THE ORIGINAL PLATE JOINERY INDEXING SYSTEM

The 31” Versidex® MEGA-ncw User’s Manual

Table of Contents

Section 1

Getting your Versidex MEGA-ncw ready for index-milling

Section II

Using the Versidex MEGA to index-mill biscuit mortises

Section III

Milling indexed bevel joints on the Versidex MEGA-ncw

Mitered joints can be index-mortised on your MEGA-ncw

Summing it all up

Section IV

Versidex®

THE ORIGINAL PLATE JOINERY INDEXING SYSTEM

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The 31” Versidex® MEGA-ncw User’s Manual

a biscuit & mortising joiner accessory fixture

Warnings and Cautions

WARNING: Versidex, LLC does not recommend one mortising joiner over another for use with the Versidex MEGA-ncw. The Versidex MEGA is not involved in the actual milling process. Your joiner and the Versidex are completely separate and distinct tools.

The Versidex is designed to *interface* with your joiner, to help you visually *index* your mortise cutting so as to improve your production efficiency and accuracy, but Versidex assumes NO responsibility for how you use, handle, control, or maintain your joiner.

WARNING: It is your responsibility to read and follow the instructions in your motorized tools' "User's Manuals". This means your joiner, as well as your vacuum system, your air compressor, and your iVac Switch Box if so equipped. It is your responsibility to use all of these other tools with caution, so as to avoid injury, and to keep them properly maintained for your safety. READ your tool MANUALS! Work safely!

WARNING: The Versidex itself is fitted with a pneumatic (pressurized air) clamping system. The system operates a pressure bar at 60-80psi. Misuse, carelessness, and failure to follow safety instructions could lead to severe crushing injuries, typically of your fingers. Take note of the DANGER label on the pressure bar warning of severe crushing risks. Never activate the air valve while at the pressure bar side of the Crosspanel. To operate the air valve, ALWAYS stand at the INFEED area of the Versidex. Work carefully and safely!

WARNING: The Versidex MEGA-ncw is a production accessory fixture. You can set up hundreds of repeatable, indexing scenarios and make the same mortise cuts for 100s of like parts. The DANGER that lurks, is that if the set up is WRONG, you will ruin 100s of parts in a very short time. We DO NOT warranty against this kind of disaster. Set up accuracy and suitability is YOUR responsibility. ALWAYS confirm your set ups BEFORE milling additional parts!!!

Introduction to the Versidex MEGA-ncw

We hope that you spent some time at the Versidex website before you jumped in and ordered your new MEGA. By doing so, you quickly realized that the MEGA-ncw is no chop saw, no thickness planer, no drill press; all of which you probably could put into use within minutes of opening the box (without reading the User's Manual!). Unlike those tools, the MEGA requires about 5-6 hours of assembly and set-up, but even then, the Versidex is a systems-oriented indexing fixture, meaning there is a learning curve, and it takes time to master its rules.

But they aren't overly complicated rules and they don't require an advanced education to master them. They do require study, meaning repeated review, over and over until they become good habits. Once these rules are well learned and practiced, you will intuitively "know" when you are orienting a panel incorrectly. PLEASE learn the rules. The MEGA is USELESS without following them, and could result in useless cabinet panels, a very expensive error.

We use the terms Versidex, MEGA, MEGA-ncw, Versidex MEGA, and Versidex MEGA-ncw interchangeably throughout this manual and throughout our website. They all refer to just the one fixture without any particular distinction.

BEFORE you can use your new MEGA, you have to assemble the ROLLING STAND (Instructions, Part I), and then set up your MEGA and connect it to the stand (Instructions, Part II).

If you have not done those things yet, do them first, because this manual will be a lot easier to understand when you have your completely set-up Versidex in front of you, and have handled and learned the names of many of the parts as you made it operational.

You can, of course, skim through this manual right now. It might not make very much sense yet, but you will begin to learn some of the terms and vocabulary we use. You have a lot to learn, so be patient and be a good student. Welcome to the world of Versidex. It's a lot bigger than you think. Happy biscuit joining!

Section I

Getting your Versidex MEGA-ncw ready for indexed mortising

1. GENERAL KNOWLEDGE:

a. The Versidex MEGA is a power tool accessory fixture. This means that it must be paired with something else to make it useful, which in the MEGA's case is either a handheld biscuit joiner or mortising machine, manually controlled by the operator to perform indexed mortising.

b. The Versidex MEGA is a mobile, dedicated joinery workstation. This means that the pieces to be milled are brought TO the MEGA and inserted & oriented in the manner called for by the Versidex Rules. We'll go over those rules shortly.

2. PREPARING YOUR MEGA-ncw:

a. You MUST have completed the assembly of the Rolling Stand, and the Assembly and Set-Up of the MEGA itself in order to use it. During those preparations you will have installed the white, inscribed template set, giving you a pre-set mortising array of 4" on center. If the Vertical template's lines do not match up, with its red lines directly above the Platform template's red lines, remove the Vertical template and turn it around, so that the other side is out.

b. Each time you want to use your MEGA, you'll need to go through a quick checklist to make sure that all of the necessary systems are ready to go. Here are the steps in the order that you should perform them:

c. Check to see that your compressed air system is powered up, and hooked onto the RED air hose whip dropping down from the MEGA. Also test that your joiner and vacuum systems are operating properly. If you opted for the iVac Switch Box, make sure that the toggle switch is set to "Auto" and the vacuum powers up shortly after the joiner does, and shuts off 5-7 seconds AFTER the joiner is turned off, so as to clear the dust hose.

d. Finally, make sure that nothing is under the pressure bar and then activate the air clamp from the INFEED area (ALWAYS), never from behind. If you can see the pressure bar and the WARNING label you are in a WRONG and DANGEROUS place to activate the clamp. Once activated, look under the Crosspanel to see that the pressure bar has dropped evenly. If it has, return the valve to the right OFF position, and then look again to see if the bar has lifted. If it has, the air clamp is operating properly. If it has not lifted, see TROUBLESHOOTING for help.

e. When all of your systems are properly operating, your new MEGA-ncw is ready to go.

f. Each time you are finished using your MEGA for the day, shut off your air compressor's power, use the blowgun to vent off excess pressure down to about 15psi, and then open the compressor's drain port to blow out any water. When the system air pressure drops under 5 psi, the semi-automatic filter bowl drain (black tube running down to the floor) will open and let water out from the Lexan filter bowl in the air filter assembly, if any has collected there. Disconnect ALL other systems from their power source(s). Always remember to put safety first. Practice safe shop habits.

3. THE VERSIDEX TRANSFER SYSTEM COMPONENTS:

a. Having a means to efficiently *transfer* panels or pieces TO and FROM the MEGA is very important for both production efficiency and for your safety. The Versidex Transfer System Components will help you work faster and more safely, and you should include as many of the System components in your work area as you can.

b. For fast and efficient panel transfers, you will want at least TWO, and preferably four, rolling, elevated-floor, upright-panel storage carts. Plans for this/these cart(s) are on our website under Products (& Accessories) on the Menu bar, #10. We also offer the 6" wheels at #11, #12, & #13, in sets of 4, 8, and 16 wheels. These carts will store all of your cabinet panels upright (except tower cabinet sides) and at a comfortable height for pulling them out to load into the MEGA. We use 4 carts for maximum efficiency. You could start with two, and then build additional carts, as they are needed.

c. The other Transfer System component plan set is for a rolling template-set 'library" cart, which can hold 12 template sets, with two arrays per template set, so that means 24 unique arrays. No shop should need that many, but if your work is very broadly based, and you employ multiple joiners for different purposes (like a Lamello Top 21 & a Zeta P2), maybe so. This plan set is listed under Products (& Accessories) on the Menu bar, #14.t the website, and this plan set also comes WITH four excellent wheels, the same ones as used on the MEGA's rolling stand.

4. THE VERSIDEX INDEXING SYSTEM COMPONENTS:

a. The Versidex Plate Joinery Indexing System is based on 3 particular pairs of components that make up the heart of the Versidex MEGA itself. These are the two stationary fences, on the left and the right sides, two template array colors, red and black, and two templates, a Vertical template and a Platform template. These component pairs are at work (almost) every time you use your Versidex. The System is designed to give you *instant* markless BISCUIT ARRAY layouts as soon as you install a set of templates. Each of the three pairs is (almost) always working with the other two pairs to help you very quickly mill the joints for your cabinet panels. They all make up the Versidex™ Integrated Indexing Systems Triangle.

b. Having already installed an inscribed 4" on center [OC] template set, next *locate and identify* the two double T-track fences, a LEFT one and a RIGHT one. At the LEFT fence, locate the RED indicator strip, further to the LEFT, and then at the RIGHT fence, locate the BLACK indicator strip, further to the RIGHT.

c. Although the lines on the template look all mixed up, pick out the RED lines starting at the LEFT fence and follow them across the template. Note that the RED lines on the horizontal template match up with the RED lines on the VERTICAL TEMPLATE. Do the same with the BLACK lines starting at the RIGHT fence and moving to the LEFT.

d. The lines represent the locations of the centerlines for each biscuit in the array depicted on that template set. We ship the white template already inscribed at 4" OC, because that array works well with 12" and 24" deep kitchen cabinet boxes, very common cabinet depths. Each template can be inscribed with two arrays, so the other (rear) end is inscribed at 3" OC. If you remember the beginning of our Versidex MEGA-ncw introductory video, we pulled out the platform template from one end of the MEGA, and brought it around to insert into the other end. Then we flipped over the Vertical template to match; so, two arrays on one template set.

e. You have just learned to identify the three paired components of the Versidex Integrated Systems Triangle, dual fences, bi-color indexing lines, and paired template sets. Remember the triangle. It is the heart and soul of the Versidex MEGA.

5. WHAT IS INDEXING AND WHAT IS REFERENCING?

a. These are two terms that you need to understand and use properly. You may well devise original ways to use your Versidex that we do not describe in the User's Manual. Knowing these two terms will help you properly describe your technique to other operators who may need training, and to talk to us, if the need arises.

b. Indexing refers to a variable measurement whereas referencing is a fixed one. When we say *indexing* in the Versidex environment, we're referring to the variable locations the joiner might assume, depending on the array inscribed on a given template set. Or we could be talking about the lines themselves, because they are in differently spaced arrays on each template. Or we're occasionally referring to how a panel might need to be moved away from a fence by using a fence spacer to improve how the panel and the template array work together.

c. When we say *referencing*, we're referring to constant distances between two things, such as the joiner soleplate and the cutting blade's bottom edge; or we are referring to the planar surfaces of the joiner, or of the template sets' surfaces, which meet the joiner's soleplate. We could also be talking about surfaces of the panels meeting surfaces of the templates, or of edges meeting the fences or fence spacers. Those relationships don't change. This can be confusing because there are so many possibilities, but keep trying to get it right. It's important.

We struggle a bit with whether to call the stationary fences referencing fences or indexing fences. Although the conversation gets animated at times, we have pretty much decided that they are referencing fences, as their edge's relationship to panels, fence spacers, and such doesn't change.

6. HOW DO I MAKE MORE PLATFORM TEMPLATES?:

a. The template sets are the worker bees of your new MEGA-ncw. Without them, the MEGA can't do much at all. We shipped you two large platform templates, one of white melamine-on-MDF, inscribed with 4" centers and 3" centers, and one of plain MDF, not inscribed at all. We also shipped you three curvaceous vertical templates, all of white melamine-on-MDF. One of these templates has been inscribed; one side is inscribed at 4" OC, and the other side at 3" OC. The other two templates are not inked at all.

b. We don't sell additional Platform templates because they are very expensive to ship, and you can easily make more of them from very inexpensive *plain* MDF. The white melamine-on-MDF looks best for photographs and selling, and for when you want to show off your MEGA, but it's NOT the BEST material for the Platform templates. Lowly, plain old .25" MDF is the best material, and even lowlier .25" particleboard performs better than the melamine. Hard to believe, but true. Here's why:

The melamine does not absorb the ink used to inscribe the array lines. It will wear off. Waxing the template at the infeed end (NEVER under the pressure bar), helps you guide your joiner along the array lines more easily, but will remove the ink if used on melamine. On MDF or particleboard, the ink soaks in a bit, won't wear off and can be *carefully* waxed, because it's IN the board. Make your extra templates from either of those and, although not pretty, you'll be glad you did. We slightly favor the MDF for its finer, smoother faces and edges. Do NOT use .25" plywood. It may not lay completely flat, the ink will bleed into the veneer, it is made too thin, and it's too darn expensive.

c. We do sell additional 3-packs of white melamine-on-MDF Vertical templates, because they look very nice and are really hard for you to make more of accurately. They also don't suffer from friction like the Platform templates do, so their lines don't wear off for a very long time. They can be inked and reinked, but *do not* wax or clean them with anything but a damp cloth. Do not use ANY kind of solvent or cleaner either.

Cut out your parts:

d. The Platform templates are best made of plain .25" MDF. To hang these in your rolling template set cart, you have to add a nose (wood edge) to one end. Therefore, cut your MDF template to a fat 31 7/16". wide x 44.75" long. You can cut out 3 pieces from a 4x8 sheet, so make three or six blanks at a time. Test the width in your MEGA. It should slide in easily with no binding, but shouldn't be too sloppy side-to-side, where more than 1/16" side-to-side is too much.

e. Prepare your nose piece(s). Use .75" hardwood, MDF, plywood, or particleboard in that descending order of what we prefer. You can also use .75" white-melamine-on-MDF, which looks nice with no painting. Cut it to 1.5 x 35 3/16". Sand it if appropriate. Mill the same 45° bevel as is on your MEGA's Platform template nosepiece on ALL of the edges of this nosing piece. Then change the bevel to *one-half* of the flat width you just milled, and use this setting to bevel ALL of the edge's of the new Platform templates.

f. Test fit your nosepiece UNDER the MDF Platform template at the INFEED end of the MEGA. Center it side-to-side, and flush the nose's face to the front edge of the template's MDF. Make any necessary adjustments.

Glue the nosing to the template:

g. To glue on the nosepiece without using any fasteners, use a second nosepiece or scrap as a clamping caul on the TOP of the MDF panel. Use about 6 handscrews or squeeze-type F-clamps and get them opened up enough to clamp the nose-MDF-caul "sandwich" together. When you're ready, apply a thin film of PVA (yellow) glue to the top edge of the nose and put the nose under the MDF lip, holding it TIGHTLY against the end of the MEGA. FLUSH the edge of the MDF and the nose, check that the nose is centered, and clamp one end. If you think you'll need a helper, get one.

g. Readjust things as necessary and then clamp the other end. Keep checking and adjusting as you apply the rest of the clamps. Once all of the clamps are applied, pull out the assembly about 6" or so, reach under and wipe the inside joint made by the MDF and the nose. The beveled edge will keep in any extra smearing, but not drips, so do it two or three times. Also, use a rag to wipe where the MDF and the end of the MEGA came together. This may have glue smeared on it, depending on how freely you applied it.

h. You have made your first blank Platform template(s)! After 30 minutes of clamped time, remove the clamps, but do NOT stress the glued joint. It's a good idea to pull the template completely OUT, wipe off any glue on its underside, walk it around the REAR of the MEGA, and reinsert it, but leave it 2" OUT and then stop. Go back to the front end, and wipe, or carefully scrape, off any glue at the front edge where the glue-up took place. Let's move on to determining which template set array you need for a given job.

7. DECIDING HOW TO LAY OUT AND INK A TEMPLATE SET:

a. By now you have heard the term ARRAY a lot. It means that pattern of red and black lines that cover a template. The array pattern is a variable thing, that's why they are part of the *indexing* system. You'll also remember that the lines that make up the array patterns represent the centers of our mortises, and that the mortises will receive biscuits or other slip-tenons to create the assembled joint.

b. Because there are 5 different biscuit sizes, 0s, 10s, 20s, S6, H9, plus some very small R-series biscuits and the various P-series connectors from Lamello, if you're using a Zeta P2, it is helpful to know how closely together we can bunch the biscuits or connectors of a given size. Too closely will result in there not being enough room for all of them, but if they're too far apart you begin to weaken the joint's potential. What is the "just right" spacing for a given biscuit or connector?

c. We've done the math for you. Actually, we've drawn a chart, based on the math, for you. It's called the "Versidex Panel Dimension vs. Biscuit Array Spacing--Template Chart", and it is listed under Products (& Accessories) on the Menu bar, #17. The directions are on the back, but we'll also tell you how to use it right here:

8. USING THE VERSIDEX PANEL DIMENSION VS. BISCUIT-ARRAY-SPACING--TEMPLATE CHART

a. Lay the Chart out on your MEGA's Platform template, end-to-end between the fences. On the LEFT side you'll see numbers like 2.5", 3", 4", etc., and each number will be on a differently colored band. As you move to the RIGHT, you'll see black bars sectioning the bands. The bars are spaced apart the same distances as the left margin number indicates, except for the 1st bar, which is always at 2.375", the centerline of all three of Lamello's current joiners.

When in use the joiner can be nudged against either fence, and the fence can be used as a fixed referencing guide to make your first mortise cut. This positive reference sets up a nice rhythm for the remaining cuts, and users like the feature.

9. DETERMINING THE 1ST BAR CHART MARK FOR NON-CURRENT LAMELLO & ALL OTHER JOINER BRANDS:

a. If you have a different brand of joiner, or an earlier Lamello model, you may have to adjust the 1st bar location on the Chart. To do that, find the RED vertical bar just to the right of the numbers at the left end of the Chart. This bar represents the stationary fence, and in this case the LEFT RED fence, because we're always reading the Chart from the left to the right.

b. If you measure from the red bar to the 1st black bar mark, you'll confirm that the distance is 2.375". Now take your non-current Lamello or other brand joiner and position it near the LEFT RED fence, and up tight against the Crosspanel. This will square the soleplate's side along the stationary fence. Now *slowly* push the joiner toward the left fence until something hits the fence. If any obstruction keeps the soleplate of the machine away from the fence, that is a physical limitation, but it's not a big deal. Measure the distance from the FENCE to the centerline of your joiner. There is usually a mark of some sort at the CL position, but not always. Write the number down on a notepad followed by "LF" for Left Fence.

c. Now, with your vacuum system's dust hose attached to your joiner, rotate the joiner up onto its nose so that it sits vertically, and press it against the Vertical template on the Crosspanel. Move it *slowly* toward the LEFT RED fence until something hits the fence or the spring closer above. Look for the hose obstructing the spring closer, or vice-versa. If there is a problem, first decide if you can OPEN or CLOSE the spring closer to relieve the obstruction so that the joiner hits the fence. If so, remember that you'll sometimes have to do that. The spring closer will never have to be put to use while the joiner is up on its nose.

d. If adjusting the spring closer doesn't relieve the obstruction, at least put it into the position that helps the most. Then move the joiner AWAY from the fence to the RIGHT just until the obstruction is relieved, and then measure the distance from the fence to the centerline of the joiner's nose flap. Write this number down followed by "LFV", for Left Fence Vertical.

e. Next, with your vacuum system's dust hose still attached, position the joiner again flat on the platform template, near the RIGHT BLACK fence. Push the joiner's nose up against the Crosspanel to square it, and then *slowly* slide it to the RIGHT, just until something bumps the fence and then stop. Again measure the distance from the fence to the centerline of the soleplate, followed by "RF", for Right Fence. This can be a hard measurement to take, because of interference by the dust port and hose, so take your time and get it right. You can make a pencil mark at the centerline mark and then move the joiner away to take the measurement.

f. The last position usually doesn't come into play, but *your* joiner may be one where it will. So, with your vacuum system's dust hose still attached to your joiner, rotate the joiner up onto its nose so that it sits vertically, and press it against the Vertical template on the Crosspanel. Move it *slowly* toward the RIGHT BLACK fence until it hits the fence or an obstruction. Then move the joiner AWAY from the fence to the LEFT just until the obstruction is relieved, and then measure the distance from the fence to the centerline of the joiner's nose flap. Write this number down followed by "RFV", for Right Fence Vertical.

g. OK, now compare the numbers. The LARGEST number is ALWAYS going to be your 1st mark distance. This will be true for the Chart, and it will be true for ALL of your templates, as long as that is the joiner you use. It will be true for the 1st mark from BOTH fences, too. Compare that number to the Chart's 1st bar number of 2.375". If your BIGGEST number is SMALLER than the Chart's 2.375" or equal to that, NO adjustment to the Chart is necessary. Lucky you. If your number is LARGER than 2.375", however, you will have to use YOUR number as the new 1st bar distance. Go to the next step, h., to do that, otherwise, if there is no change, skip on to #10.

h. Back at the Chart, measure the BIGGEST distance you had written down that is greater than 2.375", from the 1st black bar (the continuous vertical line 2.375" to the right of the RED one) back towards the red line. Make a small mark right on the Chart's laminated surface with the fine RED Sharpie that came with your new MEGA for inking templates. The line will be to the LEFT of the continuous RED line. Use a straight edge or square, and ink a new continuous RED vertical line. This represents your NEW fence position for that particular model of joiner. While you're at it, write that distance right on the chart near your new line.

10. DETERMINING THE BEST ARRAY FOR A GIVEN PANEL DEPTH:

a. You'll also notice some biscuit icons on the Chart, between a given pair of black bars. An icon within a color band and between bars indicates the MINIMUM spacing possible for that size biscuit or connector. The spacing takes into account *not* the biscuit length, but the necessary *mortise length*, which is longer. The Chart doesn't let the mortises overlap at all. We think that is best.

b. If you know what biscuit size you want to use, or must use (because of panel thickness), pick out a small panel that measures the cabinet's full DEPTH, and set it on edge on the chart this way:

i. Find the minimum spacing for a given *biscuit size* you want or must use.
ii. Put the panel on the next more tightly spaced colored band (so further away from you so you can see the lines you want).
iii. Put the REAR edge of the panel at the left end of the colored band, right at the RED line (or your new red line) that indicates the fence.

c. In the back right-hand corner of the Chart, you'll see an area with small lines and icons. What this area tells you is the amount of *setback* that is required, from a panel's FRONT edge to the first mortise's centerline, so as to not have the mortise blow out through the front edge of the panel. Now find the LAST black bar near the FRONT edge of the panel. If the bar falls too close to the front edge, move the panel towards you to the next colored bar, and check again. Keep moving it towards you until there is enough distance.

d. Now decide if that biscuit spacing is acceptable. If it is too wide a spacing, and you think the resulting joint will be too weak, answer this question: Is it possible with one of the tighter arrays to insert a *temporary* mark for that *last mortise* without interfering

with the next-further-in (2nd in from the *front* edge) mortise? You'll need to refresh your memory for the minimum spacing for a given size of biscuit.

e. If a temporary mark is possible, decide how you can make that mark. A dry-erase marker may work, but maybe not on MDF if you've waxed it, and it will be permanent on MDF if it's unwaxed. Just a strong pencil mark could work, which is our favorite, unless the surface is heavily waxed. The Sharpie pens might work if the surface is well waxed, and likely would be removable with a light sanding, but not a solvent, which could smear the ink. You will have to do some testing with your particular template surface.

f. If none of your inked templates will work, or if you want a permanent template array for index joining that particular cabinet design, you'll have to ink a new template set, and we'll cover that next.

11. LAYING OUT AND INKING THE TEMPLATES:

Laying out the RED lines in PENCIL:

a. So if nothing in your template set "library" works well, even with a temporary mark, you'll have to ink a new template set. Making new template sets will be a bit frustrating at first, because they take time and we know that you want to get right to milling. Call this frustration, "front-end loading", and understand that you are BUILDING your template library and that it's just a onetime thing for that particular array. Once done, you will be able to reuse that template set hundreds of times.

b. With a BLANK template SET installed, using your tape measure, make a *pencil* mark out at 2.375" from the LEFT fence for the current Lamello joiners, OTHERWISE use the distance you tested for above for *your* joiner model. Remember that this is the closest to the fences that you can be without hitting an obstruction in any of the four extreme locations the joiner might be used in.

c. From that first mark, tick off in *pencil* whatever your center-to-center spacing wants to be, going all the way across the template. Now put your panel on edge across the Platform template, REAR edge to the LEFT fence, and check the FRONT EDGE again. Does the last mark fall inside the edge by enough so as not to let the mortise blow through, yet not be TOO far inside? Whatever the guide gives as a backset dimension *includes* a safety factor of .375". You should make that last mark to equal what the guide says, with no further adjustment. Adjust the last mark to equal the required set back for your biscuit size, make a mark and erase the "bad" mark.

d. For any symmetrical lay out, you can make your tick marks using a point-to-point lay out tool. Google-search "point to point tool" and you'll get a lot of returns. This tool will generate equalized spacing *from your 1st mark to your required backset mark*. Remember to use the correct number of divisions to create an array spacing large enough to accommodate the biscuit size you want to use!

e. The best scenario for using these point-to-point tools, is to take your typical base cabinet panel, which likely would measure something between 23" and 24" in *depth.* Make a mark from the rear edge at whatever your 1st mark location must be, and make another mark from the front edge, in whatever the required set back is for the biscuit you want to use, usually 1.5" for a #20 biscuit in .75" material. Now take your point-to-point tool and expand it so the two ends rest on your two marks. Check that there is sufficient spacing between points for a #20 biscuit (our example), and if so, tick off your other marks at the tool's tips.

Inking the termini arcs:

e. Next, did you buy the *inking template arc*, #5? under Products on the Menu bar? That arc template will give you this result: See the results. You can make your own inking arc, but DO bevel the edges to help keep the ink from smearing.

f. The arc will span from fence-end to fence-end, from Vertical template mounting pin to Vertical template mounting pin, and sit from spring closer to spring closer. If you make your own arc, be sure it will span the *pins.* They are farther apart than the other two sets.

g. You don't HAVE to arc any of the lines. They just look nicer. You can use a straightedge and run straight lines across, if you want. But study the picture to see how the arcs are several inches apart, and how their respective colored indexing lines meet them at termination. Offset termini help separate the red and black lines, which makes them easier to pick out, but you can achieve that with two offset straight lines as well.

h. Determine where you want your termination lines (the arced/straight lines) to be. Ours are about 5" & 7" in from the front nose of the Platform template, so we slide out the template, mark its EDGE at 5" & 7" and then slide the template back in until the 7" mark meets the END of the fence. Then we place the inking arc so it hits the ends of both fences, and using the BLACK pen, we draw a smooth line, in one fluid motion, from end to end. DO NOT stop the pen while it's on the MDF. It will bleed in and make a blob. Stop and lift it away *immediately*.

i. Repeat this at the 5" mark, but with the RED pen. Do the inking in this order to help prevent ink smears. Do your best to make the line in one fluid motion; don't retrace your line. You'll get the hang of it with just a little practice. If you smear ink or wiggle your line, remember that the templates are not "art"; they are tools for helping you to be more profitable. We made an artful set for you when you bought your MEGA, using the white melamine. Save those for showing-off your Versidex or for group training. Use the MDF ones for production and for building up your template "library".

j. Now place the inking arc on the vertical Crosspanel, resting it on the two pins that hold the vertical template. Close the spring closers to help hold it in place. Ink a line from pin to pin with the BLACK pen. Next, move the arc so it sits on the frames of the spring closers. Be sure to press it against the Crosspanel at the lowest sag of the arc where it supported behind by the template itself. Practice this a few times with the pen cap *on*, and then ink that arc using the RED pen.

Inking the RED Indexing lines:

k. Next, return to the Platform template and recheck your pencil lines that will be RED. If they're good, pull out the template about 8" and make another mark 13" away from the template's nose. Use a framing square against one of the fences and draw a light pencil mark across the platform from fence to fence, flipping the square around to mark the full span of 31". This line does NOT get inked. It is the starting point for your indexing lines, and the inked arcs are the ending points, or termini. Using your framing square again, place either tongue against the template's nose and line up the other tongue with the 1st mark on the LEFT if you're left-handed, or on the LAST mark to the RIGHT if you're right-handed. You'll reduce the chances of ink smearing if you do it this way.

l. Using the RED pen, begin inking the lines. Remember, one fluid motion is the best way to do this. Keep moving *away* from lines you have just inked. When your pen reaches the arced RED line, try to stop right on the arc without holding the pen against the MDF in a stalled fashion. You'll get a bleeding blob if you do stall out. Stop and lift it away *immediately*. Try not to have to retrace a line. You may prefer to *start* the lines at the RED arc and finish at the *pencil* line, because in use, those lines will be *under* the crosspanel and not visible. Do whichever works best for you.

Mirroring or bookmatching the RED lines from the BLACK fence:

m. When you're done inking the RED lines, locate the .75 x 1 x 30" stick of melamine-on-MDF that came with your MEGA. There are X's at one end on the MDF edges. The X means, "against the fence". So put the X'ed end against the LEFT fence, spanning the platform with the stick *up on* an MDF edge. Using a pencil, tick off marks onto the stick's melamine face where the indexing lines hit the stick. Then use a small square to draw those lines fully across that one face of the stick. We're so particular here because when you're finished laying out a new template, you can simply wipe off the pencil marks using some glass cleaner and reuse this stick over and over.

n. Now flip the stick over and put the X'ed end against the RIGHT BLACK fence. Use your pencil to transfer the marks on the one face onto the template. You have just made a mirror image of, or *bookmatched*, the RED lines from the BLACK fence.

Inking the BLACK Indexing lines:

o. Repeat the inking of these indexing lines using the BLACK pen, remembering to work *away* from whichever line you just inked to avoid smearing. Your new Platform template is done. You ARE an artist!

Inking the Vertical template:

p. To match the Vertical template to the Platform template is a bit easier. Push the Platform template back in completely. Your framing square will not be able to make your vertical indexing lines in the middle area of the template, so cut a panel (just once and keep it for future use) about 12-14" and *really* square. Find its squarest corner and label one leg as the BOTTOM and the other as the "line edge" or something you like. Put those labels on BOTH faces of the panel, so they can be flipped over in use. Bevel the "line edge" on BOTH sides. The smaller bevel still set up in your router will work. This will reduce ink smear.

q. Set the panel right AT the Platform template's lines each time, BOTTOM down, and "line edge" at the mark, and start inking with whichever color you want, but keep in mind that you want to move the panel AWAY from each newly inked line while the ink dries a bit. When the OTHER, or AWAY, panel edge hits the opposite fence, give the last line a few seconds to dry, and then flip the panel over to continue on. The melamine of the Vertical templates dries *slower* than the MDF, because it doesn't soak in! Remember this!

r. One last thing is to make two broader BLACK marks at the bottom of the Vertical template, directly opposite the two piston shafts of the air cylinders on the backside of the Crosspanel. These marks are where you will line up your safety clamp spacer when single milling. And there you are, you have made a new template set for the cabinet you're building, and you're ready to mill.

s. As a final note on template making, we keep all of our arced termini lines in the same 5" and 7" in positions. We always strive for consistency wherever we can achieve it. They don't need to change. It's the indexing lines that change their array, and there can be some wild patterns in those arrays.

12. THE VERSIDEX SYSTEM RULES:

a. To effectively use the system, certain rules MUST be followed. We try to never violate these rules, or unduly weaken them with exceptions. We use consistent *referencing* terms to keep the system as simple as possible. The term *referencing* is used here with the same meaning described earlier, i.e. where two opposed-surface planes come together.

b. We always try to perform OTHER operations on the panels BEFORE joining them. We favor ploughing the dado for a recessed back, because that groove appears on the top and bottom panels as well as on the sides, whereas boring for hardware generally only appears on the sides. The groove tells us that the OTHER side of the panel is the OUTSIDE FACE, something we want to know.

c. When inserting a given panel into the MEGA, we orient it by paying attention to its:

REAR EDGE of a panel or board
OUTSIDE FACE of a panel or board
TOP & BOTTOM EDGE of a side panel
BOTTOM FACE of a fixed shelf
RIGHT SIDE FACE of a vertical divider
BOTTOM EDGE (rare) when milling the cabinet's z-axis (up and down a cabinet's side)
BACK FACE (rare) of a vertical, side-to-side panel, such as a two-sided bookcase

d. By learning and understanding the above terms, you will be able to put consistent rules into practice and minimize indexing errors. The above *referencing* terms give us the following rules:

Rule #1: Rear panel edge rule

Rule #1a: In use, the system requires that a panel's REAR edge (never the front edge), be against either indexing fence when the biscuit array will run across the panel, meaning from the back-to-the-front of the panel. Where doubles or multiple pieces are inserted together (more on these later), all of the parts' rear edges must face the fence that will be referenced, such as the left RED fence, and indexed milling will use the RED lines on that parts-dedicated template set. Or they will face the right BLACK fence and use the BLACK lines for indexed milling.

Rule #1b: In some cases (see Rule #4b below for an example), there is no designated REAR edge. When this happens, you have to temporarily designate one with a bit of blue painter's tape near the edge or a black marker ON the "rear" edge. You have to do so on ALL of the pieces being so milled. This is not done in order to mill, but to remember later HOW you milled a given panel, meaning how you determined the panel's orientation when you inserted it for milling.

Rule #1c: When milling a z-axis line of mortises (up and down [vertically] in an assembled cabinet), the BOTTOM edge of the panel goes against a fence. The REAR edge in this case is ALWAYS UNDER the Crosspanel.

Rule #2: Outside face rule

Rule #2: In use, the system requires that the OUTSIDE surface of a panel is always referencing off of a template relative to the plane that it will lie in once assembled. Understanding this can be a little tricky, and there are some exceptions to further complicate things.

An example of "tricky" is a cabinet side panel, which is milled vertically for its end-face cuts, if the cabinet sides overlap the top and bottom. You might think the outside face is the referencing surface, because that face rests against the Vertical template, but here it is not. When assembled the cabinet side's TOP or BOTTOM edge lies in the same plane as the outside face of the TOP or BOTTOM panel of the cabinet, which will join to them, so it is the top and bottom EDGES of the side panel that is the referencing surface. This is because both it and the joiner's soleplate reference off of the platform template when making the *end-face* cuts in the SIDE panel, AND when making *end-edge* cuts in the TOP and BOTTOM panels.

Rule #2b: Rule #2 does not apply to *beveled* edges because they are referenced using the FLAP of the joiner, not the SOLEPLATE. They use completely different procedures for *both* indexing AND referencing. See the separate section on MILLING BEVELED EDGES, below.

Rule #3: Fixed shelves and dividers rule

Rule #3: In use, the system requires that the RIGHT FACE of any vertical mid-partition, or the BOTTOM FACE of any horizontal fixed shelf, ALWAYS be the referencing surface. This rule is for consistency, because it lessens confusion, so learn it and stick to it. ALWAYS. We mark an arrow that points UP on the rear edge of a shelf, and to be consistent, an arrow that points LEFT on the rear

edge of vertical dividers. In both cases, when the panels are inserted for milling, the arrows must point UP, so less confusion when milling.

Rule #4: Z-axis rule

Rule #4a: In use, the system requires that when the biscuit array will run up and down a panel or piece, as a z-axis mortise line, such as running up a cabinet SIDE, the BOTTOM EDGE of a RIGHT cabinet side is always against the LEFT red fence and uses the red template lines; and therefore, the BOTTOM edge of a LEFT c

cabinet side is always against the RIGHT black fence and uses the black template lines. A panel oriented to follow Rule 4a will, by default, always have its REAR edge under the Crosspanel, or AWAY from the operator.

We always mark the TOP edge of a panel with a "T", if it has a "top" edge. We always put panels on the cart right-side-up, therefore we can see the "T", but instantly know where the BOTTOM EDGE is. Our way is just a convention for consistency, but it works. It helps reduce inefficiency and errors.

Rule #4b: When end-edge milling the interior panel joining to the cabinet sides or along the top or bottom, the BACK FACE references off of the Platform template surface. This rule typically comes into play when you build a two-sided bookcase with a center panel in the middle that acts as a BACK PANEL for both sides.

Now that you understand the RULES, we can condense them a bit:

13. QUICK MILLING RULES REMINDER KEY:

Where the cabinet sides overlap the top and bottom edges:

1. Side panel (for t or b):	insert VT; REAR edge to fence; OUTSIDE (top or bottom) end EDGE is down, mill end-face cuts
2. Top or bottom:	insert HZ; REAR edge to fence; OUTSIDE face is down, mill end-edge cuts
3. Fixed hz shelf:	insert HZ; REAR edge to fence; use fence spacer; BOTTOM face is down, mill end-edge cuts
3b. side (for a hz sh):	insert HZ; REAR edge to fence; OUTSIDE face down, flip-stop set at mark(s), mill mid-panel-face cuts
4. Fixed vt divider:	insert HZ; REAR edge to fence; fence spacer; RIGHT face is down, mill end-edge cuts
4b. (vt dv)top/bottom:	insert HZ; REAR edge to fence; OUTSIDE face down, flip-stop set at mark(s), mill mid-panel-face cuts
5. Mid-panel back:	insert HZ; SIDE edges to fence; NO fence spacer; BACK face down, mill end-edge cuts
6. z-axis side mill:	insert HZ; BOT edge to fence; NO fence spacer; OUTSIDE face down, mill mid-panel-face cuts
7. z-axis top & bot:	insert HZ; END to fence, REAR edge under VTCP; flip-stop set at mark, mill mid-panel-face cuts

14. FIVE QUESTIONS YOU MUST ALWAYS ANSWER WHEN INSERTING A PANEL INTO THE VERSIDEX:

1. What cabinet part am I handling, and what kind of cut am I making?
2. Which face of the panel is the OUTSIDE, or BOTTOM, or RIGHT face?
3. Which is the REAR edge to go against the fence, even if temporarily designated as such?
4. Do I need a fence spacer?
5. Can I double mill, or multiple mill, and do I want to?

Sometimes you will want to insert the cabinet back AFTER glue-up. We often glue-up with no back, and then stain & spray natural finishes. The spraying part goes much better without a back in the cabinet producing bounce-back, so we cut off the trapping dado from the top panel, so the back can slide in later. This, of course, makes it narrower than the sides, so we have to index mill the cabinet top panel using a *fence spacer* to make up that missing depth. Because the back edge will be hidden when the cabinet is completed, we mark that back edge with a black marker dash so we know it's the REAR edge. But we have to put a piece of painter's tape on the INSIDE face, so we'll know where the OUTSIDE face is, since it's now lacking a back panel dado. We do that *before* cutting off the trapping dado. Or, yes, you can just mill that panel narrower to start and pick which face you want for the inside surface.

15. ADJUSTING THE PLATFORM SURFACE WITH THE CONVEXITY AND INFLEXION SPINDLE:

a. The platform is quite broad. It has no fixed structure underneath, because we didn't feel it was probable that any substructure would stay true over time. Instead we developed our inflexion and convexity adjustment system. There is a Crossbeam under the platform, but it doesn't touch the platform. Instead it holds a spindle, which is threaded into the underside of the platform, yet restrained where it passes through the Crossbeam. By turning the spindle's handle one way or the other, the platform will rise or fall in its middle.

b. Mill a panel 30" long x 10-12" wide. Be sure that the long edge is *absolutely* true, without any bend or arc or curve. Check it on a joiner table or 48" level. Blow off the Platform template. Brush a long edge on the test piece clean and place this panel upright on that edge, pressed against the Vertical template.

c. Take a piece of thin paper, typically cheap 20lb copier paper will do, and see if you can slide it in under the panel anywhere. You're looking for gaps between the panel edge and the template. If there are gaps at the ends, you have too much *convexity* in the platform. If there is a gap in the middle, you have too much *inflexion*. Turn the handle one way to see what effect that has on the gap(s). Adjust the spindle so that there are no longer any gaps. You have achieved a truly flat surface. This is essential for milling joints that will be FLUSH.

16. LEARNING THE PROPER MILLING TECHNIQUE:

a. Dust control is *extremely* important when you're using the Versidex MEGA. Dust is the Enemy. How you control dust and debris hinges on three performance issues: your vacuum system's cfm and static pressure in *actual use*, your frequency of using the blowgun, and your milling technique. If you can learn how to properly maintain your vacuum, develop a habit of using the blowgun very frequently, and mill with the proper motion, you will have conquered dust and your joints will be flush and awesome.

b. So what is the proper milling technique? It's a little bit of science and a bit more of training your muscles. The science part is this: When you plunge your biscuit joiner to make a mortise, the joiner's nose is up against your panel. Very little air can get into the vacuum stream. At the blade's first contact, very little dust is created, but as the plunge continues, more and more dust is exponentially created until the plunge stops. At that maximum point there is not enough air in the vacuum stream to remove it all.

c. If you pull the joiner straight out, the rotation of the blade and the choked up cutting area will throw some dust OUT of the vacuum stream and onto the Platform template. You would be losing the battle against dust right from the start.

d. To counteract these forces, we need to get more air into the vacuum stream while still blocking the ejection of dust and debris, and give the increased air flow time to work and clear the dust port. How do we do this?

e. The technique is to put a little “hitch” in our milling motion. Start your cut as you typically would, aligning the center of your joiner with a given line, and following that line right up to the workpiece. Make your full plunge cut. When the blade bottoms out, hesitate for just a half-second. This is the “hitch” in a rhythmic motion, that “hesitation” that we’re not used to.

f. Begin your withdrawal of the blade by keeping the *right* corner of the nose pressed tightly against the workpiece, and slowly rotating the joiner, pivoting it on that *right* corner. This blocks most of the escape route for the dust, but lets plenty of air into the vacuum stream on the left side. The pivot arc does not need to be a lot, just enough so that the *left* corner moves away from the workpiece about .5-.75”.

g. The hesitation and the pivot motion have to be coordinated, and it takes a bit of time to learn how to do that smoothly, but you should practice it every time you mill until it becomes a natural motion for you. When you have mastered it, and keep up with using your blowgun, and with properly maintaining your vacuum system *all of the time*, you will have conquered dust as far as the MEGA is concerned.

Section II

Using the Versidex MEGA-ncw to index your mortise locations

1. UNDERSTANDING PRODUCTION BISCUIT JOINERY:

a. Most cabinet constructions use simple butt joints. Enhanced designs may use bevel joints. Your new Versidex MEGA-ncw will easily handle both types, but the procedures are very different. We’ll detail both types next, starting with the butt joint group, the more common technique.

b. There are three types of mortises used to make cabinet butt joints using biscuit joinery. They are end-face cuts, end-edge cuts, and mid-panel-face cuts. Any other type of butt joint is just a variation on one of these three. Each biscuited butt joint has a left-hand member and a right hand member. If the panel or board is wide enough that you need several biscuits across it to make the joint, these biscuits together, all being along one joint, are called a *biscuit array*.

c. Put your hands together as if you were going to pray. Your left thumb and your right thumb create a matching pair. Think of the pair as a biscuit joint, having a left half and a right half. Match up each of your other finger pairs. You have five biscuited "pairs" in your hand *array*.

d. Keeping your hands together, spread your fingers as wide as you can. You still have five biscuited pairs, but when spread apart they will cover a greater width than when closed together. Your hands demonstrate a simple *variable array*. Do you want that array to span 4" or 8", or something in between? What if we had 7 digits, meaning fingers? Would we span 9" or 21" or something in between?

e. The Versidex Indexing System uses this concept of variable arrays to give you almost unlimited possibilities when deciding where your biscuit mortises will be milled. The unlimited range makes the System *versatile* at indexing or positioning your mortises. That's how we got the company name: Versatile Indexing. Mash it up a bit and you get: Versidex.

f. Your praying hands demonstrate another very important concept, that of "bookmatching". If you hinge open your hands now so that your palms face you, you can see that from where your little fingers and the sides of your hands meet and spread outward to either side, the lines in your palms are exactly reflected from one side to the other. This is bookmatching and it is one of the main concepts in the Versidex Indexing System, and is *why* the Versidex MEGA is so adept at production biscuit joinery.

g. It is this bookmatching that allows your variable biscuit arrays to properly match up in *asymmetrically* spaced arrays, and therefore by definition in *symmetrical* arrays as well. We'll talk about both types of arrays from time to time, so you should understand their definitions and why they are different. Symmetrical arrays are the little sisters of asymmetrical arrays: not as complex and not as versatile, but just as capable in their limited scope.

Symmetrical arrays have mortises equally spaced from the *centerline* of the panel to the panel's edges. The mortises do *not* have to be equally spaced from each other, but usually are. You can work that concept the other way, too, saying:

Symmetrical arrays have mortises equally spaced from each edge of the panel toward the *centerline*. Symmetrical arrays have the advantage for the operator of not having to care which edge is a front edge or a back edge, and therefore whether they're making a left-handed cut or a right-handed one. However, they're not worldly enough to handle a fixed shelf that is only as deep as the *face* of a dado-trapped back, and so of lesser depth than the *sides* of the cabinet.

An adjustment must be made to that fixed shelf's rear-most mortise location relative to the rear edge of the shelf. Now you do have to know which edge is which, and now symmetrical arrays don't help you a bit. This is why we invented the Versidex MEGA-ncw. To handle asymmetrically spaced arrays, like those for fixed shelves, vertical dividers, dado-trapped-back cabinet designs, less than full depth fixed shelves or vertical dividers, and any other cabinet parts that are of different depths.

h. In *asymmetrically* spaced arrays, the mortise closest to the panel's *front* edge is located differently than the one at the *rear* edge, and the mortises, therefore, are *not balanced*, or bookmatched relative to the centerline. Furthermore any of the biscuits can be any distance apart from any of the others, meaning there could be complete chaos in the array, and the Versidex will create perfectly *matched* mortise pairs every time.

g. Now take your hands and lay one over the top of the other. You can see that now your finger pairs are all messed up. You no longer have mirrored or bookmatched pairs. You could argue that you still have left-handed and right-handed pairs, but if you hinge your hands open, you'll immediately see that they aren't "bookmatched". All mortise pairs MUST BE bookmatched.

Milling a simple four-sided cabinet or box

a. Let's say we want to biscuit join a simple 4-sided cabinet box where the sides overlap the ends of the top and bottom. Let's further say that this is a typical kitchen's upper cabinet, so it is 12" deep. We'll mill the side panels first.

b. Before we get to milling, we have to check AGAIN that our template set works with our cabinet's DEPTH. We know the depth is 12", so we need a template set whose biscuit array layout works with a 12" deep panel. We want to use #20 biscuits and we know that the ¾" material is thick enough to use #20 biscuits. We also know that for #20 biscuits, the LAST indexing line that falls WITHIN the panel must have a set back of 1.5" from the FRONT edge, but not be more than 2".

c. Checking the DEPTH of the panel against the Chart, we find that using the 4" OC template set is a good match, with no further adjustments. That set is already installed in the MEGA, so we're ready to go ahead and mill.

1. TO LOAD AND MILL A PAIR OF SIDE PANELS FOR OUR BOX:

Blow off the TOP edges of all of the panels on the cart on the left.
Pull out one side panel and insert it into the MEGA upright and against the crosspanel, so that the dado is visible, and its rear edge is against a fence. Engage the spring closer to hold it upright.
Repeat with another side panel, but flip it top-for-bottom and push it upright and against the other fence. engage the spring closer to hold it upright
Put that panel's rear edge against a fence and engage the spring closer to hold it upright.
FLIP the other panel end-for-end, if necessary, to put its rear edge against the other fence and engage that spring closer.
Recheck that both panels are tight against their fences.

Bring your joiner to the Platform, and turn it on. If you purchased the iVac Switch Box controller, your vacuum will also power up, otherwise turn it on manually.
Make your 1st *end-face cuts*, referencing from the Platform template, guiding your joiner along the RED lines from the LEFT fence, and along the BLACK lines from the RIGHT fence.

Blow off the Platform template.
Flip the panels over and reinstall them against the opposite fences this time.
Make your 2nd *end-face cuts*, referencing again from the Platform template, using the appropriate indexing lines.

Remove the panels to the empty cart on the right.
Blow off the template surfaces.
Repeat the procedure with the next pair of sides.

2. TO LOAD AND MILL A PAIR OF TOP & BOTTOM PANELS:

Blow off the upfacing ENDs of all of the TOPs & BOTTOMs on the cart on the left, if not already done.
Lay two panels on the Platform template with either end IN first, dadoes UP.
Blow off the BOTTOM edges.
Slide the panels apart, and put one panel's rear edge against a fence, and slide it under the Crosspanel until only 2" remains exposed.
Flip the other panel end-for-end and put its rear edge against the other fence, dado up, sliding it under the Crosspanel until only 2" remains exposed.
Recheck that both panels are tight against their fences.
Activate the air clamp by moving the blue handle to the LEFT.
Bring your joiner to the Platform, and turn it on. If you purchased the iVac Switch Box controller, your vacuum will also power up, otherwise turn it on manually.

Make your 1st *end-edge cuts*, referencing from the Platform template, guiding your joiner along the RED lines from the LEFT fence, and along the BLACK lines from the RIGHT fence.

Blow off the Platform template.
Release the air clamp.
Flip the panels around, end-for-end, dadoes still up, and reinstall them against opposite fences this time, again with only 2" exposed from the Crosspanel.
Recheck that both panels are tight against their fences.
Activate the air clamp.

Make your 2nd *end-edge cuts*, referencing from the Platform template, guiding your joiner along the RED lines from the LEFT fence, and along the BLACK lines from the RIGHT fence.

Remove the panels to the empty cart on the right.
Blow off the template surfaces.
Repeat the procedure with the next pair of TOPs & BOTTOMs.

This completes the milling for a simple four-sided cabinet or box.

Adding a fixed shelf to the four-sided box

Choose two side panels on the cart. Flip one of the sides over so that their dadoes are facing each other.
Mark each *top front* corner edge with a "T".
Pull these panels from the cart and slide them into the MEGA, *bottoms first*, and turning one over so that both dadoes are up and both REAR edges are against the two fences.
Slide the panels in so that the *bottom* end is just under the crosspanel, as this will keep them from falling off the platform.

Determine where you want the fixed shelf to be located, using a measurement from the panel's TOP edge to the BOTTOM of the fixed shelf, whose position will be the referencing plane.
Make a mark on each panel at that measurement.
Stand at the SIDE of the MEGA so that you can sight almost straight down the Vertical template, press the vertical template tightly against the Crosspanel, and move the panel, while tight against its fence, until the mark lies directly in the plane formed by the Vertical template. This is an eyeball determination.
Go do the other side the same way and then *activate* the air clamp from the *infeed area*, not the rear of the MEGA.

Again at the backside of the MEGA, slide up a Flip-Stop until it hits the panel's bottom edge and tighten it in place.
Now, if you will be making multiple production runs of this same cabinet, cut a piece of scrap to act as a *gauge block* with a length equal to the distance from the *backside* of the Crosspanel to the Flip-Stop, and check its fit. It should drop into that gap, yet be snug.
If the fit is good (or if it's OK to adjust the flip-stop until snug, do so now), go to the other side of the MEGA, set the Flip-Stop to snug using the *gauge block*. You're ready to mill.

Stand the joiner on its nose and press its soleplate against the Vertical template.
Line up the centerline on the back of the soleplate with the various lines on the Vertical template and make your plunge cuts.

Deactivate the air clamp.
Remove the panels to the cart.

Select a *fixed shelf* from the cart.
Determine which face will be the BOTTOM face and put a small piece of blue or green painter's tape on the TOP face.
Slide the shelf into the MEGA with the tape visible on top until only 2" of panel is left exposed.
Find or make a *fence spacer* that is equal in width to the distance from the REAR edge to the front shoulder of the dado (for the back) as measured on one of your side panels on the cart, and about 12" long.

The *fence spacer* goes between the REAR edge of the shelf and the fence.
It is set back from the shelf's side edge just a bit, so that it won't interfere with the joiner's nose.
This is a SINGLE MILLING, so you MUST use the safety clamp spacer, product #4 that came with your MEGA.
Put the spacer clamp at the AWAY, thick, black mark on the Vertical template, lining up the two black marks.
Push everything tight to the fence and activate the air clamp.

End-edge mill the shelf, using the proper lines for a given fence.
Deactivate the air clamp, pull out the shelf, blow off the Platform template, turn the shelf around and reinsert it with the *fence spacer* against the other fence, leaving the usual 2" of panel exposed.
Slide the safety clamp spacer to the other thick black mark, now the AWAY mark, and push everything up tight against the fence.
Activate the air clamp and mill the end-edge cuts.
Deactivate the air clamp and remove the shelf to the cart.

Adding multiple fixed shelves to the four-sided box

a. Use the same procedure as above, but slide on multiple Flip-Stops in L/R pairs, equal to the number of shelves. ALL STOPS will be *behind* the crosspanel, none in the *infeed area*

b. If your stationary fences are not long enough to accommodate your stop settings for tall (long) cabinet sides, such as for tall bookcases, you'll need the T-track Extension Rails & Panel kit, under Products (& Accessories) on the Menu bar, #8. There are instructions for mounting the platform to your MEGA under Instructions on the Menu bar, and also as a link from #8 under Products on the Menu bar. The extension rails add about 43.5" to the standard rails.

c. To set your multiple Flip-Stops, determine your shelf spacing, whether even or graduated. Lay out one side panel, either a left or a right, remembering Versidex Rule #3: the reference surface for horizontal shelves is the BOTTOM face. We make our mark, a short .25-.50" dash to indicate that BOTTOM face, and then put an "X" to the side of the dash where the shelf will *cover it* when assembled. This way we can see, as we're setting our stops, that we're properly referencing to the correct side of the dash

d. Now insert your laid-out side into the MEGA *bottom end* first, with the *rear edge* against a fence. The "x"es of your marks will be closer to you than the dash marks when you stand at the *infeed area*. If this is not so, something went wrong.

e. To set the multiple stops, slide the *bottom end* through and under the crosspanel. Stand at the SIDE of the MEGA so that you can sight almost straight down the Vertical template, press the vertical template tightly against the Crosspanel, and move the panel, while tight against its fence, until the mark lies directly in the plane formed by the Vertical template. This is an eyeball determination.

f. Use multiple *gauge blocks* to set the stops from the backside of the crosspanel. The gauge block lengths *will not* equal your layout measurements on the panel, and some will be quite long
Set up both L & R sides at the same time. Once you're ready to mill, you don't want to be fiddling with setting stops, so do the entire set-up first.

g. BE SURE to check your layout and stop settings BEFORE you mill. This is especially important if your shelves are evenly spaced, as an error will be glaring. Remember Rule #3 and measure for your stops using the BOTTOM face of the shelf as your reference surface. As you mill, do one entire side at a time, like the left RED fence side. You may need both INFEED and OUTFEED supports for longer panels. To reduce operator actions, set all of your Flip-Stops into the UP position, except the one farthest from the crosspanel.

d. We've found that it's more efficient to position your panels in the MEGA so that they engage the Flip-Stop farthest from the crosspanel *first*, and then keep moving that end from stop to stop working *toward* the crosspanel. This allows you to keep the joiner right on the panel after your last cut for each shelf. If you go the other direction, you have to move the joiner after each series or it drags on the panel. Remember that the joiner is up on its nose. If your joiner has anti-slip PINS, they'll scratch the panel. If they're anti-slip pads, doing this will prematurely wear them out.

For each stop change, you have to slide the panel a bit too far, flip the stop down and then slide it back to engage it at the stop.

e. Remember to always have the OTHER side panel under the pressure bar before activating the air clamp.

Adding a fixed vertical divider to the four-sided box

a. This procedure is the same as for a shelf, except your mid-panel-face cuts are made into the TOP & BOTTOM panels, instead of into the SIDE panels, and the indexing is off of the *right* face of the divider instead of the *bottom* face. This affects which panel goes against which fence.

b. For *vertical dividers*, when milling the TOP and BOTTOM panels, the TOP panel goes against the black RIGHT fence, and the TOP goes against the left RED fence. This will ALWAYS be true, because we're indexing off of the *right face* of the panels.

b. All of the other details are the same as for fixed shelves.

Adding multiple fixed dividers to the four-sided box

a. This procedure is the same as for multiple shelves, using multiple stops and gauge blocks, except that your mid-panel-face cuts are made into the TOP & BOTTOM panels, instead of into the SIDE panels, and indexed from the *right* face instead of the *bottom.*

b. All of the other details are the same.

Milling for a non-dadoed mid-set back panel (like for a two-sides-accessed bookcase with a centered back)

a. This is a rare procedure unless a two-side accessed bookcase is one of your products, such as for a peninsula or island.

b. A cabinet like this would have a center panel whose edges are surrounded by the sides, top, and bottom panels. (We would probably prefer to plough a trapping dado in the four cabinet panels and fit a back panel to fit, but there could be times where biscuiting a .75" back panel in place is the best way.)

c. All of the edge cuts are referenced from the temporarily designated BACK of the panel, so put a piece of green or blue painter's tape on the FRONT face, which will be positioned UP during milling. The back panel cannot measure more than 30.875" in any direction or it won't fit into the MEGA.

d. The other cabinet panels in this example receive y-axis and z-axis mid-panel-face cuts, with their REAR edges AWAY from you, or UNDER the Crosspanel, and they, too, cannot exceed 30.875" in length. SIDES reference from the fences using their BOTTOM edges. TOPs and BOTTOMs reference from the fences using their RIGHT-side edges, right-side edges so designated by their position in the ASSEMBLED cabinet. BOTTOM and RIGHT keep to our Versidex Rules for consistency, so stick with them.

e. The back panel itself follows these same rules, but remember that the *side edges* of the back panel MUST use a fence spacer, because the SIDE panels continue on past the TOP and BOTTOM, and that amount needs to be "replaced". The fence spacer is equal in WIDTH to the TOPs and BOTTOMs panel's thickness. Don't forget this spacer, or half of your joint will be mis-indexed. The *top and bottom* edges are the same length as the cabinet's TOP and BOTTOM, so no make-up fence spacer is used.

f. This is a complex milling procedure, so several things must be kept in mind.

i. Determine the locations of your two Flip-Stops that will locate your mortise lines for ALL of the surrounding panels. Set the Flip-Stops on BOTH fences using a *gauge block.* Remember you are indexing off of what will be the BACK face.
ii. Decide whether you can use a 4.5" OC array template set, or if you should make a new VERY widely spaced array set, such as a set 6" OC, or 8" OC. Again, these are production-based considerations. How can I do this faster each time?
iii. Or decide whether you could use a smaller spaced array template set, like 3" or 4", but index your mortises off of every *other* line. You could just try to remember to skip a line each time, and mistakes would not show or matter if you milled off too many lines, but here's what we do, again so we're not wasting any time thinking and having to remember:
iv. On say your 4" OC template set, pick out which line you want to start milling with, likely the 1st or second line from the fences. Take your framing square and lay it across the platform, with one tongue tight against a fence, and the other about 4" away from the Crosspanel, as measured to the tongue's edge *closest* to you.
v. Starting with your line of choice, and using the same color as the line, draw a small circle about .5" in diameter, just off of the tongue's edge. The tongue is just your guide to get a straight line of circles. Skip every other line of *that same color* until you reach the other fence. Come back with the *other* color. It is *essential* that you come back by starting at the *same* starting line as with the first color. Otherwise your joints *will not* match up.
vi. This template will be your "go-to" array for milling a mid-set panel, the circles meaning "*mill along these lines for a mid-set back panel"*. You'll want to create a card to keep track of what the special symbols mean.

Double milling for efficiency

a. We have mentioned double milling without explaining it earlier in this manual.

b. The Rule is simple, if two equal width panels will fit together across the platform, you should double mill. That means insert one panel against the left fence and one panel against the right fence, mill them, and then rotate and switch them to the other fences, and mill again.

c. Double milling can be done with panels upright or laying flat.

d. It saves only a few precious seconds of time through each cycle, which are meaningless for 10-20 cabinets, but add up to be very meaningful of you're milling 5000-10000 cabinets over given period of time.

e. Always remember that your Versidex MEGA-ncw is a production fixture. Keep looking for ways to shave seconds off of each procedure without hurrying your work. The MEGA is a most efficient helper when you are working rhythmically and easily. Think up new ways to enhance that rhythm and make your efforts easier and quicker, without your having to work in a hurried manner. Work safely!

Multiple milling of narrower parts

a. Multiple milling is another efficiency-based procedure, but it is quite different from double milling. In double milling you are milling both a LEFT indexed half-joint, and a RIGHT indexed half-joint in one cycle, and then the parts are flipped around and another L/R half-joint pair are milled, completing that panel pair's milling.

b. In multiple milling, you insert as many panels of the same width as will fit across the Platform template, and ALL of their REAR edges face the same fence. You will have prepared a unique template set to index your mortises perfectly, and all of the pieces are milled in one cycle. Then every piece is flipped around and reset with ALL of the REAR edges facing the other fence, and the milling step is repeated.

c. Multiple milling requires the accessory kit, #16, under Products on the Menu bar. The parts included in this kit help control the many pieces at once (10 pieces across if 3" wide each, plus a filler stop), and having that control helps you achieve consistently referenced and indexed cuts, and by now you know that that leads to beautiful, FLUSH joints.

d. So for an example, let's say we have a narrow depth frame of 4", made of .75" thick stock, and it has a rectangular shape, measuring 18"w x 24"h. Sides will overlap the tops and bottoms. It will take a mirror, so we have already ploughed the mirror groove and now know which are the OUTSIDE faces.

e. We have prepared a unique Platform template (a Vertical template is not used for this frame) based on 4" widths, and in doing so determined that we do NOT have to use a *fence spacer* to assure that the mortise location in *each piece* will exactly match every other piece, *including* the 1st mark mortise. A 4" wide piece can use a 1st mark location of 2.375", the *exact* centerline of the Lamello joiners, though that is just coincidental.

f. Just as you adjusted the Chart above, remember to use YOUR joiner's centerline measurement to determine your 1st cut and how that works with your part's width.

g. So in our example, we can just go ahead and use our ALREADY inked 4" OC template, which is already installed.

h. We'll backtrack for a moment and use a different width in order to give you a run-through on *fence spacers*. Let's say our frame parts are only 3.5" wide. If we use #20 biscuits again, the 1st mark STILL falls at 2.375" for any of the current Lamello joiners, and still at YOUR determined 1st mark if an older or non-Lamello joiner.

i. A 2.375" 1st mark will blow through the front edge of a 3.5" wide piece, so to figure out the *fence spacer*, we have to make a mark on our piece 1.5" back from the front edge (the setback for #20s). This leaves 2" to the REAR edge, so we need to make up the amount needed to make it 2.375", so the *fence spacer* needs to be .375" wide for current Lamello users, or YOUR centerline number minus the 2".

j. In laying out and inking a unique template for whatever width you want to multiple mill, take note of this interesting fact: After you make your 1st mark, all of the following marks will be ticked off an amount *equal* to the *width* of your pieces, so 4" on center in our example, and 3.5" on center in our backtracking example.

WARNING: When you multiple mill, the accuracy of your pieces' widths is VERY IMPORTANT! If you have 10 pieces spanning the Platform, and your template array is laid out at 3" OC, but each milled piece is 2.985 (1/64' less than 3"), that error is multiplied 10 times and at the tenth piece equals .156" or more than 1/8", which is the maximum slop error built into the biscuit joinery system. Those last pieces may not come together well during glue up. You must be accurate in your width milling if you are going to multiple mill. You should take an overall width measurement when the pieces are loaded, divide that by the number of pieces and see if you get a quotient equal to the width of a single piece.

1. MORTISING THE SIDE PIECES OF OUR 4" DEEP BOX:

k. OK, so we have our 4" pieces ready and our 4" OC Platform template installed. Our first step uses the SIDEs. We here at Versidex know that any piece longer than 26" will NOT sit firmly enough by itself horizontally in the infeed area. At 24" our sides will be fine, so we can now set up the Crosspanel Gap Filler. As part of kit #MMCS, #16 on the Products page, this panel lays across the Platform template BEHIND the Crosspanel for this purpose, and is pushed through and positioned FLUSH with the face of the Vertical template (although we're not using a Vertical template for this frame's indexing, one should always be installed anyway). The kit comes with two small blocks to help flush up the Gap Filler. Once flushed up, activate the air clamp safely from the INFEED side.

l. WARNING: Because your pieces are often rather narrow when multiple milling, and depending on the density of your stock, each strip by itself may not weigh very much. This can be a problem that you MUST be aware of. Additionally, the width across each BOTTOM end-edge is rather small, which means all 7 pieces in this example can tip sideways and disorient the mortises by lifting one end-edge off of the template ever so slightly.

m. To negate this problem, we'll set two 4" wooden handscrews as stops right at the top of the Crosspanel on the LEFT and RIGHT sides, and just over the spring clamps. Do not put your clamp jaw on the spring closer's base, just on the Crosspanel. We set their location using an accurate framing square pressed against each fence. There is very little room above the vertical template where your wooden handscrew's jaws can fit onto the Crosspanel and act as an upper "fence" for your vertical pieces, but this kind of clamp is the right one to use. Set one on the left and one on the right. For typically wider cabinet panels, this upper support isn't needed.

n. Now you can load as many pieces as will fit across the platform, so for 4" pieces that means 7. Load them flat, dado *down*, in this case, and all facing the same fence.

o. Next locate in the kit the multiple-milling Ends Keeper, a U-channel bar about 30" long. Fit the U-channel over the ends of the pieces, and while PRESSING IN against the Gap Filler, lift everything up in one smooth motion. Work the group against the appropriate fence and into that spring closer. In our example, the LAST piece will not engage the other spring closer. You can rip a filler piece to take up the remaining gap, but it's not essential. The one spring closer and the Ends Keeper will hold everything in place until the next step.

p. Locate the 4-in-1 Crossbar, a 1.5x1.5x 35" or so piece with pins in both ends. The end with the larger pin is the LEFT end. At the left end you will see printed labels on EACH face of the bar. These numbers match up with the various thicknesses of stock that you might use during multiple milling. We know our frame is using .75" stock, so find the .75" label and rotate the bar until that label is on TOP.

q. Insert the LEFT end into its mounting sleeve located on the inside of the LEFT side up near the spring closer. Then push the bar to the LEFT even more to compress the spring, and fit the RIGHT end into its mounting hole and let go. The bar may pivot a bit, but will settle against the group of pieces. Adjust everything getting all of the parts tight to the fences and against the Vertical template.

r. If you elect a set up that only engages ONE spring closer, you should use the 4-in-1 Crossbar, but if you rip a filler strip, your set up WILL engage the second spring closer, so you do NOT need to use the 4-in-1 Crossbar, but keep the Ends Keeper in place.

s. However, at the AWAY stationary fence, there will be a gap between the fence and the LOWER edge of the last piece, unless you elected to rip a fill-in strip. We fill this gap with a piece of scrap of the same or lesser thickness as the pieces. Cut it to a length so that it fits snuggly, but not with force, and seat it well.

t. WARNING: Because your pieces are often rather narrow when multiple milling, and depending on the density of your stock, each strip by itself may not weigh very much. This can be a problem that you MUST be aware of. While this warning is a REPEAT of "l" above, we're addressing a SECOND problem here. The pieces may be so LIGHTWEIGHT that they want to "float" while they are all getting set up. If their BOTTOM edges are not firmly seated on the template's surface, your mortises will be disoriented and not flush upon assembly.

u. How do we deal with that? The answer is the in secondary purpose of the ENDS KEEPER, which should be sitting over the ends of the pieces. Before starting to mill, PRESS DOWN on the Ends Keeper. It is felt-lined and that cushion will provide sufficient pressure on ALL of the TOPS to force them down onto the template. We often use one hand to hold down the Keeper and the other to handle the joiner, because you aren't lifting the joiner at all, you're just sliding it along, but some people will prefer two-handed control of the joiner.

v. After checking that our joiner is set at 20 for the #20 biscuits we want to use, we're now ready to mill these pieces. Blow off the Platform template; after setting up so many pieces, there may be some debris.

w. Mill these multiple pieces just like you would a wide panel, by using the RED lines with the LEFT fence OR the BLACK lines with the BLACK fence.

x. When that's done, release the Crossbar or the stop by pushing it to the left, and put it aside. We use the Ends Keeper to pull the pieces free of the spring clamp(s), and lay everything back down on the infeed area, keeping pressure against the Gap Filler.

y. Remove the Ends Keeper and set it aside. Stack the pieces into one or two piles and turn them around but not over. Push them all against the OTHER fence and fit the Ends Keeper back on the new ends. Lift everything up while pushing in, and engage the spring closer(s). Install the Crossbar if only one spring closer is used.

z. Blow off the template surface, complete the milling procedure, and remove the pieces to the cart. This completes the SIDES.

2. MULTIPLE MILLING THE TOPS & BOTTOMS OF OUR 4" DEEP BOX:

a. Deactivate the air clamp, remove the Gap Filler, bring it around to the infeed area, and place it on the end of a CART or on the MEGA's bottom shelf for now.

b. Slide in the 4" wide tops and/or bottoms (in this case they are interchangeable), 7 pieces across, plus the filler if you made one. All of the dadoes are UP this time, and all REAR edges face the same fence.

c. Push the pieces IN until about 6-8" remains visible. Don't worry about the ends being evened up at this point. We'll take care of that next.

d. Take your Gap Filler again, place it across the Platform template. Press all of the pieces against the proper fence, and press the end of the Gap Filler against that same fence. The long edge is now SQUARED to the fence. Continue PRESSING the Gap Filler against the fence as you push it further up the infeed area, collecting the ends of the pieces against its long edge, until only about 2" of the tops and bottoms remain visible. Carefully withdraw the Gap Filler. All of the ends should be flushed up with each other.

e. Push the group against the fence and activate the air clamp. Proceed with milling the mortises using the lines associated with that fence.

f. When completed, blow off the template surface, deactivate the air clamp, and withdraw the pieces, stacking them into one or two piles, flipping them around but not over, and reinserting them so 6-8" remains visible. Then repeat the squaring and flushing up procedure, activate the air clamp, and finish the milling, using the OTHER lines associated with the other fence.

g. Deactivate the air clamp and withdraw the pieces to the cart. The milling for this job is completed.

Using the Adjustable Riser Platform & a riser platform shim

Integral toe-kick milling, & adjustments for various face frame styles

a. There are four common cabinet styles being made today:

i. The frameless euro-style box, which is a simple four sided, flush cornered box with banded front edges
ii. The frameless American-style cabinet, which has a 4" high notched, integral toe-kick and banded front edges
iii. The *framed* euro-style box, which may or may not have altered dimensions, and will receive decorative and longer end panels
iv. The *framed* American-style box, which has a raised bottom sitting above the toe-kick notch, the face frame bottom even with the notch

b. The distinction that we want to be aware of is the height location of the line of mortises for the cabinet BOTTOMS as located in the SIDES of the cabinet. This next list is in the same order as the one above:

i. The mortises line is flush at the ends of the sides, and uses end-face cuts indexed off of the Platform template. This is the usual and typical panel orientation, with no adjustments necessary.
ii. The mortises line is raised and uses the top of the notch as the *referencing* plane. The side panel is inserted vertically like in "i.", but the joiner rides upon the ARP (Adjustable Riser Platform), #9. #P4RP4LV under Products on the Menu bar, and thus is raised 4" or so, such that its exchangeable template surface is exactly even with the top of the *toe-kick notch*. Its exchangeable horizontal template matches the template array being used for that cabinet, so when in position, the lines will match those on the vertical template, so is easily seen.
iii. This is a cabinet where the bottom face frame rail extends below the box's bottom. The cabinet *sides* are of typical height, and the face frame of the same cabinet height, but the cabinet bottom is raised to a position where it sits .125" below the top edge of the face frame. The mortises line, then, is raised using a *riser platform shim*, described below at 1. i.
iv. This style has a raised bottom and uses the same the mortises line calculation as in "iii", except that the *riser platform shim* is placed *under* the Adjustable Riser Platform to achieve the proper overall height.

c. Technically, these last two styles' mortise lines look like mid-panel face cuts, but to mill them as mid-panel-face cuts in the MEGA would violate the Versidex Rule that we ALWAYS index off of the BOTTOM of a fixed shelf, which is, technically, what the bottom of an American style cabinet is, a fixed shelf. We could insert the panel backwards, or end-for-end, and with Flip-Stops we could make repetitive cuts so that the notch line is exactly even with the Vertical template's face. This would not violate the Rule, but it is awkward to mill, and if it's a base cabinet side, you would have to walk around the MEGA from side to side with a lot of panel sticking out and impeding your path each time.

d. This is no different than milling 24” deep tower or pantry cabinet sides for multiple fixed shelves. You either have to reach across the platform or walk around to the other side of the MEGA. There is no other way in these cases, but for shorter base cabinet sides, we think there is an excellent alternative, and that is the ARP, the Adjustable Riser Platform.

1. USING THE ADJUSTABLE RISER PLATFORM:

e. With all of that said, we think it’s best for safety, comfort and efficiency, to use the Adjustable Riser Platform listed under Products (& Accessories) on the Menu bar, #9. This is a plan set for making your own height-Adjustable Riser Platform. The plans include four levelers for setting your Riser Platform to the exact height of that particular run of panel notches.

f. The Riser Platform works by jacking up the joiner, so that it rides on a new exchangeable template, which nests in the top frame of the ARP. You can make your Riser Platform from some .75” scrap material, and use your new MEGA to join up the corners, or just glue-nail it together. Attach the levelers and mill up some template blanks (simple rectangles) and lay out a template to match the template set you’re using for the rest of the cabinets.

g. In use, the operator would insert a notched side into the MEGA, vertically as usual, sliding it between the Crosspanel and the Riser Platform, where you have set a gap that is .5” wider than your material. The side’s BOTTOM edge rests on the Platform template, just like any side panel would. The Riser Platform is held from sliding away from the Crosspanel by two Flip-Stops moved from the outfeed area.

h. An additional *riser platform shim* would be required for a “iv.” style cabinet, if there is not a sufficient height adjustment range using the levelers, or you don’t want to change the adjusters. This would go *under* the Riser Platform’s levelers, so that your original template array remains visible. The shim can be one wide piece or two smaller pieces for each end made of the same thickness material.

i. The *riser platform shim* is an accessory that you can make without formal plans. It is simply a *very flat* board of MDF, cabinet grade plywood, or particleboard. Do not use solid wood or cheap plywood, as they will move over time, cupping or twisting.
This shim is calculated in the following way:

x = the width of your bottom face frame rail;	example: 1.5”
y = the thickness of your cabinet bottom;	example: .75”
z = the amount of reveal the face frame edge is proud of the bottom;	example: .125”
s = the thickness of our shim piece	

S = x - y - z
S = 1.5” - .75” - .125” = .625” (5/8”)

This is a convenient MDF or melamine sheetstock thickness, just be sure that it is *very flat*. Test it on your joiner or table saw. If your rail width is something other than 1.5", you'll have to rework the calculation and improvise with various combinations of materials.

Edge milling for face frame or trim attachment

a. Cabinet sides, tops, and bottoms can be *front edge-milled* to accept face frames or other pieces you want to connect, using biscuits or connectors, whenever the parts do not exceed the MEGA's 30.75" capacity.

b. Face frames can be milled and attached using regular biscuits and clamps, or with Lamello's Tenso P-14, a powerful self-clamping connector that is milled with the Lamello Zeta P2 joiner.

c. Face frames can be *flush* to the OUTSIDE cabinet surfaces, or *offset* from those surfaces, or there could be mixture of FLUSH and OFFSET frame parts in the same face frame. Let's go through the different techniques you will need to use.

1. WHEN FACE FRAME MEMBERS ARE FLUSH TO THE CABINET'S OUTSIDE SURFACE:

a. Wherever *flush* face frame members occur, the milling simply follows the Rules, so the *outside edges* of the face frames and the *outside faces* of the panel are the referencing surfaces.

2. THE FRONT-EDGE CUTS SYMMETRICAL ARRAY PLATFORM TEMPLATE:

a. How many biscuits to use, and their spacing, needs to be decided. We have developed a very special Platform template layout to help you quickly mill optimal 2 to 3 biscuit *front-edge cuts* arrays. You can make your own variations on ours if you need to. This layout works well for introducing the concept to you.

b. The front-edge-cuts *symmetrical array* Platform template is unique from the typical template design. This template doesn't use the Left-hand/Right-hand concepts of the Versidex Rules. This template works off of the centerline of a panel's edge. It can be used for both the *sides* and the *tops and bottom* panels of a cabinet or box. The template calculates the array for you, and so it is also a markless template in use, like all typical Versidex templates.

c. This template is the same size as any Platform template, and fits into the MEGA the same way, but it is an *adjustable* template. You adjust it by moving it in or out of the MEGA relative to the crosspanel. This movement allows you to center an inserted panel edge using the template's spreading lines, and then slide the template and panel in until you reach the typical and preferred 1" reveal toward you from the crosspanel. The larger the reveal, the weaker the effectiveness of the air clamp.

d. As you look at the template, you'll see that there is a centerline, and that there are several lines radiating from the centerline, spreading apart as they come toward you. The colors of the lines follow different rules, too. The usual red/black colored lines relationship isn't used, instead the line colors are balanced, or symmetrical to either side of the centerline. You can use any color in any position, but you must *bookmatch* that color relative to the centerline.

3. HOW DO I MAKE ONE OF THESE?

a. Take a blank platform template or the unused rear end of an existing template. Draw a centerline down its middle to a point 28.25" from the front nose. Make a second mark on the centerline at 26.25".
b. Make a mark at each edge of the template at 12.875" from the template's nose. Make a pencil line from the 28.25" mark to each of the 12.875" marks. These lines will lie at 45° to the centerline and 90° to each other. These lines are used for placing a panel (flat down) or a face frame (vertically) into the MEGA, and adjusting the side-to-side position of the panel or face frame as well as the in-out position of the template, until the front corners of the panel or face frame sit evenly within the outer black lines.

b. Run your tape across the template from one 12.875" mark to the other. Measure out another mark at 6.25", and then reverse your tape and make a mark from the other side. Make a pencil line from the 26.25" mark to each of the 6.25" marks.

c. If you bought the inking arc accessory, push in the template with the arc laying on it and bowing *toward* you, until the 12.875" marks and the arc's edge are aligned. This will be a black line, so go ahead and ink that line now. Then ink the two 45° lines in black also. Then ink the inner two radii with the red marker. These RED lines indicate the mortise locations of typical 2-biscuits/frame member arrays. Where 3 biscuits are wanted, the centerline is used for the third mortise.

d. Finally, mark off the centerline in pencil in 1" increments from the arc to the 26.25" point. Using a wide panel pressed against a fence as a straight edge, ink off tick marks about 3" long across both RED lines. We just do these by eye with the GREEN ink. They are used visually to help position panels parallel to the crosspanel.

4. USING THE FRONT-EDGE-CUTS SYMMETRICAL ARRAY PLATFORM TEMPLATE FOR PANELS:

a. You use this template by laying your panel across the Platform, outside face DOWN (typical Rule), rear edge under the crosspanel or away from you (exception to the Rules). Move your panel until its top and bottom edge corners are evenly touching the 45° radiating lines and the panel is more or less square across the Platform (visually using those parallel lines).

b. Now slide the template further into the MEGA until just 1" of panel is visible out from the crosspanel. Activate the air clamp to hold everything firmly.

c. The *inner* pair of lines are now properly located relative to your panel, and they indicate the centerlines of your two mortises. For wider panels, say 16-31" you'll want two mortises, and for panels less than 16" wide, just one mortise *using the centerline* as your location mark. If for some reason you want three biscuits, the two red lines and the centerline are used.

5. TAKE YOUR SET UP TO A MORE PRODUCTIVE LEVEL:

a. If you have multiple panels of this same width, a *fence spacer* will speed up your production. Remember to keep asking yourself: how can I do this faster? Take a measurement of the space between a fence and the panel's edge. It doesn't matter which side you work from. Rip a fence spacer of equal thickness (or less) as your panel. Deactivate the air clamp if necessary to slide your new fence spacer into place so that the edge of it and the panel are *exactly* flush, and the panel's corner is on the 45° radiating line. Reclamp everything. The fence spacer is your new position indicator and "fence" for that size panel.

b. Now the fence spacer will position the panel in the right place left-to-right for all future cuts. To lock in the in-out position, go to the rear of the MEGA and set a Flip-Stop for that fence spacer, *and also one* for the sliding Platform template. Its far end will be alongside the fences, unless the template is fully slid in. In that case, just use a clamp at the Platform's rear end. You want to keep the

template from being moved. It is unlikely that you'll draw the template OUT during milling operations, but if you find that happening, put a clamp at the infeed end of the template, too.

6. WHEN PANELS ARE TOO LONG OR WIDE FOR THE MEGA, USE THE BALANCED ARRAY SPACING CALCULATOR:

a. Click on this link to go see the calculator: Balanced Array Spacing Calculator. This is for locating front-edge cuts. It will download to your desktop for FREE. This is an interactive .xls (MS Excel) chart. It's helpful for panels that are too big (>30.75") for the MEGA that you still need to front-edge mortise. You can do these atop a panel cart positioned across the infeed area of the MEGA, with you in between, so you don't have to disconnect your joiner and vacuum to do them. The calculator is useful up to about 10'.

b. To use the calculator you first enter the edge length of your panel in the outlined yellow box. Then scan down the left margin for the number of biscuits to use. You can choose from 2 to 8 biscuits per the edge, but you won't get returns for all of them. The chart will return the distance in from each end to a biscuit centerline, and the distance between the other biscuits, center-to-center, giving you cumulative measurements. You WILL have to make MARKS for these panels.

7. MILLING FLUSH-TO-THE-EDGE FACE FRAMES TO MATCH THE ABOVE FRONT-EDGE PANEL CUTS:

a. Indexing the mortises for the face frame itself is just like milling any other panel, except a frame is inserted *vertically*. When *flush* with the outside cabinet edge, the outside edge of the frame is the *referencing* surface, so the frame edge sits on the Platform template, as did the panels' outside faces. Each stile or rail of the face frame that *is flush* with the cabinet's outside face is milled in typical fashion.

b. BUT, BUT, BUT: You *have to relocate the template.* Remember that for front-edge cuts the panel's edge was located about 1" from the crosspanel's template. BUT now the face frame will be against the crosspanel, and only be out .75", presuming a typical .75" thick face frame.

c. So, hold the face frame against the vertical template, and move the Platform template in or out until the corner edges of the face frame are centered on the spreading radii while tight against the crosspanel template. Again, set a flip-stop or clamp the Platform template.

d. Because the face frame is *against* the vertical template, you will have a positive stop location and don't need a fence spacer to give you that location. You're ready to mill the mortises for all face frame members of similar length, and because the template design is symmetrical, you don't have to keep track of TOPS or BOTTOMS, UNLESS:

e. UNLESS, UNLESS, UNLESS: One of the members is NOT FLUSH to the outside of the cabinet. This is very TYPICAL of kitchen cabinets where the BOTTOM RAIL sits below the cabinet bottom's outside face.

8. WHEN FACE FRAMES ARE *NOT* FLUSH TO THE OUTSIDES OF THE CABINET:

a. Even if the sides and tops of the face frames and panels are flush, the BOTTOM rails are almost always NOT flush, so how do we handle THAT situation, plus the many times where the sides of the face frame overhang the side itself by .25" or so as is typical in kitchen cabinets?

b. We usually position the BOTTOM rail of a face frame so that it is UP or proud of the cabinet bottom by .125". But we actually let the TOP rails' biscuits (if there are any) determine where the BOTTOM rail will sit, so we don't generally use biscuits in the BOTTOM rail for cabinets under 18" wide. We add a glue block behind the face frame for additional support. OK, but what about wider cabinets then? We will put in one or more biscuits when a cabinet *bottom panel* measures from 18-30.75", and we use the same template as for the edge cuts.

c. To cut the mortises, we use a dedicated *bottom rail riser shim* to raise the joiner to the proper height. We don't sell this "riser" as an accessory, because there are too many variables to address, and they are very easy to make yourself. We'll tell you how to make an accurate one next:

9. THE BOTTOM RAIL RISER SHIM IS CALCULATED IN THE FOLLOWING WAY:

x = the width of your bottom face frame rail;	example: 1.5"
y = the thickness of your cabinet bottom;	example: .75"
z = the amount of reveal the face frame edge is proud of the bottom;	example: .125"
S = the thickness of our shim piece	

S = x - y – z = 1.5" - .75" - .125" = .625" (5/8")

d. Make your shim of various engineered materials. DO NOT use solid wood as it will move and cup and give poor results over time. Do use MDF, particleboard, melamine, or cabinet-grade plywood that seems to be flat and true. Make your riser shim about 6x6". If you need that final bit of adjustment and just can't make it work, try making your stack using the method in the next step.

e. If your riser is just impossible to get just right even by stacking various pieces, try it another way by milling some rails, on top of which sits a single platform. You can mill the rails to the exact height needed without having a *solid* wood panel distorting the stack over time.

f. When your stack or railed platform is ready to use, the joiner just sits on top of it and you slide them together up to the face frame to cut the mortise.

g. When you have a .25" overhang on the side stiles, as is typical, the overhang amount *is also the thickness* of your riser shim:

riser shim thickness = amount of overhang (.25")

h. Accurate milling of your face frame members is *critical* to achieving a proper fit frame-to-cabinet, because the parts are referenced differently, and that can add to the possibility of error. ALWAYS BE TESTING trial cuts to make sure you have everything properly set up.

10. FACE FRAME ATTACHMENT USING LAMELLO'S TENSO P-14 CONNECTOR:

a. The P-14 connector is a two-piece, snap-together connector that requires the Lamello Zeta P2 joiner to mill its mortises. The Zeta P2 is fully compatible with the Versidex MEGA-ncw without adaptations to either.

b. Milling is indexed in the same way, with no changes in the procedure. The Zeta simply cuts a proprietary shouldered mortise to accept the P-series connectors.
c. The Tenso P-14 creates its own clamping force, so you can glue-up and apply your face frames and immediately stack them without external clamping time.

d. You can see other P-series connectors by going to Links on the Menu bar and clicking on "Lamello P-series". These connectors can open up different avenues to explore, all of which can be handled on your MEGA depending on size.

Section III

Milling indexed bevel joints on the Versidex MEGA-ncw

Milling bevel joints is a *very* different procedure than milling butt joints like we've covered above. The most noticeable difference is that instead of referencing off the joiner's soleplate, we use the front flap, lowered to an angle equal to the bevel angle on the workpiece. Less noticeable, but critical to mention, is that the panels are inserted into the MEGA in the same manner, with their *outside faces down*, and *rear edges to a fence*, but for bevel joints, the flap references off of the *inside* face of the panel, the one that's UP.

There are several ways to construct a bevel joint, and each has different procedures as far as index mortising in the MEGA is concerned. Let's look at the various constructions:

1. TWO BEVELED EDGES WITH EQUAL ANGLES, ON TWO BOARDS OF EQUAL THICKNESS:

a. This is a very common style, and the easiest to index mortise AS LONG AS the boards are of sufficient thickness relative to the bevel angle so that the *bevel face is greater than .75".* If not, the bottom edge of the joiner's nose will reference off of the Platform template, not the joiner's flap like it's supposed to.

b. If the bevel face is insufficient in width, the workpiece has to be elevated. This can be done with an appropriately thick sub-panel of .25" or .5" MDF. The subpanel needs to be very large. We use the full width of the platform, so 30.75" lets it fit in easily, and for the length, we use a calculated number equal to the distance from the Vertical template face to the rear end of the MEGA, so xx, plus xx", which is the Lamello flap measurement, use your measurement here, plus a likely leg length formed by the bevel angle/material thickness, and some clearance at the Vertical template, .125", so a total of xx"

c. Be sure to use plain MDF for both the Platform template and the *riser panel*, because they get glued together. Once milled to size, lay the riser on, flush up the REAR edges, and activate the air clamp. Then draw a line across the platform panel using the infeed edge of the riser as your guide.

d. Remove the riser and apply just a little glue here and there, but a thin continuous bead .5" behind your drawn line. Lay on your riser panel, and then another ¾" panel, the same size if you can, activate the air clamp and add weight around the rear area. Once dried, pull

the template out 12” or so, run a bead of glue across the infeed-side edge of the riser, and wipe smooth. Do about 6” down each side as well. This is to seal out dust from getting between them.

e. In use, this built up template will keep thinner stock and higher angled beveled stock from being mis-referenced. A panel with a beveled edge is inserted, *inside face up,* and positioned so that its bottom, the longer part of the bevel, is just toward you relative to the riser. The *rear edge to a fence Rule* still applies. Activate the air clamp, balanced with a *safety clamp spacer* if necessary. The flap on the joiner is set to the bevel angle, and the joiner applied to the workpiece.

f. You’ll note that flap of the joiner reaches to just shy of the Vertical template. You can adjust how close it falls by releasing the air clamp and moving either the template or the workpiece.

g. You will use the Vertical template for your indexing lines, so find a template array that works with your panel, or lay one out to work. The milling technique is still the same as with butt joints, with that little hitch and rotation motion to control dust. Both boards making up the two halves of the joint are milled the same way, indexing with rear edges to the fences.

2. A BEVELED EDGE AND A BUTT EDGE COMING TOGETHER:

a. This is a very common style also, and is usually done to move the joint’s seam away from the true intersection of the two planes meeting at the corner. Some say it makes for a stronger corner, or allows a cleaner line there. It takes a more complicated layout to make sure you get the true corner to come out in the right place. We’ll leave that up to you.

b. Both the beveled panel and the butt edge are handled as described above. The butt edged piece is flap referenced just like the beveled edged piece is. So the *inside faces* will meet flush at the *inside of the corner.* The resulting overhang at the outside corner is sanded or planed away and a true corner is created.

c. There are other variations, but these two cover the basic concepts of index mortising beveled joints.

Mitered joints can be index mortised on your MEGA

1. INDEX MORTISING FLAT-BOTTOMED STOCK; MAKING A MITER TEMPLATE:

a. We can mill mitered flat-bottomed stock (think both flat trim stock and profiled picture frame stock that has a flat bottom and is less than 1.5" thick) of any length in the MEGA. The indexing concept is the same as for *squared panels*; the difference is, of course, the miter angle from 90°, but everything else is the same. You still use the fences in the same way. It's just that your indexing marks on the template will be at X° to the fences instead of being parallel to them like they usually are.

b. This is a production set up, repeatable and fast. Start out with a blank Platform template of plain MDF, and insert it fully into the MEGA. Then mill two *fence spacers* (L & R), equal to or less than the height of your stock, each 1.5" wide x 24" long or so. Keep the ends with sharp saw-cut face. If your mortise location on a wider mitered face keeps the joiner's front corner *away* from the fence so that it isn't an obstruction, you don't need a fence spacer.

c. Insert your stock oriented with its *outside edge* toward a fence. Slide your fence spacer (if you need one) between the stock and the fence, with the tip of the miter on your workpiece *flush* with the end of the fence spacer. We just do this by feel. Slide the mitered face and fence spacer toward the crosspanel together, stopping at a point as close to the crosspanel as seems comfortable, but so that your joiner's nose will butt the mitered face without obstruction from the crosspanel's Vertical template.

d. To clamp the stock in place, you MUST use another piece of the same stock at the *away mark* to balance the clamp. You MUST also test to see if the air clamp pressure dents or damages a profiled piece due to the very small area of contact. You could add multiple scrap pieces of the stock as safety clamp spacers to reduce the psi pressure on your workpiece. With flat stock, this is not an issue.

e. With these steps taken, you should have your workpiece as close to the crosspanel as is comfortable for maximum air clamp effect, and also be able to slide the joiner to the workpiece without obstruction from either the crosspanel or the fence.

Slippage issues:

f. Now see whether the friction pads or pins on your joiner's nose are contacting the workpiece. If they are not, as is likely with narrower stock, you'll have to determine whether the joiner will pull to the left during milling or not. In softer woods, maybe not, in harder woods, probably. This is a joiner issue, not a Versidex issue. Here's how to deal with this:

h. Use a new blank template and glue a 5" or so long stop block directly to it, alongside the LEFT edge of your joiner, compensating for any joiner obstructions. The block is glued-rubbed on when your set up is perfect and the joiner is in place and ready to be plunged. The added plus here is that the stop block can also serve as a physical guide, steering the joiner mechanically to the workpiece. However, the guide block makes that particular template permanently dedicated to that particular *width* of stock.

i. Stock can be as narrow as the smallest biscuit your joiner can cut a mortise for, or as wide as about 12-13", because wider than that, the mitered face and long edge will run beyond the end of the MEGA, losing T-track clamping support. As the *width increases*, the longer end gets further and further away from the effects of the air clamp, so the likelihood that you'll need to add a T-track hold down increases.

2. MAKING YOUR SET-UP ACCURATELY REPEATABLE:

a. To position the stock pieces in the exact same place time after time for production mortising, check that the Platform template is fully inserted. Hold your workpiece in its exact place while sliding the fence spacer (if you're using one) until its butt end and the piece's mitered end are exactly flush. Draw a line on the template across the fence spacer's end to relocate it later. Pull the fence spacer out and put 5 dabs of glue (so none will ooze out) on its back and reinsert it, holding up your end until it's in position and then dropping it, so the glue doesn't smear. Rub it back and forth 2-3 times, stopping exactly on your drawn line. Leave it to set up.

b. Later, replace your workpiece, and position it by flushing its end with the fence spacer. We just do that by feel. Activate the air clamp and safety spacers. Put your joiner in the exact location as when making the mortise, and use its centerline mark to make a mark on the template. Repeat this to create your desired array if there is more than one mortise.

c. Be certain you have your indexing points in the correct place(s) and then deactivate the air clamp. Push the workpiece out of the way, and ink the lines in the color of that fence's indicator strip, so red or black. Extend the lines .5" or so under the mitered face.
d. Repeat these steps from the *other* fence, to give you your *other-handed* mortises, and this template is ready to go.

3. MAKE A FLAT MITERED JOINT USING LAMELLO'S E-20-L CLAMPING HALF-BISCUIT, CUT LENGTHWISE:

a. For this connector, you need to hold the two mitered halves together while making a mortise cut. You also need the crosspanel as your referencing surface. These requirements limit the length of your stock. You'll have to figure out what that limit is for whatever *width* of stock you want to use.

b. Again, you would start out with a new plain, MDF template. Draw a centerline down the middle of it until under the crosspanel. Take a paired joint and see how it will fit *under the crosspanel* and across the MEGA when the *joint line* itself is oriented to run parallel to the centerline, or perpendicular to the crosspanel. If the MEGA will accommodate the length of the longer piece, if one is longer, slide the paired joint under the crosspanel until your *inside-most* mortise location lies in the plane formed by the Vertical template, if you're using more than one connector.

c. Check for the joint line being parallel to the crosspanel again, and when just right, and the joint tight, activate the air clamp. The first of your cuts will be made with the joiner up on its nose, and centered on the joint line and template centerline. See if your joiner's front flap has centerline mark you can use. If not, use the centerline mark on the rear of the joiner, and if there isn't one, make one. Now see if any of your Vertical templates has a centerline, and if so install that template. If not, make a new centerline mark on any template, or use a blank one and ink a centerline mark.

d. Next, make this a repeatable set up, by glue-rubbing two stops of lesser thickness than your workpieces to the template, pressing them up against the sides of the workpieces making a V with an open bottom (to clear dust). Let them sit until set.

e. Make your first mortise cut, centered on the joint line and the centerline.

f. For your second cut, add a stacked shim plate, as necessary, about 6x6" x whatever thickness is required to position the joiner away from the first cut. This all depends on how *wide* your workpieces are. You'll be approaching the outside corner of the joint, so make sure your mortise won't blow out through the sides.

4. USING LAMELLO'S OTHER CLAMPING HALF BISCUIT, THE E-20-H, CUT ACROSS ITSELF:

a. This joint style is an end-mitered, meaning beveled, construction. Both sides of the joint have to be milled at the same time, just like above, but the mortises are cut into the *beveled edge* instead of into the *face* of the stock, and are cut in pairs making up both sides of one joint.

b. These joints can be multiple-milled, but are set up a little differently than in standard multiple-milling, depending on whether you want to use the E-20-H on both edges of each board or just one side.

c. To have an E-20-H on just one side, you can multiple-mill in pairs, with one mortise cut straddling the two pieces set up side-by-side. You mill with the joiner's front flap down, set at the bevel angle. Follow typical rules for bevel indexing, except that your centerline indexing "line" is going to be the seam between the two boards making up the pair. This means you *mill at every other* seam. Use your elevated Platform template, so the flap is referencing the cut, not the front edge of the soleplate. Put a blank template in for the Vertical template to avoid indexing confusion.

d. If you want an E-20-H on both sides or edges of a joint, likely if your boards are wider than 1.5", you mill at *every* seam, and move the two end pieces in and exchange them left for right to finish the cuts as a pair, or mix them in with additional pieces.

e. Accuracy in your beveled ends and your alignment of the pieces is crucial. You can help your cause by using the Platform Gap Filler (it came standard with your MEGA) to square up all of the board ends and push them to just the right spot on the template. This care is necessary, because although you're milling a pair of half-mortises into the beveled edge, when you go to assemble them, one piece may be paired with another from elsewhere in the production cycle. They must all be identical.

Mitered joints can be index-mortised on your MEGA-ncw

1. ONE LAST WORD:

This current edition of the Verisdex MEGA-ncw User's Manual just scratches the surface of the universe of possibilities that is the MEGA. We hope you'll be amazed and excited to go off on your own explorations of how this indexing marvel can stretch your own creativity. We hope you'll proudly share your discoveries with us and let us share them with the Versidex community. We'll give you credit on the website, and name the technique or template or accessory design after you [just fame, no fortune], IF we can deem it unique and helpful to others.

While we don't endorse one joiner over another, do remember that ALL of the Lamello joiners will work natively in the Versidex MEGA environment. Each machine has its own special features, from beauty in simplicity with the Classic, through the height adjustable Top 21, to the specialized, shoulder-mortising Zeta P2. Our Premier Package comes with both a Top 21 and a Zeta P2 for incredible jointmaking versatility. But your joiner may work just fine. Obstructions such as the dust port and hose will be the most likely problems, plus the tolerances of your cutting mechanism. That said, other brand joiners and older Lamello joiners may need some adjustments and sacrifice some capacity.

Section IV

Maintenance, Troubleshooting, Glossary, & Warranty

1. MAINTENANCE:

The Versidex MEGA-ncw is decidedly low-tech, which reduces the chances of parts going bad. But there will be times when you need to replace a part. The good news is that any individual component is fairly inexpensive, and the better news is that you can make the repair fairly easily yourself. Careful maintenance will help any component last a little longer, and just might prevent a serious injury.

2. PERIODIC MAINTENANCE SHOULD BE DONE ONCE A MONTH:

Check that the rolling stand's red wheels are spinning and swiveling freely. If they squeak, their axles are dry. Spritz them with WD-40 sprayed with the narrow red tube down between the wheel and the yoke to lubricate them. Wipe away any excess. The swivels may occasionally need grease in their races. Use something that comes in a squeeze tube, so you can get the tip into, or at least close to, the bearing race.

Check the Lexan air filter bowl. This should not have water in it. If it does, disconnect the air infeed line and draw off the pressure using the blow gun. When the filter holds *less than 5 psi*, the semi-automatic drain will open and the little bit of air pressure left in the system will push the water out. The drain line exits at the floor. Put a cup under the line if water on the floor is an issue.

The air pistons do not need maintenance. If they begin dripping oil, they should be replaced as soon as possible, but they will continue to operate properly for some time. It's normal for some oil to be lost off the pistons during use. You'll notice it as oily sawdust around the top of the pressure bar where the pistons are attached. This is normal and not a warranty issue or defect, and there is no loss of performance because of it. Wet oil films or pools are a defect and the air cylinder assemblies should be replaced.

Remember to frequently check the convexity and inflexion of the Platform to assure that it is absolutely flat.

Empty your vacuum's container and refresh the filter frequently. You should be able to hear the vacuum's "whoosh" at the mouth of your joiner. Pay attention to the amount of blow-by dust and grit that is escaping collection and ending up on the Platform template. More than usual signals a loss of vacuum. There should be almost no blow-by if your vacuum is up to the task (175cfm/60" SP or better).

Perform due maintenance on your other products as well: the air compressor, the vacuum system and your joiner. Versidex assumes no responsibility for their use or warranties. Avoid injury by keeping your tools properly maintained.

As-needed maintenance:

There are several things to keep aware of that will need occasional maintenance:

Use the system's blow gun to keep the MEGA and any on-board tools and machines free of dust.

If your joiner seems sticky on the platform templates, use a hard carnuba-based wax on the bottom of your joiner (the soleplate), and on your PLAIN MDF templates, but NEVER on your white melamine-on-MDF (the wax will remove your lines from the melamine). If you use the white Platform template for work, in time the melamine will attract metal from the bottom of the joiner and grey smudges will begin to appear. There is nothing that will clean those off without also smearing or removing the lines. You could completely clean the surface and re-ink the lines, but the better solution is to save this template for show & tell and not use it for work. Make a copy in plain MDF.

The pressure bar needs to be occasionally wiped clean on its BOTTOM edge. You must disconnect the air line from your compressor and help the system depressurize using the blowgun. Then from the INFEED area, activate the air clamp and confirm that the pistons will not operate and drop the pressure bar. Once confirmed, it is safe to use a damp cloth to wipe the neoprene strip that runs along the bottom edge of the pressure bar. If it gets too dusty, even clamped panels may want to skid a bit while you're milling them.

The skidding is NOT a fault, or problem per se. The referencing for your mortises is maintained even if skidding occurs. It is disconcerting, however, and it should be rectified whenever you notice it, but it is NOT a referencing issue.

Maintenance on your independent air compressor, vacuum and biscuit joiner should be done as their Manuals specify. READ UP on those devices. Keep all of them operating at peak efficiency. Remember to always work safely!

3. TROUBLESHOOTING:

The pressure bar is stuck and crooked.

a. You likely have forgotten to use the safety clamp spacer when milling only one panel. To fix this, move the air valve to its OFF position. Next, get a pry bar of about 12" length and a block of wood about half as high as the piece you were milling. Put the block of wood on the platform template, in between the pistons, and slide the pry bar under the pressure bar, and pry the pressure bar up. Keep moving the wood block closer and closer to the jammed piston (the lower one).

b. Eventually you will free the piston and it will rise up to its idle position. Usually jamming the pistons causes no immediate damage. It may cause problems down the road, though. Remember to use the correct thickness safety clamp spacer.

My assembled joints are not flush! I'm bummed!

a. Not a good thing for sure. Two possible causes are the likely suspects. First is poor control of dust and debris. Is your vacuum up to the task? As you know, we recommend 175 cfm/60" static pressure as the minimum in vacuum performance. Proper milling technique will also help collect more dust before it can spill onto the template surface. More frequent blowing off of the template surface will help. Re-read the section on this subject.

b. The second possible cause is an improperly adjusted platform surface, with too much inflexion or too much convexity. This usually doesn't affect 12" or so wide panels, but does affect 24" or so wide panels. The control spindle handle is located below the crossbeam, under the Platform. Re-read the instructions on its use and adjustments. Proper adjustment of this variable is critical to milling flush joints.

c. The third possible cause is too much play in your joiner's sliding mechanism. You really have to check that out if the other two possible causes don't seem to be the problem. We try to leave the choice of joiner brand up to you, but we also don't want the MEGA unfairly blamed when joints aren't flush. Your joiner is a variable we have no control over, so if the MEGA seems to be underperforming and you've eliminated the first two likely culprits, then take a hard look at your joiner. We honestly believe that the MEGA itself cannot be at fault for misaligned or not-flush joints, but that it's either an a, b, or c problem.

I get all of my parts confused and then I am lost...

a. Versidex recommends that you include the Versidex Transport System Components in your set-up. These include the mobile template library cart, but more importantly for this problem, the elevated-floor, upright panel storage carts, and at least two of them, preferably four of them. The carts will allow you to conveniently hold and transport your panels, grouped into part-types, like sides, tops, bottoms, fixed shelves, and dividers.

b. You can use whatever labeling system you want to identify these different groups. We separate similar but different panels by offsetting them by just an inch side-to-side and inserting a 4x6 index card between them. We write something on the side of the card facing that group, like “sides”, “tops”, “shelves”, etc. We set the carts up so the full one is to the left and at 90° to the front edge of the MEGA. We leave enough room between them so that we can easily get alongside the MEGA for mid-panel-face cuts. A second empty cart goes to the right in the same orientation. The panels go from the full cart into the Versidex for milling, and then over to the other cart, which then fills up while the first one empties. The Versidex Transport System really will solve your problem and save you time.

4. VERSIDEX MEGA-ncw WARRANTY:

Versidex, LLC warrants the Versidex MEGA-ncw fixture and its line of unpowered accessories to be free from defects in materials and manufacture for one year from the date of the sales receipt. Minor air leaks in the pneumatic system are not considered defects, nor are minor oil leaks at the pistons of the air cylinders.

The powered accessories that we also sell are manufactured by others and carry their own warranties, which are included with their packaging. Versidex, LLC assumes no responsibility for supporting their warranties; all warranty issues with powered accessories must be handled directly with that manufacturer. We will assist you with contact information to reach that company, if you need it.

If you believe a part has proven defective, you must email us a .tiff, .png, or .jpeg image showing the defect in that part. That email and image attachment must be sent to: contactus@versidex.com. If we agree that the part has failed, you will receive an RMAW# (return of merchandise authorization under warranty) and you can then send us the part at *your* expense.

Once we have received the failed part, we will ship you the free replacement part at *our* expense. This warranty covers only the part under warranty, not the labor to remove or replace that part. Servicing of any part of the MEGA-ncw is fairly simple.

This warranty does not cover consequential damages, such as, but not limited to, misaligned or misplaced mortises in cabinet panels or other parts or pieces, or other damages caused while using the fixture.

The User’s Manual clearly states how to properly set-up, use, and maintain your MEGA-ncw. When these instructions are properly followed, there is virtually no chance that the MEGA-ncw itself will be at fault for any joint problems.

In the unlikely event that the structure of the MEGA's frame, which means the joined connections between the sides, crosspanel, and platform, should fail, becoming separated or clearly not sufficiently rigid so as to perform as when new, your remedy is to ship or deliver the unit back to us at *your* expense, where we will then either replace the entire unit, or transfer all of the fittings over to a new frame, this decision being ours, and ours alone, to make. Again, you must show us images of the failure, and obtain an RMAW# before shipping.

Shipment of a MEGA-ncw frame back to us must be properly repackaged and strapped onto a 40" x 48" pallet. It must arrive here in otherwise undamaged condition, and with all of its parts, except for the damaged frame as described above, in reusable condition. You will have to remove certain external fittings prior to shipment, and reinstall them upon its return. We will return the reframed unit to you at *our* expense, reusing whatever packaging was used to ship it back to us.

The above pertains only to the MEGA-ncw itself, not to the Rolling Stand on which it sits, which can be restored with a new parts exchange.

This is the end of the Warranty details. For other Versidex, LLC Policies and details, such as privacy, return of goods, cancellation of an order, or refunds, go to our website at: versidex.com and click on Privacy & Policies at the bottom of the home page.

This ends the User's Manual for now…
Updated 2/3/2015

Let us know if something needs clarification or expanding
We'll try to add pictures soon as they're always helpful:

contactus@versidex.com