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A many thanks to John Kirchel for providing this information. Clicking on these links will open a new window.

Construction of the table.

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- 05/18/2000- Buying the mahogany and poplar
- 06/18/2000- Cutting the wood and miter measurements
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- 12/27/2000- Finishing the rail work, staining and inserting the sights
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What is it going to take

- Expenses- How much is this going to cost me? *Updates: 2/9/2001*
- Drawings- What are the dimensions of that again? *Updates: 2/9/2001*
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My quest to build a High End Pool Table

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05/04/2000 As promised here is the website on my quest to build a table... This weekend I go to pick up my slate. I called around to several places, from slate quarries to table manufacturers looking for a 9 ft 3 piece slate. The reason you get the slate first is you need to know where everything lines up. The prices I came up with for a new 9 ft 3 piece slate range from 500-1100 bucks. In my quest I came across a used slate that cost 250 bucks. It is a 1 inch slate that had never been played on because the table that it was installed on was a store demo. It took me 6 months to find my used piece of slate. I could have bought new right away but then again the hunt was half the fun.

I also have lined up the legs for the table. Adams Wood Supply has ball and claw type billiard legs for 56 bucks a leg, solid mahogany. They have a nice web site with a online catalog. They also have pre-made layered poplar rails for $24 per rail (need 6). These are the profiles that were in the Fine Woodworking magazine article "How to build a table", which if you are reading this you know what I am talking about. So now starts the running total of how much I spent to build my own table... By the way if anyone wants me to finish my table faster, email me and I will give you my address for you to send me money ... The next installment will be coming in 2 weeks when I get the poplar slate liners...

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05/18/2000 I found my mahogany for 4.82 a board foot. It is true Honduras and has a beautiful wood grain to it. It is getting milled over the Memorial day weekend. I could have had them mill it but it would have been double the price and I have a friend that has access to milling equipment for free. I will prolly be picking up a can of fix-all also to fill the scratches in the slate... I also got 4 6/4 x 3 inch 9 foot poplar for the slate support it is straight as an arrow. Nice clean, and sharp, corners

Next week I will be developing the drawings for table and posting them here.

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06/18/2000 I cut my wood this weekend. I put the 15 degree bevel across the top of each board.
15 Degree Bevel: I accomplished this with a standard table saw. I tried a couple of different methods but the best way to do it was to clamp the 6/4 X 3 poplar, that I am going to use for the slate support on the top of the frame, to the table of the saw for a guide. I left the rip fence on the saw but this was only to make sure the wood did not 'walk' as I pushed it through. To get the exact measurement for the 10 7/8" for the width of the sides I set the saw blade at the 15 degree angle and ran it up so that it would protrude through the top of the board about a half an inch. I then layed the mahogany on the table at the end of the blade. I then moved the saw blade around until the closest tip of the inside tooth was in line with the top of the board. I then measured from the side of the board to the point on that tooth. When I had that measurement I clamped down that side of the poplar to the table. I measured from the outside of the poplar at the clamp and moved the other end of the poplar to place the other clamp at that measurement. Thus giving me a long rip fence to guide the *expensive* hardwood. One important note here... You want to have the blade angle so that the long side is up. The reason for this is if you end up lifting or dropping (not literally *g*) the end of your wood when pushing it through the saw

the blade will cut into the waste side of the cut thus not destroying your wood. So remember long side up!!!

14.5 Degree Crosscut with a 43 degree Bevel: This ended up being easier than I thought. I called around to several cabinet makers in the area asking to have this done. Something I found out was if they are busy then you will pay as much as 75 bucks to have these precise cuts made. So after 10 or so cabinet makers one of them said, "Look either you pay me 60 bucks to have it done or go rent the saw and do it yourself." So I did. I paid 36 bucks for the day for a Makita Compound Miter Sliding arm saw. It had a very nice set up on it. A clamp to hold your work and a sturdy back fence to make sure the stock was aligned with the blade. I used a couple of shareware programs to find out what the two angles were going to be. They both gave me around the same numbers for the angles. For a slope of 15 degrees on the sides of the frame you need a 14.5 degree cross cut with a 43 degree bevel. Check that your angles are correct before each cut. Because sometimes when you place your work on the saw you may inadvertantly hit the blade or the table and knock it out of adjustment. Once you get the one end set up make 4 cuts on the 3 boards you have. It is much quicker to do it this way instead of having to readjust for each end. One side note here... *When you place your work into the saw it is very important to support the*

other end, and have it clamped to the table. The reason for this is if you do not have it supported and clamped and your board sags you are actually cutting at a sharper angle (not good when making knats ass exact miter cuts). After cutting the one end of each board and the middle of one of them (*remember to leave yourself at least 53 inches for each half, as these are going to be your 49 inch sides*) readjust your saw the other direction so that you are cutting 43 degrees the other way with the 14.5 degree crosscut. The best way I found to get the exact measurements on the length of the board was to put the 15 degree bevel against the fence, make my cut, then measure back from the corner 8 inches and put a mark on the fence. Then take the total measurement and of the board, subtract 8 inches and place a mark on the board. Now all I have to do is line up the 8 inch mark on the board and the mark on the fence. On slide arm saws you start the moter and start on the end closest to you and push the blade towards the back. I learned this quickly when I started the saw and started near the rip fence. The blade shot through my wood, got jammed up, and kicked off the circut breaker to the garage. Scared me as that blade ran towards me *g*.

So where are we at?: So now at this point we have two pieces of 6/4 X 10 7/8 inch X 49 inch, and two pieces of 6/4 X 10 7/8 inch X 99 inch mahogany. By the way the legs and the subrails came in last week. I should be framing up the frame next week. I have to go buy some plywood and some 2 X 4's for some jigs because with a slope it is really tough to get clamps to work right... Oh and I have added a new section on the page called Drawings. As I

build this I will be posting drawings of the pieces to make it easier on someone else who tries this project after me.

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8/07/2000 - Sorry I have not posted anything in a while. I have been doing a ton of sanding... And more sanding... and even more sanding... But it is to the point of where I like it because I just framed up the slate base this past weekend. Let me tell you it was dang hot in my garage :). Believe it or not you can do this by yourself. There are 300 different ways to do it, but I suggest you to do it the way that I did and you will minimize the problems that you can have...

First I got some 1 1/2 inch angle iron and cut 8 - 4 inch lengths out of them. I clamped two angle irons together and on one leg of the angle iron I drilled two holes that are at a 45 degree angle from the other leg. Then I unclamped it and reclamped the other two legs together and ran a 5/16 inch drill bit through the other side one inch up from the nearest hole. I made 4 sets of these brackets to accommodate the four miter corners that I will mount the brackets to. I then measured back from the miter angle, on the top of the board, 1/4 of an inch and made a line. I then centered the 5/8 inch hole on the angle and bolted it to the top of the board on each end of the long side using standard 1 inch wood screws.

After all the brackets were installed I flipped each board over and ran a 5/8 inch all thread through each matching hole on each bracket.

Threw on a couple of washers and nuts and tightened it down finger tight. I then started shimming up each side of the frame so that it was level all the way around. With these brackets in place I never had to worry about my frame falling over or loosing alignment. Also it made it easy to swing the boards and put Tightbond II in each of the joints before bolting them together... I did each joint with one screw to make sure that they lined up and I was able to still move the frame around to get it square. *Note: To find out if you are square or not the easiest way is to measure from the furthest left hand corner to the nearest right hand corner. Then measure from the furthest right hand corner to the nearest left hand corner. If those 2 measurements match then you are square. If not just lift the nearest end and swing it in the same direction as the longest further corner.* Once I was square and level I ran the rest of the bolts in both directions (3 both ways).

I flipped the whole base over and removed the brackets. I then cut 1 1/4 inch blocks 7 inches long with one side having a 7 degree bevel. I then used my miter saw to cut the ends so they would be level with the top bevel when I used them for corner glue blocks. I swung the base 15 degrees and the blade 15 degrees. I then had the inside corner (the one opposite the corner being glued) facing me and on top when I cut them. I glued them and ran 2 - 2 inch wood screws in both directions. Now you know the reason for the 7 degree bevel on one side. It allows the block to fit squarely in the corner. Now at this point is a great time to do some finishing sanding on the sides to catch any glue that may of seeped out of the corners. Believe me it is a lot easier to sand out semi dried glue than to sand out glue that has set for 24 hours. As you can see from the pictures, it is starting to look like a real table at this point. The miter cuts were right on. I do have some minor gaping at the joints, but after measuring them, nothing over 1/32 of an inch. Now all I

have to do is continue routing the ball and claw on the legs so they look like a fine piece of furniture. I should have an update in the next couple of weeks, now that most of the sanding on the frame is done. If the explanation of the brackets was too confusing email me and I will post a drawing of what I meant. Thanx for staying tuned.

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9/16/2000- Wow has it been a busy weekend... Let me see where do I start. Sold my old Brunswick Commander pool table two weeks ago, so that gave me more room to work in the garage.

I finished carving the legs. What I mean by that is the legs were already carved by Adams wood supply. But I wanted a more hand carved look to them. This step is completely optional to you. And let me tell you it adds around 2 weeks to the time that it takes to build the table. You take a dremel and route around ball and claw on the feet and it looks as though they were hand carved. It also requires a ton of hand sanding when you get done because the ball needs to be rounded after the dremel work.

I purchased 2, 2 X 12 X 10 feet Douglas Fir (Construction Fir) and ripped one board down to 10 inches with a 15 degree bevel on one side. Then I took the inside measurement of the frame 1 1/2 inches from the base. I cut 2 sections with a 15 degree bevel on both ends. *The reason I can't give dimensions of these boards is because it will be different from your table. It all depends on how wide your frame boards were planed down to...* Don't throw away those spare pieces that you ripped off the side of the Fir. You will use them for glue blocks to hold the support into place. I cut 4 pieces of the spare Fir 10 inches long with a 15

degree bevel at the end then layed one of my support boards in place and glued in the beveled sides. I placed my two 10 inch glue blocks at either end of the support boards and screwed them into place using 2 inch #10 screws. I did the same at the other end. I then layed in the rest of the left over Fir at the end. Cut them with 90 degree ends so they would fit tightly between the other two glue blocks. I ran 2 inch screws in both directions (down and out).

Now came the easy part... Actually it wasn't that bad. As long as you kept everything level when you installed your supports, then this is pretty quick. Support one end of your frame 17 inches off the ground. (Doesn't really matter what you use to do this as long as it is secure. I actually used a recycle bin with a brick and a board on it.) After the end is propped up you can put the legs under the other end. Use enough glue on all of the points that contact between the leg and the support. Glue one leg at a time!!! Run 2 inch countersunk screws though the support Fir into the leg. 3 should be enough to hold it into place. Don't worry the Tightbond II will hold the joint better than any screw will. Then do the other leg. Go to the other end and remove your support and put in the legs. After you get them all bolted in. Fill the holes on the sides of the frame with wood putty. The reason we waited to do this is so the putty did not work its way out while we were torqueing the frame installing the supports. Now go to bed it has been a long day...

9/17/2000- You wake up to a dried frame with legs and guess what you are ready to make this hunk of wood start to look like a pool table. Sand down the wood putty. Go get yourself a finish no matter what type you want. I used Minwax Polyshades 225 Glossy Bombay Mahogany. As you can tell in the pictures it gave it a nice deep glossy "rich" look. I did two coats and used 000 fine steelwool between each coat only because that was all I needed. If

you spend the time sanding you don't have to cover it up with finish... I also posted pictures of my $125.00 pockets. They are RC Design and look spectacular. They have a couple of minor dings in them but it was worth the 200 dollar discount versus new. I am also updating the expense section to reflect the latest purchases... Still on budget. I think it is starting to look beautiful but then again. Beauty is in the eye of the beholder.

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Horizontal Supports

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10/15/2000- Well after going through a few things at work and finally finding time to work on the table I am proud to say that the horizontal supports are in place. But before I get into this a few people have asked how dark I stained the table. It is not that dark it just looked that way in the picture. As I stated before it is 225 Glossy Bombay Mahogany which really brings out the red in the Honduras Mahogany and the gloss is beautiful.

Ok on to the horizontal cross members. This is where the second piece of Fir came into play. Because I already explained to you the easiest way to rip wood I will not go into how I set up my table saw to do it. All you need to know is I ripped the 2 x 12 inch fir (it really is not 12 inches but anyway) 7 and 4 1/2 inches. I will use the 4 1/2 inch board for the vertical support later this week. Ok now comes the tricky part. Remember when you questioned whether or not you were ever going to use algebra in real life. Guess what... Don't worry I will walk you through it real simple. First you need to go measure your center piece of slate. Divide that number by 2. Now go measure the long side of your frame. You must do both sides, because I don't care how good you are I can almost guarantee that one side is not the same size as the other. I guess it is inherent to miter corners. Anyway once you have the 1/2 dimension of your side you want to measure

and mark a line on the top of your frame equal to the 1/2 dimension of your slate. The reason for this is you want the center of the slate to line up with the center of the frame. Do the same on the other side. You should have 3 lines on each side of your frame... the start of the slate the center of the long side and the end of the slate. Now place a square at the line that marks the start of the slate. (This is where the algebra comes into play) Keep it square with the top of the frame and slide it out until the inside of the square touches the bottom of your frame. Now write down the measurement at the top of the square and the length of the square. I. E.: Mine was 2 3/4 by 10 1/8 inches. Now convert the fractions into decimals so you come up with 2.750 and 10.125. Take the 2.750 and divide it by 10.125 (You should come up with a huge number) mine was .2716049.... Now you ask what is the importance of this number? Well it is what is known as a slope value. We can now draw a line on the end of our 7 inch support board that will have the exact angle as the inside angle of the frame. Take our slope value and multiply it by 7, which I come up with 1.90123456.... Now convert the .90123456 to a fraction by multiplying it by 16 I come out with a 14.41 which is pretty close to 29/32 so draw a line that is square to the end of your 7 inch board then measure back and mark a line 1 29/32 on one side. Connect the two measurements and cut. Do the same thing for the other side after you have measured the distance between the inside tops of each side of your frame. You will be amazed at how snug the board will fit, you will ask yourself whether or not you need the glue blocks. Cut up some glue blocks and drill them in place while holding the supports lined up with the lines that you marked in the sides for the edge of the slate. And keep them level and square with the top of the frame. Glue the backs first, then bolt them in. When you get everything bolted, slide the supports out, put ample glue in the grove and slide the supports back in. **This is very important that**

you glue the supports to the sides of the frame. Many table manufactures do not do this and that is why you must get your table re-leveled every year and a half to 2 years. Because the sides sag under the weight of the slate. Better to be safe than sorry. Don't worry we will be covering the sag of the short sides in my next post.

Just to answer a few quick questions I keep getting about the table. First off I have no plans that I am working off of. It is a actually something I have in my head that I push and tweak in the dark recesses of my brain. I have seen and read a couple of articles on building a table that sort of pushed me in the right direction. Yes I am using some of the articles techniques in building the table, although I have changed a lot of it because of personal preference. There really is 3 ways to build a table. One that will last a week, one that will last a couple of years or one that you hope your son will pass on to his son as a wedding gift. I am shooting for the last one. So if you want a copy of the plans, be patient I will be posting them. I have started with the first set only because I have had time to do it. As soon as I get time to do the others I will. **And YES they will be free!!!!!** The other question I get is why am I giving this information away? Anyone that knows me knows that I like money like the next guy. But my passion for the game is my payment for sharing this information. If I get recognized as "The guy that built the table on the internet" when I walk into a pool hall (which it has already happened). It puts a smile on my face and makes me feel great when someone says... "Wow, you really are doing a nice job." And hey I end up with a solid mahogany table for a heck of a lot less than what I would buy it new, with the satisfaction that I built it myself.

Stay tuned....

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My quest to build a High End Pool Table

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11/06/2000-Another busy weekend! I was able to get quite a bit accomplished this weekend. I finally got a chance to throw in some 1/4 inch lag bolts into the legs. I did 3 per leg this will ensure that if a fat guy leans into my table to make a shot that the legs will go NOWHERE!

I pushed around the idea of not putting in a vertical support but finally forced myself to. It is funny how you get anxious to finish something and try and skip steps. The clincher was after going out into the garage for a smoke and looking at the legs and asking myself "Why would you spend 4 weeks carving the legs and then skip the step of putting in the vertical support that is probably one of the most important parts of the table. It is the part that pulls the frame together. It is wierd how it works. It creates 6 squares in the frame, but don't look at it that way. What it actually imposes is 24 triangles. One corner supports the opposite corner. With the weight of the slate if the sides start to bevel out it pulls on the horizontal support thus pulling on the end support and pulling the ends up. And vise versa on the ends, if they start to pull away it pulls in on the sides thus lifting the slate again. It becomes sort of a self leveling mechanism in the table. You will mostly find these in your high end tables. Not that they are difficult or expensive to install, just time consuming. To make them you will use the same method of

calculating the sides bevel when we did the horizontal cross members. But you will have to use a sliding square. What I did was loosen the nut on the square. Lay the ruler portion of the square on the top of the frame. Line up an inch mark on the ruler to the inner corner of the frame. Then slide the 90 degree side until it just touches the inside of the frame. Tighten the screw and take it to the left over 2 x 5 fir that we had left over from the horizontal supports. Get a straight edge and line it up with the inch mark and the bottom of the 90 degree and draw a line. You now have a perfect angle of the side drawn on your board. Cut the end of the board. Now measure from the inside corner of the frame to the first horizontal support. Cut you fir the exact length of this measurement. Do the same thing for the other end of the frame. Then measure from inside of one horizontal frame to the inside of the other. Cut the rest of the fir to this dimension. To make up the glue blocks. I cut 8 blocks 4 inches long by 1 5/16 square, 4 blocks 5 1/2 inches by 1 5/16 square, 4 blocks 4 inches by 1 5/16 inches with 15 degree bevels at the end (like a parallelagram), and 2 blocks 5 1/2 inches by 1 5/16 square with a 15 degree bevel on one side. The reason for the bevel on the one side is so when the glueblock is in place on the 15 degree sides will be level against the bottom of the support. Ok now put the 5 1/2 inch glueblocks on the bottom of the U on sides and the horizontal supports. Attach them so the top of the supports align with the top of the frame. Remember to use the blocks that have the 15 degree bevel on the sides with the bevel facing up. You want to also make sure that they are in the middle of the table. Then attach the 4 inch blocks to the sides and the supports. With enough room for the vertical boards to fit snugly between them. Now you can slide your in supports and glue them into place.

Now we can put on the slate support. Remember the poplar that we have been using

as a straight edge for our table saw. Guess what, we are no longer going to use it for that anymore. To cut the pieces for the slate support you take the 2 by 3 poplar and cut 45 degree angles at the ends as they would line up with the pockets. You have to leave clearance for mounting the pocket leathers to the slate liner. So your best bet is to cut 1 inch back from the holes in the pocket. What I did was measure 2 1/8 inches from each corner and make a line. Then go from the center line that we marked to find the center of the frame for the horizontal supports and mark 2 lines 3 inches from that line on either side. Now measure from line to line on each side. And cut opposing 45 degree cuts on your poplar, and glue and bolt them into place. Then I measured from poplar to poplar at the horizontal supports and cut 2 pieces the exact distance between them. Glued and bolted them onto the support, this will give our slate a place to sit on the seams. It is safe to say at this point that the **frame is done, and we are ready for slate!!!** I appreciate all of you for taking the time and reading this as it takes about an hour to update this stuff. In return I ask that you post in my Guestbook. I have cloth coming this week and must clean up the garage. Because once the slate gets installed on the table it cannot be moved (Heavy, Heavy, Heavy). Hope you are enjoying the ride. See you next week when we start to glue the slate liner on the slate.

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Installing the slate liner, cutting the pocket, leveling the slate

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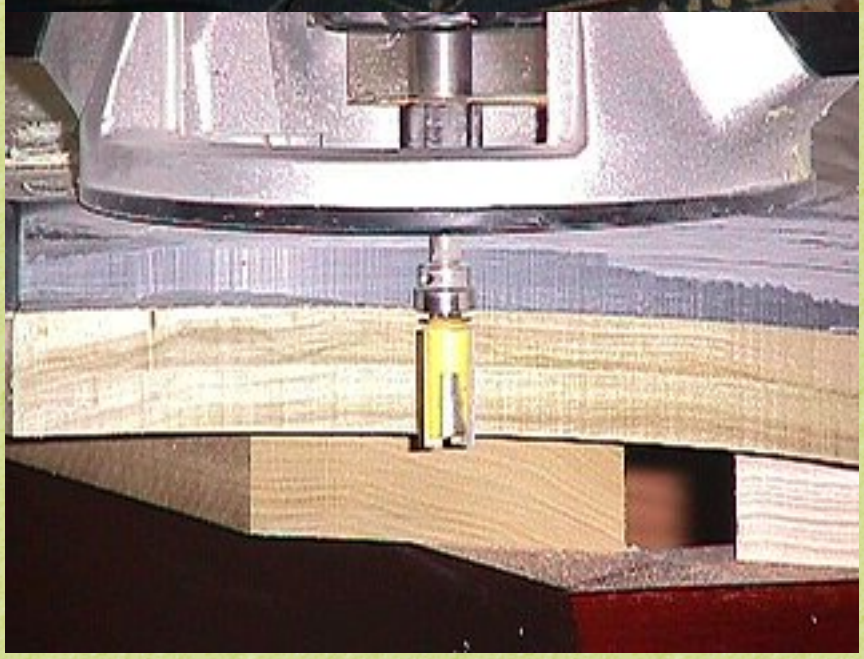
11/18/2000 I got the slate put on the frame weekend before last. Smashed the heck out of my finger doing it also (as you will notice in the expenses section I added neosporin and band aids to the price list, thanks gideon for the idea to add it to the expenses :)). But as Monte Python says "Merely a flesh wound". I put it on upside down because I needed to put on the poplar slate liner to do this I used the 1 x 8 poplar that I purchased and went around the outside of each piece except where the seams are. There I ripped one of the 1 X 8 poplar pieces down the middle. I glued 2 pieces a night because I did not have enough C Clamps to do all of them at once. I used Tightbond II to mount the poplar to the slate. Now for the pockets I took my square and slid it out so the end of the rule touched the slate inside the pocket. I layed the measurement out on the top of the poplar. I took my jig saw and cut out the excess poplar leaving about 1/8 - 1/4 inch lip (being very careful not to cut the slate). The center pockets were a little more tricky. I found a paint can that fit perfectly inside the side pocket and drew a line around it on the top of the poplar then just cut inside the line.

I then asked my neighbor to help flip the slate back over and put it pretty close to the final position it will sit. I went out and bought a straight cutting bit for my router. These bits are different than all other bits because the



bearing is on the top of blade. They are also known as template bits. It will work well with a lot of the other things that we need to do with the rails. They range in price from $20 to $25 and are a necessity when doing a project like this. When routing the pockets you want to keep the router level with the slate and take around 1/2 inch cuts into the poplar and then readjust your router and take another pass. If you try to take too deep of a cut your bit will "chatter". Not a good thing when you want a smooth pocket face. *I should mention at this point that there is a possibility that you will score the inside of the slate when routing the pocket. This is actually a good thing. When your slate was cut at the rock mill the inside of your pocket was not flush. You are going to fix this now.* When you get done your pocket will look like the picture to the left. Also you will see a shot of the pocket with the router bit I was talking about.

Now comes the fun part!!! We make an attempt to level the slate. There is a reason that you let the slate sit on top of the frame and the frame on top of the carpet for a week. This will allow the feet to dig into the carpet and put permanent dents in it. Thus if you tried to level the frame when you first put the slate on you will find out that it is unlevel in a couple of days. So after you leave it set for a while go rent yourself or ask around for a machinists level. It is really the only way to precisely level a table. Find the lowest point and put a floor jack under the leg support and jack up that end of the table until you are pretty close to level. Make up some shims out of the left over poplar that you have from the slate liner. Make sure if you are using a lot of shims with one on top of another glue them together. That way if someone leans into the table it will not slide on the shims. Once you have adjusted the low end up. Then go for the left and right. My garage floor, where the table will sit, has a slope of 1 1/4 inches to it so my shims on one end are pretty thick.

Once you get it pretty close to level (you will have one slate that is out of level and two others that are pretty close) we are looking for a happy meduim here. You then get yourself 3 decks of playing cards. No we are not going to play solitare at this point. We are going to cut them in half and use them to shim the slate. The first thing you want to look for is the highest seam (where one slate piece is higher than another at the seam) that is the slate you will start with first. Slide the slates so they are where they will sit when they are bolted down. You will place shims at four points two on each side to start. Level the highest slate by placing shims under the lowest points of the slate. Be sure to put weight on the sides when you think you are close because shims can be deceiving. You press down on a side and find out that the slate wobbles thus when you put a screw in it, it will warp the slate. So make sure that it is secure on all 4 points. Then shim up the next piece of slate so that the seams match then level that piece. Level the third piece seam to the second pieces seam and then level the last piece. When you are done all 3 pieces should be level and the seams have no high points . The easiest way to level the seam is to take one of the uncut playing cards and with a light behind it lay it on edge by the seam. If it is level you will see no light from under the card. And the final test is to spin a ball in place. As you can see in the picture the sixball is spinning like a top. If you are the least bit unlevel the ball will spin towards the lowest point.

I got Granito cloth, Championship rail cushions, rail mount plates (4 per rail) available at Ozone Park Billiards and have updated the expenses section of the website. So now the grand total comes to $1539.62, still 61 bucks under budget. Not too shabby if I do say so myself. Next week I will tell you how to drill the slate to mount it to the frame. See you then...

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Drilling the holes for the slate, final shimming, sealing the seams

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11/26/2000 It was a rather nice 4 day weekend. I got a lot done even though I don't have many images to show. I reshimmed the slate again after some settling occured. The problem with putting the slate on the first time is the frame, shims, legs, and carpet all have to settle into where they are going to sit for a long time. So you need to be patient at this point and let everything sink in. I would suggest letting everything sit for at least 2 weeks. I know this may sound insane, and you may be very excited to get everything put together. But in the long run you will thank yourself that you did. I drilled holes in the slate and counter sunk them. I used 2 drill bits to do this. A standard 9/32 drill bit and a countersinking drill bit. extend the 9/32 bit out until there is around 3/4 of an inch of thread left over on your screw and drill into the slate trying to stay as vertical as possible. Drill 5 holes in the end pieces of slate and 4 holes in the center pieces. You want to drill them as close to the seams and the ends as possible. except for the holes on the short rail, which you will drill in the center of the rail. Counter sink the holes at least 1/32 deeper than flush. You will fill these later after you are sure that the seams and the slate are level. Then screw in a 3 1/2 inch number 10 screw into each of these holes. *DO NOT USE A POWER DRILL OR POWERED*

SCREW DRIVER TO DO THIS!!! As tempting as it may be a power drill will get away from you and drive the screw too deep or to fast and the screw will heat up causing it to expand. When that happens you will be driving a big screw into a little hole. And you will chip your slate. Some minor chipping will happen it is a fact of life even when you screw it in with you hand. But a little chip is much easier to fill than a big one... When you get the screws just snug stick shims in the center of the seams. This is pretty easy if you have strong fingers. Stick the cards in until you can't fit any more in, then add one. Push up on the slate from the under side and slide the cards in You now have perfect support in the seam area. Now Tighten down all of the screws.

After you get the screws in, check the seams and the level of each section of slate. You may have to do some minor adjusting again. Stick a card in here, pull one out there. If it takes you around 4 to 6 hours to shim your table, you are not slow. All told I have spent probably eight hours leveling the table. And I plan on doing it again one more time before I put the cloth on it. Besides the rails it is the most important part of the table. After you get it all level again you want to get your fixall and mix up a batch of it. I still am not sure about the fixall because when it dries it leaves a white powder. I may end up going with "Bondo" instead to fill the scratches (a thanks goes out to Jack D for this suggestion). But anyway as a test I put fixall in all of the scratches on the slate and the seams. I used a 6 inch scraper to "strike" it smooth. The I lightly sanded ("lightly" being the key word here) using 320 grit sand paper when it dried and wiped it off with a damp cloth. Now is a great time to test you slate by rolling a ball across it from several different angles. Remember a ball rolls to the lowest point. Start from corner to corner. You do not need to roll it fast. Just a small push will make the ball roll from one end to the other. If you roll it too fast you will not get to see the imperfections in the

slate or the seams. Then roll the other corners then side pocket to side pocket. then from one inch on one side of a seam to one inch on the other side of the seam. Do this on both sides of the seam. If your seams are off even a little bit the ball will not make it over the seam.

Next week I will be posting how to build the rails. I have already started but I think I have given you enough to read at this point... Hope you all had a nice Thanksgiving and looks like we may be playing pool by Christmas Morning!!!

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Building the rails and ripping them to width

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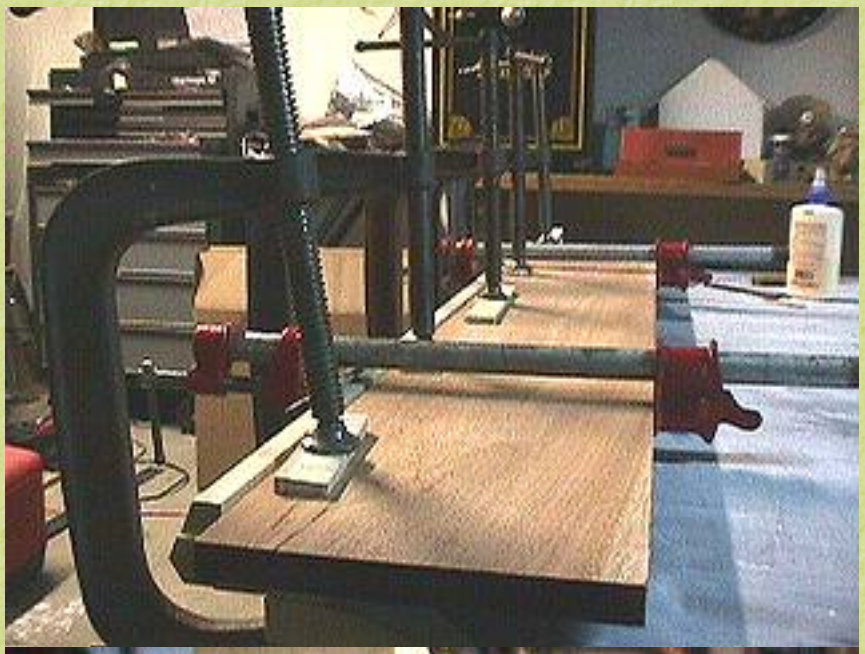

12/06/2000- Today we start to build the rails. This is probably the easiest part of the table. Enjoy it because the next entry is going to be the most critical. So lets get started. Take your 1 x 6 mahogany and glue it to the rail using the tight bond. You want to make sure that you put an ample amount of glue on the subrail and clamp it to the flatest surface possible. The slate makes a great base for this. Clamp it in several locations on the rail. That way you will have no voids in the rail. If you do you will hear a high pitched thud when you tap on the top of the rail and it will not be as strong. You also want to clamp across the rail to pull the subrail against the mahogany. To do this take the angle iron that we used to clamp the corners of the frame and put it on the edge of the subrail where the cushion goes, that way you will not be putting pressure on the softwood nose of the subrail. Let it sit for at least 3 - 4 hours depending on the temp in the room. Do this with all 6 of the rails. The pictures show how to clamp and how tight the seam must be on the feather strip. If you have it too far back your feather strip will be too

loose and will fall out. You do not want this because you cloth will fall off your rail.

Now that you have glued all of your rails you want to rip the excess mahogany off the rail. Depending on what type of design you want on your rails determines what width the rails are. I am just going to go with a straight routed edge so I cut mine with a 4 1/4 inch rail. So I set up my table saw to rip a 5 1/2 inch board and ran each rail through. Next week we will cut the ends and drill the pocket ear holes. See you then...

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Building the rails, Drilling the Pocket Ear Holes, Measuring and cutting the rails

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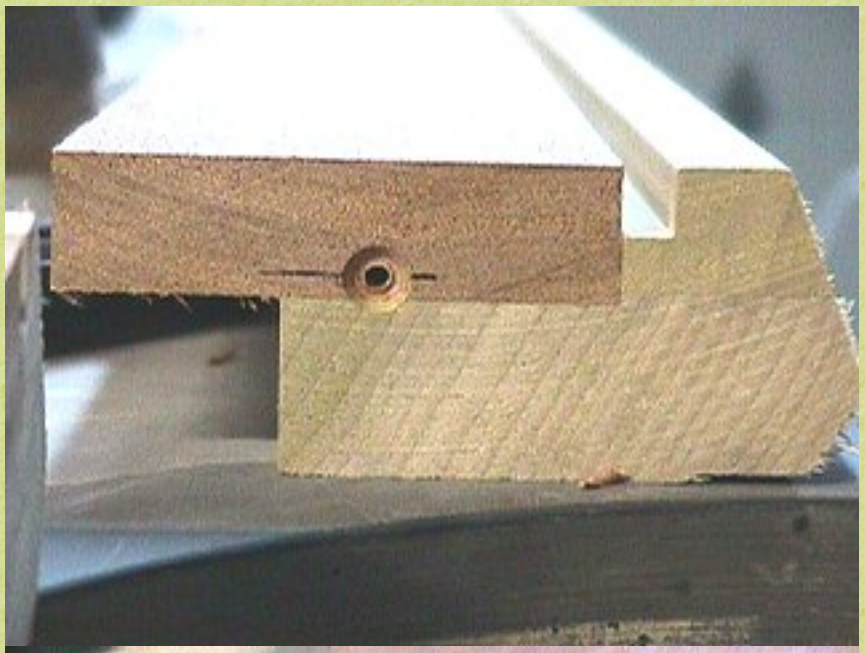
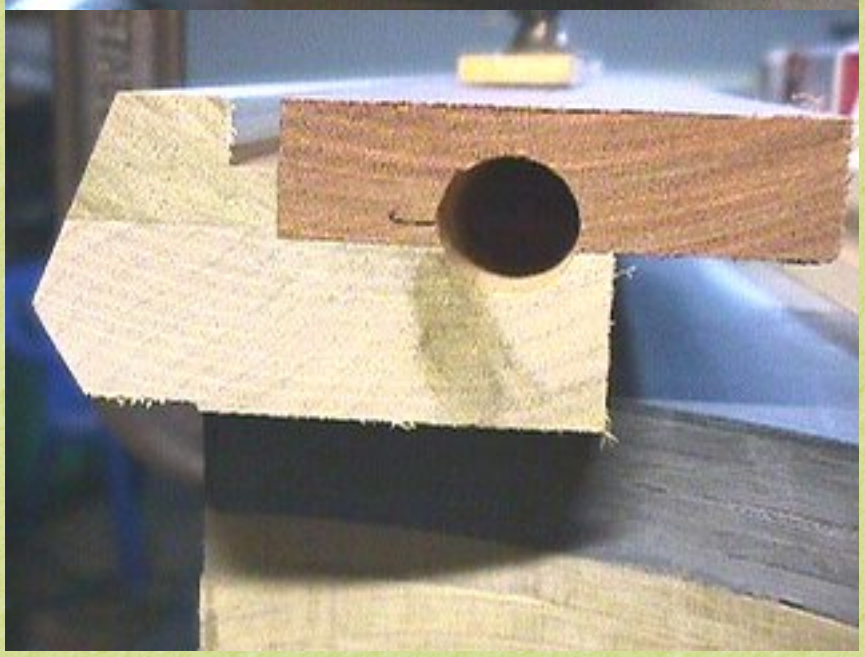
12/13/2000- Here comes the most critical part of the table... Building the rails. Hang on to your shorts cuz this is going to be a wild ride.... This is one of the reasons that the site has not been updated in a while.

I had to calculate the exact length of the rails so there would be no gaps in the pockets where they meet the rail. The first way I tried to calculate it was by the pocket ear holes... Bad move. The second way was by the front of the blank for the subrail.. Oops another bad move. So I finally came up with a way that is a set value all the way around the table. I went by the inside line of where the mahogany matches up with the subrail in the feather strip grove. The reason I went to this point is because that is where the point of the pocket lines up with the rail. It is also the point where the angles start for the pocket opening. So here goes. First you measure the pocket and find that the point of the pocket opening to the opposite side is 3 inches. Then you measure from the back of the feather strip to the nose of the cushion (yes you will need your cushions now). That measurement comes to 2 inches. Now take the playing area, 50 width and add 4 inches (this is the measurement from feather strip to nose of cushion x 2 because you have 2 rails). So now you have to subtract the pocket





measurement of 3 inches from the 54 inches to come up with the end rail size. I.E. 48 inches. Now do the same for the side rails. 100 inch playing area + 4 for the cushion to feather strip measurement - 6 for the pocket measurement. You come up with 98 inches. Now don't forget your side pocket. They typically are 5 inches across. So you subtract the 5 from the 98 and come up with 93. Now you devide that by 2 because you have 2 side rails. 46 1/2 inches is the size of the side rail. **DON'T CUT THEM YET!!!** You want to cut them a little long because we have to do something first. So straight cut them around an 1/8th of an inch larger than the calculated measurement. The reason for this is it is much easier to drill into a straight piece of wood than an angled one (I will get to that).

Now to find the center of the pocket ear holes. Line your pocket up so the point on the pocket is lined up with the back edge of the feather strip. then measure back from the feather strip grove to the center of the post. That is how far back from the feather strip the hole will be. Now measure from the top of the pocket to the bottom of the pocket ear (that is actually the part that will be contacting the rail when you have them bolted in) and subtract 1/6 - 1/8 of an inch from that measurement (because you want the pocket to sit above the rail a little. Now subtract 11/32 (the center of 11/16) from that measurement. You now have how far from the top of the rail you have drill. My two measurements came out 2 1/2 inches from the front of the subrail by 7/8ths of an inch from the top of the rail. Now Take your #10 counter sinking drill bit and predrill holes at those locations. Go ahead and drive the counter sink into the rail. Be sure to keep the drill bit square with the rail both vertically and horizontally so you do not end up drilling the hole crooked. After you predrill the rail. Run a 11/16th drill bit into the predrilled hole. Mark the drill bit with a piece of tape so you know how deep you have drilled. I drilled mine 1 3/4 inches

deep so I would have some left over after I cut the rail to its proper dimension. After drilling all the holes in the end of the rails, now you can cut your rails to the proper length. You want to set your miter saw blade (or table saw blade) at a 5 degree angle. You will cut the rail end angled out from bottom to top. The reason for this is the angle will allow room for the leather on the pocket and give you a tight fit between the rail and pocket. Now you know why we waited on cutting these angles. Imagine trying to keep the drill level and square trying to drill into an angled end, NO THANK YOU.

Now that you have all the proper lengths. Go ahead and put them on your table with the pockets installed. Now I want you to try something... **TRY AND STOP STARING AT IT!!!**. Beautiful ain't she!

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Drilling the rail mount holes, continuing the rail work

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12/23/2000- Well Santa brought me time to work on the table as a gift. First we need to drill the rail mount holes in the slate. This is when I decided I would use 4 mount screws for the rails so they would be very solid. I borrowed this design from a well known table manufacturer so I will not take credit for it. I found the dimension of my slate and found out where the rails were going to sit on the slate. It worked out that 3/16ths of an inch of the subrail would overhang the slate. I then measured my rail caps to find out where the center of the mount hole would be on my rail when they were installed. I took that measurement and subtracted 3/16ths of an inch and that gave me how far from the edge of the slate I needed to drill the center of my 11/16ths hole. *I must say when drilling holes in slate, Take your time and do not try to push the bit through the slate. The heat will expand the bit and chip your slate or even crack it. Don't worry it will go through JUST TAKE YOUR TIME*. I used the same bit that I drilled the ends of the rails for the pocket ear holes with. I marked off as best the seam would allow 4 evenly spaced holes (24 in all). And carefully drilled the holes from the top. Around the 16th hole my drill bit lost its edge and I had to resharpen it. Every other hole I would continue to sharpen the bit to make sure I did not crack

the slate when drilling.

Now we will continue to finish up the rails and install the rail caps. We have to drill the holes for the rail caps and for the pocket ear mount bolts. I laid my rails on the table where they were going to be located with the pockets in place. I then went up under the slate and used a magic marker stuck up through the mount holes in the slate to mark where the center of the holes were as they would line up with the rails. Flipping the rails over I had perfectly marked centers of where I was going to have my allthread from my rail mount caps to go into the rail. I also measured my pockets to find the center of my pocket ear mounting bolts. You want to measure from the top as some pocket irons are angled on the mounting side of the iron (that is so they have a tight fit when installed). Either way we want to measure from the top. You then want to subtract 1/8th of an inch from that measurement to accomodate the 5 degree angle at the end of your rail. Mark this from the center of the pocket ear hole on the underside of the rail. Now for the Rail caps I used a 7/16ths drill bit to drill the rail cap hole. This will allow the allthread in the rail cap to be inserted into the rail so we know where to route the rail to flush mount the caps. Drill approximately 1/2 inch into the rail. We can now drill the 7/16ths hole for the pocket ear where we marked our holes. It sounds like I am going back and forth here but the reason is you don't have to keep changing drill bits if you do these two steps at the same time. Now take a 2 x 4 and drill a 1" hole through it on one end. On the other end draw the outside of one of your rail caps. Using your router and the straight cutting bit route out the dimension of your rail cap. Now place one of the rail caps on the bottom of your router and adjust the bit so that the bottom of the bit is flush with the bottom of the rail cap. This will cut into your rail to flush mount the cap. Screw one of the all threads into the rail caps and line the

template up on your rail. Slide the rail cap assembly through the template until you stick the all thread into the rail where you drilled your hole for the rail cap. Clamp your 2 x 4 template and rail down and pull the rail cap out of the hole. Take your router and run it inside of the template. This will cut out a perfect recess for the rail cap. Do this for all 24 of the rail caps. Now take your 1 inch boring bit already in your drill and drill into the rail where the rail cap hole are. This will leave room for the pressed metal threads that are in the rail caps. Put the rail cap on the rail and mark and predrill the 3 mount holes for the rail caps using the #10 countersinking drill bit. Place the rail caps on the rails one last time and secure them with the screws provided. Now flip the template around and in the 1" hole that we drilled previously, recess the hole for the pocket ear mounting bolt around 7/16ths of an inch. This will allow you to mount a standard bolt into the pocket ear and it will not be in the way when we install the rails. Some manufacturers use countersunk screws. I like having an oversized mounting hole and using star washers that way I have some room to play with when I install the rails. All of this may seem like a lot but all in all it takes around 3 hours to do if you set it up like an assembly line.

Now we are ready to do some final work on the rails when we get a chance to work on it again after Christmas...

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Cutting the angles for the pockets. Glueing the cushions on the rails

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12/26/2000- Merry Xmas everyone. I did not get any pool related things so knowing this I went out and bought a jump break cue from J & J and some used Brunswick Centenial balls. Sorry I am not going to add the balls to the price breakdown but I will add the 17 rail sites that I purchased.

Today we cut the corners for our table. You can do this with a miter saw. You just have to use your brain to break the boundries of the 45 degrees that most miter saws allow. The corner pockets are allowed to have a 54 to 57 degree angle and the sides a 14 to 17 degree angle. The angle starts where your mahogany meets up with the feather strip. This is where you decide whether or not you are a beginner player, average player, or very good player. It depends on your ego what degree you will choose. The 57 degree and 17 degree angles are for the beginner and the 54 and 14 degree angles are for the very good players. I cut mine at 55 degrees and 15 degrees. Not saying that I am a very good player, but I want to be. And because I am building this table as a practice table, If I can sink a ball on this table I can sink a ball on any table. The first corner cut is pretty easy. Set your miter blade at a 10 degree vertical angle and swing the miter table to 35 degrees. Put your rail on the table end first.

The way this works out if you take the 55 degrees and subtract the 45 that the table allows you come up with 10. Now when you swing your rail 90 degrees you just opened the angle to work in the opposite direction. So you subtract the 10 from the 45 which gives you 35 degress or 55 if the rail was against the fence. Make sure the vertical angle on the blade is cutting in from top to bottom. The reason for the angle is when a ball comes into the pocket, if there is any top spin on it, the angle forces the ball on the table. Otherwise there is a potential that the ball could hit the pocket facing and launch it off the table. You will cut 4 of the left hand corners this way. Now swing your miter table to 15 degrees and place the rail against the fence to cut the angle for the side pockets. First one cushion side against the fence, rail face up. Then for the other angle, cushion side out rail face down. Now comes the tricky part. You take your other rails that you have not cut the Right Hand angle on and lay them down face up. Lay another rail face down on top of that rail and mark the angle of the corner on the lower rail. Now swing the miter table to around 37 degrees and place the rail on the miter saw so the blade is in line with the marked line on the rail. It should look like the picture. It looks wierd but it works. Cut all 4 of your angles. Now put the rails back on the table with the rail cap allthreads in place and the nuts on finger tight. The reason for this is so the rail will not move when you put on the cushions.

Now that it is starting to look something like a pool table we are going to finish up the last thing we need to do today and that is gluing the cushions to the rail. I used Championship Cushions purchased from Ozone Park Billiards Put ample amounts of contact cement on the cushions and the rail. Let it set up around 20 minutes. Lay the cushion in front of the rail around 4 inches away. Start on one end and place the cushion on the rail. It is best to do this with 2 hands. One hand holds the cushion

away from the rail the other pushes the cushion onto the rail. Be careful and make sure that the top of the cushion is flush with the top of the rail. Contact cement is dangerous stuff. If you screw up it usually will not let you go back and fix it. Once again take your time and don't rush things. Once you get all the cushions in place walk around the table and pull vertically on the cushions walking you hands down the rails. This will make sure that all of the cushion is contacting the rail. You do not want voids in between them as you will end up with a dead spot in the rail. Now put a bead of tight bond on the top of the rail where the cushion meets the rail. This is an added thing that I did because I did not want someone sitting on the table and pulling the cushion away from the rail and if the contact cement ever decides to break down (like it always does) after a few years, it will have something else to hold it into place.

Ok go to bed and we will finish up the rails tomorrow.

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Finishing the rails, staining and inserting the sights.

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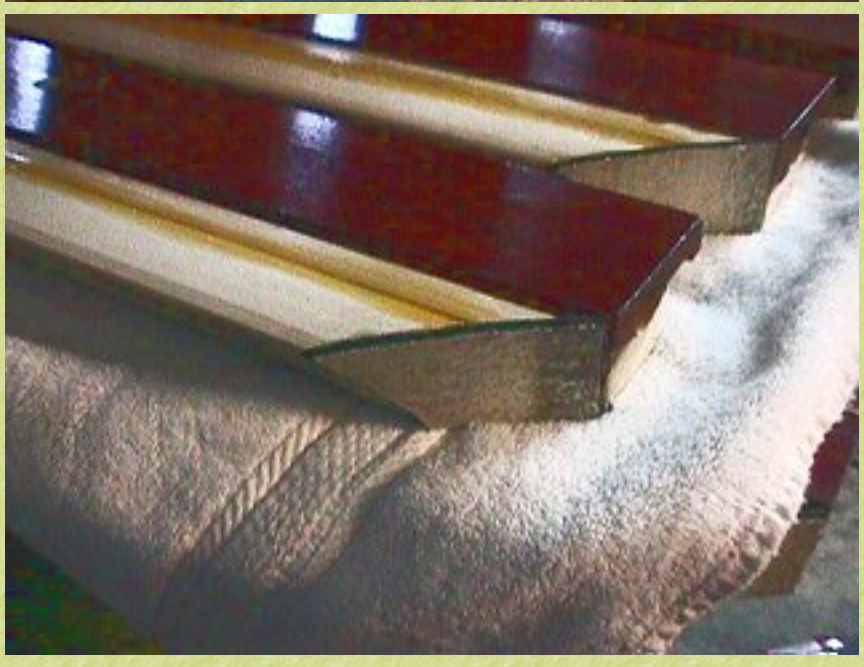
12/27/2000- Today we finish the rails. This is where you decide how the design of your rail will look. I decided to use a Roman Ogee edge. It looks classy and gives the rail a rounded edge. *Note: Do not use anything that is going to have a sharp edge on the top of the rail. If you do either you or someone else playing on the table is going to smack their knuckles on it and blood does not make a good wood stain.* I removed the rails from the table and removed the allthreads from the railcaps and clamped the rails upside down on the table (make sure the table is clean under the rail. I would hate for you to put a dink in that nice finish). Then you need to cut a groove in the underside of the mahogany right where the subrail ends. It is the same width as the left over mahogany that will be used for the blinds. The reason for the groove is so the blinds, when bolted to the underside of the slate, will be supported at the top by the rail. Use one of the straight blind boards as a guide for the bearing on the straight cutting bit and route a 3/16ths of an inch groove flush with the back of the subrail. Then mark on the rail where your goove is to stop move the blind so the outside of the straight bit is at that point and route out the rest of the groove. I think it would have been faster to use a dado cutter here but I don't have one so I used the straight



cutting bit instead. Take your clamps off and flip the board back over

Now we want to do pocket facings. They are the rubber pad that gets glued to the end of the rail and cushion at the pocket entrance. Again I used Contact cement to glue them on and trimmed them to the end of the rail and cushion. Deno Andrews gave a great suggestion when doing the pocket facings. "Figure using one razor blade per facing." Was he ever right!!! The facing is made of a grainy rubber that dulls a razor blade in a hurry.

I then sanded all the sharp edges off the Ogee edge and did some preliminary sanding on the rails using the 320 grit sand paper. Then I finish sanded it with the 600 grit sand paper. I then stained the rails using the Polyshades that I used on the frame of the table. Same as before... Stain, dry, steel wool, stain again and then dry.

After letting it dry I did the rail sites. There are really only two types of sites to get, expensive and cheap. To tell you seriously the only difference between the two is how you feel about them when you get done with your table. If you get the expensive ones (made from legal ivory) you will be the only one that knows that they are made of that material. The cheap plastic ones look the same. I got the 7/16ths rail sights that look like pearl available at Ozone Park Billiards. I used a piloting drill bit to make sure that the holes are clean and acurate. You devide the playing surface equally by 4 for the width and 8 for the length to find out the spacing on the sights. For my 9 ft that works out to 12 1/2 inches. Using the side pocket and the center of the end rails, as the starting point for my measurements, I worked out equally in each direction and drilled the 7/16ths holes. You want to drill them deeper than the sight but not much deeper. You want the glue to be able to fill the void under the sight and still hold it into place. If your holes are clean the sight should be too

tight to go into the rail. Put some tightbond in the hole and use a flat block of wood to tap the sight into the rail so that it is flush. Wipe off the excess tightbond with a damp cloth and shine it up with a dry cloth. This will ensure that there is not glue residue on the rail.

Tomorrow we finish the blinds and get ready to cloth the table.

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My quest to build a High End Pool Table

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12/28/2000- This is going to be a quick entry because I want to put the whole section on stretching the cloth into one page. That way it will make it easy to follow if someone wants to use it as a reference.

We do our final cuts on the blinds today. Depending on what type of pocket shield you have will determine what type of end you will cut on your blinds. If you have a the fringe for a shield on the pocket then you will cut the end of your blinds straight. Where as if you have a standard leather shield you want to cut them in an curved pattern so you are able to attach the shield to the blind. Measure from the inside of the groove in the rail to the bottom of the slate liner and add 1 1/4 inches to that dimension that will give you the height of your blind. For the width take the length of the rail and subtract 1/4 of an inch. This will give you enough room to play with when installing the blind. And don't worry about it not being flush with the end. The shield will cover the missing 1/8th of an inch that is not there. For the curved pattern at the end you want it to start around 1/2 of the way down the blind so the last 3/4 is curved. It should be around 1/2 to 1 inch longer on the bottom of the blind than on the top or an overall 2 inches wider if you consider both ends. Once you get both ends cut, sand and stain the blinds and let them dry someplace else because you are about to make some dust.

Lets get ready to finish the slate for the cloth and get going...

My quest to build a High End Pool Table

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12/29/2000-12/31/2000- I have got several suggestions on what to use on the seams and the slate screws. I think I have finally come up with a solution and I will break out why I chose what I did.

First I wanted to use fixall because it was easy to use and it did not shrink when applied and dried. the problem with fixall, which I found out later, was that when it dries and you run your finger over it, it releases a white powder. Not something that I wanted coming up through my cloth.

So the second suggestion was bees wax. Not a bad solution but with the table sitting in a garage and not air conditioned in California the temp could go over 105 degrees. Which would make the bees wax soft and may soak into the cloth. Again not something I wanted

Third suggestion was using bondo for the seams. Really good suggestion the only problem with bondo is it works too well. It is very strong when it dries and when I have to tear the table down to relevel and recloth it I am going to have one hell of a time getting the bondo out of the screw holes and releasing the seams without cracking and chipping the slate.

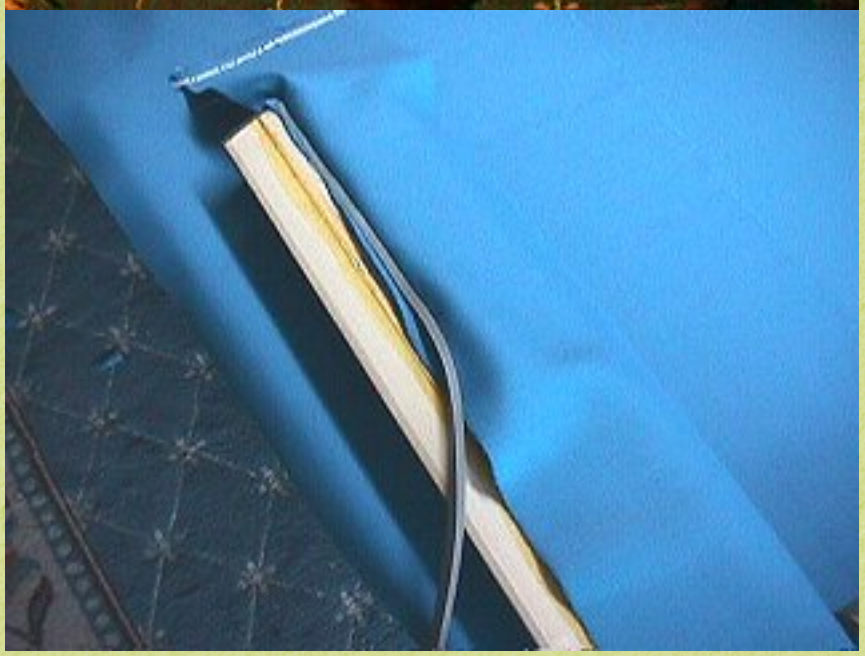
So this is when my brilliant idea came out. Why not combine two of the suggestions. I went over all of the seams and the screw holes

with a wet cloth to take off some of the fixall that I had already applied. Then I put bondo over the fixall. Hence I solved my problem with the white power and with just a thin sheet of bondo on on top of the fixall on the seams and the screw holes I will be able to remove it easily with a utility knife. So problem solved. How do we do it you ask??? Well after you make sure the table is still level fill the seams and the bolt holes with fixall. After it dries wipe it all down with a damp cloth. Wait until the slate is dry again and wipe it down again with a dry cloth (this will take up any excess white powder I was talking about). Then go over the seams and the screw holes with bondo. Let it dry and sand (LIGHTLY!!!) with 320 grit sand paper and a wood block. When you are done wipe it all down with a wet cloth again to pick up any fixall you may have missed. TA DA a perfect fix.

Go around the top of the slate and the top and bottom of the pockets with a flat file and take off any sharp corners. This way when you go to install the cloth you will not tear it when you pull it over the slate or the underside of the pocket.

Now we are ready to do the cloth. Make sure the slate is clean of any dust, bondo, fixall, sawdust, etc before continuing. How do you cloth a table you ask???

I got Granito Basalt Cloth from Gorina (available soon at Ozone Park Billiards) it is beautiful. I have always played on tables that had Simonis 860 on them (another great cloth) but when I got my Basalt I was amazed to find that it was better quality. What you want to do is get yourself a good electric staple gun. Start at one end of the table without the rails on (we will get to that). Staple the middle at the end of the table with 4 or 5 staples around 1/2 inch apart. Then pull the cloth to the corners (horizontally from the end of the slate) and put 3 or 4 staples in each corner. Then run staples across the end of the slate where there are



none. Then go to the other end of the table. Start at the middle and pull the cloth over the slate. The best way is to roll the cloth up to give yourself something to grab hold of and pull pretty hard. You will notice that the cloth stretches a lot. Put 4 or 5 staples in the middle just like you did on the other end. Then pull the corners at a 45 degree angle from the center of the table. The first corner you will do you want to pull more down the length of the table than out from the center. Put 3 or 4 staples in the corner. Then pulling equally from both directions (length and width) put 3 of 4 staples in the other corner. Then run staples all along the end of the slate. Now this is where it gets tricky. Go to the side pockets and pull from the opposite side of each pocket. What I mean is if you are going to put staples in the left side you pull the cloth to the right. So what you are doing is pulling the cloth to the center of the table. Then do the other side pocket the same way. Then grab the cloth and pull it over the edge and work your way down the table... Then do the other side. For the pockets cut the cloth down the middle of each pocket like you were starting the cut just below the bottom of the slate of the pocket. You pull the cloth as hard as you you are allowed (before you hear a rip.. Ha ha) and roll it under the slate and put a staple in the middle. Pull the cloth around the pocket opening so that it is tight against the pocket and staple from the underside. Cutting the cloth as needed to relieve stretch in the pocket opening. If you cut it more than 6 times you are doing something wrong. Put several staples into the underside of the cloth and pocket. Then do the next one and so on...

Then come the rails. The cloth should be in 5 1/2 to 6 inch strips. lay the rail so the cushion is pointing away from you and the rail is face up. Lay the cloth on the rail with 1/2 inch of the cloth over hanging the feather strip grove good side down (you are going to roll the cloth over the rail, and when you do the good side

will be up). So you should have 5 to 5 1/2 inches on your side of the feather strip. Place the feather strip into the grove on top of the cloth. If you are using a rubber feather strip like I did you will start at one end and work your way down. Otherwise with a bass wood feather strip you start in the middle and work your way out to the ends. Line up both ends and tap lightly with a rubber mallet to get the feather strip started. If you do not have a rubber mallet. Get a block of wood, place it on the feather strip and strike it with a hammer. Then working down each way of the feather strip drive it into the rail, a little at a time until the feather strip is the same height as the top of the cushion. Cut off the excess cloth on the cushion side of the feather strip. Flip the rail over and roll the cloth over the cushion. Start in the center and pull the cloth with a firm grip and staple the middle. To do the ends of the rail in the corner pockets, so you have no folds, may take a couple of tries but I will do my best to describe it. Pull the cloth towards the end of the rail and tack it with one staple in the end of the rail. Then starting just outside where the corner of the cushion is pull on the cloth. Staple then move a quarter of an inch and pull the cloth vertically to the end of the rail and staple. Move a quarter of an inch and pull again vertically from the edge of the cushion and staple. You will get some rolls in the cloth under the rail and some ripples on the underside of the cushion (there is no way around that). Once you get it all stapled work you way down the rail pulling vertically from the edge of the cushion. For the side pocket openings you do what is known as a hospital corner. Pull the cloth towards the top of the rail, in your case down. Put a finger on the end of the rail on the cloth. And fold the cloth over itself and pull it over the bottom of the rail then staple it. Cut off the excess and you are set. Do this for each rail. Cut the holes for the rail bolts in the slate through the cloth.

Assemble the rails to the pockets using bolts

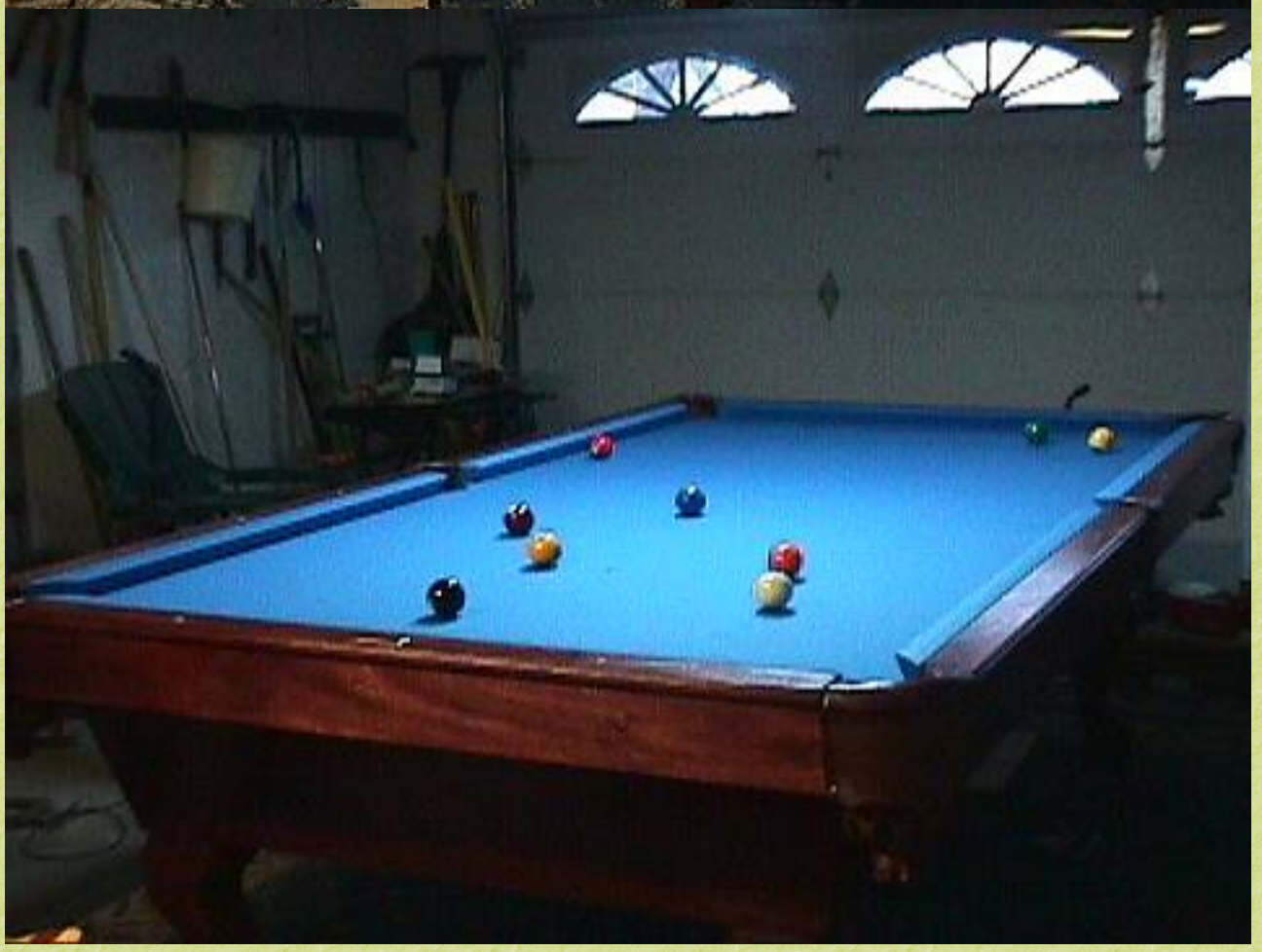
through the rail in the pocket ear mount bolt holes we drilled earlier. Using the allthread for the railcaps bolt the rails to the slate using the dome washers that come with the rail caps. When bolting them into place measure from cushion nose to cusion nose to make sure that you are maintaining the 100 x 50 playing area on the table. If you are off you can adjust the pocket ear mounting bolts to either lengthen or shorten the width or length. Once you get everything measured. Do a cross measurement on the table and the ends of each side rail to make sure you have not created a parallelagram. Now that the rails are square and equaldistant from each other tighten down the rail cap allthread nuts.

Staple the pocket leathers to the slate leaving enough slack in them so the balls can fall vertically in the pocket. Then comes the spots. Use strings to mark the center and second and sixth diamonds on the table. Where that string crosses that is where the spots go.

Measure that groove on the back of the rail for the blind to the bottom of the slate liner and place a 1 x 1 glue block at the same measurement on the blinds and secure it with tightbond glue and 1 1/4 inch #10 screws. I placed strips of felt on the tops of the blinds so they would not rattle inside the grove when the balls hit the rails. I then mounted the blinds into the grooves and secured them to the bottom of slate using 1 1/2 inch #10 screws.

Now comes the fun part....

Set up a 9 ball rack and bust the hell out of them because you have just finished a table that your great grandson will learn to play pool on.



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My quest to build a High End Pool Table

Please let me know what you think of my project. Sign my Guestbook

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Expenses

Item	Price	Notes
Slate	250	4 1/2 x 9 foot 1" thick (3 piece)
6/4" x 12" x 9 foot Mahogany boards 3 each	173	
Mahogany Ball and claw legs and poplar subrails.	369	From Adams Wood
Rental of Saw and cost of getting mahogany planed	53	
1" X 8" X 9 ft. Poplar for slate liner 3 each	46	
1" X 3" X 9 ft. Poplar for slate liner 2 each	15	
1" X 4" X 10 ft. Mahogany for rails 6 each	240	
Fix-All for slate scratches and sealing seams	5	
Pockets	125	
Polyshades Finish, Brushes, Steelwool	13.00	
Douglas Fir 2 X 12 X 10 Feet 2 each	22.00	
Granito Basalt Cloth For 9' Table	139.00	Simply the finest cloth... PERIOD
Championship Rubber (rails) 6 each	20.50	

Rail mount plates 24	48.00	
Neosporin and Band aids 4 each	0.12	For smashed finger (thanks gideon for the idea on adding it the cost breakdown.)
Straight Cutting router bit	21.00	You will get a lot of use out of this
Rail Sites 17 each	16.83	Mother of Pearl
Tighbond II Glue. 2 each	7.00	Best wood glue in the world!
Bondo for slate seams	4.50	
Pocket Facings For Rails 8 corner 4 side	2.00	
100 1 1/2" #10 screws	5.00	
100 2 1/2" #10 screws	7.00	
16 4" #10 screws	2.72	
12 3 1/2" X 1/4 Lag Bolts	2.64	
Total	**$1587.31**	**$12.69 Under Budget!!!**

This is the Final Price List as of 2/9/2001

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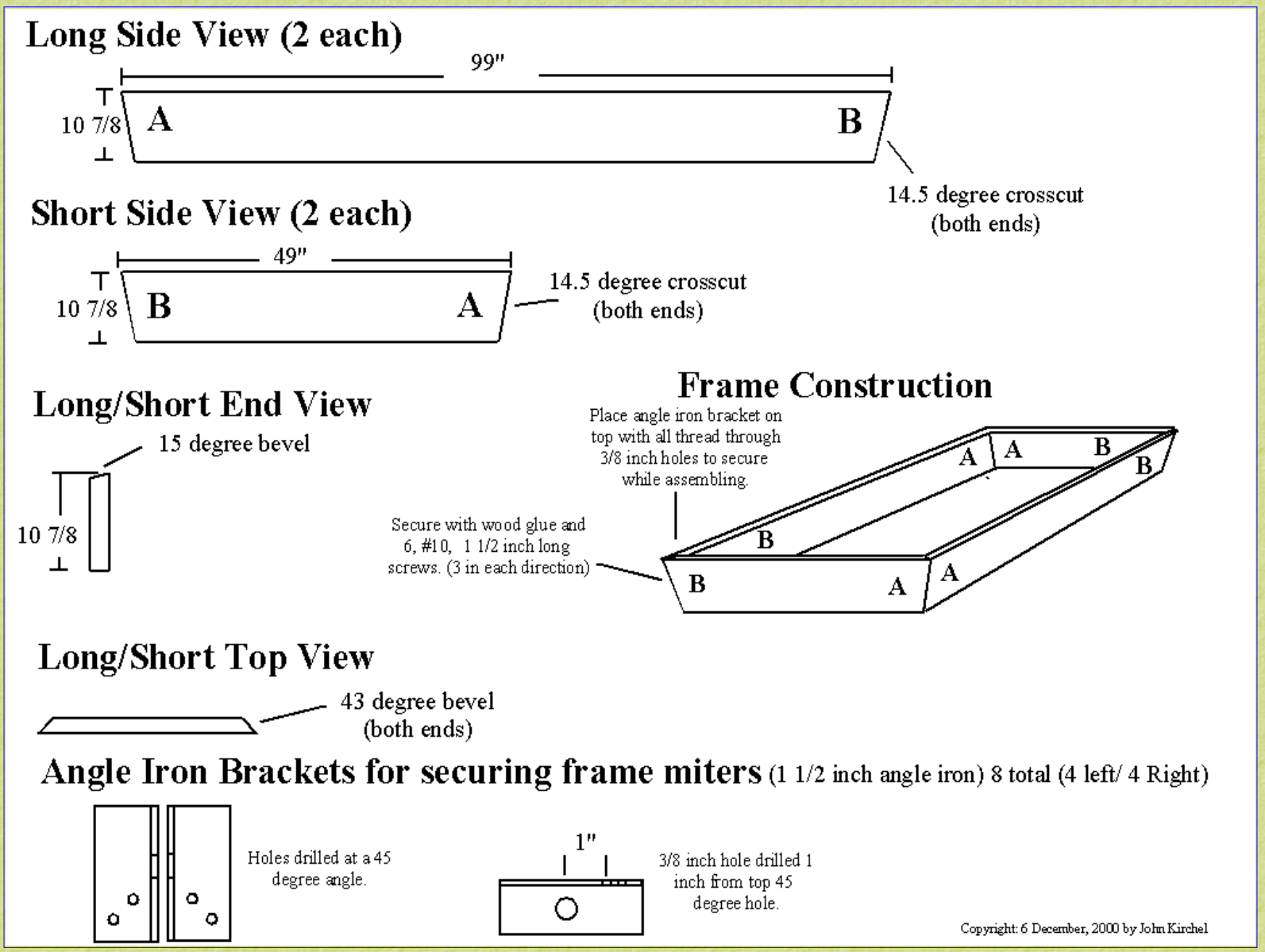
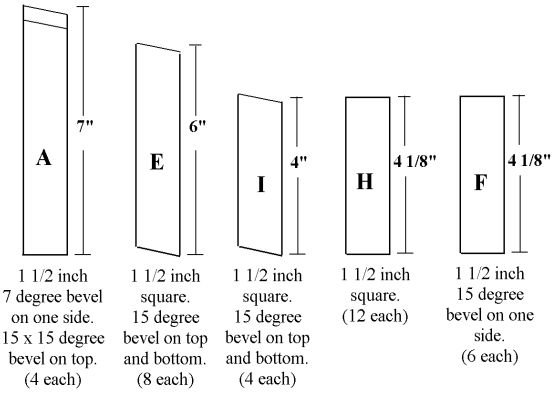
Drawings

Frame (15 Degree Slope)



Leg Supports & Glue Blocks

Glue Blocks



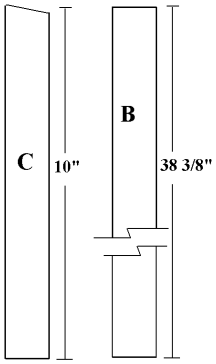
1 1/2 inch 7 degree bevel on one side. 15 x 15 degree bevel on top. (4 each)

1 1/2 inch square. 15 degree bevel on top and bottom. (8 each)

1 1/2 inch square. 15 degree bevel on top and bottom. (4 each)

1 1/2 inch square. (12 each)

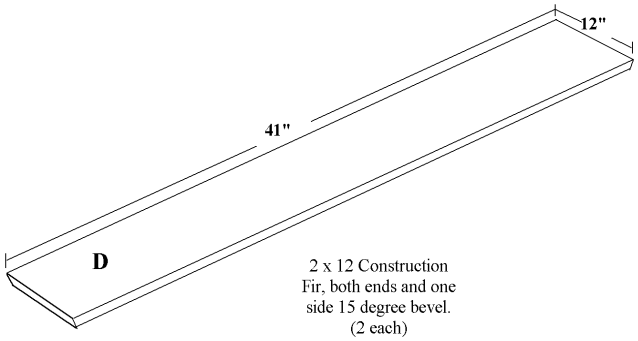
1 1/2 inch 15 degree bevel on one side. (6 each)



1 1/2 inch 15 degree bevel one side and 15 degree bevel on end. (4 each)

1 1/2 inch 15 degree bevel one side. (2 each)

Leg Support

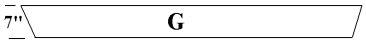


2 x 12 Construction Fir, both ends and one side 15 degree bevel. (2 each)

Crossmember Supports

(2 x 12 Construction Fir ripped 7 inches and 5 inches.)

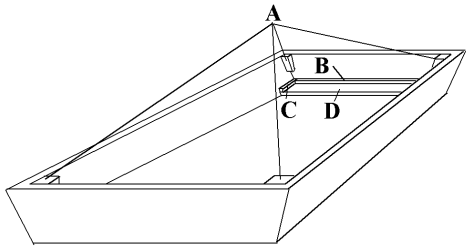
Horizontal Support

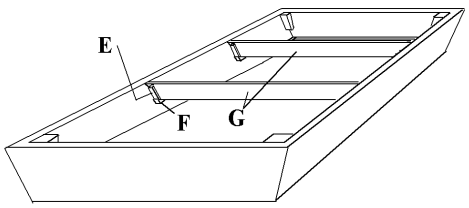


Width is determined by the inside dimension of top of frame. 15 degree cross cut on each end (2 each)

Vertical Supports

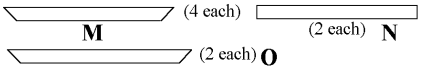
Width is determined by the inside dimension of top of frame.



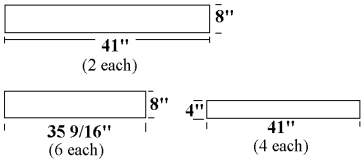


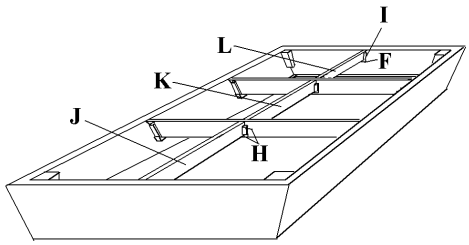
Slate Support and Liner

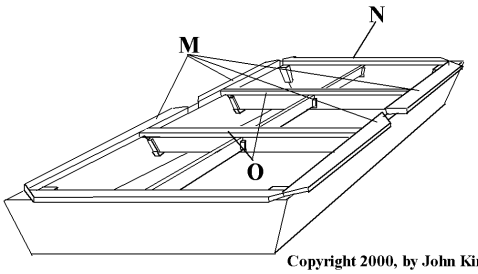
Slate Support (6/4 x 3 poplar. 45 degree cross cut on ends) (Length dependent on frame size)



Slate Liner (1 x 8 poplar and 1 x 4 poplar)







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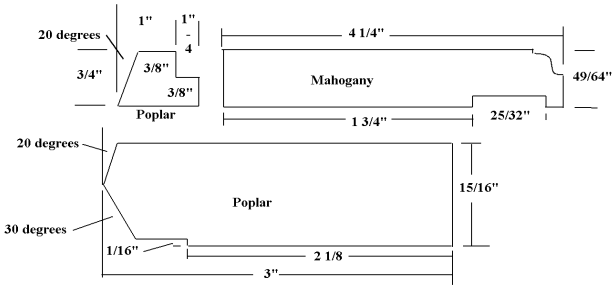
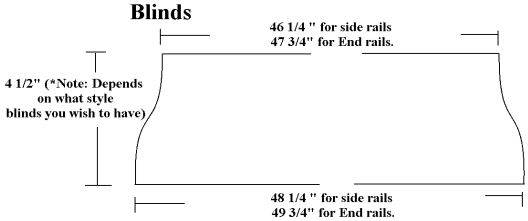
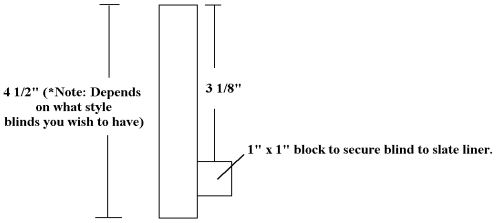
Rails

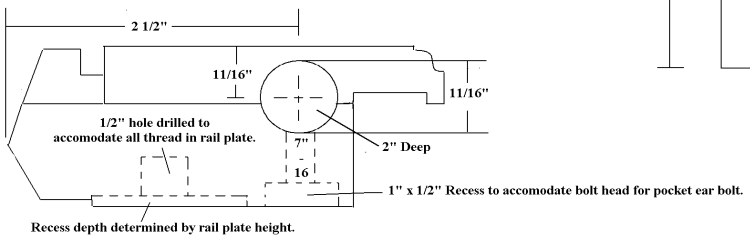
Rail as viewed from the side



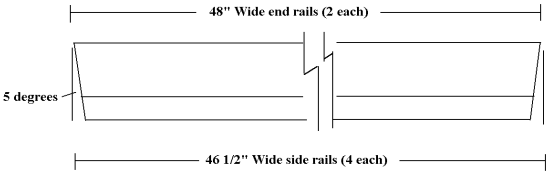
Blinds



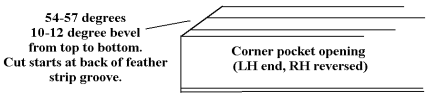


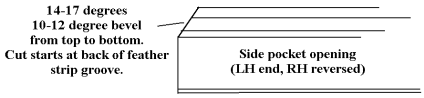


Rail as viewed from the front



Rail as viewed from the top





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Right click on drawing and click 'Save Target As' on the popup menu to save the drawing to your hard drive to print it later.

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Contacts Needed:

Contact: Shawn Gargano
Phone: 1-770-514-7736

Adams Wood - Legs and Rails
www.adamswood.com

Mcbeth Hardwoods - Mahogany and Poplar Hardwoods
Contact: Arron Johnson (Central Valley, California)
Phone:1-209-993-8045

Gorina Trading - Granito Cloth
www.granitocloth.com
Contact: Jon Spiegel
Phone:1-800-465-4900 *Tell him SSCS sent you. He may give you a discount*

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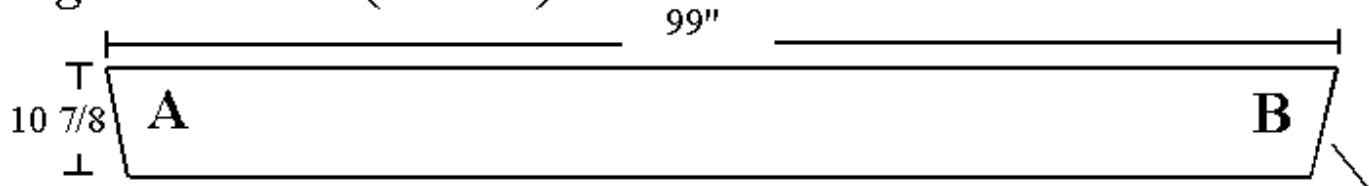
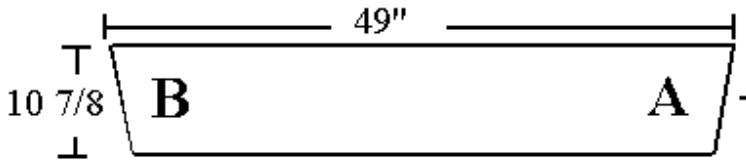
Long Side View (2 each)



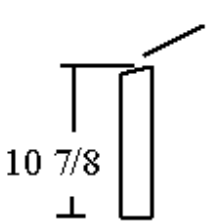
14.5 degree crosscut (both ends)

Short Side View (2 each)



14.5 degree crosscut (both ends)

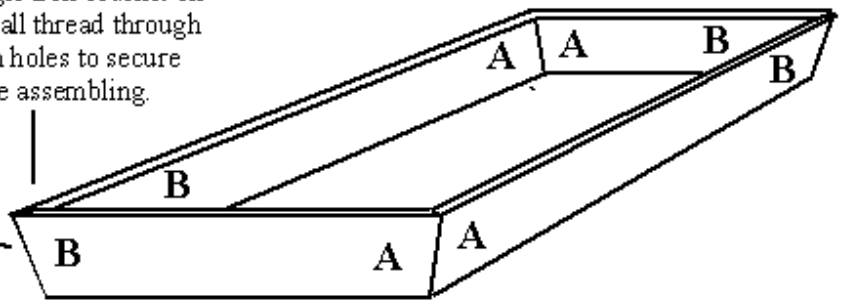
Long/Short End View



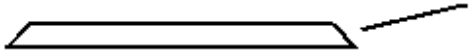
Frame Construction

Place angle iron bracket on top with all thread through 3/8 inch holes to secure while assembling.

Secure with wood glue and 6, #10, 1 1/2 inch long screws. (3 in each direction)

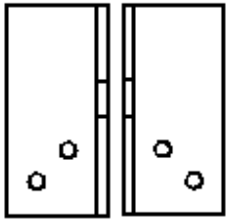


Long/Short Top View

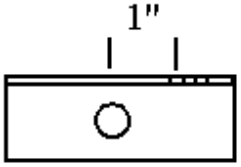


43 degree bevel (both ends)

Angle Iron Brackets for securing frame miters (1 1/2 inch angle iron) 8 total (4 left/ 4 Right)



Holes drilled at a 45 degree angle.



3/8 inch hole drilled 1 inch from top 45 degree hole.

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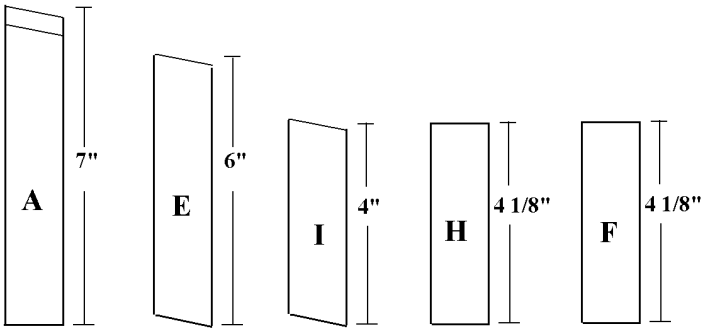
Glue Blocks



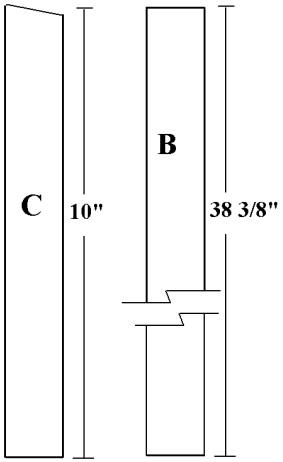
1 1/2 inch 7 degree bevel on one side. 15 x 15 degree bevel on top. (4 each)

1 1/2 inch square. 15 degree bevel on top and bottom. (8 each)

1 1/2 inch square. 15 degree bevel on top and bottom. (4 each)

1 1/2 inch square. (12 each)

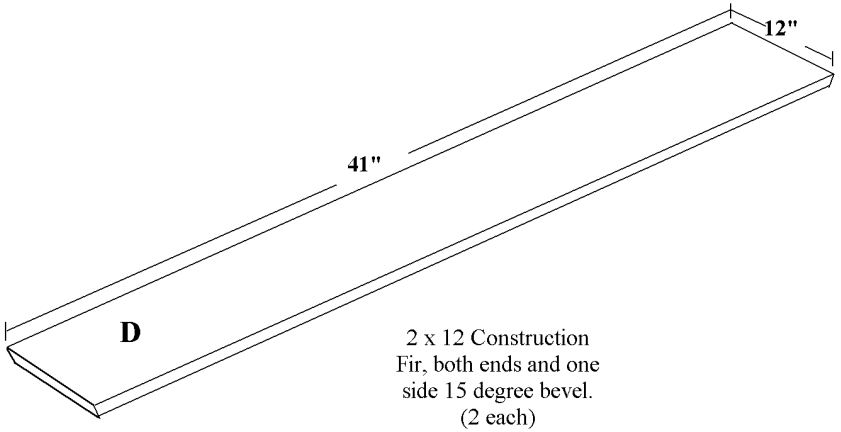
1 1/2 inch 15 degree bevel on one side. (6 each)



1 1/2 inch 15 degree bevel one side and 15 degree bevel on end. (4 each)

1 1/2 inch 15 degree bevel one side. (2 each)

Leg Support



2 x 12 Construction Fir, both ends and one side 15 degree bevel. (2 each)

Crossmember Supports

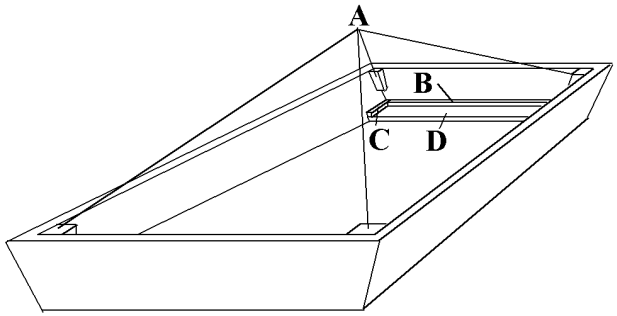
(2 x 12 Construction Fir ripped 7 inches and 5 inches.)

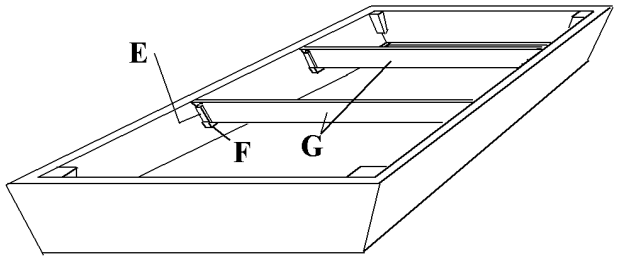
Horizontal Support

Width is determined by the inside dimension of top of frame. 15 degree cross cut on each end (2 each)

Vertical Supports

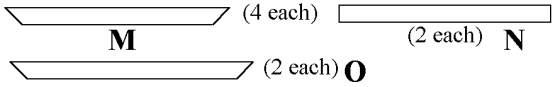
Width is determined by the inside dimension of top of frame.



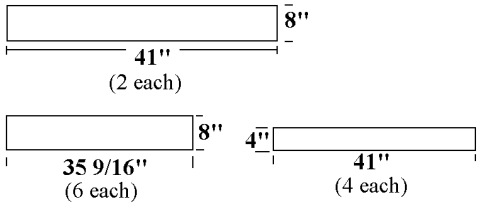


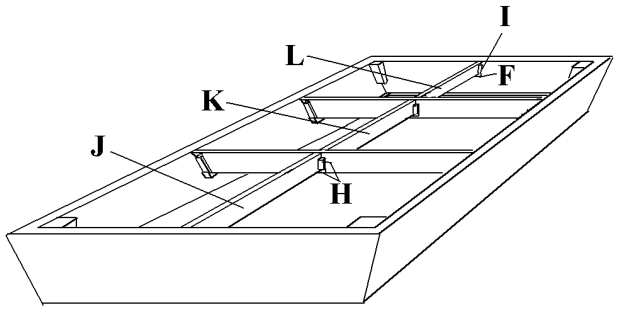
Slate Support and Liner

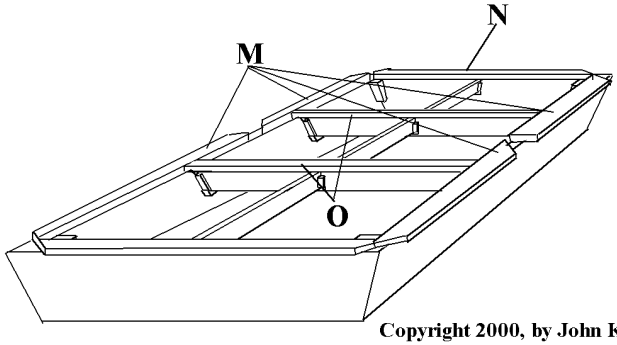
Slate Support (6/4 x 3 poplar. 45 degree cross cut on ends) (Length dependent on frame size)



Slate Liner (1 x 8 poplar and 1 x 4 poplar)







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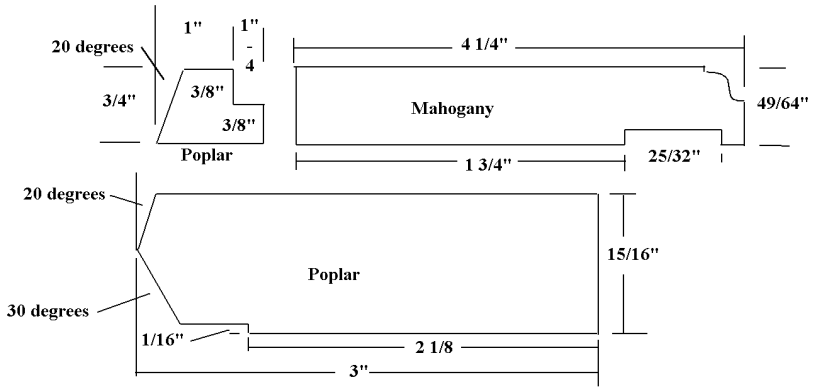
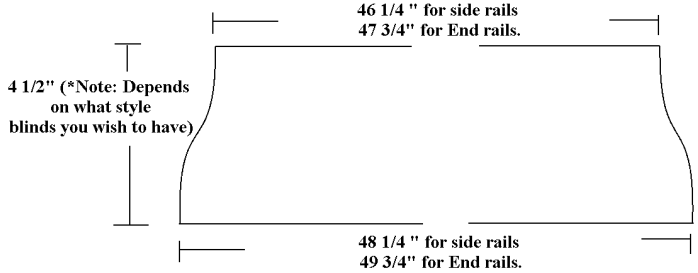
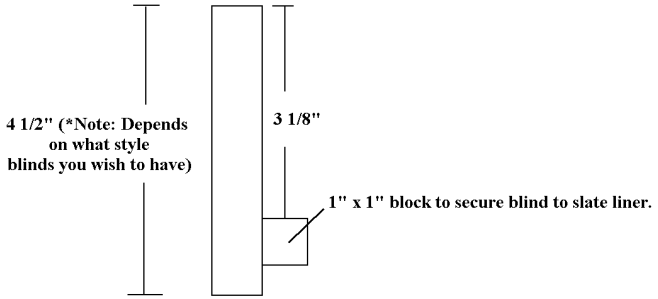
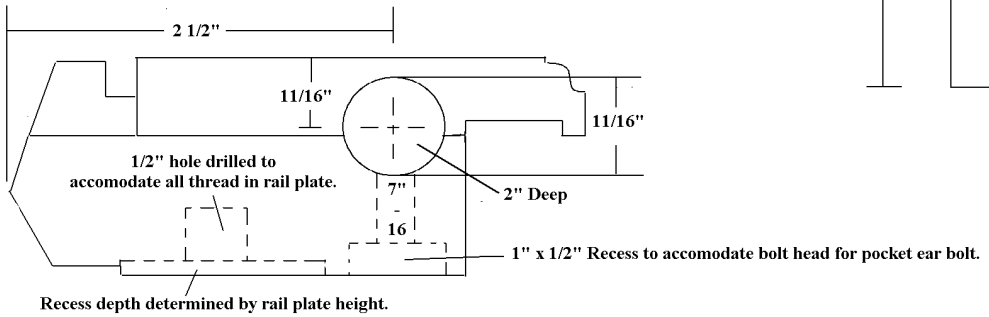
Rail as viewed from the side



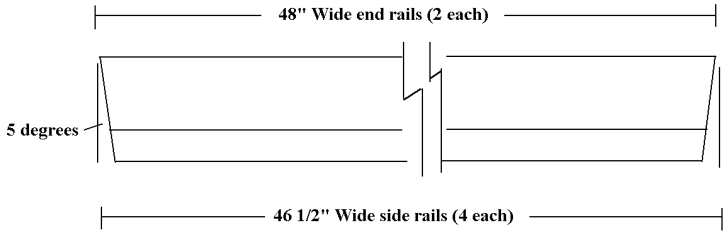
Blinds



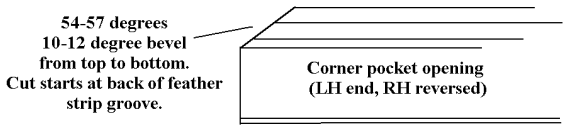


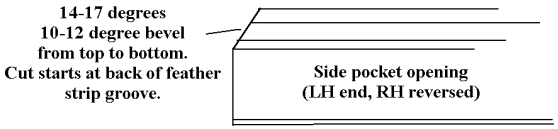


Rail as viewed from the front



Rail as viewed from the top





Test Your Knowledge

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Total Participants

6252

Participants Over 95%

234

The following is a final test from the elementary billiards class at Weber State University. There are also questions from individuals who scored over 95% on this test. The test consist of ten true/false and ten multiple choice questions. Go ahead, give it a try.

Click Here to Take Test

Click Here to See Winners

High Scores

High Scores are posted on the winners board. You must get a 95% or higher. Winners are also allowed to enter one test question of their own, which will replace a current question on the test.

Rules

Have fun, don't cheat.

Restrictions

Only the first submitted score is allowed on the winners board. This applies to any other prizes or promotions.

Test Tips

This is an elementary billiards class test, don't try to over analyze the questions. Keep it simple.

Study Tips

Most of the questions are taken from the BCA rule book. The test covers all basic fundamentals of shooting: stance, grip, stroke, etc. There are questions pertaining to the game of 8-ball. Intermediate techniques are also covered: stop shots, follow shots and draw shots.

Billiard Links

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Add Link

Title	Description
ABC Billiards	ABC Billiard - The Magical Little Box That Holds All Your Pool Chalk Without All The Mess. We also cover and repair billiard tables.
ABC Imst	Billardclub in Austria, Europe
aEasy Pool Tutor	Online resource for free billiard lessons and tips. Download lessons in ZIP format.
Alcalde Billiard	Alcalde Billiard - Jewels to play Billiard
All-for-Free Billiards Lessons	Free billiards lessons, tips and tutorials for beginner and intermediate players.
APA	American Pool Players Association.
B.E.T.T.E.R. Play Billiards!	Billiard Excellence Through Training, Education & Recreation
BCA	Billiards Congress of America Home Page
Be good on billiard	Web site reference. Principles, cuts, effects, tips, rules, cross...
Biljart- en Dartscenter de MAMBO	Pool, Snooker, 3-cushion, carom and darts
Biljartclub Touché Posterholt	Homepage of our Billiardclub
Billarnet billiard magazine	Spanish maganize about billiard (carom, pool, snooker, rules, chat, links, clubs,...)
Billiard Atlas (Systems and Techniques)	The "Billiard Atlas" books are instructional writings, filled with precise diagrams illustrating "systems and techniques".....an international favorite.
Billiard Chat Room	Live interactive billiard chat room. Participate in our scheduled billiard chats.
Billiard Sanctuary	World Class Award winning Full Service Academy of the Cueing Arts
Billiard Wall Art and Murals	Billiard Room Wall Art and Murals for Home or Commercial Settings
Billiard World	Online Billiard Magazine
Billiards Club	University of Pittsburgh Billiards Club
Billiards Digest	Monthly magazine covering tournament live from their web site.
Billiards Tour	The Family Pool Room with something for everyone
Chalk Talk Online	The Midwest’s Billiard Newsletter. Loaded with tournament info & articles!
Clicks Billiards	The "Grand-Daddy" of upscale billiard rooms! Come see the leader in the industry!
Cue Chalk Board	Active billiard discussion group on the web.
Cue Tech	Billiard Instruction and More
Cue Times Billiard News	Billiard News, Tournament Results, Articles, Player Pictures & Much More...
Cues Plus Billiard Supply	Large selection of billiard cues, cases and accessories.
Cueshoe	Innovative new billiard accessory for your cue stick

Custom Pool Cue Engraving	This site offers engraving on the steel joints of pool & billiard cues. Engraving pool & billiard cues since 1985.
DBR Leisure P/L Australia	manufactures of quality indoor\outdoor American and English standard Billiard tables.
Forty Ways To Improve Your Game, Vol. I-II	Take your game to that next level with what many have said to be 2 of the best instruction manuals on the market today.
Great new pool book	great website, includes magic card trick, order book
Great new Pool book	Check it out - http://www.thegreenfeltjungle.com
harlequin family card pool games	harlequin billiard games featuring Aramith Belgium balls, dice and cards are games for the entire family. More than new and completly unique games with cards and dice which level the playing field.es
Highland Billiards	Discount site offering C.L. Bailey Pool Tables.
History	History of Billiards (BCA)
Imperial International	A major billiard supplier for Best Billiard
indian pool tables	We are manufacturing of Pool & Billiards Tables in INDIA
Internet Billiards Resource	Pool room and tournament search. Free Tournament flowcharts.
Laser Art Techniques	We engrave the steel joints of pool cues.Many designs available. Three day turn around.
Liga Argentina de Pool: Billar	Creada para promover, difundir y fomentar los Juegos de Pool, Billar y Snooker como actividades deportivas.
Magazine	Pool and Billiard Magazine.
Minnesota Ace Billiards League	New Billiards League in town. Call with questions.
Minnesota Billiard Congress of America	Minnesota chapter for the BCA.
My billiard page	Facts,Rules,Players,etc.
National Pool Players Association	Pool league offering team and singles matches with great prize funds
National Team Open	Triple Elimination team 8-ball tournaments
Nat'l Wheelchair Poolplayers Assoc. Inc.	NEW! Name & Location of the 'disbanned' NWBA. The NWPA is dedicated to its members worldwide. We 'sanction' some 12-14 tournaments nationally each year. 99 schedule posted on NWPA site.
News Group	Billiard Related News Group.
NWBA	National Wheelchair Billiards Association
Online 3D Multi-Player Billiards	The best 3D pool in your browser! Practice up or take on your friends.
PBT	Pro Billiards Tour
PCA	Professional Cuesports of America
Picasso's Belgian Snooker Page	Everything about snooker in Belgium !
Pool Billard Zentrum	Pool Billiard Infos, Webring, Links and more!
Pool Table Professionals	Pool table service and repair in the Central Florida area.

poolroom.com	searchable/sortable database of poolrooms and suppliers
POWER 8-Ball League	New sanctioned 8-ball league with a handicap system that works.
Rampage Computer Systems	Pool Room Management Systems
Real Feel Pool	Real Feel Pool is the home of the PoolShark, the gaming controller that lets you play Pool on your PC or Mac with a Real Cue!
Reference	Billiard Reference: Billiard Pages Magazines Pro's Commercial Sites

Round Pool Tables	Pool Tables Snooker Tables Round Pool Tables Zig-Zag Pool Tables Hi-Power Pool Tables Hi-Power Black Pool Tables
Snooker in Belgium	Everything about snooker in Belgium
Southern Billiards	" The Best Little PoolRoom In The South "
Southern Indiana Cues	Pool Cues For The Discerning Player
Sports On A Pool Table / Rules	This is where you can discover new Games to play on a Pocket Pool Table !!
Talisman Billiard Accessories	Manufacturer of professional layered cue tips and fine leather cue cases.
The Billiard Channel.com	The Utimate Website for Billiard Fans! Online Audio & Video Features. Exclusive Photo's, coverage on specific men & women's tournaments and much more!
The Billiard Search Engine	Search billiard sites on the web by keyword or by category.
The Mining Company	Excellent Billiard Related Site.
The Original Fast Eddie's Website	Describes Fast Eddie's biography, pool shooting show, instructional video tape, etc.
The Pool Tournament Manager	The latest in computerized tournament management systems.
The United States Snooker Association	The official site of snooker's governing body in the US
Twin Cities Billiards	TCB has pool and billiard articles, links, and a growing list of all the places to shoot billiards in Minnesota
Viking	Viking Cues Home Page.
WCBS	World Confederation of Billiard Sports.
Women & Billiards Online Magazine	Interactive online magazine with links, articles, tips, stories, and free services & more.
WPB A	Women's Professional Billiard Association.
X-TEND-A-Q	REVOLUTIONARY NEW BILLIARDS ACCESSORY

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There is life after eight-ball. Click on the link to view the rules for some other popular billiard games.

Bank Pool

Cake Pool

Convergence Pool

Cowboy Pool

Crossover Pool

Eight Ball

General Rules of Pocket Billiards

Kelly Pool

Nine Ball

One Pocket

One-Fifteen Ball

Seven Ball

Straight Pool

Game Rules

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Bank Pool

TYPE OF GAME Bank Pool is a game where legally pocketed balls must be banked into the pocket (using one or more banks). Any ball on the table can be selected and the game is call ball-and-pocket.

PLAYERS Two individuals, or two teams.

BALLS USED Object balls numbered 1-15, plus the cue ball.

THE RACK Standard triangle rack. Balls can be in any order.

OBJECT OF THE GAME To be the first player, or team, to legally sink eight balls.

OPENING BREAK The break shot is "free". If anything is made on the break it spots and the breaker is still at the table. If nothing is made the breaker's inning is over.

RULES OF PLAY All shots, except opening break, are call ball-and-pocket. A player continues with his inning so long as he
makes legal shots. ILLEGALLY POCKETED BALLS Are spotted. If a foul was committed the player must spot an additional ball from those he previously sank, or owe the table a ball (to be spotted immediately after the end of the inning in which he is first able to pay the table).

JUMPED OBJECT BALLS Are spotted without penalty.

CUE BALL AFTER JUMP OR SCRATCH Is put in play from the kitchen. The cue ball coming to rest off of the table bed is considered a foul.

PENALTIES FOR FOULS The player must pay the table a ball. In addition to this any balls sunk on the foul stroke must be spotted.

SUCCESSIVE FOUL PENALTIES If a player fouls in three successive innings he looses the game.

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Cake Pool

Cake is a game for 4-6 players. The game consists of frames and the person with the most frames won is the winner of the game. At the beginning of the game the order of the play is decided the following way: The numbers from 2 to 7 are written on separate paper pieces which are folded up so that the number cannot be seen, put into the ball case and shuffled. Then each player takes one piece and the order of the play is the order of the taken numbers. The paper pieces are put back, they will be needed during the game, too.

Start of the frame

At the beginning of each frame, all the object balls are set up to form a triangle with 6 red balls on the edges and the colours in the middle (hence the name "cake"). The triangle is placed like in snooker, but the apex red stands on the pink spot. The first shot of the frame, played from the quot;D", should look like a breaking in pool and at least two object balls must hit a cushion or a red must enter a pocket or the shot is a foul (oh poor cue tip and poor balls, but this was the worst part of the game, I promise you ;-). Every player has zero points at the beginning of the frame, and each foul counts as minus one (this is best handled by setting the pointers of the scoreboard to ten initially).

Potting

If a player is below two points, he can only pot colours into the two center pockets and reds into any of the six pockets (this means that every object ball is "on" in snooker terms). Each red potted scores one point, but no points are given for the colours. If a player reaches two points at the first time in the frame, he takes one paper piece, but he doesn't show it to the other players. The number taken indicates a colour ball, and from this point on this ball will be his. This is very important as the winner of the frame is the person who pots his own ball into a corner pocket.

If a player has two or more points, he may pot any of the object balls into any of the pockets. If he pots his colour into a corner, he then shows his paper piece to the others and the frame is over.

Other rules

In cake, it is not allowed to use equipment other than the cue. Shots made using them are foul shots. (It is interesting but one often forgets this rule, resulting in minus one point...) Potting a colour into a pocket having less than two points is a foul if he didn't want to pot it there. unfair play if the shot was deliberate. In this case he is disqualified from the frame being played. The frame is over and there is no winner if no colour remains on the table and none of the players have announced a win (see above).

Apart from these, the normal snooker rules apply. That is, it is a foul to touch balls, to force balls off the table, to cause the white enter a pocket, to shoot with none of the legs touching the floor and so on. The player remains at the table if he could pot a ball "cake-legally". There are no such rules as "free ball", "you fouled, please shoot again" etc. For better players the two-point limit for potting colours can be raised to three.

There is quite a bit of luck involved in "cake", which enables weaker players to win. Of course this game has completely different tactical approaches than snooker, but this is what makes it "interesting". For example, it is sometimes a good idea to pretend that you're trying to pot your colour into the center pocket (making sure you don't, of course). If your colour is no longer on the table (or it wasn't there even when you took the paper piece ;), try to get rid of all the other colours, so that the others can't win. Always try to guess what colour is whose and play according to this, if you can.

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Convergence 8-Ball

Except when specifically contradicted, all General Rules of Pocket Billiards (as defined by the Billiard Congress of America) apply.

Convergence 8 Ball plays much like 9 Ball, but each player has his/her own balls, making it less of a turn-by-turn battle than 9 Ball.

Players: 2 (Multi-player variations are also described.)

Skill Level: Moderate to Professional

Object: To legally pocket the 8 ball.

Play: One player is "high", the other "low". The low player's object ball is the lowest ball on the table at the beginning of the shot; likewise, the high player's object ball is the highest ball on the table. A player must, at some time during the shot, touch the object ball with the cue ball. Failure to do so is a foul, which gives the other player the cue ball in hand anywhere on the table.

Any ball and pocket may be called for each shot. (Often the object ball is called.) It is legal to call an opponent's ball. A player continues at the table until failing to make a valid shot. To make a valid shot, the cue ball must collide with the object ball, and the called ball must be pocketed in the called pocket. Furthermore, the collision of the cue ball and the object ball must contribute to pocketing the called ball. For example, a player does not earn another shot for pocketing a called ball and then touching the object ball because the collision with the object ball does not play a role in pocketing the called ball. (More specifically, there must be a series of collisions, including ricochets, from the object ball to the called ball.)

To win, the 8 ball must be called and pocketed on a valid shot. Any other time the 8 ball is pocketed it is spotted at the foot spot. All other pocketed balls remain pocketed. (For coin-operated tables where the 8 ball cannot be spotted, pocketing the 8 ball without winning can be considered a loss of game.)

The Break: The breaker has the low balls. The rack is similar to an 8 Ball rack, with the 1 at the head and the 15 in one of the back corners. The breaker continues his/her turn if the 1 ball was struck first, and any ball is pocketed. If the 8 ball is pocketed on the break and the 1 was struck first, the breaker wins. Failure to pocket a ball or drive two balls (other than the cue ball) to a rail gives the other player the option of accepting a ball in hand anywhere on the table or forcing the breaker to rebreak. Two failed breaks is a loss of game.

Fouls: A scratch or other foul results in a ball in hand anywhere on the table.

Handicapping: A one-ball handicap can be provided by skipping the 15 ball. For a two-ball handicap, use the seven ball as the common final ball.

Multi-player variations: Multi-player variants are possible. For example, in a three-player variation the breaker's object ball is the lowest ball from 1 to 5, the 2nd player's is the lowest from 6 to 10, etc. A player wins by calling and pocketing his/her highest ball on a legal shot. The rack has the 1 ball in front, and the 6 and 11 in the rear corners.

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Cowboy Billiards

TYPE OF GAME Cowboy is another game that combines carom and pocket billiards skill, and employs a very unusual set of rules. Certainly a change of pace game; how many games have you played in which the cue ball must be pocketed on a carom of the 1 ball on the last shot??!

PLAYERS Any number.

BALLS USED Object balls 1,3 and 5, plus the cue ball.

THE RACK No triangle needed; the 1 ball is placed on the head spot, the 3 ball on the foot spot, and the 5 ball on the center spot.

OBJECT OF THE GAME To score 101 points prior to opponent(s).

SCORING The first ninety points exactly may be scored by any of these means on legal scoring strokes: pocketing any of the object balls: points equal to the balls' numbers; and/or carom of the cue ball off two of the object balls: one point; and/or carom of the cue ball off the three object balls: two points.

Points 91 through 100 (exactly) must, and may only, be scored by execution of carom shots #2 and #3 above.

Point 101 (winning point) must be scored by caroming the cue ball off the 1 ball into a called pocket without the cue ball contacting any other object ball.

Should a player accomplish more than one scoring possibility permitted by these rules, he scores for each; thus a single shot can result in a total of 11 points scored.

OPENING BREAK No "break shot" as such. Beginning with cue ball in hand behind the head string, starting player must cause the cue ball to contact the 3 ball first. If starting player fails to do so, incoming player has the choice of (1) requiring starting player to repeat the opening shot, or (2) executing the opening shot himself.

RULES OF PLAY A legally executed shot, conforming to the requirements of "Scoring",entitles the shooter to continue at the table until he fails to legally execute and score on a shot. On all shots, player must cause the cue ball to contact an object ball, and then the cue ball or object ball must contact a cushion. Failure to do so is a foul. At the completion of each shot, any pocketed object balls are spotted on their same positions as at the start of the game. If the appropriate position is occupied, the ball(s) in question remain off the table until the correct position is vacant after a shot. If, however, the 1 ball would be held out as a playerwith exactly 100 points is to shoot, the balls are all placed as at the start of the game, and the player shoots with cue ball in hand behind the head string. When a player scores his 90th point, the shot must score the number of points exactly needed to reach 90; if the shot producing the 90th point also scores a point(s) in excess of 90 for the player, the shot is a foul. When a player is playing for points 91 through 100 (which must all be scored on caroms solely), it is a foul to pocket an object ball on a shot. When a player is playing for his 101st point, it is a foul if the cue ball fails to contact th 1 ball, or if the cue ball contacts any other object ball. When a player pockets the cue ball on an otherwise legal shot, and according to the special requirements given in "Scoring" for counting the 101st point, pocketing the cue ball on such a shot on the 101st point is not a foul. Player loses the game if he fouls in each of three consecutive plays at the table.

ILLEGALY POCKETED BALLS All spotted per the provisions of "Rules of Play" #3 (above), with no penalty, except in the special cases covered by "Rules of Play" #4 #5.

JUMPED OBJECT BALLS All spotted; no penalty.

CUE BALL AFTER JUMP OR SCRATCH Incoming player has cue ball in hand behind the head string.

PENALTY FOR FOULS No point deduction, but any points scored on previous shots of the inning not scored, and player's inning ends. After fouls other than cue ball jump or scratch, incoming player accepts the cue ball in position.

Game Rules

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Crossover Pool

Crossover is a rather unconventional 2-player game with very simple rules. It is challenging for any level of player, and cue ball control is critical.

Players: 2 (Multi-player variations are also described.)

Skill Level: Any

Object: Be the first to touch every ball on the table in succession with the cue ball.

Play: One player begins with the 1 ball as his/her target ball and advances toward the 15; the other begins with the 15 and advances toward the 1. In a turn, a player gets exactly one shot in which to advance as many balls as possible. Players advance by touching their target ball with the cue ball, or when their target ball is pocketed. Even within a shot, balls must be advanced in order. Advancement occurs at the time of contact, or at the moment the target ball is pocketed. Cue ball collisions with non-target balls do not effect advancement. All pocketed balls remain pocketed. A player automatically advances past any balls that are not on the table when they are reached. Shots are not called.

The Break: One player arranges the rack as he/she chooses, but may not put both the 1 and the 15 in the interior three positions of the rack. The other player then chooses whether to begin with the 1 or with the 15 and breaks. The breaker may advance balls as on any other shot, but if no balls pass the center string (line between the side pockets) the breaker does not advance. The cue ball may contact any rails prior to touching the rack without penalty.

Fouls: A scratch or any other foul results in a ball in hand anywhere on the table. Failing to make the cue ball contact an object ball on a shot is not a foul, but failing to touch any ball in two consecutive turns is a foul. Advancement in a turn is not negated by a scratch.

Judgement: Judgment calls may be required in rare cases where a player's next two balls are touched or pocketed simultaneously, since a player who touches or pockets his/her current ball immediately advances to the next ball while the balls are still in motion. Another player (or a referee) should carefully judge the shot if such a shot is being attempted. If the events are judged to be simultaneous, all advancements are rewarded.

Handicapping: A player with a one-ball handicap does not need to touch the final ball (1 or 15), and so on.

Multi-player variations: In multi-player variations, all players try to advance past every ball on the table in increasing numerical order, with the 1 ball following the 15. With three players, one player begins with the 1 ball, another with the 6, and another with the 11. After choosing player order, the last player racks (no interior 1st balls), the breaking player chooses a starting ball (1, 6, or 11), then the 2nd player chooses a starting ball.

Remarks: Not only are caroming skills and cue ball control important, but pocketing balls can be advantageous as well. It is useful for players to pocket any ball they haven't reached that the opponent has passed. Defense can also be a deciding factor.

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Game Rules

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Eight Ball

[Standardized World Rules 1997]

Except when clearly contradicted by these additional rules, the General Rules of Pocket Billiards apply.

1. OBJECT OF THE GAME. Eight Ball is a call shot game played with a cue ball and fifteen object balls, numbered 1 through 15. One player must pocket balls of the group numbered 1 through 7 (solid colors), while the other player has 9 thru 15 (stripes). THE PLAYER POCKETING HIS GROUP FIRST AND THEN LEGALLY POCKETING THE 8-BALL WINS THE GAME.

2. CALL SHOT. In Call Shot, obvious balls and pockets do not have to be indicated. It is the opponent's right to ask which ball and pocket if he is unsure of the shot. Bank shots and combination shots are not considered obvious, and care should be taken in calling both the object ball and the intended pocket. When calling the shot, it is NEVER necessary to indicate details such as the number of cushions, banks, kisses, caroms, etc. Any balls pocketed on a foul remain pocketed, regardless of whether they belong to the shooter or the opponent.

The opening break is not a "called shot." Any player performing a break shot in 8-Ball may continue to shoot his next shot so long as he has legally pocketed any object ball on the break.

3. RACKING THE BALLS. The balls are racked in a triangle at the foot of the table with the 8-ball in the center of the triangle, the first ball of the rack on the footspot, a stripe ball in one corner of the rack and a solid ball in the other corner.

4. ALTERNATING BREAK. Winner of the lag has the option to break. During individual competition, players will alternate breaking on each subsequent game.

5. JUMP AND MASSE SHOT FOUL. While "cue ball fouls only" is the rule of play when a match is not presided over by a referee, a player should be aware that it will be considered a cue ball foul if during an attempt to jump, curve or masse the cue ball over or around an impeding numbered ball that is not a legal object ball, the impeding ball moves (regardless of whether it was moved by a hand, cue stick follow-through or bridge).

6. LEGAL BREAK SHOT. (Defined) To execute a legal break, the breaker (with the cue ball behind the headstring) must either (1) pocket a ball, or (2) drive at least four numbered balls to the rail. If he fails to make a legal break, it is a foul, and the incoming player has the option of (1) accepting the table in position and shooting, or (2) having the balls reracked and having the option of shooting the opening break himself or allowing the offending player to rebreak.

7. SCRATCH ON A LEGAL BREAK. If a player scratches on a legal break shot, (1) all balls pocketed remain pocketed (exception, the 8-ball: see rule 9), (2) it is a foul, (3) the table is open. PLEASE NOTE: Incoming player has cue ball in hand behind the head string and may not shoot an object ball that is behind the head string, unless he first shoots the cue ball past the headstring and causes the cue ball to come back behind the headstring and hit the object ball.

8. OBJECT BALLS JUMPED OFF THE TABLE ON THE BREAK. If a player jumps an object ball off the table on the break shot, it is a foul and the incoming player has the option of (1) accepting the table in position and shooting, or (2) taking cue ball in hand behind the head string and shooting.

9. 8-BALL POCKETED ON THE BREAK. If the 8-ball is pocketed on the break, the breaker may ask for a re-rack or have the 8-ball spotted and continue shooting. If the breaker scratches while pocketing the 8-ball on the break, the incoming player has the option of a re-rack or having the 8-ball spotted and begin shooting with ball in hand behind the headstring.

10. OPEN TABLE. (Defined) The table is "open" when the choice of groups (stripes or solids) has not yet been determined. When the table is open, it is legal to hit a solid first to make a stripe or vice-versa. Note: The table is always open immediately after the break shot. When the table is open it is legal to hit any solid or stripe or the 8-ball first in the process of pocketing the called stripe or solid. However, when the table is open and the 8-ball is the first ball contacted, no stripe or solid may be scored in favor of the shooter. The shooter loses his turn; any balls pocketed remain pocketed; and the incoming player addresses the balls with the table still open. On an open table, all illegally pocketed balls remain pocketed.

11. CHOICE OF GROUP. The choice of stripes or solids is not determined on the break even if balls are made from only one or both groups. THE TABLE IS ALWAYS OPEN IMMEDIATELY AFTER THE BREAK SHOT. The choice of group is determined only when a player legally pockets a called object ball

after the break shot.

12. LEGAL SHOT. (Defined) On all shots (except on the break and when the table is open), the shooter must hit one of his group of balls first and (1) pocket a numbered ball, or (2) cause the cue ball or any numbered ball to contact a rail.

PLEASE NOTE: It is permissable for the shooter to bank the cue ball off a rail before contacting his object ball; however, after contact with his object ball, an object ball must be pocketed, OR the cue ball or any numbered ball must contact a rail. Failure to meet these requirements is a foul.

13. "SAFETY" SHOT. For tactical reasons a player may choose to pocket an obvious object ball and also discontinue his turn at the table by declaring "safety" in advance. A safety shot is defined as a legal shot. If the shooting player intends to play safe by pocketing an obvious object ball, then prior to the shot, he must declare a "safety" to his opponent. If this is NOT done, and one of the shooter's object balls is pocketed, the shooter will be required to shoot again. Any ball pocketed on a safety shot remains pocketed.

14. SCORING. A player is entitled to continue shooting until he fails to legally pocket a ball of his group. After a player has legally pocketed all of his group of balls, he shoots to pocket the 8-ball.

15. FOUL PENALTY. Opposing player gets cue ball in hand. This means that the player can place the cue ball anywhere on the table (does not have to be behind the headstring except on opening break). This rule prevents a player from making intentional fouls which would put his opponent at a disadvantage. With "cue ball in hand," the player may use his hand or any part of his cue (including the tip) to position the cue ball. When placing the cue ball in position, any forward stroke motion contacting the cue ball will be a foul, if not a legal shot. (Also see Rule 39 in the General Rules of Pocket Billiards)

16. COMBINATION SHOTS. combination shots are allowed; however, the 8-ball cannot be used as a first ball in the combination except when the table is open.

17. ILLEGALLY POCKETED BALLS. An object ball is considered to be illegally pocketed when (1) that object ball is pocketed on the same shot a foul is committed, or (2) the called ball did not go in the designated pocket, or (3) a safety is called prior to the shot. Illegally pocketed balls remain pocketed.

18. OBJECT BALLS JUMPED OFF THE TABLE. If any object ball is jumped off the table, it is a foul and loss of turn, unless it is the 8-ball, which is a loss of game. Any jumped object balls are spotted in numerical order according to General Rules for spotting balls.

19. PLAYING THE 8-BALL. When shooting at the 8-ball, a scratch or foul is not loss of game if the 8-ball is not pocketed or jumped from the table. Incoming player has cue ball in hand. Note: A combination shot can never be used to legally pocket the 8-ball.

20. LOSS OF GAME. A player loses the game if he commits any of the following infractions:

a. Fouls when pocketing the 8-ball (exception: see 8-Ball Pocketed On The Break).

b. Pockets the 8-ball on the same stroke as the last of his group of balls.

c. Jumps the 8-ball off the table at any time.

d. Pockets the 8-ball in a pocket other than the one designated.

e. Pockets the 8-ball when it is not the legal object ball.

Note: All infractions must be called before another shot is taken, or else it will be deemed that no infraction occurred.

21. STALEMATED GAME. If, after 3 consecutive turns at the table by each player (6 turns total), the referee judges (or if no referee, both players agree) that attempting to pocket or move an object ball will result in loss of game, the balls will be reracked with the original breaker of the stalemated game breaking again. The stalemate rule may only be used when there are only two object balls and the 8-ball remaining on the table. PLEASE NOTE: Three consecutive fouls by one player is not a loss of game.

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General Rules of Pocket Billiards

These general rules apply to all pocket billiard games, UNLESS specifically noted to the contrary in the individual game rules.

1. TABLES, BALLS, EQUIPMENT. All games described in these rules are designed for tables, balls and equipment meeting the standards prescribed in the BCA Equipment Specifications .

2. RACKING THE BALLS. When racking the balls a triangle must be used, and the apex ball is to be spotted on the foot spot. All the balls must be lined up behind the apex ball and pressed together so that they all have contact with each other.

3. STRIKING CUE BALL. Legal shots require that the cue ball be struck only with the cue tip. Failure to meet this requirement is a foul.

4. FAILURE TO POCKET A BALL. If a player fails to pocket a ball on a legal shot, then the player's inning is over, and it is the opponent's turn at the table.

5. LAG FOR BREAK. The following procedure is used for the lag for the opening break. Each player should use balls of equal size and weight (preferably cue balls but, when not available, non-striped object balls). With the balls in hand behind the head string, one player to the left and one to the right of the head spot, the balls are shot simultaneously to the foot cushion and back to the head end of the table. The player whose ball is the closest to the innermost edge of the head cushion wins the lag. The lagged ball must contact the foot cushion at least once. Other cushion contacts are immaterial, except as prohibited below.

It is an automatic loss of the lag if: (1) the ball crosses into the opponent's half of the table, (2) the ball fails to contact the foot cushion, (3) the ball drops into a pocket, (4) the ball jumps the table, (5) the ball touches the long cushion, (6) the ball rests within the corner pocket and past the nose of the head cushion, or (7) the ball contacts the foot rail more than once. If both players violate automatic-loss lag rules, or if the referee is unable to determine which ball is closer, the lag is a tie and is replayed.

6. OPENING BREAK SHOT. The opening break shot is determined by either lag or lot. (The lag for break procedure is required for tournament and other formal competition.) The player winning the lag or lot has the choice of performing the opening break shot or assigning it to the opponent.

7. CUE BALL ON OPENING BREAK. The opening break shot is taken with cue ball in hand behind the head string. The object balls are positioned according to specific game rules. On the opening break, the game is considered to have commenced once the cue ball has been struck by the cue tip and crosses the head string.

8. DEFLECTING THE CUE BALL ON THE GAMES OPENING BREAK. On the break shot, stopping or deflecting the cue ball after it has crossed the head string and prior to hitting the racked balls is considered a foul and loss of turn. The opponent has the option of receiving cue ball in hand behind the head string or passing the cue ball in hand behind the head string back to the offending player. (Exception: ball in hand on the whole table: see rule 1.3 for 9-Ball). A warning must be given that a second violation during the match will result in the loss of the match by forfeiture. (See Rule 28.)

9. CUE BALL IN HAND BEHIND THE HEAD STRING. This situation applies in specific games whereby the opening break is administered or a player's scratching is penalized by the incoming player having cue ball in hand behind the head string. The incoming player may place the cue ball anywhere behind the head string.

The shooting player may shoot at any object ball as long as the base of the object ball is on or below the head string. He may not shoot at any ball, the base of which is above the head string, unless he first shoots the cue ball below the head string and then by hitting a rail causes the cue ball to come back above the head string and hit the object ball. The base of the ball (the point of the ball touching the table) determines whether it is above or below the head string.

If the incoming player inadvertently places the cue ball on or below the head string, the referee or the opposing player must inform the shooting player of improper positioning of the cue ball before the shot is made. If the opposing player does not so inform the shooting player before the shot is made, the shot is considered legal. If the shooting player is informed of improper positioning, he must then reposition the cue ball. If a player positions the cue ball completely and obviously outside the kitchen and shoots the cue ball, it is a foul, if called by the opponent or referee.

When the cue ball is in hand behind the head string, it remains in hand (not in play) until the player drives

the cue ball past the head string by striking it with his cue tip.

The cue ball may be ADJUSTED by the player's hand, cue, etc., so long as it remains in hand. Once the cue ball is in play per the above, it may not be impeded in any way by the player; to do so is to commit a foul.

10. POCKETED BALLS. A ball is considered as a pocketed ball if as a result of an otherwise legal shot, it drops off the bed of the table into the pocket and remains there. (A ball that drops out of a ball return system onto the floor is not to be construed as a ball that has not remained pocketed.) A ball that rebounds from a pocket back onto the table bed is not a pocketed ball.

11. POSITION OF BALLS. The position of a ball is judged by where its base (or center) rests.

12. FOOT ON FLOOR. It is a foul if a player shoots when at least one foot is not in contact with the floor. Foot attire must be normal in regard to size, shape and manner in which it is worn.

13. SHOOTING WITH BALLS IN MOTION. It is a foul if a player shoots while the cue ball or any object ball is in motion (a spinning ball is in motion).

14. COMPLETION OF STROKE. A stroke is not complete (and therefore is not counted) until all balls on the table have become motionless after the stroke (a spinning ball is in motion).

15. HEAD STRING DEFINED. The area behind the head string does not include the head string. Thus an object ball that is dead center on the head string is playable when specific game rules require that a player must shoot at a ball past the head string. Likewise, the cue ball when being put in play behind the head string (cue ball in hand behind the head string), may not be placed directly on the head string; it must be behind it.

16. GENERAL RULE, ALL FOULS. Though the penalties for fouls differ from game to game, the following apply to all fouls: (1) player's inning ends; (2) if on a stroke, the stroke is invalid and any pocketed balls are not counted to the shooter's credit; and (3) any ball(s) is respotted only if the rules of the specific game require it.

17. FAILURE TO CONTACT OBJECT BALL. It is a foul if on a stroke the cue ball fails to make contact with any legal object ball first. Playing away from a touching ball does not constitute having hit that ball.

18. LEGAL SHOT. Unless otherwise stated in a specific game rule, a player must cause the cue ball to contact a legal object ball and then (1) pocket a numbered ball, or (2) cause the cue ball or any numbered ball to contact a cushion. Failure to meet these requirements is a foul.

19. CUE BALL SCRATCH. It is a foul (scratch) if on a stroke, the cue ball is pocketed. If the cue ball touches an object ball that was already pocketed (for example, in a pocket full of object balls), the shot is a foul.

20. FOULS BY TOUCHING BALLS. It is a foul to strike, touch or in any way make contact with the cue ball in play or any object balls in play with anything (the body, clothing, chalk, mechanical bridge, cue shaft, etc.) EXCEPT the cue tip (while attached to the cue shaft), which may contact the cue ball in the execution of a legal shot. Whenever a referee is presiding over a match, any object ball moved during a standard foul must be returned as closely as possible to its original position as judged by the referee, and the incoming player does not have the option of restoration.

21. FOUL BY PLACEMENT. Touching any object ball with the cue ball while it is in hand is a foul.

22. FOULS BY DOUBLE HITS. If the cue ball is touching the required object ball prior to the shot, the player may shoot towards it, providing that any normal stroke is employed. If the cue stick strikes the cue ball more than once on a shot, or if the cue stick is in contact with the cue ball when or after the cue ball contacts an object ball, the shot is foul. If a third ball is close by, care should be taken not to foul that ball under the first part of this rule.

23. PUSH SHOT FOULS. It is a foul if the cue ball is pushed by the cue tip, with contact being maintained for more than the momentary time commensurate with a stroked shot. (Such shots are usually referred to as push shots.)

24. PLAYER RESPONSIBILITY FOULS. The player is responsible for chalk, bridges, files and any other items or equipment he brings to, uses at, or causes to approximate the table. If he drops a piece of chalk, or knocks off a mechanical bridge head, as examples, he is guilty of a foul should such an object make contact with any ball in play (or the cue ball only if no referee is presiding over the match).

25. ILLEGAL JUMPING OF BALL. It is a foul if a player strikes the cue ball below center ("digs under" it) and intentionally causes it to rise off the bed of the table in an effort to clear an obstructing ball. such jumping action may occasionally occur accidentally, and such "jumps" are not to be considered fouls on their face; they may still be ruled foul strokes, if for example, the ferrule or cue shaft makes contact with the cue ball in the course of the shot.

26. JUMP SHOTS. Unless otherwise stated in rules for a specific game it is legal to cause the cue ball to rise off the bed of the table by elevating the cue stick on the shot, and forcing the cue ball to rebound from the bed of the table. Any miscue when executing a jump shot is a foul.

27. BALLS JUMPED OFF TABLE. Balls coming to rest other than on the bed of the table after a stroke (on the cushion top, rail surface, floor, etc.) are considered jumped balls. Balls may bounce on the cushion tops and rails of the table in play without being jumped balls if they return to the bed of the table under their own power and without touching anything not a part of the table. The table shall consist of the permanent part of the table proper. (Balls that strike or touch anything not a part of the table, such as the light fixture, chalk on the rails and cushion tops, etc., shall be considered jumped balls even though they might return to the bed of the table after contacting items which are not parts of the table proper).

In all pocket billiard games when a stroke results in the cue ball or any object ball being a jumped ball off the table, the stroke is a foul. All jumped object balls are spotted (except in Nine Ball) when all balls have stopped moving. See specific game rules for putting the cue ball in play after a jumped cue ball foul.

28. SPECIAL INTENTIONAL FOUL PENALTY. The cue ball in play shall not be intentionally struck with anything other than a cue's attached tip (such as the ferrule, shaft, etc.). While such contact is automatically a foul under the provisions of Rule 19., if the referee deems the contact to be intentional, he shall warn the player once during a match that a second violation during that match will result in the loss of the match by forfeiture. If a second violation does occur, the match must be forfeited.

29. ONE FOUL LIMIT. Unless specific game rules dictate otherwise, only one foul is assessed on a player in each inning; if different penalties can apply, the most severe penalty is the factor determining which foul is assessed.

30. BALLS MOVING SPONTANEOUSLY. If a ball shifts, settles, turns or otherwise moves "by itself," the ball shall remain in the position it assumed and play continues. A hanging ball that falls into a pocket "by itself" after being motionless for 5 seconds or longer shall be replaced as closely as possible to its position prior to falling, and play shall continue.

If an object ball drops into a pocket "by itself" as a player shoots at it, so that the cue ball passes over the spot the ball had been on, unable to hit it, the cue ball and object ball are to be replaced to their positions prior to the stroke, and the player may shoot again. Any other object balls disturbed on the stroke are also to be replaced to their original positions before the shooter replays.

31. SPOTTING BALLS. When specific game rules call for spotting balls, they shall be replaced on the table on the long string after the stroke is complete. A single ball is placed on the foot spot; if more than one ball is to be spotted, they are placed on the long string in ascending numerical order, beginning on the foot spot and advancing toward the foot rail.

When balls on or near the foot spot or long string interfere with the spotting of balls, the balls to be spotted are placed on the long string as close as possible to the foot spot without moving the interfering balls. Spotted balls are to be placed as close as possible or frozen (at the referee's discretion) to such interfering balls, except when the cue ball is interfering; balls to be spotted against the cue ball are placed as close as possible without being frozen.

If there is insufficient room on the long string between the foot spot and the foot rail cushion for balls that must be spotted, such balls are then placed on the extension of the long string "in front" of the foot spot (between the foot spot and the center spot), as near as possible to the foot spot and in the same numerical order as if they were spotted "behind" the foot spot (lowest numbered ball closest to the foot spot).

32. JAWED BALLS. If two or more balls are locked between the jaws or sides of the pocket, with one or more suspended in air, the referee shall inspect the balls in position and follow this procedure: he shall visually (or physically if he desires) project each ball directly downward from its locked position; any ball that in his judgement would fall in the pocket if so moved directly downward is a pocketed ball, while any ball that would come to rest on the bed of the table is not pocketed. The balls are then placed according to the referee's assessment, and play continues according to specific game rules as if no locking or jawing of balls had occurred.

33. ADDITIONAL POCKETED BALLS. If extra balls are pocketed on a legal scoring stroke, they are counted in accord with the scoring rules for the particular game.

34. NON-PLAYER INTERFERENCE. If the balls are moved (or a player bumped such that play is directly affected) by a non-player duringthe match, the balls shall be replaced as near as possible to their original positions immediately prior to the incident, and play shall resume with no penalty on the player affected. If the match is officiated, the referee shall replace the balls. This rule shall also apply to "act of God" interference, such as earthquake, hurricane, light fixture falling, power failure, etc. If the balls cannot be restored to their original positions, replay the game with the original player breaking. This rule is not applicable to 14.1 Continuous where the game consists of successive racks: the rack in progress will be discontinued and a completely new rack will be started with the requirements of the normal opening break

(players lag for break). Scoring of points is to be resumed at the score as it stood at the moment of game disruption.

35. BREAKING SUBSEQUENT RACKS. In a match that consists of short rack games, the winner of each game breaks in the next. The following are common options that may be designated by tournament officials in advance: (1) Players alternate break. (2) Loser breaks. (3) Player trailing in games score breaks the next game.

36. PLAY BY INNINGS. During the course of play, players alternate turns (innings) at the table, with a player's inning ending when he either fails to legally pocket a ball, or fouls.

When an inning ends free of a foul, the incoming player accepts the table in position.

37. OBJECT BALL FROZEN TO CUSHION OR CUE BALL. This rule applies to any shot where the cue ball's first contact with a ball is with one that is frozen to a cushion or to the cue ball itself. after the cue ball makes contact with the frozen object ball, the shot must result in either (1) a ball being pocketed, or (2) the cue ball contacting a cushion, or (3) the frozen ball being caused to contact a cushion (not merely rebounding from the cushion it was frozen to), or (4) another object ball being caused to contact a cushion to which it was not already in contact with. Failure to satisfy one of those four requirements is a foul. (Note: 14.1 and other games specify additional requirements and applications of this rule; see specific game rules.)

An object ball is not considered frozen to a rail unless it is examined and announced as such by either the referee or one of the players prior to that object ball being involved in a shot.

38. PLAYING FROM BEHIND THE STRING. When a player has the cue ball in hand behind the string (in the kitchen), he must drive the cue ball to a point outside the kitchen before it contacts either a cushion or an object ball. Failure to do so is a foul if a referee is presiding over a match. If no referee, the opponent has the option to call it either a foul or to require the offending player to replay the shot again with the balls restored to their positions prior to the shot (and with no foul penalty imposed).

Exception: if an object ball lies on or outside the head string (and is thus playable) but so close that the cue ball contacts it before the cue ball is out of the kitchen, the ball can be legally played.

If, with cue ball in hand behind the headstring and while the shooter is attempting a legitimate shot, the cue ball accidentally hits a ball behind the head string, and the cue ball crosses the line, it is a foul. If with cue ball in hand behind the head string, the shooter causes the cue ball to accidentally hit an object ball, and the cue ball does not cross the headstring, the following applies: the incoming player has the option of calling a foul and having cue ball in hand, or having the balls returned to their original position, and having the offending player replay the shot.

If a player under the same conditions intentionally causes the cue ball to contact an object ball behind the headstring, it is unsportsmanlike conduct.

39. CUE BALL IN HAND FOUL. During cue ball in hand placement, the player may use his hand or any part of his cue (including the tip) to position the cue ball. When placing the cue ball in position, any forward stroke motion contacting the cue ball will be a foul, if not a legal shot.

40. INTERFERENCE. If the nonshooting player distracts his opponent or interferes with his play, he has fouled. If a player shoots out of turn, or moves any ball except during his inning, it is considered to be interference.

41. DEVICES. Players are not allowed to use a ball, the triangle or any other width-measuring device to see if the cue ball or an object ball would travel through a gap, etc. Only the cue stick may be used as an aid to judge gaps, etc., so long as the cue is held by the hand. To do so otherwise is a foul and unsportsmanlike conduct.

42. ILLEGAL MARKING. If a player intentionally marks the table in any way to assist in executing the shot, whether by wetting the cloth, by placing a cube of chalk on the rail, or by any other means, he has fouled. If the player removes the mark prior to the shot, no penalty is imposed.

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Kelly Pool

Number of players: 2-15

The game is played with a set of 16 balls, 1 cue ball and 15 coloured, and numbered 1-15. The table marker throws an alley (a numbered token) to each intending player for his/her rotation in playing. When all names are taken down, the alleys are returned and pool money collected. The marker then throws and alley to each player in the same order as market in his book. The alleys are then placed in the box according to playing order. (eg 1st player in no 1 spot, 2nd player in number two spot etc), and the first player commences play by breaking the balls from the "D". The cue ball must strike one cushion before coming in contact with pool balls. The first player to pocket the ball on the table with the number corresponding to his alley wins the pool nad the game is over. A player may pocket any ball on the table other than the cue ball, and continues his/her play until he/she misses pocketing a ball or plays a foul shot. Should he/she pocket a ball other then their his/her own, but one of which no player has the alley of that number, he/she gains nothing but continues their stroke. If another player has the alley corresponding to the ballpocketed, than he/she pays the player striking half pool - ie five cent pool, 2 cent, and so on, but takes his/her own turn when it comes. Any ball once in the pocket by fair shot remains there and does not come back into play during the game.If a ball is pocketed on foul shot, then it is placed on the table on the pink spot, or if that is covered, behind it and as close as possible to it. Immediatly after a foul shot has been played, the next player commences play. If another player desires to join the game he/she may do so by paying double or treble pool entrance fee. The new player takes last alley thrown for position.

Foul Shots

1. If the cue ball does not strike a numbered ball the shot is replayed but does not count and the next player commences play. Any player's balls potted on the second shot are spotted on the pink spot.

2. If cue ball is potted, the player stops, and the next player commences from the "D" and can play at any ball on the table.

3. Should the player pocket the cue ball as well as his/her own ball or any other ball in the same stroke; it is a foul stroke and does not count.

4. Any ball pocketed under above shots are respotted and next player plays.

5. Rules governing foul shots in billiards: eg both feet off the floor, moving the cue ball in act of striking, push shots etc, constitute a foul.

6. In any case where the marker is satisfied that a player has deliberatly played a ball so as to let his following player win the pool, it will be called a foul shot and the ball will be spotted

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Nine Ball

[Standardized World Rules 1997]

Except when clearly contradicted by these additional rules, the General Rules of Pocket Billiards apply.

1 OBJECT OF THE GAME. Nine Ball is played with nine object balls numbered one through nine and a cue ball. On each shot the first ball the cue ball contacts must be the lowest-numbered ball on the table, but the balls need not be pocketed in order. If a player pockets any ball on a legal shot, he remains at the table for another shot, and continues until he misses, fouls, or wins the game by pocketing the 9-ball. After a miss, the incoming player must shoot from the position left by the previous player, but after any foul the incoming player may start with the cue ball anywhere on the table. Players are not required to call any shot. a match ends when one of the players has won the required number of games.

2. RACKING THE BALLS. The object balls are racked in a diamond shape, with the one ball at the top of the diamond and on the foot spot, the nine ball in the center of the diamond, and the other balls in random order, racked as tightly as possible. the game begins with cue ball in hand behind the head string.

3. LEGAL BREAK SHOT. The rules governing the break shot are the same as for other shots except:

a. The breaker must strike the 1-ball first and either pocket a ball or drive at least four numbered balls to the rail.

b. If the cue ball is pocketed or driven off the table, or the requirements of the opening break are not met, it is a foul, and the incoming player has cue ball in hand anywhere on the table.

c. If on the break shot, the breaker causes an object ball to jump off the table, it is a foul and the incoming player has cue ball in hand anywhere on the table. The object ball is not respotted (exception: if the object ball is the 9-ball, it is respotted).

4. CONTINUING PLAY. On the shot immediately following a legal break, the shooter may play a "push out." (See Rule 5.). If the breaker pockets one or more balls on a legal break, he continues to shoot until he misses, fouls, or wins the game. If the player misses or fouls, the other player begins his inning and shoots until he misses, fouls, or wins. the game ends when the nine ball is pocketed on a legal shot, or the game is forfeited for a serious infraction of the rules.

5. PUSH OUT. The player who shoots the shot immediately after a legal break may play a push out in an attempt to move the cue ball into a better position for the option that follows. On a push out, the cue ball is not required to contact any object ball nor any rail, but all other foul rules still apply. The player must announce his intention of playing a push out before the shot, or the shot is considered to be a normal shot. Any ball pocketed on a push out does not count and remains pocketed except the 9-ball. Following a legal push out, the incoming player is permitted to shoot from that position or to pass the shot back to the player who pushed out. A push out is not considered to be a foul as long as no rule (except rules 7. and 8.) is violated. An illegal push out is penalized according to the type of foul committed. After a player scratches on the break shot, the incoming player cannot play a push out.

6. FOULS. When a player commits a foul, he must relinquish his run at the table and no balls pocketed on the foul shot are respotted (exception: if a pocketed ball is the 9-ball, it is respotted). The incoming player is awarded ball in hand; prior to his first shot he may place the cue ball anywhere on the table. If a player commits several fouls on one shot, they are counted as only one foul.

7. BAD HIT. If the first object ball contacted by the cue ball is not the lowest- numbered ball on the table, the shot is foul.

8. NO RAIL. If no object ball is pocketed, failure to drive the cue ball or any numbered ball to a rail after the cue ball contacts the object ball on is a foul.

9. IN HAND. When the cue ball is in hand, the player may place the cue ball anywhere on the bed of the table, except in contact with an object ball. He may continue to adjust the position of the cue ball until he takes a shot.

10. OBJECT BALLS JUMPED OFF THE TABLE. An unpocketed ball is considered to be driven off the table if it comes to rest other than on the bed of the table. It is a foul to drive an object ball off the table. The jumped object ball(s) is not respotted (exception: if the object ball is the 9-ball, it is respotted) and play continues.

11. JUMP AND MASSE SHOT FOUL. If a match is not refereed, it will be considered a cue ball foul if during an attempt to jump, curve or masse the cue ball over or around an impeding numbered ball, the impeding ball moves (regardless of whether it was moved by a hand, cue stick follow-through or bridge).

12. THREE CONSECUTIVE FOULS. If a player fouls three consecutive times on three successive shots without making an intervening legal shot, he loses the game. The three fouls must occur in one game. The warning must be given between the second and third fouls.

A player's inning begins when it is legal for him to take a shot and ends at the end of a shot on which he misses, fouls or wins, or when he fouls between shots.

13. END OF GAME. A game starts as soon as the cue ball crosses over the head string on the opening break. The 1-ball must be legally contacted on the break shot. The game ends at the end of a legal shot which pockets the 9-ball; or when a player forfeits the game as the result of a foul.

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One Pocket

Except when clearly contradicted by these additional rules, the General Rules of Pocket Billiards apply.

TYPE OF GAME One Pocket is a form of pocket-billiards in which the opposing sides each have one of the foot pockets in which to sink their balls. They can not have the same foot pocket as their pocket. The winning player is the one to first score eight balls in his pocket (any eight balls).

PLAYERS The game may be played by two individuals, or by two teams.

BALLS USED The standard set of object-balls numbered 1-15, plus cue-ball.

THE RACK A triangle rack with the apex on the foot spot. There is no particular order to the position of the balls in the rack.

OBJECT OF THE GAME To win by getting any eight balls in your pocket.

SCORING A player scores a ball in his pocket when he legally pockets a called ball in his pocket, or when his opponent shoots a ball(s) into his pocket (whether the opponents stroke was legal or not).

OPENING BREAK The player winning the lag has choice of breaking, or assigning the break to his opponent. The starting player, called the breaker, will choose which one of the foot pockets will be his pocket. His opponent will have the remaining foot pocket. The starting player must then either pocket a called ball in his pocket, or cause a ball from the rack, or the cue ball (after hitting an objet-ball), to make contact with a cushion. Failure to do so is a foul, and the player's inning is ended and a 1-point penalty is applied.

RULES OF PLAY

A player will continue his inning so long as he legally pockets a called ball in his pocket.

Any balls which fall into a pocket other than one of the foot pockets will be spotted at the end of the player's inning. If there are no more balls on the table and a player's inning is still alive then any balls in illegal pockets will be spotted so the player can continue his inning. (An illegal pocket is any pocket other than one of the foot pockets).

Safety play is allowed. Any ball(s) which are pocketed on a safety stroke will be spotted, unless they fall in the opponent's pocket (they count for the opponent as legally scored balls).

Safety play on a ball frozen to a cushion (any ball within a cue-ball's width of a cushion) requires the following for a legal safety. Normal safety play applies unless the ball remains frozen. If the frozen ball has not become unfrozen after each player has played two safeties on it then the third, and any subsequent, safety on said ball (until it becomes unfrozen, or a different object-ball has been played) must either:drive the frozen object-ball to a cushion other than the one it is frozen to, or the cue-ball must contact a cushion after contact with the frozen ball, or the shooter may play a different object-ball. Failure to play a frozen ball as outlined above is a foul. Any ball which falls into the opponent's pocket will count for the opponent (even if the stroke was foul).

LOSS OF GAME A player looses the game if his opponent scores eight balls before he does. A player will loose the game for committing any foul in each of three successive innings.

WINNING THE GAME A player wins the game when he has eight legally pocketed balls in his pocket. A player may win the game by pocketing balls in his opponent's pocket if the opponent does not call attention to the fact that the balls have been scored in the wrong pocket before the required number of balls for the game have been scored. If the opponent notifies the shooter that he has been pocketing balls in the wrong pocket, before the shooter has reached the number required to win the game, then all balls the shooter pocketed will count for his opponent.

PAYING PENALTIES Normal penalties for fouls, scratches, and such will apply. In the event the penalized player does not have any balls to pay the penalty with he will owe the table those balls.

CUE BALL AFTER JUMP OR SCRATCH Incoming player will have ball in hand behind the head string.

CUE BALL AFTER FOUL Incoming player must take cue ball as it sits.

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One Fifteen Ball

TYPE OF GAME Eight Ball (often called stripes and solids) is a unique game, and is doubtless the most commonly played pocket billiard game in the United States. This is a variation on that game in which special rules apply to the 1-ball and the 15-ball. The 1-ball and the 15-ball are termed "special balls" in this game.

PLAYERS Two (or two teams).

BALLS USED The standard set of object-balls numbered 1-15, plus a cue-ball.

THE RACK Standard triangle rack with the apex on the foot spot and the 8-ball in the center of the triangle. One ball from each group is put on the two rear corners. The 1-ball is placed immediately behind the 8-ball (right of center), and the 15-ball is placed immediately behind the 8-ball (left of center). The other balls may be placed at random.

OBJECT OF THE GAME To legally pocket all the balls of the player's group (see below for how the player's group is determined), and then the 8-ball.

SCORING Group balls have no point value. The player legally pocketing the 8-ball wins the game.

OPENING BREAK The starting player must make an open break or pocket a ball. If he fails to do so it is an illegal break and his opponent has the choice of either: accepting the table in position and shooting, or shooting the opening break shot himself. Any balls which fall from a legal opening break count as legally pocketed balls if there were no fouls. Should a player foul on the opening break, their opponent has cue-ball in hand behind the head string. If the 8-ball is pocketed on a legal opening break shot, the breaker wins the game.

DETERMINATION OF GROUPS The table remains open until a player legally pockets one or more balls. The player who first legally pockets a ball from a group is assigned that group, his opponent then has the other group.

If balls a sunk from more than one group, on the first legal counting, then the group from which the most balls were sunk becomes the shooter's group. If a player pockets an equal number of balls from both groups the table remains open. RULES OF PLAY Combination shots involving balls of both groups are legal when the table is open. After groups have been determined, the player must cause the cue-ball's first contact to be with a ball of his own group. Failure to do so is a foul. A foul shot is not a legal shot.

When shooting the player must make the cue-ball contact an object-ball (of his group if groups have been determined), and then either: pocket the object-ball, or send a ball (object- or cue-) to a cushion. Failure to do so is a foul.

A player may shoot at any ball that he chooses, but before he shoots he must call the ball and the pocket. He need not call any detail such as kisses, caroms, combinations, or cushions (all of which are legal). A legally pocketed ball entitles the shooter to continue.

The player with the "solids" must legally pocket the 1-ball in the left side-pocket for it to stay down. The ball can be pocketed in any other pocket, and will count as a legal shot if it was correctly called, but it will immediately be spotted if it didn't go down in the left side-pocket on a legal shot. The 15-ball is played similarly except that it must be legally snk in the right side-pocketed in order to stay down. If a player's opponent pocket's the player's special ball (the 1-ball, or the 15-ball depending on the player's group) then it will stay down. It does not matter if the stroke was legal or not. After all the balls of his group are pocketed, the player shoots to pocket the 8-ball (he is said to be "on the 8-ball").

LOSS OF GAME A player will loose the game for: pocketing the 8-ball on an illegal, or foul, opening break shot, pocketing the 8-ball when the shooter still has some of his group balls left, pocketing the 8-ball before legally pocketing his special ball, pocketing the 8-ball on the same stroke as his last group ball(s), fouling when he is on the 8-ball, knocking the 8-ball off the table, pocketing the 8-ball in an uncalled pocket, fouling on 3 successive strokes.

ILLEGALLY POCKETED BALLS Any of the shooter's balls pocketed on an illegal shot will be spotted. If the shot was a foul an additional ball of the shooter's will be spotted. If any of the shooter's opponent's balls were sunk they will stay down. (NOTE: The shooter will determine which of his balls gets spotted.) If the 8-ball was illegally pocketed the shooter looses the game.

JUMPED OBJECT BALLS Jumped balls will be spotted if they belong to the shooter. If the jumped balls belong to the shooter's opponent the will count as pocketed. If the jumped ball is the 8-ball the shooter

looses the game.

SCRATCH OR FOUL Other than after opening break, incoming player has cue ball in hand anywhere on the table.

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Seven Ball

PLAYERS Two individuals, or two teams.

BALLS USED Object balls numbered 1-7, plus the cue ball. The seven ball has a black stripe around it, the numeral seven is white in a red circle.

THE RACK A circular rack is used. A standard Nine Ball rack can be used if it is turned sideways. The balls are racked with the 1-ball at the apex with balls 2-6 running clockwise for the outside of the rack; the 7-ball is in the middle of the rack.

OBJECT OF THE GAME To win by legally pocketing the 7-ball.

SCORING The balls have no point value. The player legally pocketing the 7-ball wins the game. If the 7-ball is illegally pocketed the shooter looses the game.

OPENING BREAK The starting player must make an open break, or legally pocket an object ball. If he fails to do so the incoming player may elect to take the balls as they lie and put the cue ball in play from behind the head string, or shoot the opening break himself. In subsequent games the looser breaks. RULES OF PLAY A legal shot requires that the cue ball's first contact be with the lowest numbered ball on the table. The player must then either pocket a ball, or send the cue ball or an object ball to a cushion. Failure to do so is a foul. A legally pocketed ball entitles the shooter to continue at the table until he fails to pocket a ball on a legal shot. Immediately after a legal opening break the opponent chooses the side of table on which he will pocket the 7-ball. Balls 1-6 may be pocketed anywhere. Pocketing the 7-ball on a legal break wins the game. Any violation of the General Rules of Pocket Billiards that is deemed a foul will give the opponent cue ball in hand anywhere on the table.

LOSS OF GAME A player looses the game if he commits any of the following infractions: pockets the 7-ball in a non-assigned pocket after the break, fouls when on the 7-ball, pockets the 7-ball on an illegal shot, commits three successive fouls.

ILLEGALLY POCKETED OBJECT BALLS All illegally pocketed balls are spotted and the opponent gets cue ball in hand anywhere on the table.

JUMPED OBJECT BALLS Are spotted. No penalty.

FOULS Incoming player has cue ball in hand anywhere on the table.

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Straight Pool

14.1 Continuous [Standardized World Rules 1997]

Except when clearly contradicted by these additional rules, the General Rules of Pocket Billiards apply.

1.1. OBJECT OF THE GAME. 14.1 is a nomination game. The player must nominate a ball and a pocket. The player is awarded one point for every correctly nominated and pocketed ball on a legal stroke, and is allowed to continue his turn until he either fails to pocket a nominated ball or commits a foul. The player can pocket the first 14 balls, but before he can continue his turn by shooting at the 15th (and last remaining) ball on the table, the 14 pocketed balls are racked as before, except with the apex space vacant. The player then attempts to pocket the 15th ball in a manner so that the racked balls are disturbed and he can continue his run.

The player who scores the pre-determined point total for a game (usually 150 in major tournament play or any agreed upon total in casual play) prior to his opponent, wins the game.

2. PLAYERS. 2, or 2 teams.

3. BALLS USED. Standard set of object balls numbered 1-15, plus cue ball.

4. THE RACK. Standard triangle rack with the apex ball on the foot spot, 1-ball on the racker's right corner, 5-ball on left corner. Other balls are placed at random and must touch their neighbors.

5. SCORING. Any ball legally pocketed counts one point for the shooter.

6. OPENING BREAK. Starting player must either (1) designate a ball and a pocket into which that ball will be pocketed and accomplish the shot, or (2) cause the cue ball to contact a ball and then a cushion, plus cause two object balls to contact a cushion. Failure to meet at least one of the above requirements is a breaking violation. Offender's score is assessed a two point penalty for each breaking violation. In addition, the opponent has the choice of (1) accepting the table in position, or (2) having the balls reracked and requiring the offending player to repeat the opening break. That choice continues until the opening break is not a breaking violation, or until the opponent accepts the table in position. The three successive fouls rule does not apply to breaking violations.

If the starting player scratches on a legal opening break, he is charged with a foul and assessed a one point penalty, which applies toward the "Successive Fouls Penalties." The incoming player is awarded cue ball in hand behind the head string, with object balls in position.

7. RULES OF PLAY. A legally pocketed ball entitles a shooter to continue at the table until he fails to legally pocket a called ball on a shot. A player may shoot any ball he chooses, but before he shoots, must designate the called ball and called pocket. He need not indicate any detail such as kisses, caroms, combinations, or cushions (all of which are legal). any additionally pocketed ball(s) on a legal stroke is scored as one point for the shooter. On all shots, a player must cause the cue ball to contact an object ball and then (1) pocket a numbered ball, or (2) cause the cue ball or any numbered ball to contact a cushion. Failure to meet these requirements is a foul.

When an object ball is not frozen to a cushion, but is within a ball's width of a cushion (referee to determine by measurement if necessary), a player is permitted only two consecutive legal safeties on that ball using only the near rail. If such safety play is employed, that object ball is then considered frozen to the rail on the player's next inning. The General Rules of Pocket Billiards "Frozen Balls" requirements apply if the player chooses to make his first cue ball contact with that object ball on his third shot.

(Note: If a player has committed a foul on the shot immediately before or the shot immediately after playing this ball, then he must immediately meet the requirements of the "Frozen Ball" rule when playing this object ball. Also, if he has committed two consecutive fouls, he must immediately meet the requirements of the "Frozen Ball" rule when playing this object ball. If such player fails to meet the requirements of the "Frozen Ball" rule, he is considered to have committed a third successive foul and the appropriate point penalty is assessed as well as one point for each of the previous fouls. All fifteen balls are then reracked and the player committing the infraction is required to break as at the beginning of the game.)

When the fourteenth ball of a rack is pocketed, play stops momentarily with the fifteenth ball remaining in position on the table; the fourteen pocketed balls are then racked (with the space at the foot spot vacant in the triangle). Player then continues, normally pocketing the fifteenth (or "break" ball) in such manner as to have the cue ball carom into the rack and spread the balls to facilitate the continuance of his run. However, player is not compelled to shoot the fifteenth ball; he may shoot any ball he desires.

A player may call a safety rather than an object ball (for defensive purposes). Safety play is legal, but must comply with all applicable rules. Player's inning ends when a safety is played, and pocketed balls are not scored. Any object ball pocketed on a called safety is spotted. A player may not catch, touch, or in any way interfere with a ball as it travels toward a pocket or the rack area on a shot (to include catching a ball as it enters a pocket by having a hand in the pocket). If he does, he is charged with a special "deliberate foul" and is penalized one point for the foul and an additional fifteen point penalty, for a total of sixteen points. The incoming player then has choice of (1) accepting the table in position with the cue ball in hand behind the head string, or (2) having all fifteen balls reracked and requiring the offending player to shoot under the requirements of the opening break.

If the fifteenth (unpocketed) ball of a rack and/or the cue ball interferes with the triangle being lowered straight down into position for racking, refer to the diagram , which indicates the proper manner of relocating balls. (The lined out boxes are those situations in which there is no interference, both balls remain in position.) When a player has the cue ball in hand behind the head string (as after a scratch) and all object balls are behind the head string, the object ball nearest the head string may be spotted at his request. If two or more balls are an equal distance from the head string, the player may designate which of the equidistant balls he desires to have spotted.

14.1 - What to do if:

8. ILLEGALLY POCKETED BALLS. All spotted. No penalty.

9. OBJECT BALLS JUMPED OFF THE TABLE. The stroke is a foul. Any jumped ball(s) is spotted after the balls come to rest.

10. CUE BALL AFTER JUMPING OFF THE TABLE OR SCRATCH. Incoming player has cue ball in hand behind the head string, unless the provision of Rule of Play 7.2., 7.5. or 12." (below) apply to the offender's foul and dictate alternate choices or procedures.

11. PENALTIES FOR FOULS. One point deducted for each foul; NOTE: more severe penalties for deliberate fouls (Rule of Play 7.5.) and third "Successive Fouls" (12. below). Incoming player accepts cue ball in position unless foul was a jumped cue ball, pocket scratch, deliberate foul (Rule of Play 7.5.) or third successive foul.

12. SUCCESSIVE FOUL PENALTIES. When a player commits a foul, he is penalized one point (or more as appropriate) and a notation is made and posted by the scorer that he is "on a foul." The player remains "on a foul" until his next shot attempt, at which time he may remove the foul by successfully pocketing a called ball, or completing a legal safety. If he fails to meet these requirements on his next turn at the table, he is penalized one point. The notation is changed to "on two fouls." If he fails to meet the requirements of successfully pocketing a called ball or completing a legal safety on his third consecutive turn at the table, a penalty of fifteen points is assessed. The commission of a third successive foul automatically clears the offender's record of fouls. All balls are then reracked and the player committing the infraction is required to break as at the beginning of the game. Rules for the opening break apply. It should be emphasized that successive fouls must be committed in successive turns (or playing attempts), not merely in successive innings. For example, if a player ends inning 6 with a foul, steps to the table for inning 7 and fouls (he is "on two fouls"), and then starts inning 8 with a legally pocketed ball before scratching on his second shot attempt of the inning, he has not committed three successive fouls, even though there were fouls in three successive innings. As soon as he legally pocketed the ball to start inning 8, he cleared the two fouls. he is, of course, "on one foul" when he plays the first stroke attempt of inning 9.

13. SCORING NOTE. The deduction of penalty points can result in negative scores. A running score can read "minus one," "minus two," "minus fifteen," etc. (a player can win a game with a score of 150 while his opponent has scored but two fouls. The final score would read 150 to -2.)

If a player fouls on a shot that has not pocketed a ball, the point penalty is deducted from his score at the end of the previous inning. If a player fouls and pockets a ball on the same shot, that ball is spotted (not scored) and the point penalty is deducted from his score at the end of the previous inning.