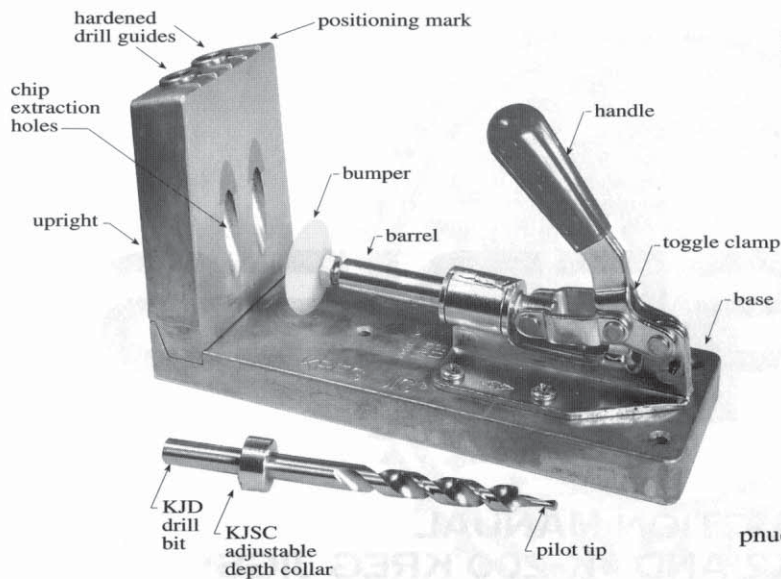




K-SERIES

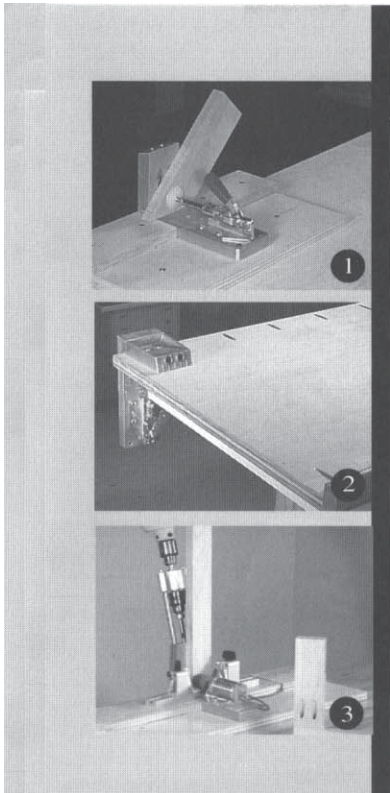
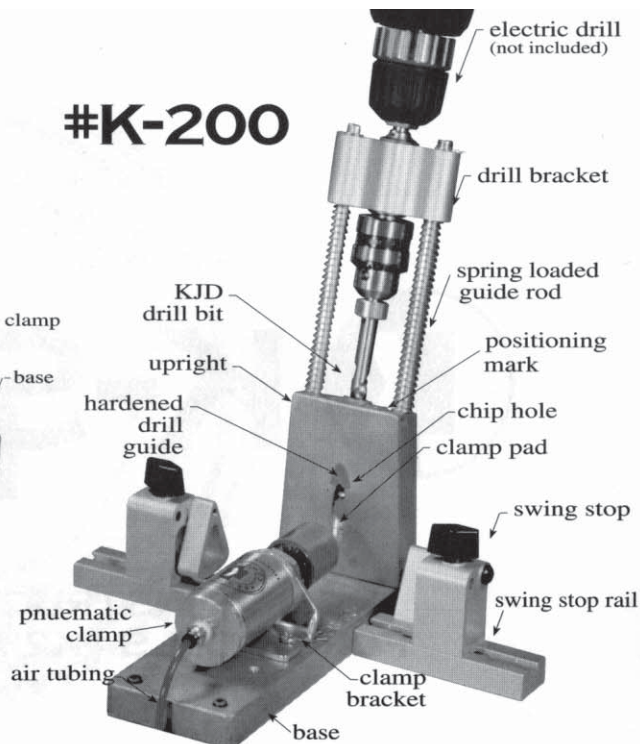
INSTRUCTION MANUAL
FOR MODELS #K2 AND #K-200 KREG JIGS®

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#K2 KREG JIG®

#K-200



3

THANK YOU!

Thank you for purchasing a #K2 or K-200 KREG JIG®. For over a decade Kreg Tool Company has specialized in pocket hole joinery. We are proud of the useful design and quality construction of our tools, but we also strive for improvement. If you have any questions, comments or suggestions please feel welcome to call us at 800-447-8638.

This manual covers our #K2 and #K-200 KREG JIGS®.

MAINTENANCE

- Place drop of oil in guide bushing when dry or every 250 to 500 holes.
- Periodically lubricate K-200 guide rods with silicon spray or graphite.
- Keep drill bits sharp. See page 15 .

SETTING-UP THE #K2 KREG JIG®

One of the KREG JIG®s most useful features is its versatility which allows it to be used as both a workstation (**photo 1**) and portably (**photo 2**). As a workstation the jig is screwed to the workbench, allowing it to hold large work pieces securely while leaving both hands free for positioning the work piece and boring the pocket holes. When work pieces are too large, heavy or cumbersome to lift to the workbench the jig can be used portably.

For workstation use, we recommend setting-up the KREG JIG® in a fixture as shown in **Photo 1**. This will make it easier to slide large work pieces, such as cabinet partitions and end panels, through the jig without the work piece tipping.

SETTING-UP THE #K-200

Setting up the #K-200 is a simple matter of plumbing the supplied fitting into your air system, setting the stop collar on the drill bit (see page 6), and supplying an electric drill. Approximately 100 psi of air pressure is required for the pneumatic clamp. A fitting has been provided at the end of the air line coming out of the foot switch. You'll need to find the appropriate fittings to plumb the fitting into your air system.

We recommend using a high rpm corded electric drill or air drill. Using a drill with 2,000 or higher rpm will improve the life of the drill bit as well as create faster boring speed. To attach your drill to the #K-200 simply tighten your drill's chuck onto the drill shaft of the K-200 (see page 3). We recommend a keyed chuck rather than a keyless.

Finally, you may want to construct a base like the one shown in photo 3, which will help support wider work pieces as you slide them through the #K-200. All parts of the base are made from 3/4" plywood. The swing stops are used to help position materials like face frame rails in the jig. With the stops set in the correct position you can simply position the rail against one of the stops, plunge the drill, and then move the work piece against the other stop and plunge the drill. The stops can be moved in and out for wider or narrower work pieces, and automatically swing out of the way when not necessary. Screw the swing stop rail to the base so that your material just fits between the upright and the rail. To position the swing stops, line the edge of the workpiece up to the second positioning mark from the end, then slid the stop in until it hits the workpiece.

GENERAL OVERVIEW

The pocket hole technique consists of two simple steps—placing just one of the joint members into the jig (**photo 4**) and boring the work piece with the Kreg drill bit, and then assembling the joint with a self-tapping screw (which is normally 1-1/4" long). An

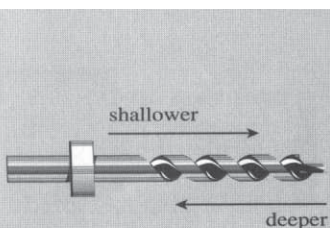
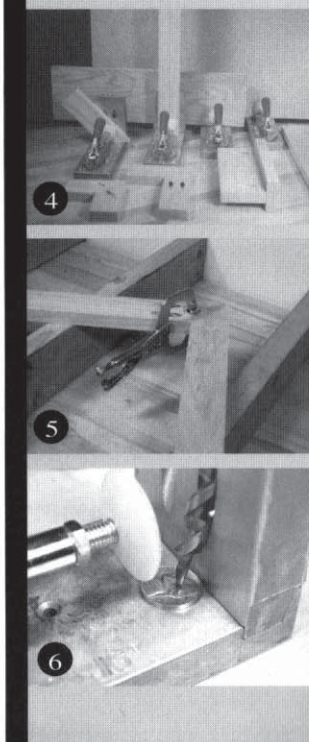


Figure 1.

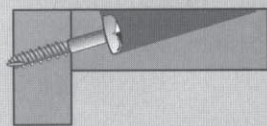


Figure 2.

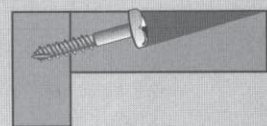


Figure 3.

aligning clamp is typically used to keep the joint in position as the screws are driven (**photo 5**). Once the screws are driven the clamp can be removed because the screw will provide the clamping pressure for the glue allowing you to add other work pieces, rout, sand and even stain, all while the glue is still drying.

STEP ONE: BORING THE POCKET HOLE

Boring the pocket requires drilling in only one of the joint's work pieces because the self-tapping screw will enter the second work piece (the mating work piece) without a pilot hole, saving the tedious process of measuring to align mating fasteners. Use a high rpm drill for best drill bit life. See "Tips for Prolonging the Life of Your Drill Bit" on page 15.

When you have a choice of which work piece to bore the pocket holes in, place the pocket hole so that the screw will enter the mating work piece across the grain as shown in photo number 5.

To bore the pocket holes position the material in the KREG JIG® and clamp as shown in **photo 1, 2 and 4**. To set the #K2's clamp, spin the bumper in or out of the clamp's barrel until the handle snaps closed with two fingers of pressure (adjustment on #K-200 is automatic). Once you have found the correct setting, unclamp and tighten the wing nut, then reset the clamp. If the work piece shifts while drilling the pocket hole apply more pressure by spinning the bumper farther out of the clamp, or by increasing the air pressure to the pneumatic clamp (100 to 110 psi should be sufficient). Bore the pocket hole by sliding the drill bit into the guide (do not make contact with the wood yet). Allow the drill to achieve full speed before pushing it into the material. Once the depth collar has made contact with the top of the drill guide, keep the drill turning at full speed and withdraw the drill bit from the guide.

SETTING THE DEPTH COLLAR

The depth collar (see page 2) is used to control the depth of the pocket hole, which in turn controls how much screw protrudes into the mating work piece. This allows the same length screw (typically 1-1/4") to be used in a wide range of applications, rather than having to have many different lengths of screws on hand.

Figure 1 shows which direction the depth collar should be moved to either shallow or deepen the pocket hole.

If the depth collar position is set too deep the screw may protrude through the face of the mating work piece (**figure 2**), or if too shallow may not contact enough of the mating work piece for adequate holding power. **Photo 6** shows the standard collar setting for face frame style joints in 3/4" material (the tip roughly 1/8" from touching the base). This setting places roughly half of a 1-1/4" screw in each work piece.

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SHALLOWER POCKET HOLES

Pocket holes are bored shallower than the standard set-up when working with thinner materials and miters to avoid the situation shown in **figure 2**. As the pocket is made more shallow the head comes closer to the surface. As this happens the screw will begin to interfere with seating a pocket hole plug, and eventually the screw head will rise above the surface and interfere with sanding (**figure 3**). To avoid these situations, bore the hole deeper and use a shorter screw.

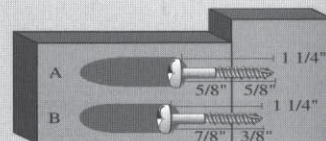
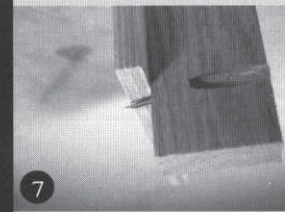
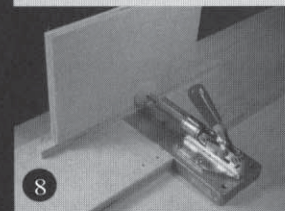


Figure 4.



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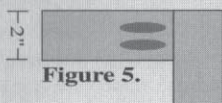


Figure 5.

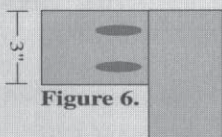


Figure 6.

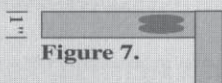


Figure 7.



Figure 8.

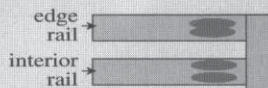


Figure 9.

DEEPER POCKET HOLES

Deeper pocket holes are typically not required. Instead, a longer screw is used. If the pocket was made deeper, the amount of material between the head of the screw and the joint line would become thinner and thinner. If the material becomes too thin, it can't hold the screw if stress is applied to the joint.

Figure 4 shows the effect of changing the collar position. Pocket hole A was bored with the depth collar set approximately an 1/8" from the base of the jig. Pocket hole B would result if the collar was moved towards the tip of the drill bit, resulting in a shallower pocket hole.

TESTING POCKET HOLE DEPTH (IMPORTANT TIP)

When changing material or joint application it is wise to test the depth setting in order to avoid the situation shown in **figure 2**. To test the depth setting bore a pocket hole in **scrap stock** using what you guess to be an appropriate collar setting, and then drive the screw out through the work piece (without lining up the mating work piece). When you line up the scrap work piece with the actual mating work piece as shown in **photo 7** you will quickly be able to determine if the collar is set correctly.

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POCKET HOLE SPACING

When boring framing materials two pocket holes are typically used to keep the wood from being able to twist (**figure 5**). The #K2 KREG JIG® has guides that are spaced 7/8" center-to-center and 1-1/4" at the outside edges. This allows boring holes in material that is 1-1/2" to 2-1/2" wide without having to reposition the material to bore the second hole. If the material is wider or narrower than the 1-1/2" to 2-1/2" range, bore the first hole, then unclamp

and reposition the work piece to bore the second hole as shown in **figure 6**. For very narrow material the pocket holes can be placed so that they overlap, as long as there is room to seat both screw heads, as shown in **figure 7**. Of course you always have the option to use a single pocket hole and rely on glue to keep the work piece from twisting.

When working with long pieces of stock fastened on edge, as in the case of table tops, edge-banding or apron work, the pocket holes are typically spaced 6" to 8" apart as shown in **figure 8**.

When making face frames or similar projects using material that is only 1-1/2" to 1-3/4" wide you may notice that the outside pocket hole, on the top or bottom rail, might split the mating work piece because the screw is entering the mating work piece too close to the end of the work piece. The solution is to crowd the pocket holes toward the inside as shown in **figure 9**, keeping the pocket hole away from the end. Pocket holes in interior rails of the face frame can be spaced normally.

WORKING WITH DIFFERENT THICKNESS MATERIALS

Both the #K2 and #K-200 KREG JIG®s are ideally designed for working with 3/4" thick material. This is because the distance from the base to the drill guide, combined with the angle of the screw, causes the screw to exit in the center of 3/4" thick material, as shown in **figure 10**. If the work pieces are thicker or thinner than 3/4" the screw will not exit in the center of the edge, as shown in **figures 11 and 12**.

Keep in mind that the screws do not have to exit in the center of the work piece to create a tight joint, however, as the material begins to differ significantly from 3/4" you may want to make some adjustments.



Figure 10.



Figure 11.



Figure 12.



Figure 13.

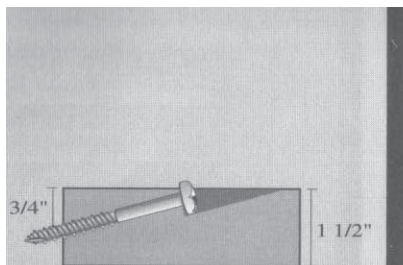


Figure 14.



Figure 15.

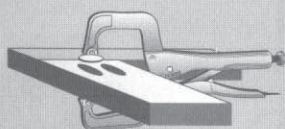


Figure 16.

For Materials Thinner Than 3/4"

For 5/8" thick material no adjustment is typically required as the screw will not exit far enough off center to cause any problems, however, if the material is only a 1/2" thick, making an adjustment will improve the joint. **Figure 11** shows the result of boring a pocket in 1/2" thick material without making an adjustment.

To re-position the pocket to center the screw for 1/2" thick material place a 3/8" shim underneath the work piece as shown in **photo 8**, and adjust the depth collar so the tip is 3/8" off the base of the jig. If you are joining 1/2" material to 3/4" material, such as joining a cabinet floor to the face frame, you'll be able to use a 1-1/4" screw. If you are joining two pieces of 1/2" material, such as in making a drawer box, you will need to purchase 1" screws to avoid the situation shown in **figure 2**.

For Work Pieces Thicker Than 3/4"

For work pieces up to 1" thick no adjustment is necessary. Boring material thicker than 1" produces the situation similar to the one shown in **figure 12**. The simplest solution is to put pocket holes on multiple sides of the work piece as shown in **figure 13** (either 1-1/4" or 1-1/2" screws can be used). Another solution is to position the pocket hole farther away from the end of the work piece as shown in **figure 14**. For this you might want to use either a Kreg ROCKET or MINI jig, or you can detach the drill guide portion of your jig from the base, and use a different clamp to hold the drill guide in the position shown in **figure 15**. If you choose to disassemble your jig please use caution when reassembling so as not to strip or cross-thread the holes in the bottom of the upright. Repair, if possible, is difficult and is not covered by the warranty.

If the material you are working with is soft you typically won't need a screw with the self-tapping tip. Take the stop collar off your drill bit and chuck a minimum amount of the drill bit shaft as you are comfortable with into the chuck. Bore your holes and use a 2-1/2" to 3" #8 round washer screw. If you are working with hardwoods you will need the self-tapping tip. The longest length the self-tapping screws are available in may not be long enough, so you may need to purchase a longer drill bit from your local Kreg dealer. For a Kreg dealer nearest you call 800-447-8638.

STEP TWO: ASSEMBLING THE JOINT

Self-tapping pocket hole screws eliminate the need to bore an aligning pilot hole in the mating work piece, even in hardwoods like oak, hickory and maple. Although other types of screws may work, pocket hole screws greatly reduce splitting, and are hardened to nearly eliminate breakage. **We recommend using glue unless the ability to disassemble the joint is desired.**

Using a Face Clamp™ to align the work pieces, as shown in **figure 16**, insures that the joint stays flush as the screws are driven. When using the Face Clamp™ place the large washer on the face of the joint. This will help to keep the face flush if the work pieces are of slightly different thickness, and will also keep the clamp from denting the face of softer materials.

When driving the screws you may notice a slight separation of the work pieces before the screw begins to pull them back together. This is normal, but if the gap exceeds an 1/8" to a 1/4" increase the clamp pressure. The Face Clamp™ works well for aligning face frame and picture frame style joints. For other joints a Quick Grip™ or some other style of bar clamp will be useful to keep the work pieces in position while driving the screws.

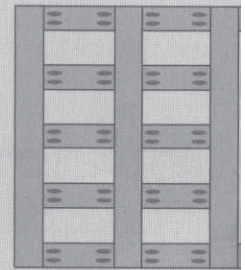
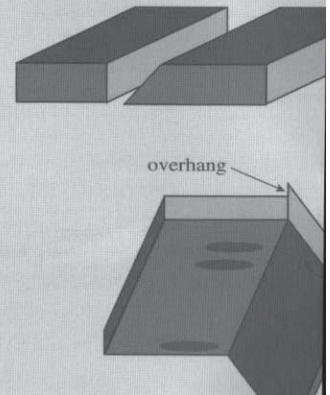


Figure 17.



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It is best to drive the screws using a drill with a clutch. The clutch allows you to vary how much torque the drill puts on the screw so you don't strip the screw out. Most cordless drills include this feature, and some corded drills now have a clutch as well. If you do not have a drill with a clutch you can use a corded drill to drive the screws until they are almost seated, and then finish driving the screws with a hand driver.

TIGHT SPOTS

When trying to drive a screw in a tight spot where your cordless drill won't fit you can assemble some of the joints, and then take them back apart so that you'll have room to use the cordless drill to assemble the other joints. Once the holes have been tapped by using the drill, you can reassemble the joints with a hand driver. If the space is too tight for a hand driver, you can use your driver in a socket, and turn the socket with a ratchet, or use a flexible shaft driver.

CHOOSING THE RIGHT SCREW

Choosing the right screw is largely a matter of experimentation, however some guidelines do exist.

Thread Pitch—Mating material determines thread pitch. Use a fine thread in hardwoods and a coarse thread in softwoods and composite materials like plywood (coarse threads can split hardwoods). Hi Lo screws work well in medium woods like cherry and poplar.

Screw Size—Use smaller screws (#6) in hardwoods where the smaller size is less intrusive and won't split. Use a larger size (#8) in softwoods and composites (plywood and particle board) for more holding power.

Construction Grade—Construction grade materials such as 2x4s do not typically require

Figure 18.

self-tapping screws. Instead, standard round-washer screws in a 2", 2-1/2", or 3" length can be used for deeper penetration.

Length—1-1/4" is standard length for 3/4" materials. 1-1/2" and 1" lengths are available for applications where greater or lesser screw protrusion is desired than can be provided by adjustments to the depth collar.

Maxi-Loc™ Screws—The washer head keeps the screw head from crushing into the bottom of the pocket hole and seating the screw deeper than desired. Use a coarse thread washer head when joining any combination of soft materials like pine, plywood or particle board. Use a fine washer head screw when the pocket hole is bored in a soft material and passes into a hard material (ie.: edge-banding or partition to face frame).

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APPLICATIONS

FACE FRAMES

Using pocket hole joinery for face frames is faster and stronger than conventional methods (dowel, biscuit and even mortise and tenon), and frees you from having to simultaneously manipulate several bar clamps as the frame is clamped for glue-up.

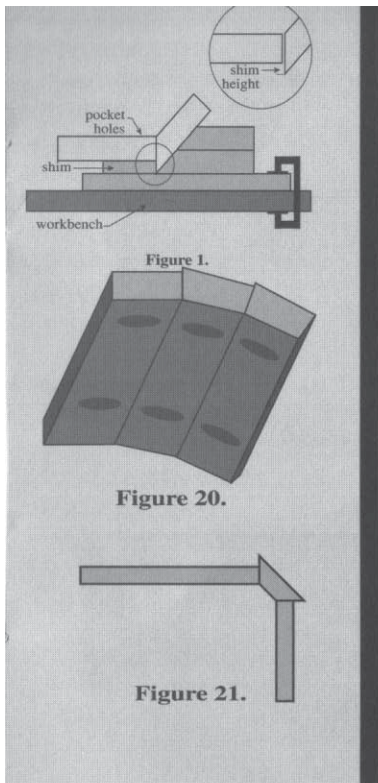
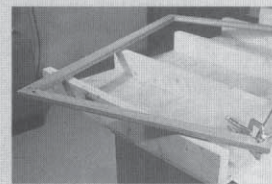
ANGLED JOINERY

Using pocket hole joinery to make angles and curves eliminates difficult clamping setups and the expense of specialized clamps. To form any angle up to 45°, rather than cutting half the desired angle on both work pieces, the entire angle is cut on the mating work piece

SHOP TIP

A grid makes it easier to assemble joints because it suspends the joint above the table top where you can get at both sides of the joint with the Face Clamp™. The grid also keeps your tools, screws and glue easily accessible between the 2x4's, yet out of the way when sliding the frame around.

Make the grid using a sheet of 3/4" plywood cut to any dimension, with 2x4's pocket holed on edge to the sheet. Vary the spacing of the 2x4s.



(top left drawing, **figure 18**) which provides more distance for the screw. Before cutting the pocket make sure the stop collar is set correctly (see Photo 7).

Cutting the entire miter on only one work piece makes its edge longer than the edge of the first work piece. This causes an overhang (bottom left drawing, **figure 18**) which will have to be removed with either a jointer, sander, or hand plane. Notice that the point of the joint shifts away from the glue-line when the over hang is removed, making the glue line less conspicuous (right drawing, **figure 18**).

When making face frames assemble your angled stiles first, remove the overhang, and then complete the face frame.

A jig like the one pictured in **figure 19** makes it very easy to screw the work pieces together. If you have to put the work pieces together without the benefit of the jig do not apply glue to the joint line when driving the screws because the glue will make the work pieces slippery and hard to control. Once the screws are driven, back the screws out, remove any burrs, apply glue and drive the screws back into the same holes. (If you are using the jig shown in **figure 19** you can use glue as you drive the screws without any slippage problems.). We also like to put two pocket holes at each end of the work piece as shown in **figure 18**. This allows an opportunity for a second try if the work pieces slip on the first attempt. Once you have one screw seated it will be easy to hold the joint in position as you drive the remainder of the screws.

CURVES

The same technique used to form angles is also used for curves, except a shallower angle between 5° and 15° is typically used as shown in **figure 20**. The smaller angle creates

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a smaller overhang, and a belt sander is used to smooth the face. This technique can be used for both solid wood and curved panel work as well.

BEVELED NINETY DEGREE CORNERS

Trying to join two work pieces, each with 45° miters, to form a 90° degree corner is not a good application for the pocket hole joint. However, a 90° change of direction can be accomplished using pocket hole joinery with the 90° bevel joint shown in **figures 21 and 22**. The joint consists of a center work piece with a forty-five degree miter on both edges.

TABLE TOPS AND APRONS

When making table tops a bar clamp is helpful to hold the work in position as the screws are driven.

MITERED CORNERS

Using pocket hole joinery for a mitered corner eliminates the need for frustrating and expensive clamps. For narrower frames a single pocket hole can be used. Cut the miter and rout the rabbet before boring the pocket holes. Use a Face Clamp™ to align the joint and drive the screws.

Notice in **figure 24** that the pocket holes are not necessarily bored perpendicular to the joint line. This is accomplished by lifting one edge of the work piece off the base of the jig as shown in **photo 9**. This technique is especially helpful when working with stock less than 2" wide. One inch screws are useful when making mitered corners.

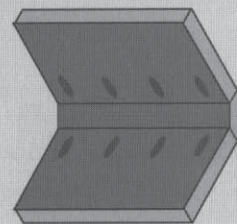


Figure 22.

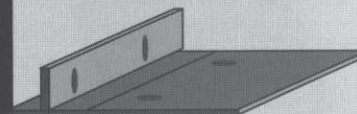
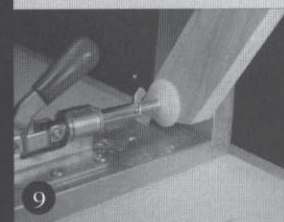


Figure 23.



TIPS FOR PROLONGING THE LIFE OF YOUR DRILL BIT.

Keep sharp. A dull drill bit gets hotter, causing metal fatigue and breakage. Factory sharpening is available for a small fee.

Use a high rpm (we recommend 2,000 rpm or higher, the faster the better) corded drill.

Make sure that drill bit is chucked securely by tightening the chuck in all three of the chuck's key holes. If the drill bit spins loose in the chuck while drilling a hole the shock may break the drill tip.

Aim the drill bit into the drill guide before starting the drill spinning, but do **not** place the tip of the drill bit against the work piece until the drill is up to full rpm. Do not push hard on the drill until the pilot tip of the drill bit is engulfed in the work piece and the counter bore portion of the drill bit has begun to cut.

SHELVING

Pocket holes work great for shelving with or without a dado (**figure 25**).

POST & RAIL LEG

Table and chair legs are extremely strong and easy to construct with pocket hole joinery (**figure 26**). Cut the miters for the brace after boring the pocket holes. When attaching the brace use a Quick-Grip™ style clamp to clamp the brace to the opposite side of the post. Be careful how deep the holes in the brace are drilled because cutting off the miter will place more of the screw in the rail. Use the technique shown in (**photo 7**) to judge the depth.

The pocket holes pointing upwards to attach the table top have to be bored in a special way to deal with the expansion and contraction of solid wood table tops. The first step is to bore the hole as you normally would, then, pull the work piece up off the floor of the jig roughly an 1/8" or 1/4". This will cause the pilot tip of the drill bit to bore through the end grain, allowing the screw some room to move with the wood. Depending on the direction the grain of the wood will move, you may need to not only lift the work piece off the floor, but also move it slightly left or right and repeat the procedure.

EDGE-BANDING COUNTER-TOPS OR SHELVING

Pocket holes are a great, and often over-looked solution for edge-banding counter-tops and shelving made from either plywood or particle board, as shown in **figure 27**.

OUTDOOR APPLICATIONS

Using pocket hole joinery for exterior projects hides the fastener from exposure to the elements as shown in **photos 10, 11 and 12**. Because moisture can no longer pool around the head of the fastener and seep around it into the core of the wood, the wood, and the screw, last much longer.

TRADITIONAL STYLE (FRAMED) CABINETS

Pocket hole joinery can be used for almost every facet of framed cabinet construction, as shown in **figure 29**. The traditional technique calls for making the face frame and case as separate components, and then fitting the two together, creating substantial opportunities for error. Because of the strength of pocket hole joinery, cabinet end-panels and partitions can be attached directly to the face frame one component at a time making construction much simpler. Also, the strength of pocket joinery eliminates the dados and rabbets that are usually cut into the face frame for the partitions and end-panels, making construction easier.

EURO-STYLE (FRAMELESS) CABINETS

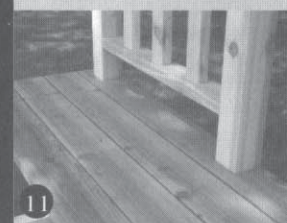
Pocket hole joinery works extremely well for Euro-style (frameless) cabinetry, as shown in **figure 30**. Use #SML-C125 (#8 coarse) screws for greater holding power.

WINDOW AND DOOR JAM EXTENSIONS

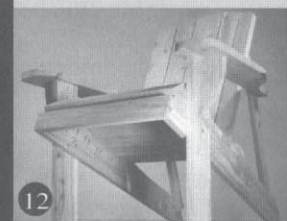
A great time saver and something that can easily be accomplished in the field (**figure 31**).



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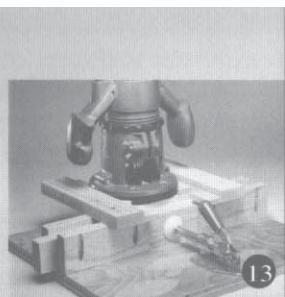


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STAIRS

Extremely solid stair construction (**figure 32**). Pocket holes can be bored into existing stairs to eliminate squeaks.

JIGS

Great for building shop jigs and temporary setups as shown in **photo 13**. Allows work pieces to be disassembled after use if necessary.

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Figure 24.

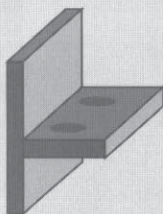


Figure 25.

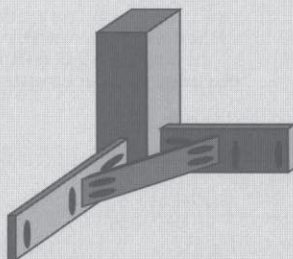


Figure 26. Post and rail inverted to show joinery.

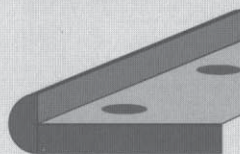


Figure 27.

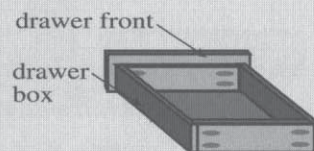


Figure 28.

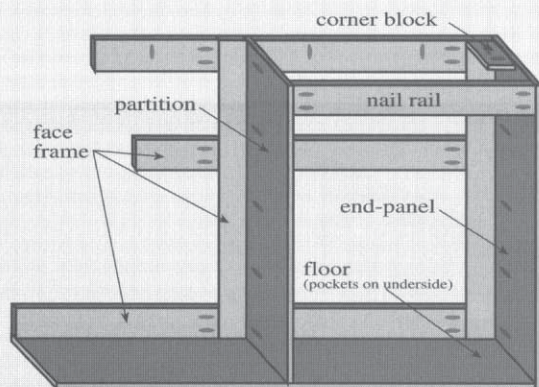


Figure 29. Cut-away view with back removed.

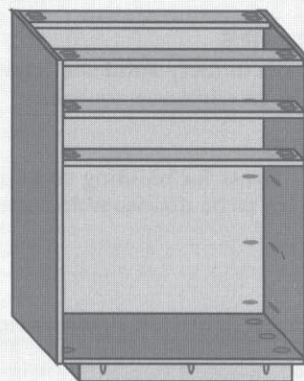


Figure 30. All pocket holes are placed on the under or back side except the top braces, which will be covered by the countertop.

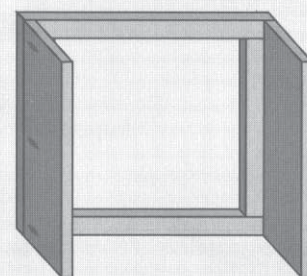


Figure 31. Window and door jam extensions.

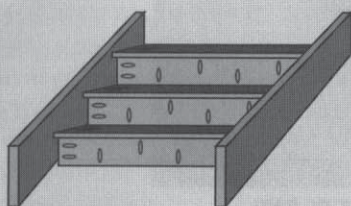


Figure 32. All pocket holes are placed on the under or back side.

TROUBLE-SHOOTING

1. Work pieces will not pull together tightly.

This happens in very hard woods when the work pieces push apart when the screw is driven. Since the pilot has not been drilled all the way through the first work piece, the threads can hold in both work pieces and keep the pieces from pulling together. There are two solutions. The first is to clamp the work pieces so they can't separate when the screws are driven. The other is to set the stop collar so that the top of the drill bit comes nearly through, or completely through, the first work piece. This eliminates the un-piloted portion of the first work piece so there is no solid material for the threads to hold on to.

2. Screw protrudes through face of mating work piece.

Depth collar is set too deep. See page 6.

3. Work pieces not flush or move when screw is driven.

The screws have a tendency to follow the grain of the wood, which can cause the work pieces to shift at assembly. Some clamping pressure created by either body weight or a clamp may be needed to keep the work pieces in place. The face clamp shown in figure 16 is specifically designed to keep face frames, picture frames and other joints flush.

4. Drill tip breakage.

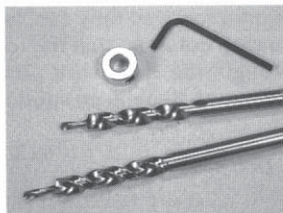
See "Prolonging the Life of Your Drill Bits" on page 15.

5. Drill bit won't cut.

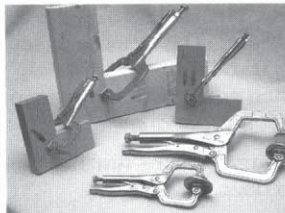
Make sure drill is spinning forward (clockwise), and that drill bit is sharp.

ACCESSORIES

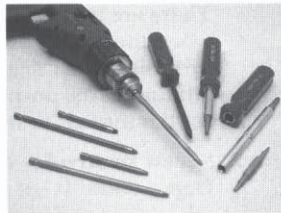
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DRILL BITS



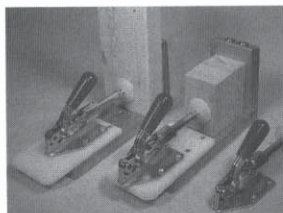
FACE CLAMPS™



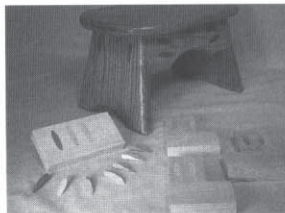
DRIVERS



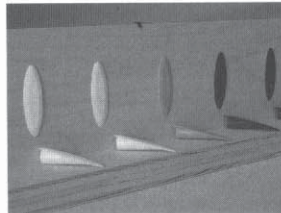
PROJECT PLANS



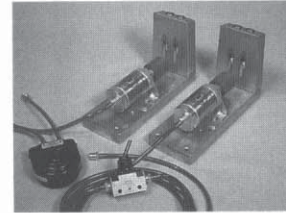
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