

PassapClub

An on-line club for Passap knitters. By Pat Groves

Session #1

Date: December, 2003

For this first session I want to go over some very basic things about the machine. For most of you this will be incredibly boring, but by doing it this way, we'll all use the same terminology when referring to parts of the machine, and we'll all be starting with the same information.

This club will be working with 3 of the Passap machines. The DM5, called affectionately the "pinkie"; the DM80, also called a Duo 80 or Duomatic 80, or the green machine, because of the color of the lock covers (unless you have one of the Jubilee series machines and they were grey); and the E6000. These 3 versions of the double bed Passap are all basically the same. The lock settings function the same, and they all have pushers on both beds.

First, let's cover the machine and what the various parts are called.

Sit in front of your machine and look at the beds -

From the top and working downward, we have the striking combs, also sometimes referred to as the flow combs.

At the bottom of the striking combs we have the upper rail. On the back bed this rail has teeth along its length.

Below the upper rail is the needle bed area. Needles are located in individual channels (metal) and those channels are placed in bed sections. Nine sections make up a bed.

Slightly more than half way down the bed is the needle rail. This is the one with the needle scale on it.

Below the needle rail is the pusher area. On the DM5, DM80 and the back bed of the E6000, the bottom of the pusher area has a blocking rail, which locks these manual pushers into an out-of-work position. The blocking rail slides to the right on the front bed and to the left on the back bed to open and release the pushers (use the knob at the left end of either rail). On the front bed of the E6000, the front bed pushers rest against the auxiliary guide rail when they are in an out-of-work position.

Needles have 2 positions: out-of-work (meaning down against the needle rail), and working (up from the rail and in a position to knit).

Pushers have 3 positions: out-of-work (locked in the blocking rail or resting against the auxiliary guide rail), rest position (out of the blocking rail, but down resting against it, or for the E6000 front bed, up from the rail, but at the bottom of the needle channel), and working position (about half way up the area between the needle rail and the bottom of the needle channel).

Additional items on the bed are the edge springs (located riding in the upper rail), and the trip cam (on the front upper rail and trips the row counter on the front lock). Edge springs are used on the last WORKING needle on each end of the knitting. The word working is emphasized because the last working needle isn't always the edge needle. We'll get into that more when we get into knitting.

The racking handle is located on the left towards the end of the bed and moves the back bed horizontally when rotated. When the handle is up, needles on both beds are opposite each other and would hit if facing needles were both knitting on the same row. When the handle is down, needles are offset and won't hit when they are working at the same time.

The knob underneath the front bed on the right lowers the front bed when pulled to the right. Later machines have a ring cut into the shaft of the lowering knob to 'lock' the knob in place and keep the front bed from accidentally dropping down (although in all my years of working on a pinkie, I never had the bed drop when it wasn't supposed to).

I want to cover the tension dial on the yarn tensioner (that's the thing on the top of the mast that you're threading the yarn through). The higher the number the tighter the tension. 1 is the loosest (almost no tension) and 8 is the tightest (usually only used with really thin yarn).

The machine has two locks. Those are the things that you push back and forth to knit. Other knitting machines call them carriages, but Passap has always called them locks. The two locks are held together by a slide located at the upper left corner of the front lock. Lowering the slide allows the locks to be separated.

All locks have an N/X lever, a letter dial and a stitch size dial. The stitch dial is numbered from 1 to 8, with 1 being the smallest stitch and 8 the largest. The step between full numbers is divided into quarters: one-quarter (the first click), one-half (the second click) and three-quarters (the third click). When you need to adjust the stitch size, only increase or decrease the stitch size by a quarter, not a full number (unless you know it's really far off). It's amazing what just another quarter will do.

I was told one time that N meant "neutral", but to me it's always stood for Knit. When the lever is on N, it doesn't matter where the letter dial is set, or if there are pushers --- the lock will knit every needle in working position. When the lever is set to X, then the setting of the letter dial is used to determine the function of the lock. In the cases where pushers are used to determine the lock function (A, B, D, F, H, K, L, O, U), the rule is that the corresponding needle to a pusher in working position always knits. If the pusher is in rest, then the dial setting determines what happens to that needle.

Letter dials will vary depend on machine in the number of settings and the letters being used, but let's go through them.

For DM5s, DM80s and the back lock of the E6000, the common letters and their meanings are:

- A - Tuck
- B - Slip or Skip
- C - Tubular
- D - Tubular Tuck
- E - Fisherman's Rib
- F - Patterned Fisherman's Rib
- G - Free Move - Undoubtedly the most important setting on the dial

DM80s and E6000 can add:

- H - Tubular Slip or Slip

For the front lock on the E6000:

- K - Tuck
- L - Slip or Skip
- C - Tubular
- O - Tuck going right to left, Slip going left to right
- E - Fisherman's Rib
- S - Pusher selection, no knitting at any time
- G - Free Move

U - Slip going right to left, Tuck going left to right.

Only the front lock of the E6000 has no arrow keys. All other locks have 3. Right, left and the center key is designated 0, which means 'off' or cancel.

Arrow keys provide a unique feature for the Passap. They only affect the pushers, but are responsible for many of the automatic, non-electronic patterns. An arrow key reverses the position of a pusher when the lock is moved in the direction of the arrow. In other words, if the left arrow key is in (activated) and the lock is moved from right to left, then any pusher that is in rest position will be moved to working position and pushers in working position will be moved to rest. One very important fact you need to know is that the pusher position change is done BEFORE the lock determines what to do with the needle. For example, if the lock was set to AX (tuck any needle that has a pusher in rest position), and the left arrow key was in, a needle with a pusher in rest position would knit. That's right. It won't tuck because the arrow key is going to change the position of the pusher (bring it up to working position) and then the lock is going to decide what to do with that needle. And any needle with a pusher in working position will knit when the lock is on AX. Conversely, if the pusher had been in work position, the arrow key would cause it to go to rest and the corresponding needle would tuck.

So, with arrow keys, the lock will knit each needle after any arrow keys move the pushers. With the front lock of the E6000, things work differently. Pusher positions are not changed prior to knitting. That's because the E6000 front lock sets up the pushers on the previous row. Remember those 2 R. Empty rows that you do when you start a design? The last R. Empty row leaves the pushers set up for the next row of knitting. Pusher set up for the next row of knitting is actually achieved by the trailing side of the front lock.

Is everybody comfortable with the parts of their machines and how they work? Of course not! Simply reading this once and not using it isn't going to make it real. So, here's your first sit at the machine and learn what it's doing.

Separate the front lock from the back. Put 10 needles on the front bed into working position. Lock on N. Run the lock across and watch the height of the needles. This is the distance up they travel if they are knitting. Remember with the lock on N, every needle in working position, knits.

Now, take out pushers for every needle that you have up in work. Put the first 4 in rest, the next 2 in work and the last 4 in rest. No arrow keys for DM5 and DM80 people.

Put the lock on AX. Remember, you have to have the NX lever in N so that you can move the letter dial. Now, move the lock across the needles. See the difference in how high the needles move? Needles with pushers in rest are going to tuck, meaning they only go up and grab a loop of yarn, they don't knit off the stitch that's currently on the needle. Needles that have pushers in working position are moved all the way up (as they did when the lock was set to N) and so are going to knit. The same thing happens when you move the locks from left to right. E6000 knitters have a bit of a problem with this exercise, because the pushers are all going to come up to working position after every row, so you're going to have to reset them each row.

Now, your homework is to work you way around the letter dial to see what each setting does with pushers in work or rest. Also, test out the arrow keys and see what happens. The E6 knitters can use the back lock for this, it's just so much harder to see what's happening.

Feel free to report what you discover, and just because somebody else does the work and reports it, doesn't mean you don't have to do it also. For those of you who have already been through this

little exercise (maybe because I pushed you to do it, or your dealer did), you can be excused, but you might want to check out some of the lock settings that you don't normally use.

Oh, and one other little tidbit. What effect does the pusher have on the C and E settings? And for the E6 users, pay close attention to what happens with the needles on the S setting, and how is it different than G?

PassapClub

An on-line club for Passap knitters.

Session # 2 Casting On

Date: December 2003

This is going to be a session on casting on. You don't get to use any cast-on combs and weights, and you E6000 knitters are not going to use your consoles. Stitch sizes can vary by machine, so don't take my stitch size as gospel, but it should be within a quarter or half of your stitch size. Edge springs are always placed on the edge needles unless otherwise specified. You have your yarn, Bramwell Fine 4 Ply or equivalent, so let's begin.

There is no really nice single bed cast-on, although some of the manual ones are nice, the 'automatic' ones tend to be less than wonderful. However, they have their places. Especially the following, which gets stitches on the needles quickly, so that you can get into the business of knitting a swatch.

"Quick and dirty" single bed cast-on

Using the toothed side of the orange/red ruler, bring up into working position a ruler's worth of needles (every other one) on the front bed. Place an edge spring on the right end needle. Black strippers, N/N, stitch size 1. Knit 1 row. Bring up the skipped needles, plus a needle on the left end (this left end needle can't have a loop of yarn on it - which is the secret to this cast-on). Place an edge spring on the leftmost needle. Change the stitch size to 5. Knit 2 rows slowly. Change to stitch size 5.5 and knit 20 more rows. Release knitting from machine.

Take a good look at the cast-on. If you pull on the tail, it will gather up the stitches. This might be useful in some special situations, but not normally.

If you had trouble getting the second row to knit on all the needles, then check your strippers for nicks. You might also have to adjust your stitch size. Keep trying this cast-on until you either conquer it, or get the majority of needles to work. I have problems with some yarns being real resistant to doing this cast-on, but if you keep knitting slowly, you will usually get all the needles with good stitches on them.

You can use this same technique to cast on every other needle. On the first row, have every 4th needle in work (one in work, three out-of-work), then bring up the middle of the three out-of-work needles for the second row.

We'll do the other 'automatic' single bed cast-ons when we use pushers and for E6000 knitters, the console. For now, we'll start with the double bed cast-ons, of which there are a fistful.

Racking Cast-on

With the straight side of the orange/red ruler, put 30 stitches into work on the front bed and the same number on the back bed, being sure to follow the needle rule of having the first needle on the right being on the back bed and the last needle on the left being on the front. Move the racking handle one full turn counterclockwise. The needles will now be out of needle rule. Handle down, orange/red strippers, stitch size 3.5/3.5. Knit 1 row to the left. Rack one needle to the right (move the racking handle one complete turn clockwise). Knit 1 row to the right. This completes the cast-

on. This cast-on is a good one to use where you will need a lot of stretch, as in double bed tuck afghans. It's also a fast one to get stitches on every needle so that you can start a swatch.

Tubular Cast-on over all needles

The lock settings for the first 3 rows of this cast on are used in several other cast-ons. They consist of the first row being knit with the locks on N/N and the next 2 rows the locks are set to CX/CX. This forms a 'tube' or tunnel at the base of the fabric and we normally use it to help block the fabric. When blocked it should result in a straight horizontal edge to the fabric.

With the straight edge of the orange/red ruler, bring 30 needles into work on both beds, following the needle rule. Handle down, orange/red strippers, N/N, stitch size 1.5/1.5. Knit 1 row. Locks on CX/CX, stitch size 2.5/2.5. Knit 2 rows. Locks N/N, stitch size 3.5/3.5. Knit 1 row. The cast on is complete. Knit several more rows and drop the knitting off the machine.

Was the 4th row hard to knit? It needs to be. Otherwise you end up with a sloppy cast-on that won't hold its shape. If you wanted to use this cast-on with cotton, you'd have to radically change the stitch sizes upward or you will break the yarn from the first row on either the 2nd or 4th row. Remember, cotton has no give and can't get this real tight edge from the cast-on. You will need to get it some other way (possibly with crochet).

If you want to do a tubular hem (sometimes called a Closed Tubular Cast-on), you follow the directions for the Tubular cast-on over all needles for the first 3 rows, but you don't change to N/N on the fourth row, but leave the locks in CX/CX. You will need to up the stitch size to what you would use to knit this yarn in stockinette and then knit the number of rows you wanted for a tubular hem.

1x1 Rib Cast-on

Use the toothed side of the orange/red ruler and bring up every other needle between -15,14 on the front bed. Handle up. Bring up the same number of needles on the back bed following the needle rule. The back bed needles should be facing the empty spaces between the needles on the front bed. Orange/red strippers, N/N, stitch size 1.5/1.5. Knit 1 row. Locks CX/CX, stitch size 2/2. Knit 2 rows. Locks N/N, stitch size 2.5/2.5. Knit 20 rows. Drop the knitting from the machine and look at the rib. It may be too tight for what you want. In that case, you can up the stitch size by a quarter.

Look closely at the edge. Take your double eye tool and lace it through the tunnel created by the two CX rows. Once you have it all the way through all the stitches, hold on to the other edge of the knitting and pull down with the double eye tool. It will block the edge of the ribbing and make it straight. This is all the blocking that ribbing should need. Pulling the stitches sets them. Ideally, when you block the rib (pull it), you should be holding on to the fabric above the last row of the ribbing. I always set my rib before I wash my garment pieces.

If you know the stitch size for this yarn in stockinette, then you know the stitch size for 1x1 rib. For a tight rib, you always use one half of the stitch size for stockinette, ie. stitch size 5 for stockinette would mean that the 1x1 rib would be done with stitch size 2.5.

2x2 Rib Cast-on

First I need to explain about 2x2 rib. There are actually two different versions. One setup has 2 needles in work and one out-of-work across the bed. The other has 2 needles in work and 2 out-

of-work across the bed. The first version is normally used as a tighter rib that is dense and has a firm 'snap back'. The second is much looser, less dense, doesn't snap back as firmly. It does draw in more than the first version, but only because it has fewer stitches. At this point, no one has ever differentiated them and given them different names, so you always had to ask what the needle setup was. I'm going to go out on a limb and give them names - Compressed and Open.

Compressed 2x2 Rib Cast-on

Handle down, orange/red strippers, stitch size 1.5/1.5, N/N.

Starting with needle 15 on the front bed, put 2 needles in work and leave 1 out-of-work across the front bed ending with needle -14. On the back bed start the pattern with the two needles immediately to the right of the first front bed needle and arrange the needles across the bed as you did for the front bed. There should be no back bed needles to the left of the last two needles on the front bed.

Rack one needle to the left by turning the handle one complete turn counterclockwise. Knit 1 row. Locks CX/CX, stitch size 3.5/3.5. Knit 2 rows. Rack one needle to the right by turning the handle one complete turn clockwise. Locks N/N. Knit 1 row. The cast-on is complete. Knit about 20 rows and drop the knitting from the machine. If this is too tight for you, you can make it looser by upping the stitch size.

Open 2x2 Rib Cast-on

Handle up. Setup is the same as for 1x1 rib. Orange/red strippers, stitch size 2/2, N/N. Knit 1 row. Locks CX/CX, stitch size 3.5/3.5. Knit 2 rows.

Transfer the first stitch on the right on the front bed to the opposing back bed needle. Transfer the next stitch to the left on the back bed to the opposing front bed needle. You now have 2 needles in work on the back opposing 2 empty spaces on the front, and 2 needles on the front opposing 2 empty spaces on the back. Continue transferring stitches in this manner to give you the 2 needles facing 2 empty spaces across the beds. Be sure that any empty needles are out of work.

Locks N/N, stitch size 4.5/4.5. Knit 1 row. Cast-on is now complete. Knit 20 more rows and drop the knitting from the machine.

Larger rib setups can be done the same way as the Open 2x2 Rib. Start with a basic 1x1 rib cast-on and then transfer stitches to your desired needle set up. You can achieve 3x3, 4x4, 5x5, etc. by just transferring stitches from the basic 1x1 setup.

You can also do a wider spaced rib using the basic 1x1 rib cast-on steps. For instance, you can have a rib where only every 3rd needle is working and set it up like 1x1 and do the same steps. Every 5th needle would work the same way.

The 1x1 rib cast-on is also when you need a finished edge for a single bed fabric. The trick is to only do 3 rows of the cast-on, then transfer all the stitches to the front bed for the 4th row. If you need a finished edge for a double bed fabric that doesn't use all the needles, but needs more stitches than are provided with the 1x1 rib, consider using the Closed Tubular Cast-on over all needles. When your fabric has an unusual number of needles or needle setup, it behooves you to try different cast-ons and transfer to the finished setup and knit enough rows to let you really look at the sample and see if you like what the cast-on looks like.

Many knitters have found out that the fabric for the garment uses a different rib than thought. If you're going to knit a garment in Fisherman's Rib, then you'd best use the Closed Tubular Cast-on over all needles, or the ribbing will pull in too much for the garment (or when you cast on the number of stitches for the garment, you won't have nearly enough for a 1x1 or 2x2 rib).

One note about blocking the different rib cast-ons. Besides using a thin strong tool (maybe a small sized knitting needle) to thread through the channel at the bottom, you can also hang a strong thread (ravel cord) between the beds after the first zigzag row (row 1), weighting it down on both ends to keep it from getting tangled into the knitting. After you take your garment off the machine, you use this added thread to pull down and set the stitches. Then you just pull it out.

Now your homework is to knit all these cast-ons until they're very familiar and you can do them without referring to the notes for every step.

PassapClub

An on-line club for Passap knitters.

Session # 2A

Date: December, 2003

A quick addendum to session 2.

How DO you hold (anchor) the end of your yarn when you're starting a cast on? Well, it's easy, once someone tells you and I forgot to tell you in session 2.

For the E6 knitters, you actually have 2 places you can use: the yarn clip that's attached to one of the C-clamps that's holding your machine to the stand (it should be on the right end), or the notch that's cut out of the front right end plate. It's along the bottom edge, right on the end.

For the DM80 knitters, you have that same notch on the front right end plate down at the bottom edge. If you also have a Deco installed, just be sure that you hang the tail of the yarn behind the rail. Don't let it hang down in front, it's just too easy to get it caught around the feelers in the Deco selector and then your repair person is going to be very angry with you.

For the DM5 knitters, you don't have a factory supplied place to anchor your yarn. So here's a couple of hints: put a piece of sticky back velcro on the right front leg and let it hold the end of the yarn, or tape a clothes pin to that leg and use it to hold the tail. I used to tie my yarn around the leg, but the velcro is a neat trick and I use that on my E8000, since it doesn't have a yarn anchoring place, either.

Passap Club

An on-line club for Passap knitters.

Session #3

Date: March, 2004

Because of my broken wrist, I asked Billie Hall to write up this session (which she did in January and I'm just terribly slow getting it out to you). She graciously agreed to help out.

This session, we will discuss and explore a couple of options concerning how to transition from the ribbing to the garment. What do I mean by that?? Well ... we have knitted the rib and now we want to start the garment whether it is going to be a single bed fabric (stockinette) or a double bed fabric (tuck, jacquard, etc.). So how do we set up to knit the single (stockinette) or a double bed fabric from the rib? For the purpose of this session, we will be dealing mainly with the transition from a 1x1 rib to single bed knitting and 1x1 rib to double bed knitting. We will continue using the Bramwell Fine for Ply or yarn equivalent.

From Rib to Single Bed Knitting

Knit a 1x1 rib following the instructions in Session #2 EXCEPT knit only 19 rows. The lock will be on the left. Increase the stitch size to one stitch size less than the garment being knitted in stockinette stitch. i.e. If the stitch size for the yarn being knitted in stockinette stitch is 5.5, increase the stitch size to 4.5/4.5. Lock N/N. Knit the last row. Row Count will be 20.

(Why do you increase the stitch size??? Because if you don't increase the stitch size, the ribbing will have a tendency to curl toward the garment and it helps make a nice transition between the tight rib and the looser knitting of the garment.)

Using the flat side of the orange/red ruler, bring into Working Position (WP) all the empty needles on both needle beds within the area that you are knitting. When looking at the needle beds, you should see directly across from an empty needle, a needle with a stitch on it. That is to say that all the needles between -15, 14 will be in Working Position.

Next transfer stitches from one bed to the empty needles on the opposite bed. Which way do you transfer? Front Bed to Back Bed? Back Bed to Front Bed? Well ... if you are knitting stockinette stitch, it doesn't really matter. I have done it both ways when knitting stockinette and find I prefer to transfer the stitches on the Front Bed to the empty needles on the back bed because I can see the stitches better when I am manipulating the stitches i.e. decreasing/increasing stitches. But, if you are knitting a patterned single bed fabric i.e. tuck, fairisle, etc., you should to transfer the back bed stitches to the empty needles on the Front Bed.

Tip: In the next step, keep the bodkin in line with the needle while you are removing the stitch from the needle. When you are just learning to transfer stitches, sometimes it is helpful to manually push the needle with the stitch on it up so that the stitch moves away from the hook of the needle then grab the hook with the bodkin. This will prevent you from grabbing the yarn and the hook together thus splitting the yarn.

Using the double eye bodkin, grab the needle hook of the first needle with a stitch at the right side of the back bed and pull the needle all the way out so that the stitch falls behind the latch. After the stitch falls behind the latch, push the needle back toward the needle bed until the stitch is on the

bodkin. Holding the end of the bodkin on the Front Bed side, let it rest on the top edge of the needle beds. Grab the end of the bodkin on the back bed side and 'rock' the bodkin forward so that the eye catches the hook of the empty needle on the Front Bed. With the eye of the bodkin on the hook, rotate the bodkin toward you. The stitch, with the help of the teeth on the flow combs, will 'pop' onto the needle.

(There is nothing written that says you can't use both hands together. Sometimes I find myself holding the front and back of the bodkin at the same time or push the Front Bed needle up with one hand while rotating the bodkin to transfer the stitch. Relax! We are practicing here. The more you do the easier it gets. Like most things .. practice, practice, practice)

Continue transferring all the back bed stitches to the empty needles on the Front Bed. Increase the stitch size to 5.5. Change to black strippers, racking handle down. Knit 30 rows.

Drop the knitting from the machine. Take a look. What do you think? If you see that the ribbing still curls, knit the next sample by beginning at row count 18 and increase to stitch size 4.5. Row Count 19 increase to stitch size 5.5.

Now that you have transferred from the back bed to the Front Bed., Repeat this exercise. Knit a 1x1 rib, increase the stitch size – making any adjustments you think are necessary, Transfer the stitches from the Front Bed to empty needles on the back bed. You need to practice transferring in both directions and this will give you that practice.

From Rib to Double Bed Knitting

Knit a 1x1 rib following the instructions in Session #2 EXCEPT knit only 19 rows. The lock will be on the left. Increase the stitch size to one stitch size less than the garment being knitted in double bed. i.e. If the stitch size for the yarn being knitted in double bed is 5 increase the stitch size to 4/4. Lock N/N. Knit the last row. Row Count will be 20.

(Why do you increase the stitch size??? In this case, I like to increase the stitch size because it helps easy the transition between the tight rib and the looser knitting of the garment. If you didn't increase the stitch size, the first row of the garment would be very tight.)

Using the flat side of the orange/red ruler, bring into Working Position (WP) all the empty needles within the knitting area on both beds. When looking at the needle beds, you should see directly across from an empty needle, a needle with knitting on it. That is to say that all the needles between –15, 14 will be in Working Position.

If we do nothing and merely begin knitting the double bed fabric there will be 'holes'/empty spaces at the transition between the ribbing and the double bed fabric. I want you to see what this looks like. So ... Set lock to N/N. Stitch Size 5/5. Racking handle down. Knit 30 rows. Drop the knitting from the machine. Look at the transition between ribbing and garment fabric. Do you see the 'holes'?

We don't want that – it looks sloppy. So, we need to fill those empty needles with stitches. There are two ways to fill those empty spaces/'holes'. Either one is good, so let's practice both.

#1 Tubular Fill: Set up and knit the ribbing as you did above. Using the flat side of the orange/red ruler, bring into Working Position (WP) all the empty needles within the knitting area.

Set the locks to CX/CX. Stitch Size 5/5. Black Strippers. Reset the row counter. Knit four rows. As you knit, notice that the empty needle picks up a loop of yarn on the first (Front Bed) and second (Back Bed) rows. Then on the third (Front Bed) and fourth (Back Bed) rows, a real stitch is formed. These four rows will fill the empty space and you won't have noticeable holes at the transition between ribbing and garment fabric.

Set lock to N/N. Stitch Size 5/5. Orange Strippers. Handle down. Knit 30 rows.

Drop the knitting from the machine. Look at the transition between ribbing and garment fabric.

Tip: I keep asking you to look at your knitting when you drop it from the machine. Always look at the needles where your knitting is being formed as you are knitting. This is a good habit to get into because you might see a misformed stitch or a dropped stitch indicating that something might be wrong with a needle. Also, this will be very helpful when we get into later lessons and you are supposed to be knitting a tuck, let's say, and as you are looking at your knitting you see it still looks like a knit stitch. Hmm ... something is wrong. We'll get into this later, but for now, keep watching the needles as you are knitting.

#2 Hang the Purl Stitches: This method of filling the empty needles does take a few minutes, but I feel the results are worth it. My preference is to hang the purl stitches. Let's see what you think.

Set up and knit the ribbing as you did above EXCEPT before the last row count of the rib increase the stitch size to 4.5/4.5. (We increase the stitch size this time because as we hang the purl stitches we will be taking up some of the yarn from the already knitted stitches. If we didn't increase the stitch size, the stitches would be too tight and we might not be able to knit across the knitting or worse yet, break the yarn.) Using the flat side of the orange/red ruler, bring into Working Position (WP) all the empty needles within the knitting area on both beds.

Now we are going to hang the purl stitches. Look at the stitches that are on the needles on the Front Bed (FB). See the loop of yarn/stitch on the needle? That is the last knit stitch you knitted. Look closer. See the loop of yarn just behind that stitch? It is horizontal to the stitch (loop of yarn) on the needle. That is the purl stitch.

With the eye end of your orange tool, slide the orange tool between the purl stitch and the top of the flow comb. The horizontal piece will be on your tool. Gently pick up this purl stitch and hang that purl stitch onto the empty needle directly opposite on the Back Bed (BB). Continue hanging the purl stitches from the Front Bed to the Back Bed all the way across the Front Bed.

Tip: If you are having a little problem seeing the horizontal purl stitch, gently pull down on the needle on the Front Bed that the knit stitch is on. That will bring the purl stitch up a little and you should be able to slide the orange tool between the purl stitch and the top of the flow comb much easier. As you are hanging the purl stitch, watch the knitting again and you will see what I meant by some of the yarn being taken up from the already knitted stitches. You will see the adjacent stitches become slightly smaller.

Good Job! We are half way there! Now repeat the procedure for the Back Bed. Hang the purl stitches on the Back Bed onto the empty Front Bed needles following the same technique you have just learned. You might find one direction – Back Bed to Front Bed or Front Bed to Back Bed - easier than the other, I do. And that is natural.

Set lock to N/N. Stitch Size 5/5. Orange Strippers. Handle down. Knit 30 rows.

Drop the knitting from the machine. Look at the transition between ribbing and garment fabric. Which do you prefer?? The Tubular Fill or Hang the Purl Stitches.

Here's a little more practice on Hanging the Purl Stitches ...

Set up and knit the ribbing again as you just did. Fill the 'holes' using the Hang the Purl Stitches method, then ...

Set the Locks N/EX. (Yep, we're gonna step out and try the Shaker Knit a.k.a. Half Fisherman's Rib. It is Half Fisherman's Rib because we are only knitting EX on one bed. If the Locks were set to EX/EX, then it would be Full Fisherman's Rib.) Stitch Size 5/5. Orange Strippers. Handle down.

And here I go again ... watch the knitting because something different is going to happen on the Front Bed!! As you knit from right to left, notice that on the Front Bed and the Back Bed all the stitches are knit stitches, just like the ribbing you have been knitting. BUT as you knit from left to right, notice that on the Front Bed the original knit stitch remains on the needle while an extra loop of yarn has been added to that needle. That is a tuck stitch. As the tuck is being formed on the Front Bed, the back bed needles are all forming knit stitches.

Knit 30 rows. Drop the knitting from the needle beds. Fun, Huh?

Either technique – Tubular Fill or Hang the Purl Stitches - will work for most any rib. But as I said, I prefer the Hang the Purl Stitches even though it takes a little longer because I just think it looks better. As you do more and more knitting, you will decide which you prefer.

I'll leave you with something someone told me a long time ago when I was a weaver . . . You may weave the most beautiful fabric in the world, BUT if you don't finish it well, you have ruined the whole piece. This piece of advice translates to knitting as well - A good transition from rib to garment fabric is part of the finishing the garment!

Have fun and keep Knitting!!

PassapClub

An on-line club for Passap knitters.

Session #4 Moving from rib to main body part 2

Date: July 9, 2004

Billie covered most of the ways of moving from rib to the main part of the garment in the last session, at least for 1x1 rib. Let's look at other ribs and then to a special 1x1 rib.

If you're dealing with a 2x2 rib, then you have some other options when moving into the body of the garment.

So cast on some Compressed 2x2 rib cast on (see session #2) and knit about 20 rows. This is one of the few ribbings that you can close up (read fill the empty needles) without creating a big hole. When you get to the end of your desired rib length (in our case 20 rows), set the locks to CX/CX, bring into work the out of work needles, and knit 2 or 4 rows with the same stitch size, then change to N/N and knit about 20 rows before dropping the swatch off to take a look. This is an excellent transition from rib to double bed fabric where all needles are in work. I've had some yarn give excellent results with just 2 rows and some of the others needed 4. Always test your transition from rib to body to see if you're going to like it.

If you're going to be doing a single bed fabric, then you will need to transfer all the stitches from one bed to the other. You can either put both stitches from one bed onto the single empty needle on the other bed, or you can put one on the empty needle and double up another needle with the other stitch. Some knitters prefer one look, others like the other one. So cast on some Compressed 2x2 rib (enough so that you can sample both techniques), knit 20 rows and then transfer the right half of the stitches from one bed to the single empty needle and the left half using the second technique of one stitch onto the empty needle and the other stitch doubling up on the next needle. Knit several rows of stockinette and then drop the swatch.

For the Open 2x2 rib, if you're going to stockinette, you just transfer the stitches from one bed to the empty needles on the other bed. Do a small swatch to check it out.

But if you want to do a double bed fabric, then you have to fill in those empty needles or you're going to have holes. Now, sometimes, the holes can be a nice design element and I've seen it be very effective, but if you don't want them, then you've got some work to do. Cast on some Open 2x2 rib and knit about 20 rows. Since we're going to need to borrow some purls from other needles (Billie had you doing that in session 3), remember to increase your stitch size for the last row of your rib. You now have to decide whether you're going to take a purl from the opposite bed and hang it on the empty needle, or whether you're going to take the purl from the adjacent needle on the same bed and move it onto the empty needle. I'm lazy and only fill in the empty needles on the bed that's going to have the public side of the garment. But I always do a transition swatch, since not all yarns lend themselves to the same technique. I had a cotton that absolutely would not allow me to use the purls from the back bed and hang them cross bed onto the front bed needles. Broke the yarn every time on the first row across. But that same yarn was very happy when I used the purls from the adjacent needles to fill in the empty spaces. Try both techniques on your swatch to check the results. If you're not happy with filling in the empty spots on only one bed, do another swatch and fill in the empty needles on both beds.

It really is very important that you test your transition BEFORE you start your garment. You may decide that the transition you used on that last sweater just doesn't look good with the fabric and yarn that you're using with this sweater. It's also the perfect time to check if you're going to need to change the stitch size for those transition rows.

Here's the special 1x1 rib.

It's sometimes called Swedish Rib, or Doubled 1x1. It's an excellent rib for when you want a bulkier rib for stockinette fabric, or you want to use a 1x1 rib for double bed and don't want to double up on the yarn (remember, your ribbing must take into account the weight of your main fabric, or it can look unbalanced), or you want a rib that isn't tight at the cast on edge but still has body.

Set up for a standard 1x1 rib (see session 2). Bring into working position a pusher for every working needle on the back bed. Locks N/N and stitch size 3/3. Knit 1 row. Bring up all intervening needles on the back bed. Set locks to CX/CX, knit 2 rows with the same stitch size. Set locks to BX/N, same stitch size, and knit 40 rows. You may have to push the knitting down between the beds for the first few rows.

Handle down, bring up the empty needles on the front bed, lock N/N and knit 20 rows. Drop the swatch from the machine and take a look. The rib was automatically double over for you. You have to knit double the number of rows that you want for the ribbing, since it's folded over. If you're going to use a single bed fabric for the main knitting, then you're going to need to transfer all the back bed stitches to the front bed. This does make a very nice cuff for baby things, since the edge of the ribbing isn't tight. The first N/N row being loose also keeps the transition area between the doubled rib and the main body from being tight and not stretching.

This is a short session, but it concludes the transitions between ribbing and main fabric (unless I remember something I've failed to tell you) and has a lot of homework for you. Please do the knitting of these swatches. It's the only way to practice and get a good feel for your machine and various techniques. Reading about them is never the same as actually doing the work. Saving the swatches you do and labeling them in a binder (I use the sheet protectors and put the information about what I did in with the swatch), is a great way to have your own reference library. This reference library will give you ideas for when you decide you're really tired of the plain old 1x1 rib and want to do something different.

PassapClub

An on-line club for Passap knitters.

Session #5 – The Dreaded Swatch

Date: July 2004

For those of you who know me or have attended a class where we talked about swatches and gauge, you know that this subject is one of my hot buttons. Swatches and how you treat them are very important. Swatches need to be done in the same fabric (read stitch or KT) that you're going to use in the garment. You can't do a stockinette swatch and then use it for a tuck pattern. When doing tubular knitting, you really should do a tubular swatch, even though the knitting is stockinette. Aside from dealing with the doubling of row counts (2 rows on the row counter only equals 1 row of knitting), there's the possibility that the back bed doesn't have the same gauge as the front bed for the same stitch size.

First, you really HAVE to do a swatch for a garment if you want it to fit. The only out might be if you are using the same yarn in the same color, on the same machine and you haven't done anything significant to the machine (like a deep cleaning) since you last did a swatch for that fabric with that yarn. Oh yes, one other thing, you're using the same tension mast and you haven't changed the tension dial since you last used the yarn. Not likely that all those conditions are going to be correct unless you're doing production.

Second, always be consistent in the size of your swatches. If you normally do 40sx40r, 50sx50r, 60sx40r, or 100sx100r, fine. But always do your swatches the same size unless you're dealing with a very unstable fabric and then you're going to want to do a swatch that's double the normal size except for the 100x100 size. What is unstable fabric? Well, stockinette and birdseye fairisle are really stable (unless you're knitting stockinette on a really big stitch size with weights to get very loose stitches). Fisherman's Rib is one of the most unstable. The larger the piece of fabric, the more it will grow and the smaller your gauge will be (50 stitches may measure 8 inches, but 100 stitches may measure 20 inches). Some of the double bed tuck fabrics may grow in both dimensions the larger the piece of knitting, and the yarn may affect the gauge even more. I saw an afghan knit in a Fairisle (AX on one bed) using a strand of light weight mohair as one of the yarns. The afghan stretched from single bed size to almost king in the space of a couple months. The mohair relaxed and the hairy part worked out to open up the stitches. Presto, really, really loose fabric that just kept growing.

The contrast yarn that you use to mark the beginning and end of your swatch should be close to the same size as the main yarn and of similar fiber content. If your main yarn is cotton, then if you use cotton for the contrast yarn, they'll both shrink and the contrast yarn won't distort the shape of the main yarn piece. By the way, large pieces of cotton don't seem to shrink as much as the swatch, sometimes. Multiple washings seem to correct the problem, given enough water to move around (pieces washed in mesh bags usually don't move around as if they're free, so be sure to wash your swatch in a small mesh bag if you're going to wash the garment pieces in one).

Never have ribbing attached to your gauge swatch, unless you have a considerable number of rows between the two, since it will severely distort the main fabric gauge. In fact, if you have very disparate stitches that you want to swatch, be sure to put at least 100 rows of scrap between them. In the middle of that 100 rows, change from one stitch to the other. This will give enough distance to keep one fabric from affecting the other.

Session # 6 – June 2005

Increases and Decreases

There are multiple methods of doing both increases and decreases, and some of those methods are going to need weights on the edges to prevent the fabric from pulling up tight and distorting the edge and length of the fabric piece. It's always best to test out any new method of doing the increases or decreases to be sure that you're not going to have a problem. And if you've never used that particular yarn before, it's almost mandatory. Unpleasant surprises are best discovered in a swatch.

Double bed fabrics require that you increase/decrease on the back bed as well as the front to keep the number of needles in sync (however, it is counted as a single increase/decrease even though you've changed both beds). Single bed fabrics that have an extra needle on the back bed to control the edge, need to have that back bed needle moved along when the front bed increases/decreases. It always remains the outside needle. Fabrics that are created by having needles out of work should use method 1 or 2, and we'll cover how to manage those increases/decreases after discussing the methods.

So, how many different methods are there for increasing/decreasing the number of stitches? More than I probably know, but here are descriptions and pros and cons for most of the methods. Cast on about 30 stitches (do all the single bed increases/decreases first and then go back and do the double bed), and work the following increases and then decreases. Do 4 repeats of each method with 4 rows of plain knitting in between, and work the same method on each side of the knitting.

1. The easiest and fastest method for increasing the number of stitches is by bringing into working position an additional needle on the edge. It's done on the side where the lock is and produces a rather ugly edge (elongated loop) that's difficult to seam by hand. It has the advantage that it doesn't disturb any fairisle patterning, and if the edge is going to be encased, it's a good method. It can be used where the fabric is going to have an uneven or unattractive edge that will be buried in a deeper seam.

2. A second method also involves the edge stitch, but you move it over one needle and then pick up the purl from the moved stitch or from the stitch that was next to it and hang the purl on the empty needle. This closes any hole and provides a neater fabric. The edge is better than in the previous method, but if you need to do a very rapid increase (increasing one stitch every row), you **must** use the purl from the stitch that is moved, not from the adjacent stitch. Using the purl from the adjacent stitch will pull up the fabric because that stitch will never really knit, since it keeps being rehung to an empty needle. This increase may require weights to keep the edge from drawing up. Does not matter which side the lock is on.

3. Full fashion increase. This is the method most commonly used on garments where the increases are going to show. You can use the 2, 3 or 5 prong tools. Take the tool and move the same number of stitches as prongs, one needle outward. Pick up a purl and hang it on the empty needle. When you pick up the purl, be consistent. You can pick up the purl from the inside needle (the needle toward the center of the garment), or the outside needle (the needle toward the seam edge), but always do it the same, since

on some fabrics it will show. This increase does distort any pattern you have going and is best used on smooth fabrics or those with no pattern (Fisherman's rib, etc.). This is also one of the least likely to tighten up the edge. As in method 2, where the lock is, doesn't matter. I usually do both sides of a symmetrical piece at the same time.

4. Multiple stitch increases aren't that common, but you should know how to handle them. If it's just 2 stitches that you need to increase, use method #3, but use the 3 or 5 prong tool first (move 3 or 5 stitches), and then use a single or 3 prong tool again, on those stitches that you moved first. This gives you 2 empty needles in a single increase. Fill the empty needles with purls from adjacent stitches and you're finished. For increases of more than 2 stitches, you have the following single bed options:

a. Cast on rag. This is a piece of knitting made before you start the garment and you hang it across the number of needles you need to increase. If you finish your cast on rag with ravel cord and scrap, you can hang open stitches onto the increase needles and pull the ravel cord out after you're done. Be aware that you will have open stitches to deal with at the beginning of the added knitting when you take out the ravel cord and drop the cast on rag.

b. Crochet on. This is a flat bed technique. It's time consuming, but does produce a finished secure cast on for the increased stitches.

c. Double e-wrap. Another flat bed technique the produces a secure cast on, and works well on the Passap. Single e-wraps do not do well at all.

Be aware that b and c are probably going to require some sort of weight until several rows have been knit.

e. For double bed, put needles up on both beds opposite the lock and then knit one row. You want to have yarn around every needle on both beds. Now take the loop off each increase needle with your double eyed tool and twist it and put it back on the needle. This will form a permanent cast on. Knit the next row slowly to be sure that all needles knit, and don't let those increase needles be involved with any of the patterning (all pushers in working position if they are being used).

Decreasing is fairly simple, you just move stitches from the outer edge in toward the middle and if you move 2 stitches onto a needle, you've decreased one stitch. However there's more than one way to put 2 stitches on a single needle, and it's important that you always do it the same way in a garment. Again, consistency is paramount, otherwise your garment will appear haphazard in those spots where you were moving stitches. Always remember that if you're working with all needles in double bed fabric (say Fisherman's rib), you need to move stitches on both beds to keep them in sync. So you move one stitch on the front bed and one on the back bed on each end and that counts as a single decrease.

You can use any of the pronged tools to decrease. The most popular is probably the 3 prong and that is usually called a full fashion decrease. Counting from the outside needle, you move stitches 1,2 and 3 onto needles 2,3 and 4. Taking needle 1 out of work. That's a simple decrease and slants toward the outer edge of the fabric. This method blends well into the existing fabric and doesn't stand out. If you want the decrease to be a bit more defined (and this works wonderfully for raglans where the decreases are part of the design), move the 4th stitch onto the 3rd needle and then move

the stitches from needle 1,2 and 3 (which has 2 stitches on it) onto needles 2, 3 and 4. Moving the 4th stitch outward one needle and then moving everything inward creates an

Page 3 of 3

inward slant to all the stitches that have been moved. In the case of a series of decreases (raglan or V neck) it will create a band of stitches that are very sharply defined.

If you need to decrease 2 stitches at a time, you should involve at least 5 stitches and double up on 2 of the needles. If you take and move stitches 2 and 3 to 5 and 4 you will get a tuck in the fabric which you may not want. It would be better and less noticeable to move stitch 4 to needle 5 and then stitch 2 to needle 3, then move everything in until all the empty needles have stitches on them.

Decreasing multiple stitches in a single row (more than 2) is done on the side with the locks and is accomplished by moving the edge stitch in one needle, pushing the needle up so that both stitches fall behind the latch, placing the yarn in the hook and manually knitting the two stitches off the needle, creating a new stitch – one stitch decreased. Move that edge stitch to the next needle and repeat the manual knitting. Continue in this manner until you've decreased the necessary number of stitches. For E6000 knitters, there's a description of this decrease on page 109 of your instruction book. Dm80 knitters will find it on page 49. You can use this same method for double bed by transferring the back bed stitches to the front bed and then proceeding with the wrap cast off.

When you're dealing with fabric where some needles are not in use, increases/decreases are handled slightly different than normally and the first thought is that you're doing it all wrong.

The first thing to remember is that when you did your gauge, the non-working needles were part of the gauge. Let me use a simple example to explain. Let's assume we're using every other needle on one bed. Now, we need to increase a stitch. How does it happen? This is a case for moving just the edge stitch. We move the edge stitch out **1 needle** and hang the purl on the needle we just moved off of. NO, we do not move out 2 needles. That would be 2 increases, not one. We can't move the edge stitch out to the next needle until the next increase. At that time we will then be back in pattern.

For a decrease, we'd move the edge stitch in 1 needle, not two.

If we happened to be doing 1x1 rib, then on an increase, we would move a needle into work on the opposite bed, in pattern. We'd now be out of needle rule, but the next increase would put us back in sync.

Just remember that when you're doing increases and decreases, you're moving stitches 1 needle width for each one. Depending on your fabric, you may be moving back and forth between beds. You may not be moving in pattern, and you really shouldn't try to put the new stitches into pattern until you have enough new needles to form a pattern repeat. Decreases are a bit easier, but in some cases of tucking, it's just better to let a partial repeat of the pattern stay in straight knit.

Session # 6 – June 2005

Increases and Decreases

There are multiple methods of doing both increases and decreases, and some of those methods are going to need weights on the edges to prevent the fabric from pulling up tight and distorting the edge and length of the fabric piece. It's always best to test out any new method of doing the increases or decreases to be sure that you're not going to have a problem. And if you've never used that particular yarn before, it's almost mandatory. Unpleasant surprises are best discovered in a swatch.

Double bed fabrics require that you increase/decrease on the back bed as well as the front to keep the number of needles in sync (however, it is counted as a single increase/decrease even though you've changed both beds). Single bed fabrics that have an extra needle on the back bed to control the edge, need to have that back bed needle moved along when the front bed increases/decreases. It always remains the outside needle. Fabrics that are created by having needles out of work should use method 1 or 2, and we'll cover how to manage those increases/decreases after discussing the methods.

So, how many different methods are there for increasing/decreasing the number of stitches? More than I probably know, but here are descriptions and pros and cons for most of the methods. Cast on about 30 stitches (do all the single bed increases/decreases first and then go back and do the double bed), and work the following increases and then decreases. Do 4 repeats of each method with 4 rows of plain knitting in between, and work the same method on each side of the knitting.

1. The easiest and fastest method for increasing the number of stitches is by bringing into working position an additional needle on the edge. It's done on the side where the lock is and produces a rather ugly edge (elongated loop) that's difficult to seam by hand. It has the advantage that it doesn't disturb any fairisle patterning, and if the edge is going to be encased, it's a good method. It can be used where the fabric is going to have an uneven or unattractive edge that will be buried in a deeper seam.

2. A second method also involves the edge stitch, but you move it over one needle and then pick up the purl from the moved stitch or from the stitch that was next to it and hang the purl on the empty needle. This closes any hole and provides a neater fabric. The edge is better than in the previous method, but if you need to do a very rapid increase (increasing one stitch every row), you **must** use the purl from the stitch that is moved, not from the adjacent stitch. Using the purl from the adjacent stitch will pull up the fabric because that stitch will never really knit, since it keeps being rehung to an empty needle. This increase may require weights to keep the edge from drawing up. Does not matter which side the lock is on.

3. Full fashion increase. This is the method most commonly used on garments where the increases are going to show. You can use the 2, 3 or 5 prong tools. Take the tool and move the same number of stitches as prongs, one needle outward. Pick up a purl and hang it on the empty needle. When you pick up the purl, be consistent. You can pick up the purl from the inside needle (the needle toward the center of the garment), or the outside needle (the needle toward the seam edge), but always do it the same, since

on some fabrics it will show. This increase does distort any pattern you have going and is best used on smooth fabrics or those with no pattern (Fisherman's rib, etc.). This is also one of the least likely to tighten up the edge. As in method 2, where the lock is, doesn't matter. I usually do both sides of a symmetrical piece at the same time.

4. Multiple stitch increases aren't that common, but you should know how to handle them. If it's just 2 stitches that you need to increase, use method #3, but use the 3 or 5 prong tool first (move 3 or 5 stitches), and then use a single or 3 prong tool again, on those stitches that you moved first. This gives you 2 empty needles in a single increase. Fill the empty needles with purls from adjacent stitches and you're finished. For increases of more than 2 stitches, you have the following single bed options:

a. Cast on rag. This is a piece of knitting made before you start the garment and you hang it across the number of needles you need to increase. If you finish your cast on rag with ravel cord and scrap, you can hang open stitches onto the increase needles and pull the ravel cord out after you're done. Be aware that you will have open stitches to deal with at the beginning of the added knitting when you take out the ravel cord and drop the cast on rag.

b. Crochet on. This is a flat bed technique. It's time consuming, but does produce a finished secure cast on for the increased stitches.

c. Double e-wrap. Another flat bed technique the produces a secure cast on, and works well on the Passap. Single e-wraps do not do well at all.

Be aware that b and c are probably going to require some sort of weight until several rows have been knit.

e. For double bed, put needles up on both beds opposite the lock and then knit one row. You want to have yarn around every needle on both beds. Now take the loop off each increase needle with your double eyed tool and twist it and put it back on the needle. This will form a permanent cast on. Knit the next row slowly to be sure that all needles knit, and don't let those increase needles be involved with any of the patterning (all pushers in working position if they are being used).

Decreasing is fairly simple, you just move stitches from the outer edge in toward the middle and if you move 2 stitches onto a needle, you've decreased one stitch. However there's more than one way to put 2 stitches on a single needle, and it's important that you always do it the same way in a garment. Again, consistency is paramount, otherwise your garment will appear haphazard in those spots where you were moving stitches. Always remember that if you're working with all needles in double bed fabric (say Fisherman's rib), you need to move stitches on both beds to keep them in sync. So you move one stitch on the front bed and one on the back bed on each end and that counts as a single decrease.

You can use any of the pronged tools to decrease. The most popular is probably the 3 prong and that is usually called a full fashion decrease. Counting from the outside needle, you move stitches 1,2 and 3 onto needles 2,3 and 4. Taking needle 1 out of work. That's a simple decrease and slants toward the outer edge of the fabric. This method blends well into the existing fabric and doesn't stand out. If you want the decrease to be a bit more defined (and this works wonderfully for raglans where the decreases are part of the design), move the 4th stitch onto the 3rd needle and then move

the stitches from needle 1,2 and 3 (which has 2 stitches on it) onto needles 2, 3 and 4. Moving the 4th stitch outward one needle and then moving everything inward creates an

Page 3 of 3

inward slant to all the stitches that have been moved. In the case of a series of decreases (raglan or V neck) it will create a band of stitches that are very sharply defined.

If you need to decrease 2 stitches at a time, you should involve at least 5 stitches and double up on 2 of the needles. If you take and move stitches 2 and 3 to 5 and 4 you will get a tuck in the fabric which you may not want. It would be better and less noticeable to move stitch 4 to needle 5 and then stitch 2 to needle 3, then move everything in until all the empty needles have stitches on them.

Decreasing multiple stitches in a single row (more than 2) is done on the side with the locks and is accomplished by moving the edge stitch in one needle, pushing the needle up so that both stitches fall behind the latch, placing the yarn in the hook and manually knitting the two stitches off the needle, creating a new stitch – one stitch decreased. Move that edge stitch to the next needle and repeat the manual knitting. Continue in this manner until you've decreased the necessary number of stitches. For E6000 knitters, there's a description of this decrease on page 109 of your instruction book. Dm80 knitters will find it on page 49. You can use this same method for double bed by transferring the back bed stitches to the front bed and then proceeding with the wrap cast off.

When you're dealing with fabric where some needles are not in use, increases/decreases are handled slightly different than normally and the first thought is that you're doing it all wrong.

The first thing to remember is that when you did your gauge, the non-working needles were part of the gauge. Let me use a simple example to explain. Let's assume we're using every other needle on one bed. Now, we need to increase a stitch. How does it happen? This is a case for moving just the edge stitch. We move the edge stitch out **1 needle** and hang the purl on the needle we just moved off of. NO, we do not move out 2 needles. That would be 2 increases, not one. We can't move the edge stitch out to the next needle until the next increase. At that time we will then be back in pattern.

For a decrease, we'd move the edge stitch in 1 needle, not two.

If we happened to be doing 1x1 rib, then on an increase, we would move a needle into work on the opposite bed, in pattern. We'd now be out of needle rule, but the next increase would put us back in sync.

Just remember that when you're doing increases and decreases, you're moving stitches 1 needle width for each one. Depending on your fabric, you may be moving back and forth between beds. You may not be moving in pattern, and you really shouldn't try to put the new stitches into pattern until you have enough new needles to form a pattern repeat. Decreases are a bit easier, but in some cases of tucking, it's just better to let a partial repeat of the pattern stay in straight knit.

Session # 6 – June 2005

Increases and Decreases

There are multiple methods of doing both increases and decreases, and some of those methods are going to need weights on the edges to prevent the fabric from pulling up tight and distorting the edge and length of the fabric piece. It's always best to test out any new method of doing the increases or decreases to be sure that you're not going to have a problem. And if you've never used that particular yarn before, it's almost mandatory. Unpleasant surprises are best discovered in a swatch.

Double bed fabrics require that you increase/decrease on the back bed as well as the front to keep the number of needles in sync (however, it is counted as a single increase/decrease even though you've changed both beds). Single bed fabrics that have an extra needle on the back bed to control the edge, need to have that back bed needle moved along when the front bed increases/decreases. It always remains the outside needle. Fabrics that are created by having needles out of work should use method 1 or 2, and we'll cover how to manage those increases/decreases after discussing the methods.

So, how many different methods are there for increasing/decreasing the number of stitches? More than I probably know, but here are descriptions and pros and cons for most of the methods. Cast on about 30 stitches (do all the single bed increases/decreases first and then go back and do the double bed), and work the following increases and then decreases. Do 4 repeats of each method with 4 rows of plain knitting in between, and work the same method on each side of the knitting.

1. The easiest and fastest method for increasing the number of stitches is by bringing into working position an additional needle on the edge. It's done on the side where the lock is and produces a rather ugly edge (elongated loop) that's difficult to seam by hand. It has the advantage that it doesn't disturb any fairisle patterning, and if the edge is going to be encased, it's a good method. It can be used where the fabric is going to have an uneven or unattractive edge that will be buried in a deeper seam.

2. A second method also involves the edge stitch, but you move it over one needle and then pick up the purl from the moved stitch or from the stitch that was next to it and hang the purl on the empty needle. This closes any hole and provides a neater fabric. The edge is better than in the previous method, but if you need to do a very rapid increase (increasing one stitch every row), you **must** use the purl from the stitch that is moved, not from the adjacent stitch. Using the purl from the adjacent stitch will pull up the fabric because that stitch will never really knit, since it keeps being rehung to an empty needle. This increase may require weights to keep the edge from drawing up. Does not matter which side the lock is on.

3. Full fashion increase. This is the method most commonly used on garments where the increases are going to show. You can use the 2, 3 or 5 prong tools. Take the tool and move the same number of stitches as prongs, one needle outward. Pick up a purl and hang it on the empty needle. When you pick up the purl, be consistent. You can pick up the purl from the inside needle (the needle toward the center of the garment), or the outside needle (the needle toward the seam edge), but always do it the same, since

on some fabrics it will show. This increase does distort any pattern you have going and is best used on smooth fabrics or those with no pattern (Fisherman's rib, etc.). This is also one of the least likely to tighten up the edge. As in method 2, where the lock is, doesn't matter. I usually do both sides of a symmetrical piece at the same time.

4. Multiple stitch increases aren't that common, but you should know how to handle them. If it's just 2 stitches that you need to increase, use method #3, but use the 3 or 5 prong tool first (move 3 or 5 stitches), and then use a single or 3 prong tool again, on those stitches that you moved first. This gives you 2 empty needles in a single increase. Fill the empty needles with purls from adjacent stitches and you're finished. For increases of more than 2 stitches, you have the following single bed options:

a. Cast on rag. This is a piece of knitting made before you start the garment and you hang it across the number of needles you need to increase. If you finish your cast on rag with ravel cord and scrap, you can hang open stitches onto the increase needles and pull the ravel cord out after you're done. Be aware that you will have open stitches to deal with at the beginning of the added knitting when you take out the ravel cord and drop the cast on rag.

b. Crochet on. This is a flat bed technique. It's time consuming, but does produce a finished secure cast on for the increased stitches.

c. Double e-wrap. Another flat bed technique the produces a secure cast on, and works well on the Passap. Single e-wraps do not do well at all.

Be aware that b and c are probably going to require some sort of weight until several rows have been knit.

e. For double bed, put needles up on both beds opposite the lock and then knit one row. You want to have yarn around every needle on both beds. Now take the loop off each increase needle with your double eyed tool and twist it and put it back on the needle. This will form a permanent cast on. Knit the next row slowly to be sure that all needles knit, and don't let those increase needles be involved with any of the patterning (all pushers in working position if they are being used).

Decreasing is fairly simple, you just move stitches from the outer edge in toward the middle and if you move 2 stitches onto a needle, you've decreased one stitch. However there's more than one way to put 2 stitches on a single needle, and it's important that you always do it the same way in a garment. Again, consistency is paramount, otherwise your garment will appear haphazard in those spots where you were moving stitches. Always remember that if you're working with all needles in double bed fabric (say Fisherman's rib), you need to move stitches on both beds to keep them in sync. So you move one stitch on the front bed and one on the back bed on each end and that counts as a single decrease.

You can use any of the pronged tools to decrease. The most popular is probably the 3 prong and that is usually called a full fashion decrease. Counting from the outside needle, you move stitches 1,2 and 3 onto needles 2,3 and 4. Taking needle 1 out of work. That's a simple decrease and slants toward the outer edge of the fabric. This method blends well into the existing fabric and doesn't stand out. If you want the decrease to be a bit more defined (and this works wonderfully for raglans where the decreases are part of the design), move the 4th stitch onto the 3rd needle and then move

the stitches from needle 1,2 and 3 (which has 2 stitches on it) onto needles 2, 3 and 4. Moving the 4th stitch outward one needle and then moving everything inward creates an

Page 3 of 3

inward slant to all the stitches that have been moved. In the case of a series of decreases (raglan or V neck) it will create a band of stitches that are very sharply defined.

If you need to decrease 2 stitches at a time, you should involve at least 5 stitches and double up on 2 of the needles. If you take and move stitches 2 and 3 to 5 and 4 you will get a tuck in the fabric which you may not want. It would be better and less noticeable to move stitch 4 to needle 5 and then stitch 2 to needle 3, then move everything in until all the empty needles have stitches on them.

Decreasing multiple stitches in a single row (more than 2) is done on the side with the locks and is accomplished by moving the edge stitch in one needle, pushing the needle up so that both stitches fall behind the latch, placing the yarn in the hook and manually knitting the two stitches off the needle, creating a new stitch – one stitch decreased. Move that edge stitch to the next needle and repeat the manual knitting. Continue in this manner until you've decreased the necessary number of stitches. For E6000 knitters, there's a description of this decrease on page 109 of your instruction book. Dm80 knitters will find it on page 49. You can use this same method for double bed by transferring the back bed stitches to the front bed and then proceeding with the wrap cast off.

When you're dealing with fabric where some needles are not in use, increases/decreases are handled slightly different than normally and the first thought is that you're doing it all wrong.

The first thing to remember is that when you did your gauge, the non-working needles were part of the gauge. Let me use a simple example to explain. Let's assume we're using every other needle on one bed. Now, we need to increase a stitch. How does it happen? This is a case for moving just the edge stitch. We move the edge stitch out **1 needle** and hang the purl on the needle we just moved off of. NO, we do not move out 2 needles. That would be 2 increases, not one. We can't move the edge stitch out to the next needle until the next increase. At that time we will then be back in pattern.

For a decrease, we'd move the edge stitch in 1 needle, not two.

If we happened to be doing 1x1 rib, then on an increase, we would move a needle into work on the opposite bed, in pattern. We'd now be out of needle rule, but the next increase would put us back in sync.

Just remember that when you're doing increases and decreases, you're moving stitches 1 needle width for each one. Depending on your fabric, you may be moving back and forth between beds. You may not be moving in pattern, and you really shouldn't try to put the new stitches into pattern until you have enough new needles to form a pattern repeat. Decreases are a bit easier, but in some cases of tucking, it's just better to let a partial repeat of the pattern stay in straight knit.

CASTING or BINDING OFF

One of the hardest things to decide is which cast off to use for a particular piece of knitting. And of course, whether to even cast off (take off on waste yarn and rehang to seam later). But let's just go through the cast off by fabric type.

Single bed cast off.

There are 2 common methods for casting off single bed fabric. Your choice and whether you want a tight or loose cast off.

1. Wrap cast off.

Manually knit the first stitch (push the needle up until the stitch on the needle falls behind the latch, put the free yarn into the hook and then pull the needle down until the previous stitch falls over the needle head and off the needle, leaving you with a new stitch in the hook of the needle).

*With a single decker tool, move that new stitch to the next needle (usually to the left). Manually knit the two stitches on that needle, resulting in one new stitch. Repeat from *. Watch that you don't get the cast off stitches pulled up together resulting in a tight bind off and gathering up the edge of the knitting. One trick is to hang the first bind off back on the first needle so that it keeps the edge stretched out, preventing you from pulling it tight.

2. Crochet cast off.

This can be used any time you have all the stitches on one bed and produces a more relaxed, loose cast off. Just remember that you don't take the stitches off the needles while doing this bind off. That way, if you accidentally drop the stitch off the tool, you don't drop any live stitches - they're still hanging on the needles.

Bring up enough empty needles on the opposite bed to match the number of needles you have on the working bed. Handle down. Set the stitch size on the bed with the empty needles to 1 to 3 full numbers less than the stitch size on the working bed. Locks N/N, knit one row.

Lower the front bed. Push the loops from the previous stitches away from the working bed (this makes the loops of the stitches in the hooks larger and easier to grab).

Using the latch hook end of the yellow or green tool, pick up one side of the first stitch on the right (if your knitting was on the front bed, this would be the first stitch on the right on the front bed). It's easiest if you push the tool between the two sides of the stitch on the needle and pick up the left side yarn. Pull up slightly on this yarn, and move the tool to the next stitch (on the same bed). Push the tool down between the two sides of this stitch until the loop that was on the tool slides behind the latch. Now pull the tool upward while catching one side

of the new stitch (left side is easiest). The old stitch will slide off the tool and you will have the yarn from the current stitch caught in the hook of the tool.

Now you advance to the next stitch to the left and pull it through the loop that you have on the tool.

If it's hard to get the tool between the sides of the stitch because it's tight, then you probably didn't use a large enough stitch size on the opposite bed when you did the N/N row. Or (and this is the problem most new knitters have) you pulled up too far on the yarn in the hook of the tool and tightened up the next couple of stitches (that yarn you pull up has to come from someplace). You will learn to just pull up enough on the tool to slide the old stitch off the tool and to get to the next stitch.

Double bed cast off

The simplest way to cast off double bed is to transfer all the stitches to the front bed and then use one of the single bed cast offs. The only difference would be for the crochet cast off, you increase the back bed stitch size by 1 full number before doing the N/N row.

1. Crocheting off without transferring

This is the most common cast off used for tuck afghans, where you need a stretchy edge.

On the last row of your knitting (locks are at left) change the lock setting to N/N. this makes every needle knit and if you've been doing tuck, ensures that you only have one loop on the needle to contend with.

Set the stitch size on both beds to 8. Knit one row. You will need to pull down on the fabric while you knit this row because it's going to be difficult to knit (the machine isn't going to be fond of knitting with this stitch size).

Lower the front bed. Using the yellow or green tool, pick up the first stitch on the right and then move to the first stitch on the opposite bed and pull that stitch through the loop on the tool. This is exactly like crocheting off on single bed, but you alternate between the beds, picking up the next stitch.

Some knitters find this hard to do while sitting at the machine so they knit several rows with waste yarn and the locks on CX/CX and black strippers (make your stitch size large and the job will be easier) and take the knitting off the machine. Now you can fold the waste yarn down on either side to expose the last stitches of the main yarn and crochet across while you sit in a comfortable chair.

Nelson seam

Used at the shoulder seam or where ever you want a flat bulkless seam and have live stitches to sew into.

Take your knitting off on waste yarn so you have live stitches. Lower the front bed, because you are going to use the needles on the back bed and getting the

front bed out of the way makes it easier. Rehang the first shoulder stitches on the back bed (the garment is laying across the front bed), right side facing you and the stitches behind the latches. Rehang the second shoulder, wrong side facing and keep the stitches in the hooks. Now pull the first piece towards you causing the latches to close over the second shoulder stitches and keep pulling until the stitches from the first piece slide off the needles and over the stitches of the second piece.

Take a tapestry needle and yarn and back stitch through the stitches left on the needles. I start at the left side. Go down through the first stitch from front to back bringing the tapestry needle back to the front to the left of the stitch. Now take the needle down through the next stitch to the right and come up through the stitch on the left. *Skip the stitch immediately to the right and go down through the next one, coming back up through the stitch that is immediately to it's left. Repeat from * until you go through all the stitches twice (first time going down from front to back, second time coming back up through the stitch from back to front). My instructor taught me the following way – “forward 2, back 1” to remember that I always went to the second stitch from where the yarn tail currently came to the front, to go down, and then I went back up just 1 stitch back towards where that tail was.

You can use this seaming/ bind off technique for putting live stitches together with a selvedge edge (called seaming stitches to rows), as long as you hang the rows/selvedge first and the stitches second. That way you have live stitches to sew through.