



THE
Best Practices™
Helping ArchiCAD users
get the most out of their software
COURSE

QuickStart
COURSE

QUICKSTART COURSE - MODULE 3 – PART 1

copyright 2011 by Eric Bobrow, all rights reserved

For more information about the QuickStart Course, visit <http://www.acbestpractices.com/quickstart>

Hello, this is Eric Bobrow. And in this first lesson of the third module of the QuickStart course, we'll actually start to create a building together, following measurements that are already set out on a drawing. Please go ahead and find the PDF file that is available for download on this lesson page, and download that. You'll see that there is a series of sheets that you can print out, one of them will have the exterior walls in feet and inches, and another in metric standard. So use the one that is appropriate. You'll also see other versions that have interior partitions and other information. [00:45]

So we'll start with the PDF sheet that just gives us the exterior partition dimensions. And you can follow along with me, or you can watch this and then try it yourself separately. To get started, get ArchiCAD going. And what I'm going to do to make sure that we're all on the same page is go to the File menu and create a new project. You can do this when you're starting up ArchiCAD, just say that you want to create a new project, and it will give you an option for what template you'd like to use. Now, normally you will not have to change it, it would just have the ArchiCAD 15 template highlighted. So I'm just going to go ahead and use that, and then say I'd like to use the default profile for the program. Or you can pick the standard profile. These should probably do exactly the same things. [1:41]

The profile has to do with how your menus are configured and certain other preferences. And I'm just going to make sure that we're all starting in a similar way. So I'll say "New" here. The program then loads the template file and will give us an untitled file that is a copy of it. Now, I'm looking right now at the U.S. version. And so in the U.S. version this is what it looks like with the elevations drawn with these particular markers. I'll just click on the Fit in Window, and you'll see it blown up a little bit, and you'll see those markers. And I'll switch over to the international version, and you'll see that the markers look slightly different. [2:26]

I'll just again do a Fit in Window, and you'll see the elevation markers in the international version. I'm going to switch back to the U.S. version now. And I've got the Wall tool highlighted. If you, for example, have the Arrow tool highlighted, you need to click on the Wall tool to get it going. And we'll leave the settings all the way that they come in the template, in the sense that it's going to be on a particular layer. In the U.S., it's "A Wall EXTR" for exterior walls. We'll leave the height right now set at the 10 foot level, which would be about 3 m. But I'm going to change the thickness of the wall from 9 inches to 6 inches, so it's not quite as thick. So we can literally just highlight this field and change it. [3:19]

Now I'll go to the international one, and in the Wall tool, we have it at 2,800 mm for height, we'll leave that alone. But again, I'm going to make the wall thickness a little bit more reasonable for my purposes,

150 mm. So that's the only change we're going to do. And by the way, I'll point out that the layer in the international version is called "Structural Bearing". So now I'll go back to the U.S. version, and I'll start to draw some walls. Now as we went over in a previous lesson, we can draw a single wall or a chain of walls, a box of walls on the axes, or a box that's rotated. Now I'm going to pick Chain Wall command here. [4:10]

And I'll start somewhere in the upper left quadrant, and click to start this wall. Now you'll see that immediately, the tracker shows a distance and an angle, and we also have the editing palette or the pet palette with some options off to the side indicating we can choose between creating straight segments or curved segments. And I'll just do a straight segment for now, and gesture down. Now the guideline is showing up as soon as I get close to the axis. In ArchiCAD 15, you'll see the letter "Y" indicated, which is supposed to tell you that you're on the "Y" axis. Sometimes you may have the drawing rotated, and so this may be useful. But Y would be going up and down on screen. [5:03]

Now I'm going to go ahead and start to draw this shape, and I'll do the shape in the U.S. version, but I'll also read off the dimensions that you'll be following in the international metric version. So we're going to go down 10 feet, so I'm simply going to type in 10, and it will assume that it's feet as long as you don't type in inches. So I'll hit the Return or Enter key. And then I'll gesture to the right, which would put me on the X axis, and I'm going to go 3 feet. 3, Enter. Now in the international version, going down, you would be typing in 3,000 mm or 3 m, and then going to the right you'll type in 900 mm. [6:00]

So now I'll continue. The walls are still active, and I'm going to be creating another wall. In this case, I'll go down 12 feet. So 12, Enter. Or if you're in the international version, it would be 3,700 mm. And then I'll go one more wall to the right, and this is 22 feet, 22, Enter. And for the metric version, it's 6,700 mm. Now, I could keep going all the way around this building, but I'm just going to hit the Enter key one more time, and we'll see that that completes a series of the four walls. And your screen should look quite similar to this. [6:44]

Now let's just verify that my distances are correct. So I'll use the Measure tool. I'll click on the Measure icon here, and I'll click first in the upper left corner here, and then go down. And you can see that it says 10 feet. Metrically it should say 3,000. And go across, it says 3 feet. And I can go, down and just verify, 12 and 22. And those were 3,900 and 3,700 and 6,700 would be your metric equivalents. And now I'll hit the Esc key to cancel out of the Measure tool. The distances that I'm reading off, you can refer to choose from the PDF file that is included on this lesson page. In other words, go ahead and download, and perhaps print out the PDF file that has the floor plan for this lesson, and that will give you a good guide. [7:49]

Now I'm going to continue with this, but I'm going to zoom in a little bit. I'll click on the plus magnifying glass and zoom in, and simply click on two corners. You don't have to go down and across; you can just go straight on a diagonal. And now that has enlarged the screen here. Now I'm going to go and click on the bottom right corner to start the next wall, but let me just explain something. The walls have two lines that are identical in weight. In other words, the inside and the outside of the wall have the same pen weight, or thickness. But as you worked, you were placing the reference line, in this case, the

outside of the building as we were drawing. So that reference line, basically the lines that we were clicking or typing in values for, can be seen when we pass our cursor over the top of it. [8:52]

You notice that we have the three line Mercedes cursor, and if I move up to the inside wall, you see that the Mercedes cursor is thinner. So when I go down, you see the thick one. Generally, it's best to connect walls at the ends of the reference lines. So we would find the heavy border here and go to the end, when we get a checkmark, and that's where we'll start the next wall. So I'm going to go up now here and just position my mouse on the tracker, or the guideline, and type in 12 feet or 3,700 mm, and then go to the right. This would be 5 feet or 1,500 mm. And then I'll go up 13 feet, or 3,900 mm. Now you notice that it's now off-screen. Now, in order to continue, I might want to scroll up. [9:57]

You notice the scroll bars here, I can just grab this and move this up a little bit, and it will redraw this as soon as I let it go. Or, if we could do something like Fit in Window, and that will jump out. And I'm still in the middle of this operation, but I can move around. I can also use the magnifying glass here now to zoom in to the area that I need. So I'll continue on with this. Now if you make a mistake, in terms of clicking. Let's say I click over here by accident, then instead of canceling the whole operation, which you could do with the Esc key, you can use the Backspace key on a PC or the Delete key on a Mac, and go back a single step. And in fact, you can go back another step, and as many steps you like back to the beginning of this operation using that. [10:50]

So I'll just repeat this vertical one, which is 13 feet or 3,900 mm. And then I'll go to the left here, 8 feet 2. That this is the first time we're doing inches here. I can do 8-2, and that's going to be the simplest way to do this. You could also do 8 apostrophe, a foot sign too, which of course requires you to - well you can't do that on the keypad, if you have an extended keyboard. So I usually use the dash, because you can use that on the main keyboard or the extended keyboard. And I'll just hit Return or Enter, and that distance would be 2,500 mm. Now we're going to go back down, and when I go back down, I could type in the distance, but I do want to line it up with the first wall that I drew. [11:53]

Now, I'm going to go over without clicking, and position my mouse on top of this wall. You'll notice that the cursor gets a black appearance or the pencil changes to have a black one. Now if you're in ArchiCAD 10, 11, 12, 13 or 14, you will see a tracker guideline shooting off vertically and horizontally from this point. As soon as you pause more than a couple of seconds on a corner or node point, it will create those lines. If you move away from the point on some other angle, those lines will disappear. But if you simply move your mouse across a long one of the lines without clicking, just move it along the line gesturing, then that line will change from blue to orange, and will stay visible. [12:53]

Now I'm in ArchiCAD 15, and we can do something similar. But instead of just moving the mouse side to side, what I need to do is actually press the mouse button down and hold it down. So this may be a little tricky, but press the mouse button down on this point, hold it down while I move to the right, and you notice that the guideline shows up like I was expecting. And when I let go, that guideline will become orange. This is now same appearance you would have in ArchiCAD 10, 11, 12, 13, 14, which is a horizontal guideline. The difference again is that in earlier versions, you simply hover over the corner point and then hover without clicking over the horizontal line and it will then become orange. [13:47]

In 15, you need to press down on that corner point, hold the mouse button down while you gesture in the direction that you'd like the guideline to show up. So now, we've got this guideline. I'm moving my mouse freely. It can go anywhere I want. But I would like to go in line with it. And I've found the point where we're on the vertical axis, the Y axis, and touching the horizontal guideline that I've just indicated. And it also is showing, in terms of the cursor, it changed from a pencil to a special appearance. In this case, a perpendicular or indicator. [14:31]

So that means that this particular point that I am on and would be perpendicular to the guideline that I have drawn. So all of that was a lengthy explanation, but I could have done it in literally about 3 seconds. I'm going to now click on the point that I'm snapped to, and by the way the distance also showed correctly as 3 feet 0 inches or 900 mm at that point. And I'll now go to connect this with the wall. Now you might think that I would connect it to this upper right corner, and ArchiCAD probably would clean this up, depending upon certain settings. But generally what you want to do is connect the outside corner of one wall to the outside corner of the other. So I'll move it to the left. [15:23]

Now notice as I move it back and forth, it has a white eraser here. And then when I go to the left, it has a black eraser, making that pencil almost entirely black. That's the ideal one that you'll want to click on, because it will clean up in all cases. Now I'm going to click. ArchiCAD things that maybe I'm going to draw another wall, because this is a separate operation, these walls. I would like to finish it, so I'm simply going to click again when the distance says zero. So basically, you double click or make two clicks on the same point, and it now complete the operation. So I now have the shell of the building. [16:08]

And again to verify distances, I can go along with the Measure tool and click on corners and see that yes, that was 12 feet or 3,700 mm. And I can just go along here and click on these points, and you'll see the numbers show up very nicely. Now, as I'm doing this, you'll also see a shading happening. And the feedback from the Measure tool is showing the distance at the top line. That's the current distance that I'm traversing along this edge. It's showing an angle, in this case, I'm going horizontally to the left 180°. But I want to point out the cumulative distance, which would be the perimeter that I've actually been touching on so far, and the area, which is the shaded space. [17:00]

So if I keep on going and click on all of these points, you can see the cumulative distance keeps going up, and the area keeps going up and shading the space. And if I did go all the way around here, at least down to the next to last point where it's shading it all, I'm going to have the area. Now this is a slightly complicated outline, it's not rectangular, but with about seven or eight clicks, I was able to get the area report. This is just one way that you can read off areas. Obviously, if you have a room that is rectangular and you want to get the area, you can click on just four points and read off the area. [17:42]

Now once you've verified all these distances and made sure that they're good, then you can hit the Esc key to cancel out of the Measure tool. So we've now placed all of these exterior walls. And I'm going to go actually and switch to the international version, and just repeat the exercise very, very quickly to show you how fast this can be done. So with the Wall tool set up, I'll just make sure that I'm in the Poly wall method here, where I'm doing multiple walls. And I'll click in the upper left quadrant, and drag down, or just gesture down, and type in the distance that I want, which is 3,000. Hit enter. And then go

to the right, and this is 900, and go down. This is 3,700. And go to the right. And to finish, in this case, this first step, I'll just hit the Enter or Return key again, and that draws these walls. [18:51]

Now I'm going to zoom in with the magnifying glass plus and allow a little bit of extra space at the top, because I am going to go a little higher. And I'll just do the other walls again here. 3,700, 1,500, 3,900, 2,500. And now here again, I'll explain this. I'm going to hover over this point. I get a black pencil, if you're in ArchiCAD 10 through 14, you'll see the guidelines going vertically and horizontally. And you simply move the mouse without clicking along the horizontal guideline. In version 15 you press the mouse button down and move it in the direction you want. Now I have that orange guideline, and I move to where I snap to the perpendicular. And again, go to the upper left where the pencil is totally black and click. And then click one more time on the same point to finish those walls. [20:03]

And so now, let me just zoom out. I'll double click on the minus sign here which says reduce zoom, which will be very a simple way to see the entire building outline. So that took 2 minutes, and you can see it's very quick to enter the building shell when you use the Poly wall method. And you already know the distances that the elements are supposed to be drawn at. [20:31]

So this concludes the first lesson in module three of the QuickStart course where we've gone over creating the exterior shell of the building. And in the next lesson, we'll be looking at creating the interior partitions. Thanks for watching. I look for to getting your comments and feedback; please add your thoughts down below on the lesson page in the comment area. [20:56]