PVC is your Friend

Sid Price—Avian Ambassadors

The designs in this poster were inspired by an article by Barbara Heidenreich in the IAATE Flyer. Barbara's article was itself inspired by an idea from Joseph Shelnutt.

Barbara's article described a tall perch for parrot training, this poster expands the concept to in-mews and on-stage perches and furniture.

Avian Ambassadors

Base for Release Box Stand and Flight Perch

The release box stand and the flight perch both use the same design of base constructed from 1.5” PVC pipe and fittings.

To begin: cut 6 24” lengths of PVC pipe. Clean the ends of the pipe with fine grade sand paper to remove any burrs.

To assemble the base, glue a right-angle pipe fitting to 2 of the cut pipes and lay out these assemblies and a third pipe as shown in the photo on the left.

Carefully glue these 3 pieces together, keeping the whole assembly as square as possible. As an aid to keeping the assembly square it helps to work on a large flat surface.

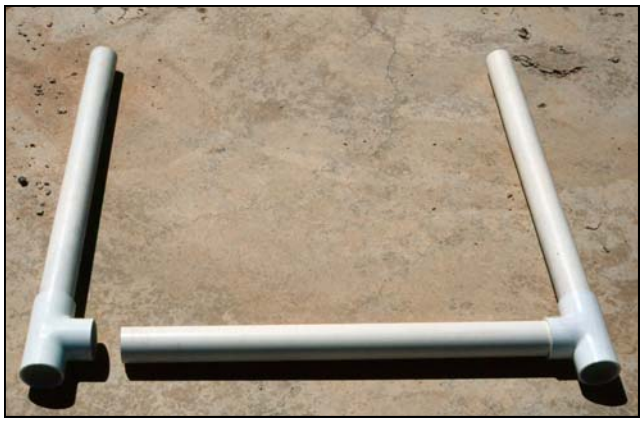
Make a second assembly following the steps outlined above and loose-fit (do **not** glue) two PVC tee-pieces to one of these assemblies. This will be used to hold the tee-piece square while it is glued to the other assembly. This is shown on the right. Glue the tee-pieces onto the assembly.

To complete the base assembly remove the assembly that was loose-fitted and glue the two parts together as shown on the left.

The base is now complete except for adding weight, this is described later.

The Flight Perch

The upper part of the flight perch uses a base unit and an upper assembly. Cut 6 24” lengths of PVC pipe and glue 3 of them with right-angle fittings as shown under the base construction section. Glue 2 tee-pieces to 2 of the remaining lengths of pipe and then glue these to the third piece as shown on the right.



To complete assembly of the upper perch glue the two assembled parts together. This upper part is then placed into the tee-pieces of the base to give the final assembled flight perch.

The lengths and size of PVC used may be varied to adjust for the required perch size.

Stabilizing the Perch

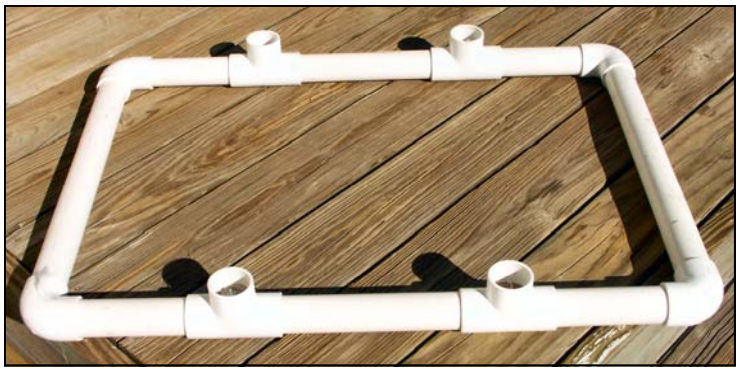
To prevent the perch from being knocked over or moved when a bird lands on it the base should be filled with sand. It is important to ensure that the base is filled completely, this may be done by pouring sand into the tee-pieces and shaking the base to distribute it. Once the base is filled the tee-piece opening should be filled with a silicone sealant, taking care to keep the opening clean for easy insertion of the upper perch assembly.

The Flight Stand

The flight stand uses a smaller base unit that has 4 tee-pieces to receive the vertical supports for the stand. Also, the verticals of the stand are **not** glued into the base or the top, this allows the stand to pack flat for transport.

The cutting list for the base and the top is:

1. 4 20” lengths
2. 4 11” lengths
3. 4 8” lengths
4. 4 2” lengths



To assemble the base glue a right-angle fitting to one end of each of the 8” lengths of PVC and then glue one of the 20” pieces between a pair of these, keeping the assembly as square as possible.

Using the same technique as described for the large base glue 2 tee-pieces to each assembly. Finally join these two assemblies with 2 of the 11” lengths. The completed base is shown above.

The top is assembled in a similar way using the remaining lengths of PVC.

To complete the top a rectangle of 0.25” plywood is fitted and covered with indoor/ outdoor carpet.

The verticals of the stand are cut to give the required height.

Like the large base the stand base should be filled with sand and sealed with silicone sealant.

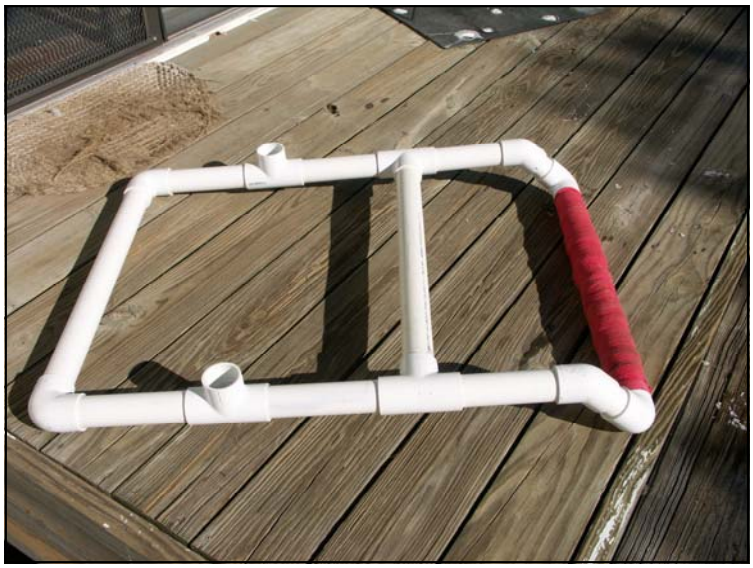
Release Box Stand

This stand uses the large base described for the flight perch. It has a more complex structure on the top of the stand in order to provide a place to fix a release box and provide a landing perch directly I front of the box.

The cutting list for the top of the stand is shown below. Remember that you may need to make adjustments to these dimensions to suit the box/crate used for release and also bird using it.

- 3 24” lengths
- 4 8” lengths
- 2 7” lengths
- 2 3” lengths

Begin by gluing a right-angle fitting to the ends of 2 of the 8” lengths. Join these assemblies by gluing a 24” length between them. Next, glue a right-angle fitting to one end of one of the remaining 24” lengths. Take the 2 remaining 8” lengths and glue a tee-piece to each, then, using the second 24” wide assembly to hold them square, glue the tee-piece assemblies to the first section built. Take the 2 7” lengths and glue a tee-piece to each one. Using one of the 24” wide assemblies to hold these two assemblies square, glue the remaining 24” length between the tee-pieces. Finally, glue a 45 degree elbow onto the 3” lengths and then join the two assemblies.



Cut two lengths of PVC to set the top at the required height. The crate is secured to the stand using bungee cords, and a pair of rear bungee cords may also be added to give the landing perch some “spring”.

Other Small Perches

By choosing a diameter of PVC pipe to suit the bird species a variety of perches may be designed both for show and mews use. The photo below show some perches in our pied crow (*Corvus albus*) mews.

Gluing PVC Pipe

The glue used for PVC pipe generally comes with a catalyst liquid to clean and prepare the two surfaces before gluing. The problem with the catalyst most commonly available is that it is usually purple or blue in color. If one is planning on using the perches on stage this looks a little unattractive. To get around this we recommended using acetone for surface cleaning and preparation. Immediately prior to gluing take a paper towel and clean the two surfaces with acetone. Then apply the PVC pipe glue according to the manufacturers directions.

Most PVC pipe also comes with all kinds of manufacturers names and codes printed on it. To remove this use the acetone on a paper towel. Be sparing with the acetone and change the paper towel often for best results. Use of too much acetone on the pipe may soften it too much and the surface will not look as good as it can.

Wrapping PVC Perches

The surface of PVC pipe is not suitable for perches so it is necessary to wrap them to make them safe and comfortable for the bird.

For a base wrap we use old tee-shirts, socks, or towels. The material should be cut or torn into strips between 2 and 4 inches wide. Variation in width and material type is good, it will help produce an uneven surface.

Using PVC tape attach the end of the first strip to one end of the perch and proceed to wrap the whole perch, allowing the material to bunch and overlay. Adjust how much material you wrap to build a thickness of perch that is suitable for the bird that will be using it. Pieces of material may be joined by simply wrapping the next piece over the previous or with PVC tape.

It is important that this layer of material is protected from moisture while cleaning or from the weather. This is achieved by wrapping a layer of PVC electrical tape over the base material. Carefully check that there are no gaps in the PVC tape layer, if you find a gap then wrap that area again with tape. The object is to seal the base layer with this protective tape layer.

To provide the surface that the bird will actually perch on a final layer of Vetwrap is wound over the perch. In order to absolutely distinguish any flight perch form a tethering perch we use Vetwrap ***only*** on flight perches, plus we make all the flight perches the same color just to add to ease of recognition in a crowded theatre situation. For tethering perches we replace the Vetwrap layer with Elasticon, medical bandage.

The exposed layer will wear and get food debris on it, it may be cleaned or replaced as required. The PVC intermediate layer should be disinfected when replacing the outer layer.