THE CONSTRUCTION ZONE

Building Cavalettis

By Kim Duff, photos by author

Caveletti jumps are easy to make and cost little. They can be made to whatever height or length you may choose. I usually make them 4' long and either 3" or 6" tall. My cavalettis stay outside in all weather, and they seem to last for many years.

Materials Needed

This materials list is for making three 4' cavalettis that can be set at either 3" or 6" in height.

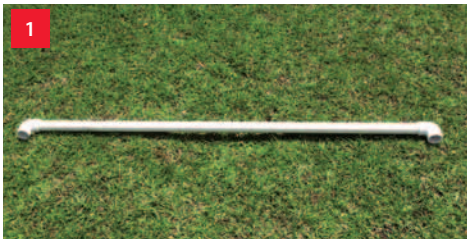
- 2 – 10' lengths of 1" schedule 40 PVC pipe
- 6 – 1" PVC tees
- 6 – 1" PVC elbows
- 12 – 1" PVC end caps

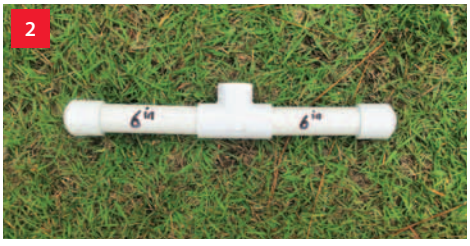
Tools Needed

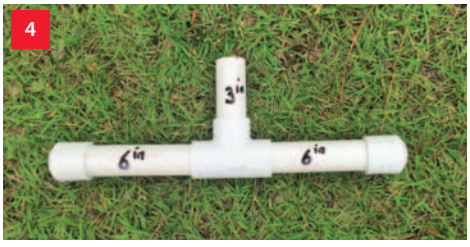
- PVC cutter or hacksaw— PVC can be cut with a hacksaw or you can buy a cutting tool. Invest in the cutting tool if you are going to make more than one or two cavalletis.
- Carpenter's rule or tape measure
- Pencil or marker
- PVC cement
- *Optional:* Tape to decorate bar

Directions

1. Cut a 4' length of PVC pipe.
2. Push an elbow fitting onto each end of the PVC and align the elbows so the assembly lays flat. See **Figure 1.**
3. Cut 4 pieces of pipe that are 6" long.
4. Glue 2 of the 6" lengths into a tee connector and then glue an end cap onto the open end of each 6" piece. See **Figure 2.** These are the only pieces I glue together. This allows me to set the cavaletti at varying heights as needed. You will have 2 "feet" assemblies when you're done.
5. Cut two pieces of pipe for each cavaletti height you want to have. I cut 3" and 6" lengths as shown in **Figure 3** so I have the flexibility to set my cavalettis lower or higher, but you can make the height whatever you want.
6. Slide one of your height pieces into each foot assembly. **Figure 4** shows a 3" piece of pipe inserted in a foot piece. Do not glue these pieces.







7. Without gluing, attach one of these assemblies to the elbow on each end of the 4' PVC bar. See **Figures 5 and 6.**
8. You can leave the bars white or you can decorate them with tape. I use different colored electrical tape. See **Figure 7.**

Kim Duff has been doing agility since it started in Great Britain where she was living at the time. She has been successful in many venues. Kim currently runs two Border Collies and an Australian Cattle Dog in agility. As a general rule, she builds her own jumps.

THE CONSTRUCTION ZONE

Pause Table

By Kathy Mocharnuk, photos by author

This practice table is a fun weekend project. You do need to make careful measurements, but it only requires basic building skills to make a very sturdy table. The table is designed so you can change heights, which will be made much easier by sanding the connections indicated.

Materials Needed

- 1 – sheet of ½" plywood
- 2 – 2" x 4" x 8'-long boards
- 1 – package of 30 #8 x 2"-long Phillip flat-head wood screws
- 12 – #8 x ½"-long screws
- 12 – metal washers for the #8 screws
- 3 – 10' long pieces of 1½" schedule 40 PVC pipe
- 4 – 1½" schedule 40 PVC 90° elbows
- 4 – 1½" schedule 40 PVC cross connectors
- 12 – 1½" schedule 40 PVC tees
- 6 – 2" diameter galvanized steel 2-hole pipe straps
- 4 – 1½" PVC end caps (preferably with flat tops)
- Sand to make a nonskid surface (I like washed playground sand)
- Paint for table
- Optional: paint primer
- Optional: PVC primer and glue
- Optional: spray paint made for PVC
- Optional: acetone to wipe down and prepare PVC surface before painting

Tools Needed

- Drill with 7/32" drill bit
- Optional: countersink drill bit for #8 Phillips screws
- Phillips screwdriver or Phillips screwdriver bit for the drill
- Sandpaper, sander, or Dremel
- Pencil or marking tool
- Saw to cut wood (I suggest getting the wood cut at your local home center)
- PVC cutter that can cut pipe with an outside diameter of 2" (you can use a hacksaw or electric saw, but it can be more difficult to keep your cuts straight)
- Paint brushes and painting supplies

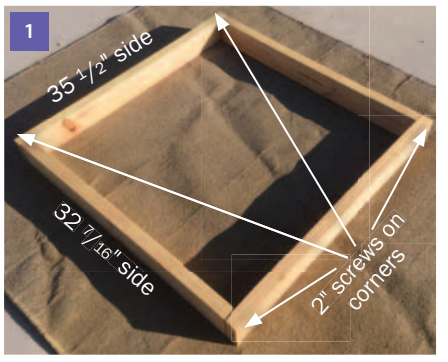
Prepare the Table Top

1. Cut a 35½" square from the ½" sheet of plywood.
2. From the 2x4s cut the following pieces:

   2 – 35½" long

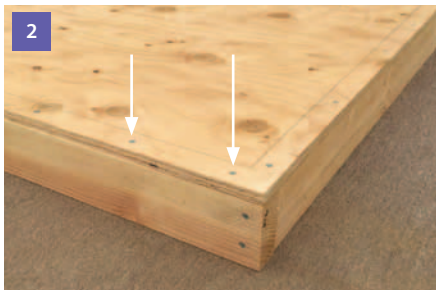
   2 – $32\frac{7}{16}$" long

   Position the two 35½" 2x4s opposite each other and the two $32\frac{7}{16}$" boards opposite each other to make a square as shown in **Figure 1.** Your square will be 35½" on the outside of all sides.



3. Using the $^{7}/_{32}$" bit, drill two holes at each end of the long board (one above the other) that go through the long board into the shorter board. Attach the boards together using the #8 x 2"-long screws as shown in Figure 1. (If you wish, you can use a countersink bit so the screws will end up flush to the board's surface.)

4. With the smooth, finished side of the 35½" plywood square *facing up,* lay the square frame you just made on top of it. Use your pencil to trace the inside edge of the frame so you have a mark all the way around on the plywood. This gives you a template for where to place your screws in the next step.



5. Remove the plywood and place it on top of the square frame with your marks showing. With the $^{7}/_{32}$" bit, drill screw holes through the plywood into the bottom support frame. (Again, it is optional to use a countersink drill bit so the screw heads will lay flush with the table top.) Use #8 x 2" screws to attach the top to the 2x4 frame as shown in **Figure 2.**

6. Optional: Sand, prime, and paint the *underside* of the table top you have made.

Prepare the PVC Legs

1. Cut the 10' lengths of PVC into the following pieces:

   16 – 17½" long

   4 – 3½" long

   12 – 2" long

   4 – 4½" long

2. Make an "X" shape from PVC pipe by inserting a 17½" piece of pipe into each opening of a PVC cross connector. Then attach a 90° elbow to each end of the X as shown in **Figure 3.**

   You do not need to glue the PVC fittings for this section. But if you want to use glue, be sure to dry fit the pieces first to make sure your measurements are accurate and everything fits well before gluing.

3. Optional: It isn't necessary to paint the PVC, but doing so will protect the table and help the PVC last longer, especially if the table will be used outside. Wipe down the PVC "X" assembly with acetone to prepare it for painting. Spray paint it with PVC spray paint.

4. Set the PVC "X" assembly inside the 2x4 frame on the underside of the table top as shown in Figure 3. Use the six 2-hole pipe straps to secure the pipe assembly to the plywood table top. Position the straps on top of the PVC fittings and use the #8 x ½" screws and washers to fasten the straps to the table top as shown in **Figure 4.**

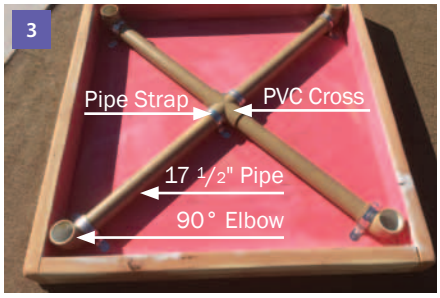
   Important: Be sure to use only ½"-long screws; anything longer will go through the ½" plywood of your table top!

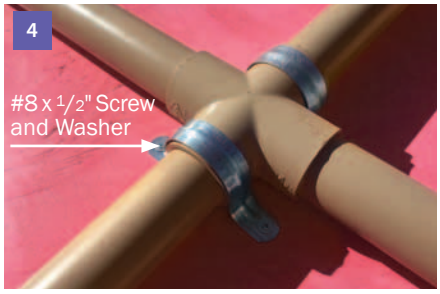
5. Insert the four 3½" PVC pieces of pipe into the elbow fittings on the underside of the table top as shown in **Figure 5.** Do *not* glue these pieces!

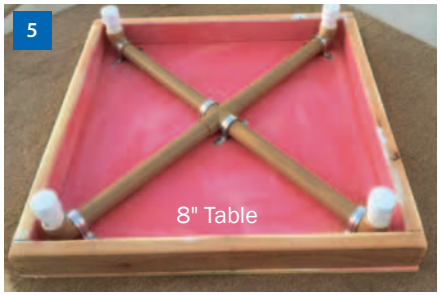
6. If you just need just an 8" table, you can place a PVC end cap on the other end of each leg. If, however, you intend to make the table higher, do not attach the PVC caps yet. Go on to the next step to build the next "layer" for the table legs.

7. Make another "X" shape from PVC pipe by inserting a 17½" piece of pipe into each opening of a PVC cross connector. Then attach a tee fitting to each end of the X as shown in **Figure 6.**

   It is not necessary to glue the pipe and fittings, but if you do choose to use glue, only apply it to the horizontal joints of the "X." Gluing the vertical pieces will prevent you from being able to change the height of the table.





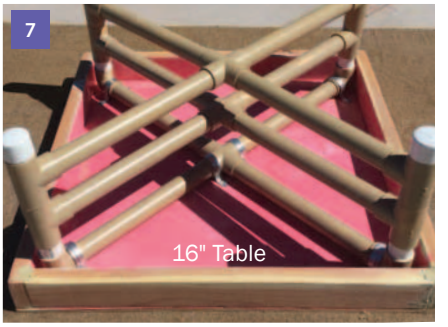


1. Insert the tees of this “X” onto the 3½" PVC pieces inserted in the elbows under the table top.
2. Insert a 2" piece of PVC pipe into the open end of each tee.

   Optional: Lightly sand or Dremel this end of the PVC pipe and the inside of the tees so the pieces aren’t as tight and will come apart more easily. Wear eye protection and a mask to avoid breathing in particles.
3. If you just need a 12" table, you can put on PVC caps; if, however, you intend to make the table higher, do not attach the PVC end caps yet. Go on to the next step to build the next “layer” for the table legs.
4. Make another “X” shape from PVC pipe by inserting a 17½" piece of pipe into each opening of a PVC cross connector. Then attach a tee fitting to each end of the X as shown in **Figure 7.**

   It is not necessary to glue the pipe and fittings, but if you choose to use glue, only apply it to the same joints as in step 7.
5. Insert the tees of this “X” onto the 2” PVC pieces in the legs for the 12" table.

   If you just need a 16" table, insert a 2” piece of PVC pipe into the open end of each tee (again, it is optional to sand or Dremel these pieces) and put on the PVC end caps; if, however, you intend to make the table higher, do not attach the PVC caps yet. Go on to the next step to build the next “layer” for the table legs.



6. Insert the 4½" long pieces of PVC pipe into the bottom of the 16" table layer.
7. Make a final “X” shape from PVC pipe by inserting a 17½" piece of pipe into each opening of a PVC cross connector. Then attach a tee fitting to each end of the X.
8. It is not necessary to glue the pipe and fittings, but if you choose to use glue, only apply it to the same joints as in step 7.
9. Insert the tees of this “X” onto the 4½" PVC pieces as shown in **Figure 8.**
10. Cap off the table legs by inserting a 2" piece of PVC pipe with an end cap.

Finishing the Table

Now you have a nice sturdy table and the fun begins! First you will want to sand your table. It doesn’t have to be perfect, but you want to sand the wood so there are no splinters and it looks nice. Next you can apply your nonslip surface. I chose to use playground sand with the paint.

1. Optional: Prime the table top surface.
2. Let the primer dry and then paint the table top with a *slightly thick* layer of paint.
3. Completely cover the *wet* paint on the table top with a layer of playground sand. Let that dry completely.
4. Turn the table top on its side and tap the back so that the loose sand falls off.
5. Paint over your sanded surface. Let dry.
6. Apply two to three more layers of paint over your table top, letting it dry between layers.
7. Prime and paint the sides of the table.
8. Give your table a day or two to completely dry and cure before using it.

Kathy Mocharnuk is a RN, a homeschooling mom, and has been involved in agility for 14 years. She currently partners with her Border Collies Cricket and Katydid. She can be reached through her blog at http://kathy-agilityadventures.blogspot.com.

THE CONSTRUCTION ZONE

PVC Jump and Detachable Wings

By Sadie Swanson, photos by author

This wing jump was the end result of having many short, extra "end" pieces of PVC sitting around, a number of ground-bar PVC jumps that I wanted to convert into freestanding jumps, and a wish for minimal, lightweight wings that could be easily disconnected from the jump and moved around.

If you have PVC jumps with a ground bar that connects the standards, but the ground bar is not glued, you can easily convert your ground-bar jumps to this design by taking out the bar, cutting it into two 16" pieces, and reversing the jump cups to face the other direction.

Materials

The materials list has been divided into what you need for the jumps and what you need for the wings in case you already have jumps and only want to build the wings.

Note: Clean Run sells 1" and 1 ¼" color pipe and fittings as well as Clip and Go products in the "Build Your Own Equipment" section of their website: https://www.cleanrun.com/index.cfm?category=484. Their pipe is already cut into 3' sections.

For the jump:

- 4 – 3' sections of 1" schedule 40 PVC pipe (or equivalent amount, 12')
- 1 – 4' section of 1" schedule 40 PVC pipe for the jump bar
- 2 – 1" schedule 40 4-way connectors
- 6 – 1" schedule 40 PVC 90° elbows
- 8 – 1" schedule 40 PVC end caps
- 1 – pair of Clip and Go Jump Cup Strips, regular or flexible

Note regarding jump cup strips: This jump, as designed, does not work with the Clip and Go Sliding Jump Cup Strips. It would be possible to modify the wing design to make it work, but that is not covered here.

For the wings:

- 2 – 3' sections of white 1" schedule 40 PVC pipe (or equivalent amount, 6')
- 1 – package Clip and Go Jump Wing Clips (4 pieces)
- 1 – 2' x 8' or 4' x 8' section of white vinyl lattice
- 12 – ¾"-long self-tapping screws

Note regarding screws: Self-tapping screws should be easily found at a local hardware store. These are really nice for building PVC jumps since they eliminate the need to pre-drill holes. They are also easy to remove if you make a mistake.

Tools

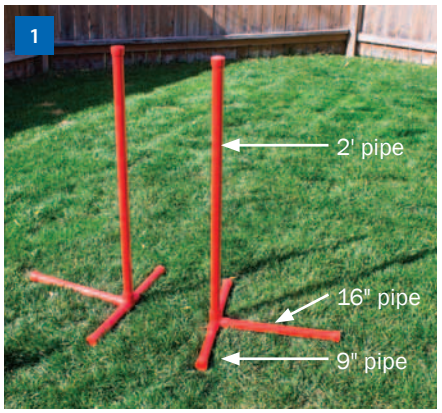
- Measuring tape
- Pencil or marker
- Cordless drill with screwdriver bit
- PVC pipe cutter and a hacksaw (for lattice) or PVC/plastic saw

Note regarding saw: In the past we have used a hacksaw for cutting PVC which works well but tends to leave rough edges. We recently found a saw intended for cutting PVC, which is used in these photos. It leaves much smoother edges than cutting with a regular saw. If you have a good pipe cutter, it can give you smooth cuts, but can be slower than using a saw.

Building the Jump Standards

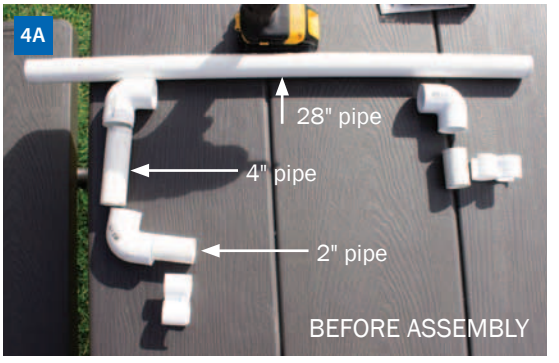
1. Measure and cut your PVC pipe. Remember to measure twice and cut once:
   - From one of the 3' lengths of pipe, cut 2 pieces that are 16" long.
   - From the second 3' length of pipe, cut 4 pieces that are 9" long.
2. Using the pieces you have cut along with the two remaining 3' lengths of pipe, the 4-way connectors, and the end caps, assemble the standards for your jump as shown in **Figure 1.** I do not glue jumps together because I prefer to have the option of being able to take them apart in the future. For loose connections, I add a small amount of tape onto the pipe that I am placing inside of the connection which snugs up the fit. Using the self-tapping screws to connect the pieces is also a good option that still gives you the ability to take the jump apart if necessary.
3. Follow the directions on the Clip and Go Jump Cup Strips package to measure and set the jump cups. Use your cordless drill and the included self-tapping screws to set them in place. In **Figure 2,** you'll notice I have the jump cup strip facing the wrong direction so the longest leg of the base isn't in my way. Once the strip is attached, I simply rotate the upright to the correct direction (this won't work if you glued the upright into place).

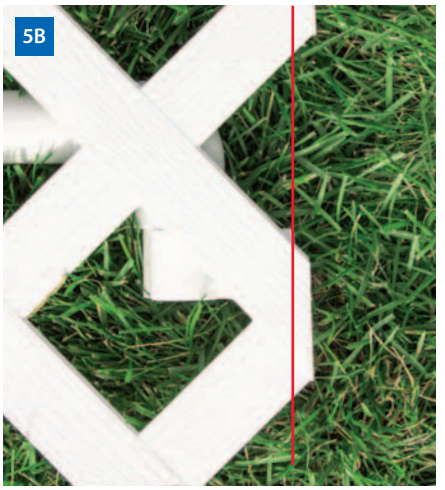
That's it for building the jump standards! See **Figure 3.**



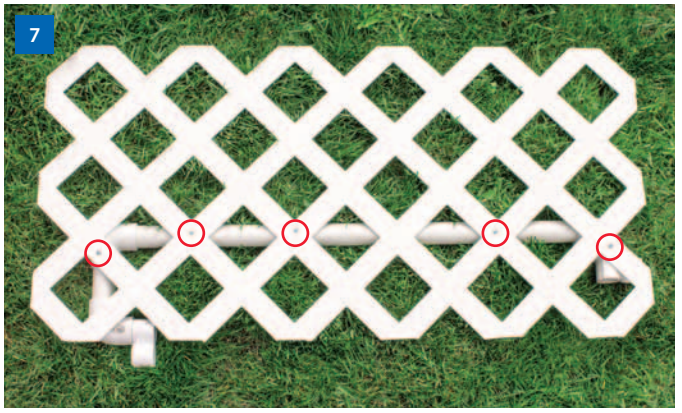
Building the Wings

1. Cut your lattice into 2 pieces that are 18" by 36". If you end up with rough edges on your lattice, use sand paper to make them smooth.
2. For the internal frame of the wings, you need to cut PVC pipe. If you have 3' lengths of pipe, measure out 2", 2", 4", and 28" on each piece and then cut. If you are using scrap pipe, you need the following pieces:
   - 2 – 28" pieces
   - 2 – 4" pieces
   - 4 – pieces at least 2" long for attaching the Clip and Go Wing Jump Clips (2½" to 3" is ideal if it's available)
3. Assemble two wing frames from the pipe you cut, the 90° elbows, and the wing jump clips, as shown in **Figure 4.**





4. This is the trickiest part; attach a piece of lattice to one of the wing frames. Position the lattice so it is in line with the edge of the top clip as in **Figure 5a.** On the bottom, you want the lattice to sit on the ground so you need to leave a bit of space for the feet of the upright. So line up the lower clip to be just inside of the lattice (roughly ½") as in **Figure 5b.** (It may help you to look at the photo of the completed jump to see how the lattice is lined up on the PVC frame. Then place the lattice on your jump standard and mark where you need to attach the frame.
5. Once you have the lattice lined up, ask someone to help you hold it in place (it can easily shift when you're sinking the screws) or stand on it carefully, making sure it doesn't shift when you step down onto it! Drive in one screw in the lower corner and one in the top corner. See **Figure 6.** Press down on the self-tapping screws as you sink them. It can take a second or two for them to go through the PVC connectors, so be patient.



6. Now check your wing on the jump to make sure it sits evenly. Remember, you are using screws, not glue, so you can just remove them and try again if necessary. Once you are happy with the wing, insert more screws to hold the lattice to the pipe as shown in **Figure 7.**
7. I also insert one screw in the lower elbow joint of the wing to lock the short PVC piece in place. See **Figure 8.**
8. Use one of the screws included with the wing jump clips to set the clip in place. See **Figure 9.**
9. Now it's time to put together your second wing, but you need to *reverse* the direction of the underlying PVC frame in order to have them on matching sides of the lattice. See **Figure 10.**

The Finished Jump

This jump is lightweight and easily moved around. I find it more stable than my pedestal jumps on uneven ground, thanks to the extra-long third foot on the base. The one downside of the jump being lightweight is that it can be knocked over by wind, but you can fill the base with sand to add weight if necessary.

The wings are easy to store when removed and don't take up much space when stacked so they are ideal when you need to bring your equipment with you in a car. They also work on the Clip and Go Ready Jumps.

Happy building!


These wings will also fit on a Clip and Go Ready Jump.

Author's Note: Thank you Dan Surkan and Venessa Martens for your assistance with this article.

Sadie Swanson lives in Saskatchewan, Canada with her partner, Dan, their Basset Hound and two Border Collies. She is a software developer with the Saskatoon-based digital agency Zu. She competes primarily in AAC with all three dogs and enjoys trying out new ideas for building equipment with PVC. You can find her on Instagram as @aveldina posting photos of her dogs, agility, and building equipment.

THE CONSTRUCTION ZONE

Wing to Nonwinged-Double Convertible Jump

By Patricia Pointing, photos by author

This simple plan allows you to build a traditional winged jump that converts into a double. While the double is not legal for competition, it is very handy for training at home. There are two versions of the jump you can build: a double with a fixed width or a double where you can change the width.

Materials

The PVC pipe pieces can be cut from two 10' lengths of schedule 40 PVC pipe or five 4' lengths.

- 4 – 3' pieces of 1" schedule 40 PVC pipe for the uprights of the wings
- 4 – 1' pieces of 1" schedule 40 PVC pipe for the support feet
- 2 – pieces of 1" schedule 40 PVC pipe cut to a length that is 2" shorter than the desired *maximum* width for the double (check your organizations rulebook) for the crosspieces of the wings. (The photos here show a 15"-wide double for a dog that jumps 22" in AAC, so the two pieces are 13" long.)
- 4 – 1" PVC tees
- 4 – 1" PVC elbows
- 8 – Clip and Go Clip-On Single Jump Cups, size Large
- Optional: Flat material to use to fill wings
- Optional: Additional PVC for jump bars if you need them
- Optional: PVC cement

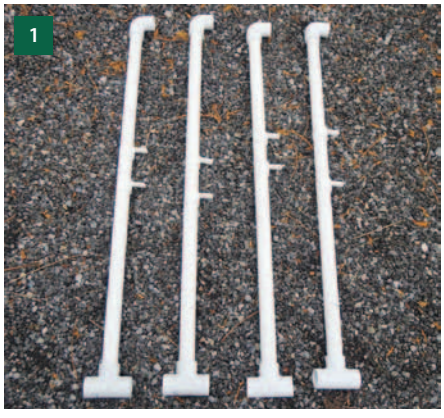
Tools

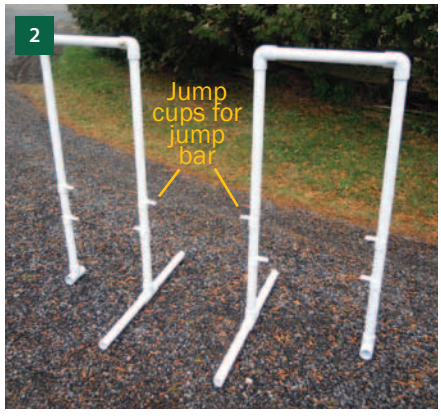
- Measuring tape
- Pencil or marker
- PVC pipe cutter, hacksaw, or PVC/plastic saw

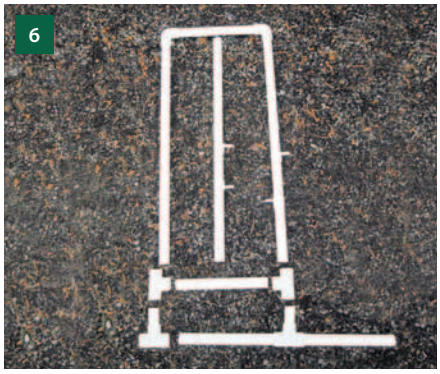
Assembling the Jump

1. Slide two Clip and Go Clip-On Single Jump Cups onto each of the four 3' uprights, making sure both cups are facing the same direction on each upright.
2. Add a tee to the bottom of each upright and an elbow on the top, facing the same direction as the jump cups, as shown in **Figure 1.**

   I prefer *not* to glue the pipe and fittings and just leave them friction-fit permanently, so the jump can be easily modified later if my needs change. However, if you do want to glue your jump together, be sure to dry-fit the entire assembly first and make sure you've got it right, *before* you even consider fixing anything in place with PVC cement.
3. Insert your custom-length crosspieces into the open ends of the elbows to connect the uprights together, and then add the 1' pieces to the open ends of *one tee* on each upright as feet. See **Figure 2.**







On very uneven ground or in windy conditions, you may wish to add matching feet to the tee on the other half of each standard. You can also put PVC end caps on the ends of the feet if you wish, for appearance.

4. For use as a standard wing jump, turn all but one of the jump cups inward on each wing, out of the way of a tightly wrapping dog, as in Figure 2. For use as a double jump, rotate the upright with the feet 90° and then turn the jump cups so they are all in service as shown in **Figure 3.**

Adding a Filler to the Wing

If you want a solid wing, it's easy to use zip ties (a.k.a. cable ties) to attach a piece of corrugated signboard, plastic snow fencing, lattice, or whatever you like as shown in **Figure 4.** Just make sure to position the cable ties where they won't hamper your ability to move the jump cups.

Optional Plan Modification: Making the Double Adjustable in Width

The wing jump plan can be modified so the double is adjustable to different widths for use with dogs of different sizes. If you want to build the jump with this modification, it is recommended that you do not add a filler to the wings.

You will need all the materials in the original materials list along with the following extra materials:

- 4 – 1" PVC tees
- 2 – 32" pieces of 1" schedule 40 PVC pipe
- 2 – pieces of 1" schedule 40 PVC pipe cut to the same length as the 2 pieces you cut for the wing crosspieces
- 2 – 7' lengths of rope

1. Assemble each wing as described in steps 1-3 in "Assembling the Jump."
2. Now you are going to make each wing into a closed rectangle. First, cut through each upright 2" above the tee as shown in **Figure 5.** Remove both jump cups from *one* of the uprights on each wing, and transfer those cups to a 32" piece of pipe. Now splice an extra tee onto each upright at the location of your cut, and connect the two extra tees with one of the extra crosspieces you cut. See **Figure 6.**

3. Run a piece of rope up through the inside of the 32" piece of pipe with the cups on it, around the top crosspiece of the wing, back down through the same pipe again, and tie it below the bottom crosspiece as shown in **Figure 7.** This lets you slide the vertical pipe from side to side (as well as moving its jump cups up or down), adjusting your double to whatever width your dogs require.

Patricia has been a horse trainer, biologist, and university professor, before "retiring" to raise two children and discovering that not only are dogs a lot more affordable and portable than horses, they also fit on the sofa much better. She lives outside Toronto, Ontario, Canada, where she competes in agility and rally with Russell, a rescued Lab-type, and Coppertop, a rescue of no identifiable breed whatsoever.

THE CONSTRUCTION ZONE

PVC Wing Jump

By Kim Duff, photos by author

When I originally made this jump I swore I would never make another because it's a little more complicated than other wing jump designs, but years and experience have changed my mind, and I made this jump quickly in about two hours. My jumps stay out in the Florida sun year round and they last for years.

Materials

I used white furniture-grade PVC to build this jump. If you would like to be more "colorful," you can buy color pipe and make the vertical bars of the jump different colors.

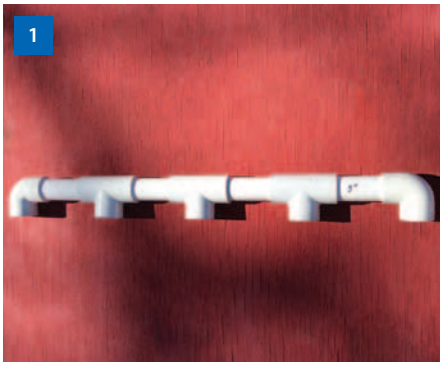
- 40' – 1" schedule 40 PVC pipe. You can buy PVC in 10' lengths at your local home store. I bought 10 of the 4' pieces of pipe that Clean Run sells and cut them down to 3', saving the 1' leftover pieces to make the feet and connectors at the top and bottom of the wings.
- 4 – 1" schedule 40 90 elbows
- 12 – 1" schedule 40 tees
- 4 – 1" schedule 40 four-way connectors
- 8 – 1" schedule 40 end caps
- 1 – pair of Clip and Go Jump Cup Strips

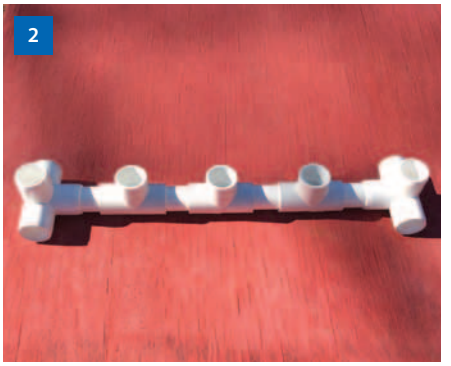
Tools

- Measuring tape
- Pencil or marker
- PVC pipe cutter or PVC/plastic saw
- Hammer or rubber mallet
- PVC cement is optional. I glued the first jump I made and it was a nightmare to put together once the glue dried. For this jump I did not use glue, instead tapping the joints together firmly. It was so easy!

Instructions

1. Cut the following pieces from your PVC pipe:
   - 10 – 3' lengths
   - 16 – 3" lengths
   - 8 – 6" lengths (These pieces are for the feet of your jump. If you want them to be longer, depending on your terrain, you can make them longer.)
2. Working on a flat surface, assemble two 90° degree elbows and three tees, connecting the fittings with 3" pieces of pipe as shown in **Figure 1.** When you add each piece to the line, tap the pieces together firmly with a hammer or mallet. This assembly will be the top of a wing. Make one more of these assemblies for the other wing.
3. Assemble two 4-way connectors and three tees, connecting the fittings with 3" pieces of pipe as shown in **Figure 2.** Tap the pieces together firmly as you work. This assembly will be the bottom of a wing. Make one more of these assemblies for the other wing.





4. Take five of the 3' poles and push them into the PVC sockets of one of the top wing assemblies you made in step 2. Then attach one of the wing base assemblies you made in step 3 to the bottom of the 3' poles. Tap the connections together firmly. You may have to fiddle a bit to get everything lined up. (This is why I choose not to use glue!) You should end up with a wing frame like the one shown in **Figure 3.** Assemble the other wing in the same way.
5. Place four of the 6" pieces in the open holes of the 4-way connectors on each wing. Add end caps to the feet. If you like, these feet can be weighted with sand or concrete; in this case, it's appropriate to glue the feet and caps on!
6. With the wing on a flat surface, measure 27" from the surface and mark a line on jump standard.

Then simply clip on a jump cup strip, lining up the top of the strip with the mark you made. Repeat for the other wing. You can screw the strips on if you prefer, but it's not necessary when you're using 1" PVC pipe. You should end up with a pair of wings like the one shown in **Figure 4.**

You can now add 4' or 5' jump bars colored or taped as you choose.

Kim Duff has been doing agility since it started in Great Britain where she was living at the time. She has been successful in many venues. Kim currently runs two Border Collies and an Australian Cattle Dog in agility. As a general rule, she builds her own jumps.

THE CONSTRUCTION ZONE

15-Minute Jump

By Kim Duff, photos by author

I used to sell these jumps for $25 (before the jump cup strips came along). They are quick and easy to make, and they break down for easy storage and traveling. You can also combine these jumps to make double and triple jumps.

Materials

- 3 – 10 ft. lengths of 1" schedule 40 PVC
- 1 – Pair of Clip and Go Jump Cup Strips
- 2 –1" schedule 40 PVC 4-way tees
- 6 –1" schedule 40 PVC end caps
- Electrical tape or paint to color the jump bar (or not!)
- PVC cement

Tools

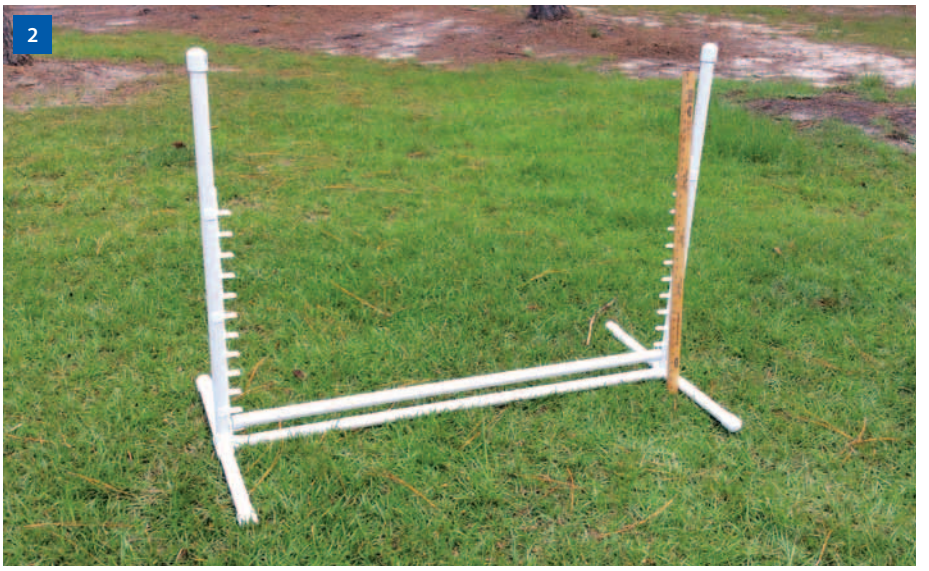
- Hack saw, plastic saw, or PVC pipe cutter
- Pencil or marker
- Measuring stick or tape

Directions

1. Cut the following pieces from the PVC pipe:
   - 2 – 4 ft. pieces for the ground bar and the jump bar.
   - 2 – 3 ft. pieces for the up rights.
   - 4 – 1 ft. pieces to make the feet to stabilize the jump.

2. Connect the four-way tees together using one of the 4 ft. pieces of pipe as shown in **Figure 1.**
3. Add 2 of the 1 ft.-long feet to each of the four-way tees.
4. Insert a 3 ft. upright in the remaining hole of each 4-way tee.
5. Place the caps on the top of the uprights and the ends of the feet.

6. Measure 27" from the ground and mark a line on each upright, then simply clip on a jump cup strip, lining up the top of the strip with the mark you made. See **Figure 2.**
7. Now that the jump is together and you know everything fits correctly, you can decide if you want to glue any of it together. I usually glue the uprights and the feet, but not the ground bar.
8. Stripe or paint the jump bar.
9. Get your dog!



I have probably been doing agility longer than anyone in this country. I started in England in 1984, a good two years before Ken Tatsch went over to England and came back to start USDAA. I love to run agility, but have added other dog sports to our lives these days. Dock diving, barn hunt and nose work. My dogs have competed in sheepdog trials and all have obedience titles. Older and hopefully wiser, I love hanging out with the dogs. I live with my husband and 4 dogs: three Border Collies and an ACD in Florida. I can be reached at kimcobblestone@gmail.com.