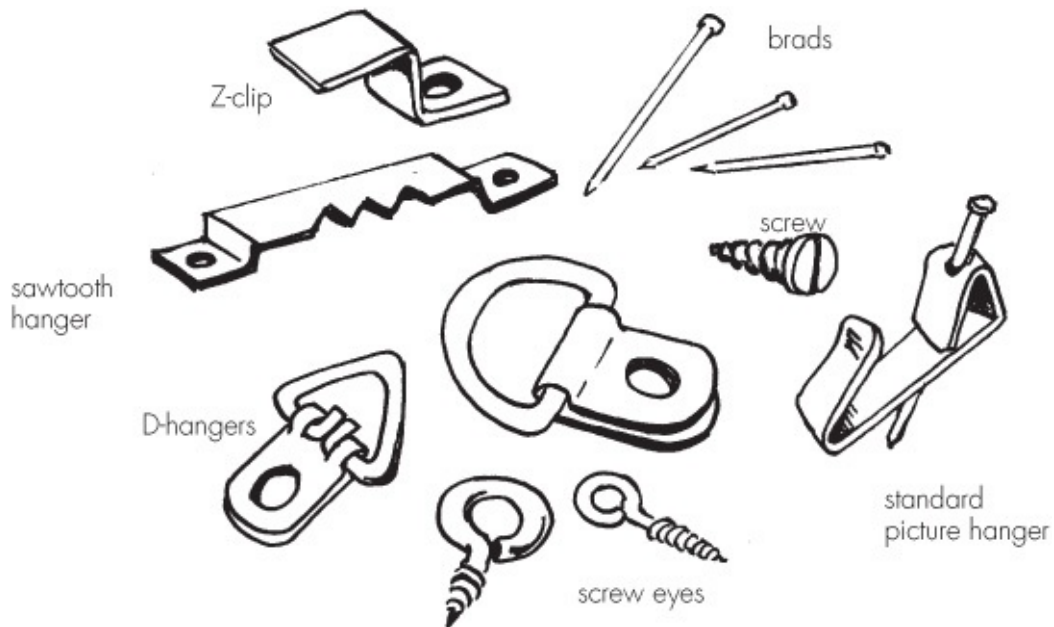
Screw eyes – the most commonly used hanging hardware; commonly used sizes are: 214½, 212½, 210½

D hangers – best used for heavier pieces; installed using the wood screws which are included

Picture frame wire – galvanized, braided steel; most commonly used sizes are #s 2, 3, 5, and 8

Picture frame hangers – a variety of types designed to hold between 10 and 100 pounds; nail into the wall

Press on bumpers



Some common picture-framing hardware

Matting and Framing Materials

Now that you have purchased your tools and supplies and have a work area set up for picture framing the time has come to buy the materials to frame your artwork. The most difficult decision you will have to make is what you want the framed picture to look like: What **color** will the mat be? What **size** should the finished picture be? What **frame** will look best?

Choosing Your Materials

While styles and tastes change over the years, there are some general rules of thumb you may want to consider:

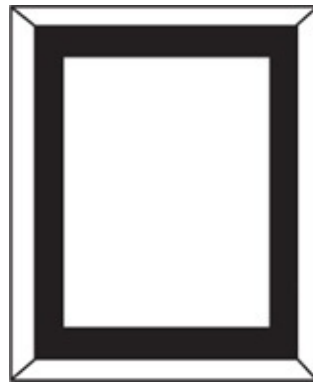
Most picture framers agree that the width of a mat should be no less than 1½"; a narrower mat makes the picture appear "squeezed" into the frame.

Make all the mat borders the same width, or make the bottom border slightly wider; narrower side borders will make the piece look top heavy and unbalanced.

The width of the frame should be either wider or narrower than the mat width. Mats and frames that are of equal widths are static and uninteresting.

The mat color works best when it is kept as neutral as possible; neutral tones also help the picture blend with the decor of the room.

Choose a frame that is sturdy enough to support the weight of the picture; make sure that it will be deep enough to accommodate the glass, matting, and backing materials — ½"-¾" rabbet depth is minimum. The choice of frame can be determined by the decor of the room: more ornate frames for Victorian homes, classical styles for Colonial and traditional rooms, rustic for western and country styles, and metal and formica frames for a modern look. Simple profiles in stained hardwoods work well most anywhere.



*A good balance between
frame and mat widths*

Getting Ideas

Look through your favorite home decorating magazines to find examples of picture framing that you'd like to try. Visit home decorating centers and furniture galleries, museums, art galleries, and gift shops. If you notice a picture that you particularly like, pay attention to the framing. The more you become aware of your own personal tastes, the easier it will be to select matting and framing that will please you.

Purchasing Supplies

It is helpful to visit a frame shop with the pictures you want to frame. They will often let you experiment with their matboard corners and framing samples. They may have smaller pieces of matboard left over from other jobs which they are willing to sell. If the color you want is available, you may not have to buy a whole board to mat a small picture. Frame shops often stock ready-made frames as well. You may also get a discount if you purchase an uncut length of molding, have a frame cut to size only, or order an unassembled chop.

When shopping for your materials at an art or craft supply store, ask about artist's discounts and frequent buyer clubs.

Request mail-order catalogs from suppliers and distributors listed at the end of this bulletin. You can request actual samples of moldings if they are available. Mat specifiers, charts provided by the manufacturers of actual matboard samples and their stock numbers, are essential for phone ordering.

Shop around for the best prices on the supplies and quantities you want. Be sure to ask for shipping and C.O.D. charges. It may be more convenient and less expensive in the long run to buy one sheet of matboard or a single frame locally.

Standard Matting and Framing Materials

The charts on pages 11 and 12 will help you determine the kinds of materials to use for the particular pieces you want to frame. The chart of framing materials will show you the characteristics of most commonly used matting, mounting, and backing materials. Refer to the chart of standard sizes to determine if you can use a pre-cut mat or ready-made frame. Using these materials can often save time and money.

COMMONLY USED MATTING AND FRAMING MATERIALS

Type of Board	Characteristics	Common Uses	Sizes	Advantages	Disadvantages
Standard paper matboard	treated wood pulp; acid-free core and backing; colored top layer	matting backing mounting	32"x40" 40"x60"	lowest cost; widest range of colors	off-white core; not acceptable for museum mats
Pre-cut mats	usually standard paper matboard	matting (backing included)	standard	ready to use; will fit most standard size frames	limited colors and sizes; often poor quality board
Conservation matboard (e.g. Alphamat)	lignin-free wood pulp; pH buffered; 100% acid-free; colored top layer	matting backing mounting	32"x40" 40"x60"	white core; many colors available	higher price
Rag matboard	100% cotton rag; 100% acid-free; colored top layer	matting backing mounting	32"x40" 40"x60"	white core; used for museum mats; many colors	higher price
Museum matboard	100% cotton rag; 100% acid-free; solid color	matting backing mounting	32"x40" 40"x60"	protects art; solid color is useful	expensive; very limited color range
Fabric matboard	acid-free core and backing; top layer assorted fabrics	matting mounting	32"x40"	fabric surface has interesting texture	expensive; hard to cut; make your own
Foam core	paper outer layers, Styrofoam core; 1/8", 3/16", 3/8" thick	mounting backing	32"x40" & standard	white color; light weight; cuts easily; inexpensive	not acid-free
Acid-free foam core	acid-free paper top and backing; 1/8", 3/16" thick	mounting backing	32"x40" 40"x60"	light weight; can	expensive eliminate other backing boards
Corrugated cardboard	wood pulp	backing filler	all	cheap; rigid; light weight	very acidic; must use with acid-free backing board

STANDARD SIZES OF MATTING AND FRAMING MATERIALS

Material	Sizes available outside meas.	inside meas.	Additional materials included	Where found
Pre-cut mats	5"x7" 8"x10" 11"x14" 11"x14" 11"x14" 12"x16" 14"x18" 16"x20"	2½"x4½"* 4½"x6½"* 7½"x9½"* 8"x10½" 7½"x10½"* 8½"x11½" 10½"x13½" 13½"x16½" 13½"x17½"	backing board; sometimes double mats available *Oval openings usually available in these sizes	art supply, craft, hobby & discount stores
Ready-made frames (metal and wood)	3"x5"* 5"x7"* 6"x8" 8"x10"* 8½"x11" 9"x12" 11"x14"* 12"x16" 14"x18"	16"x20" 18"x22" 18"x24" 20"x24" 22"x28" 24"x30" 24"x36" 30"x40"	glass or plastic glazing; mats and backing; hardware for hanging *Oval frames usually available in these sizes	art supply, craft, hobby, photo, gift, & discount stores, catalogs
Frame kits (metal and wood)	2 pieces per pkg. sizes in 1" increments allows for custom sizing		hardware for assembly and hanging	art supply, craft & hobby stores, photo shops, catalogs
Stretcher strips (for stretching canvas)	2 pieces per pkg. sizes in 1" increments		wooden "keys" for tightening	art supply, craft and hobby shops, catalogs
Glass: single-strength "picture glass" clear & non-glare	generally follows standard frame sizes or custom cut		sometimes has paper between each piece	glass shops, art supply & hardware stores
Acrylic glazing, clear & non-glare	22"x28" 24"x36"	32"x40" 40"x60"	protected by peel-off plastic covering	art supply & craft stores, catalogs

Basic Matting Techniques

Assemble your tools: utility knife, razor blades, emery board, burnisher, straightedge, carpenter's framing square, clamps, pencil, paper, and mat cutter. Gather your supplies: matboard; foam core, additional matboard, or corrugated cardboard for backing; linen tape; and weights. Make sure that your cutting surface is clean and free of grease and dirt, and let's begin! (If using a pre-cut mat, proceed to the directions for hinging.)

Figuring Outside and Inside Mat Dimensions

Determine the image size. First, measure the picture. If it has a border around it that you don't want to show, measure the length and width of the image only. If you want to show some of the border, determine how wide you want it (often $\frac{1}{2}$ " is used) and *include* the extra in the measurements. Remember to add the extra to *all sides*.

Determine the mat opening size. After finding the image size, you can determine your mat opening, or window, dimensions. If the picture has no border, or a narrow one ($\frac{1}{8}$ " or less), the mat opening dimensions must be smaller than the image size or the picture will fall through the window. Decrease your measurements (length and width) by $\frac{1}{2}$ ". This will give you a mat opening that covers $\frac{1}{4}$ " of the picture on all sides. (If you are leaving a border around the image, make sure you still have at least $\frac{1}{4}$ " of extra paper on all sides to hold the picture in the mat.)

Determine the outside dimensions of the mat. The outside dimensions of the mat are easily calculated. Determine how wide you want the mat borders to be, then *add* the widths to the mat opening dimensions. *Double check to make sure you added on to the correct measurement!*

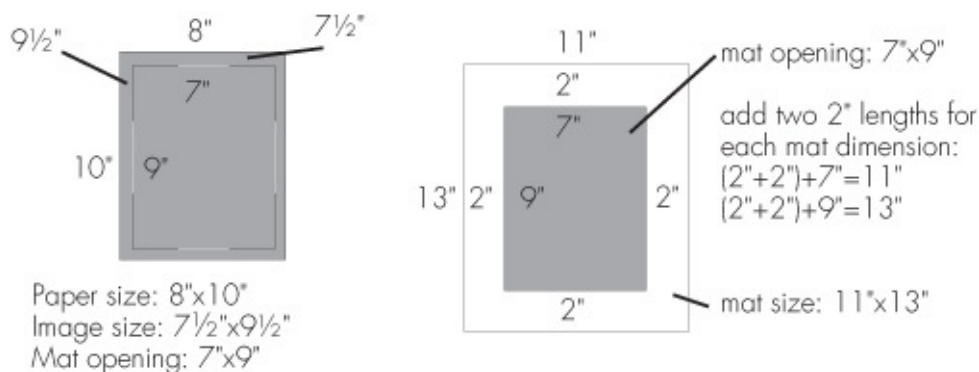
If the picture has a very wide border, you can trim some of it off, but *never* trim signed prints or original artwork. The mats should extend $\frac{1}{4}$ " to $\frac{1}{2}$ " beyond the edge of the paper on all sides to allow the paper to expand in humid weather.

Example:

A photograph is printed on 8"x10" paper, with a $\frac{1}{4}$ " white border all around. The **image size** is $7\frac{1}{2}$ "x $9\frac{1}{2}$ ". Decreasing that measurement by $\frac{1}{2}$ " will make the **mat opening** 7"x9", ensuring that the white border won't show.

For a 2" mat border on all sides, add two 2" widths to each dimension of the opening size: $(2"+2")+7"=11"$ and $(2"+2")+9"=13"$ so the **outside dimensions of the mat** will be 11"x13".

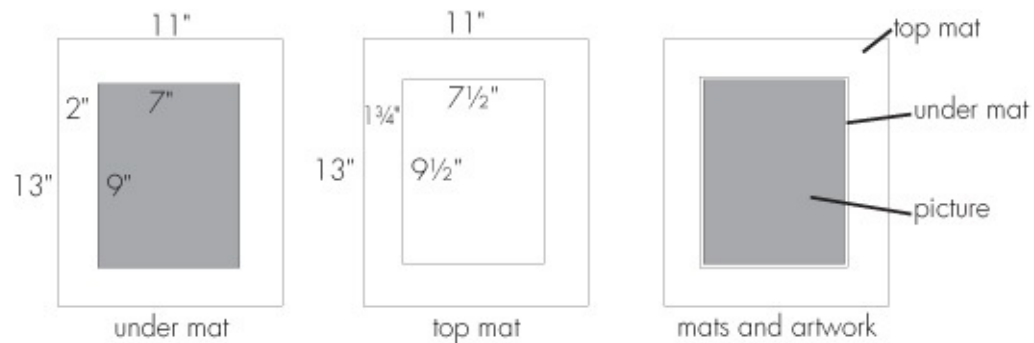
For a 2" border on the top and sides and a 3" border on the bottom: $(2"+2")+7"=11"$ and $(2"+3")+9"=14"$ so the **outside dimensions of the mat** will be 11"x14".



To add a second mat. An under mat usually has a mat opening $\frac{1}{4}$ " smaller on all sides than the top mat, although slightly larger or smaller borders can also be used. To add a top mat, cut the mat opening in the top mat $\frac{1}{4}$ " larger on all four sides than the opening in the under mat.

Example:

For a **mat opening** of $7'' \times 9''$, and an **outside dimension** of $11'' \times 13''$: Cut the **under mat opening** to the exact $7'' \times 9''$ size. The top mat opening will be $\frac{1}{4}''$ larger on all sides, or $7\frac{1}{2}'' \times 9\frac{1}{2}''$ leaving $\frac{1}{4}''$ of under mat showing and a top mat border of $1\frac{3}{4}''$ on all sides.



Standard frames and frame kits. When using standard frames or frame kits available in 1" increments, the mat borders are determined by subtracting the mat opening size from the frame size, then dividing the number in half to find the mat widths.

Example:

For a **mat opening** of $7'' \times 9''$ and a **frame size** of $10'' \times 13''$, subtract the width of the mat opening from the width of the frame: $10'' - 7'' = 3''$; and subtract the height of the mat opening from the height of the frame: $13'' - 9'' = 4''$; divide each measurement by 2, leaving mat borders of $1\frac{1}{2}''$ on each side and 2" at the top and bottom. For a more balanced feel, leave a $1\frac{1}{2}''$ mat border at the top and a $2\frac{1}{2}''$ mat border at the bottom.



Uneven mat borders often occur when fitting an odd-sized picture into a standard frame. Try a larger frame and wider mat widths to make the picture look more balanced.

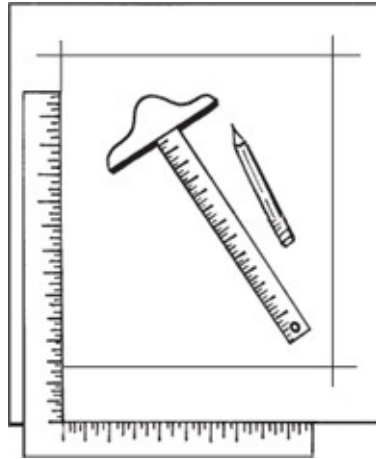
Cutting your materials to size and to square

Getting the most out of the matboard. Try to lay out your mats to avoid waste. Cut your largest sizes first. If you are using the same matboard for backing, measure out a second piece the same size. Naturally, the drop-outs from your mat openings can be used to mat smaller pictures. Any narrow strips left over are useful for filler, as samples, and as a protective surface when cutting other boards.

Squaring the boards. Matboard and other materials are rarely square and rarely the exact size. To square a board, turn the board face down. Using a carpenter's square and one edge of the board as a guide, check the adjoining side for square. With a *sharp* pencil, draw a line perpendicular to the first

side, along the edge of the second. Clamp a straightedge down on this line and trim off the excess board with a utility knife. Continue around until all four sides are straight and square.

Cutting the boards. Lay out the mat dimensions you need using two squared sides as your starting points. Make sure your pencil stays sharp! Draw your lines using the carpenter's square. Check the mat for squareness by measuring the distance corner-to-corner on the diagonal. If the two measurements are equal, the mat is square. Clamp down the straightedge and cut. Cut a second piece of mat-board for backing, and also corrugated cardboard or foam core for filler. These cuts do not need to be as exact. *Note: Foam core board cuts cleanly and easily as long as the knife blade is sharp. If you notice pulling and a ragged edge, change the blade.*



Measure and mark the mat borders on the back of the mat

Laying out the mat borders. On the back side of the mat, measure your mat borders and draw pencil lines for cutting. Check for squareness. If you are cutting a double mat, mark both mats.

Cutting the Mat Opening

Several factors can affect your success in mat cutting. Blade depth, blade sharpness, how much pressure is applied to the cutter, and the smoothness of motion when cutting all contribute to the outcome. Get the feel of the cutter by making practice cuts, and start by cutting some small mats.

Checking the blade depth and sharpness. Your individual mat cutter will have specific directions on replacing and adjusting the blade. To check the blade depth, take a scrap piece of matboard, and make a practice cut. The point of the blade should cut all the way through, but not by more than 1/16". A sharp blade will cut a clean, smooth bevel. If the bevel is rough or the colored surface paper is ripped, replace the blade.

Cutting the mat opening.

Place the straightedge 1/8" to the left of one of the pencil lines so that when the cutter is placed against it the beveled blade will cut directly on the line. (Mat cutters vary, so check the placement.) Clamp down the straightedge on the top and the bottom to keep it from moving. *If you are cutting a double mat, cut the bottom mat first and check it for size before cutting the top mat.*

Begin the cut by lightly inserting the blade 1/16" to 1/8" below the lower corner of the mat

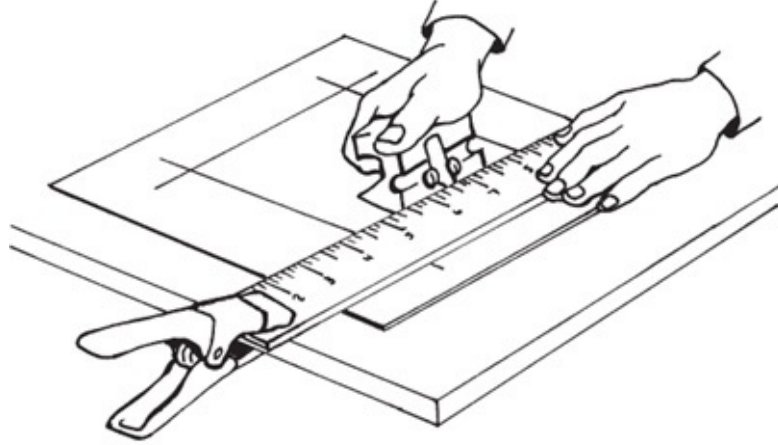
opening. Push the cutter away from you, pressing down on it.

Maintain even downward pressure on the cutter as you push it away from you. You must also exert pressure against the straightedge to achieve a straight cut.

End the cut at the line that intersects at the lower corner.

Depending on the cutter you are using, you may or may not be able to actually see the blade as it is cutting. Many cutters have a mark or a notch for reference to indicate the position of the blade. When the mark lines up with the lower line, stop cutting.

Make the additional cuts by rotating the mat clockwise.

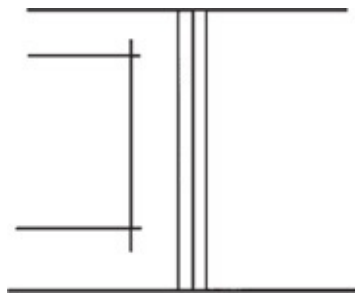


The proper way to position the cutter and straightedge

Removing the “dropout.” The center of a cleanly cut mat should fall out after the last cut is made.

If the mat is still attached in the corners, finish cutting out the corners with a single-edged razor blade. Insert the blade from the back, holding it flat against the bevel, and carefully cut into the corners to free the dropout.

If the mat is not cut completely through in places, do not try to push the center of the mat out — this can rip the top layer and ruin the mat. Using a single-edged razor blade inserted from the back and set against the bevel to maintain the proper angle, carefully cut through the top layer. Use an emery board to sand off any rough edges. (Uneven pressure when cutting, a dull blade, or a blade not set deeply enough can cause this problem.)



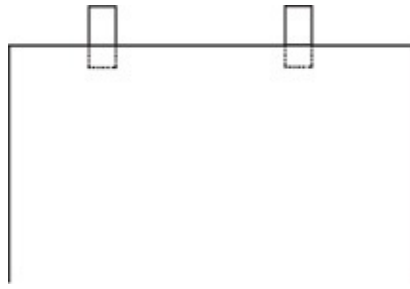
Hinging the mat to the backing. Place the mat and backing face down next to each other with the long sides touching. Apply a strip of linen tape along the seam to create a hinge. Let the tape dry thoroughly, then close the mat like a book.

If you have a double mat, attach the top mat after the bottom mat has been hinged. Apply several short strips of ATG to the back of the top mat. Set the mat into position, making sure the under mat shows an even border. Press down.

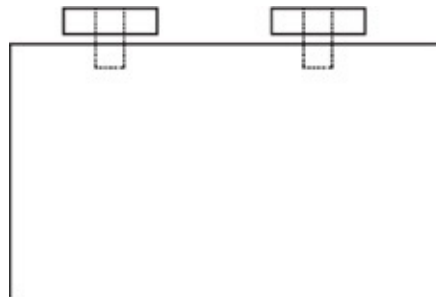
Hinging the artwork to the backing board. Raise the mat and slide the picture underneath. Close

the “book,” and move the picture around until it is in position. Place weights on the picture to hold it in place. Open the “book.”

To make hinges for pieces 14”×18” or larger, cut two 3” pieces of linen tape. Cut each piece in half. For smaller pictures, cut one 2” piece of tape into quarters.



Moisten two of the pieces and stick about $\frac{1}{4}$ ” to $\frac{1}{2}$ ” of the tape to the back of the picture. Moisten the two remaining pieces of tape, and glue the hinges to the backing by forming a T. Put the weights on the hinges until they dry.



Note: Only a small amount of water is necessary to moisten linen tape. Draw the tape across a wet but not soggy sponge, or lick the smaller pieces. The glue tastes bad, but is harmless.

Special papers and adhesives are used to make hinges for museum matting. Information about using these products can be found in the University Products catalog. This company specializes in conservation framing supplies.

Floating the artwork. Sometimes the picture you want to frame may have an irregular shape or an interesting border design that would be covered by a traditional mat. These pieces can be “floated” on top of a piece of matboard, showing a border of color.

Measure the picture. (With very irregular pieces, use the average length and width.) Add the border widths to the measurements. Cut the matboard to size. Position the piece on the matboard. Put weights on the picture to hold it in place.

Make hinges by folding two 1” pieces of linen tape in half, glue side out. Moisten the hinges, and slip them under the top edge of the picture near the corners. Put weights on the hinges until thoroughly dry.

Mounting Artwork

Many types of artwork can benefit from mounting on a board before framing. Changes in humidity can cause photographs, posters, and newspaper clippings to ripple when framed without mounting. For pictures and posters larger than 16"×20" you may want to have a frame shop do the mounting. Because mounting a picture is usually permanent, do not mount anything of value.

Using spray adhesives. 3M Company makes many different spray adhesives. Super 77 is the most useful. To mount a picture using a spray adhesive, follow these steps.

You can mount the picture on colored matboard and leave a border, like a float, or on foam core or scrap matboard, to be covered with a mat. Neatly trim newspaper clippings before mounting and mount on a dark-colored matboard, so the printing on the back side won't show. Cut the mounting board oversize. It is very difficult to lay the picture down with 100 percent accuracy.

Make small pencil marks on the board to indicate where the picture will be placed.

Protect your work area from overspray by covering the work top with newspaper, then with coated freezer paper.

This adhesive is very sticky.

Make sure you have good ventilation — the vapors are harmful. Don't smoke or work near an open flame.

Lay the picture face down. Following the directions on the can, spray a light, even coat using side-to-side motion.

Wait until the adhesive becomes "aggressively tacky."

Carefully pick up the picture and align it with the marks on the mounting board. Once the adhesive touches anything, it is almost impossible to unstick, so if the picture is large and floppy, get another person to help you hold up the other end.

Allow the two top corners to stick, then the top edge. Slowly let the picture down on the board from the top to the bottom.

Cover the picture with a clean piece of paper and press it down with a clean rolling pin, working from the center out.

Remove any spray residue with adhesive release and cotton swabs.

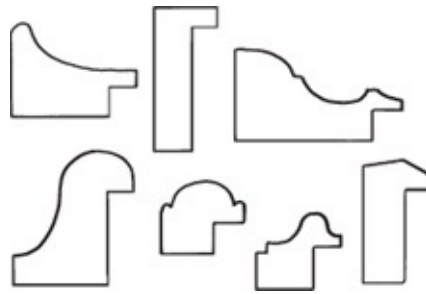
Trim the backing board to the size required. If you are matting the piece, attach the mat to the backing board with ATG first, then trim off the excess backing.

Building the Frame

There are several ways to purchase picture frames. Depending on your interest, tools, and budget, you can decide at what level to start. If you are a beginner, buying a precut or “chop” frame, frame kit, or ready-made frame is simplest.

Making your own molding. If you are a woodworker with a well-equipped shop, you can manufacture your own moldings using a router or table saw. *The Home Book of Picture Framing* by Kenn Oberrecht gives detailed instructions for making many common molding profiles.

Buying unfinished molding. Xylo, Inc. (page 31) sells unfinished molding in many profiles and types of wood cut to size. You can stain and paint the molding using any wood-finishing technique. Some lumber yards, hardware stores and frame shops also carry unfinished molding.



Some common molding profiles

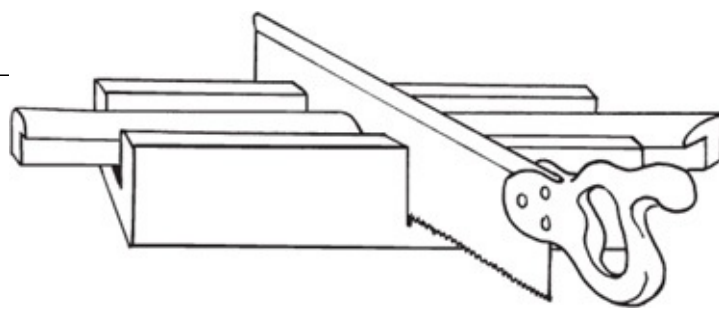
Measuring Molding

When cutting your own molding or ordering a chop frame, it is important to remember that the size of a picture frame is measured *on the inside of the rabbet*. Because of the miter cuts, additional footage must be added. For each side of the frame, add to the measurement two times the width of the molding. An allowance of $\frac{1}{8}$ " is also added to give the matting room for expansion. Canvases will need a $\frac{3}{16}$ " allowance. When ordering a chop frame, specify the allowance you want. Frame kits and ready-made frames will have an allowance of $\frac{1}{16}$ " to $\frac{1}{8}$ ".

Cutting Molding

The most inexpensive tool for cutting molding is a hand mitering saw with a miter box. Check the saw frequently to make sure an exact 45° angle is maintained.

1. Lay the molding face up in the miter box with the lipped edge toward you. Clamp the molding to the miter box fence or table with spring clamps. Cut off one end.
2. Using your framing square, measure from the inside edge of the miter cut along the rabbet and mark for the next cut with a sharp pencil. Make the cut in the opposite direction.
3. Repeat Step 1 with a second piece of molding. Using the piece you already cut as a guide, place the pieces right side up and back to back, lining up the mitered ends. Mark for the second cut at the point where the first piece ends. Repeat the cut as in Step 2.
4. Repeat the procedure for the other two frame sides.



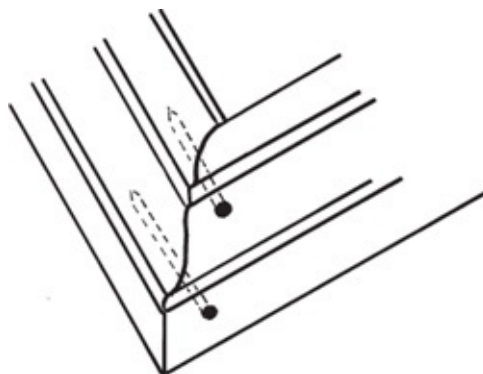
Cutting molding using a miter box

Joining Wood Frames

There are many clamps available for joining mitered cuts. Picture framers prefer the miter vise, which can be screwed onto the work bench. Miter clamps are an inexpensive alternative. Four of them will allow you to glue and clamp all four corners of the frame at once. You will need additional clamps to hold down the frame while nailing.

In addition to miter clamps, you will also need: white glue or carpenter's yellow glue, brads, hammer, nail set, a rag, wire cutting pliers, palette knife, and wood putty. When working with hardwoods, you will also need an electric drill.

1. Spread a thin layer of glue on the entire surface of one cut end. Clamp the glued piece and a piece from the *adjoining* side together. Make sure the joint is tight. A bad cut will show up immediately, although it may be possible to fill the corner with wood putty. Wipe the excess glue off with a wet rag right away. Let the glue dry completely. If you have four clamps, glue and clamp the entire frame.
2. Use additional clamps to secure the pieces of molding or the frame to the workbench. Protect the molding by cushioning the clamps with pieces of corrugated cardboard. Nail two brads into each corner as shown at right, and countersink the heads with the nail set. When working with harder woods, nip the head off a brad the size you plan to use and insert it in the electric drill. Use the nail to drill pilot holes for the brads.
3. Fill the nail holes using wood putty applied with the palette knife. Wipe off the excess. Colored wood putty sticks are very useful, or touch up light putty with marker or paint to match the finish.



Metal Frames

Metal frames are easy to assemble using only a screwdriver. They can be purchased in kits or as chop frames, and come in a wide variety of colors. Make sure the corner hardware is included when

ordering a chop frame.

Using an Old Frame

You can save money by buying old frames at flea markets and tag sales and reusing them. Here are some tips for determining if an old frame can be “recycled”:

Look for warpage. A badly-warped frame is worthless.

Ornate gilt frames that are badly chipped and cracked are difficult to restore.

Loose corners can usually be reglued and renailed. Pull the old nails out if possible.

Scrape off all the old backing paper and seal the rabbet with acrylic spray or varnish before installing a new picture in an old frame.

Glazing

The simplest way to obtain the glass you need is to buy it, cut to size, from a frame shop, glass shop, or hardware store. Be sure to specify single strength glass, not window glass. You can choose clear or non-glare glass.

A lightweight alternative to glass is plastic glazing. It comes in standard sizes, and can be easily cut by scoring using an inexpensive plastic cutting knife.

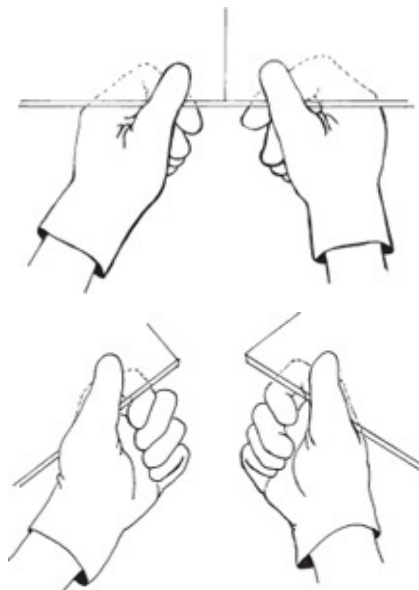
To cut your own glass, you will need a glass cutter, kerosene for lubrication, a grease pencil or a fine-tip marker, metal straightedge, clamps, and pliers.

1. Wear safety glasses and gloves when handling glass. Cut the glass on a clean flat surface. A piece of felt makes a good cutting surface.
2. Wipe the glass with a rag. Measure the glass to size and draw cutting lines with the straightedge.
3. Place the cutting wheel on the line. Using the cutting head for positioning, clamp the straightedge down on both ends. The ruler will be offset slightly from the cutting line.
4. Dip the cutting wheel in kerosene to lubricate. Start cutting the glass at the top, drawing the cutter toward you, using the straightedge as a guide.



Apply even pressure and do not lift the cutter off the glass until the end of the glass is reached. Proper cutting produces a hissing sound.

5. Remove the straight edge. Carefully grip the glass with one hand on either side of the cut. Snap the glass downward. Use pliers to snap off narrow strips.



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