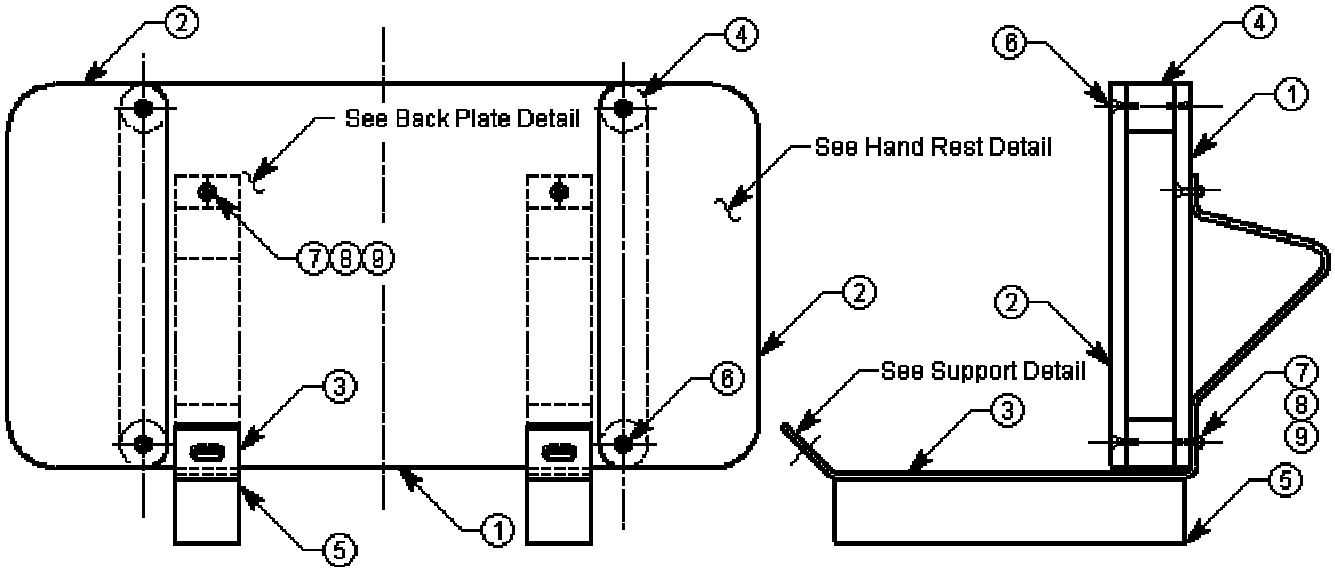
Transmitter Tray

The vast majority of R/C flyers control the sticks of the transmitter with their thumbs on the tops of the sticks. In most cases, this is out of necessity. The flyer must be able to grip the transmitter securely and still move the sticks. This results in the four fingers of each had being placed under the transmitter and the thumbs being used to move the sticks. Many people have found that more precise control can be gained by using the thumb and fore-finger to move the stick but this results in an unnatural grip on the transmitter. The transmitter tray can be used to support the transmitter and provide a place to rest the heel of the hands while the thumb and fore-finger are used for control.

A transmitter tray can be a simple device crafted by the flyer or a complex commercial device. The tray that is presented is relatively simple to build of readily available materials. It serves two (2) purposes. First and foremost, it cradles the transmitter allowing the pilot more precise control. Second, it allows the transmitter to be placed on the ground at a precise angle for manipulating the controls before a flight starts.

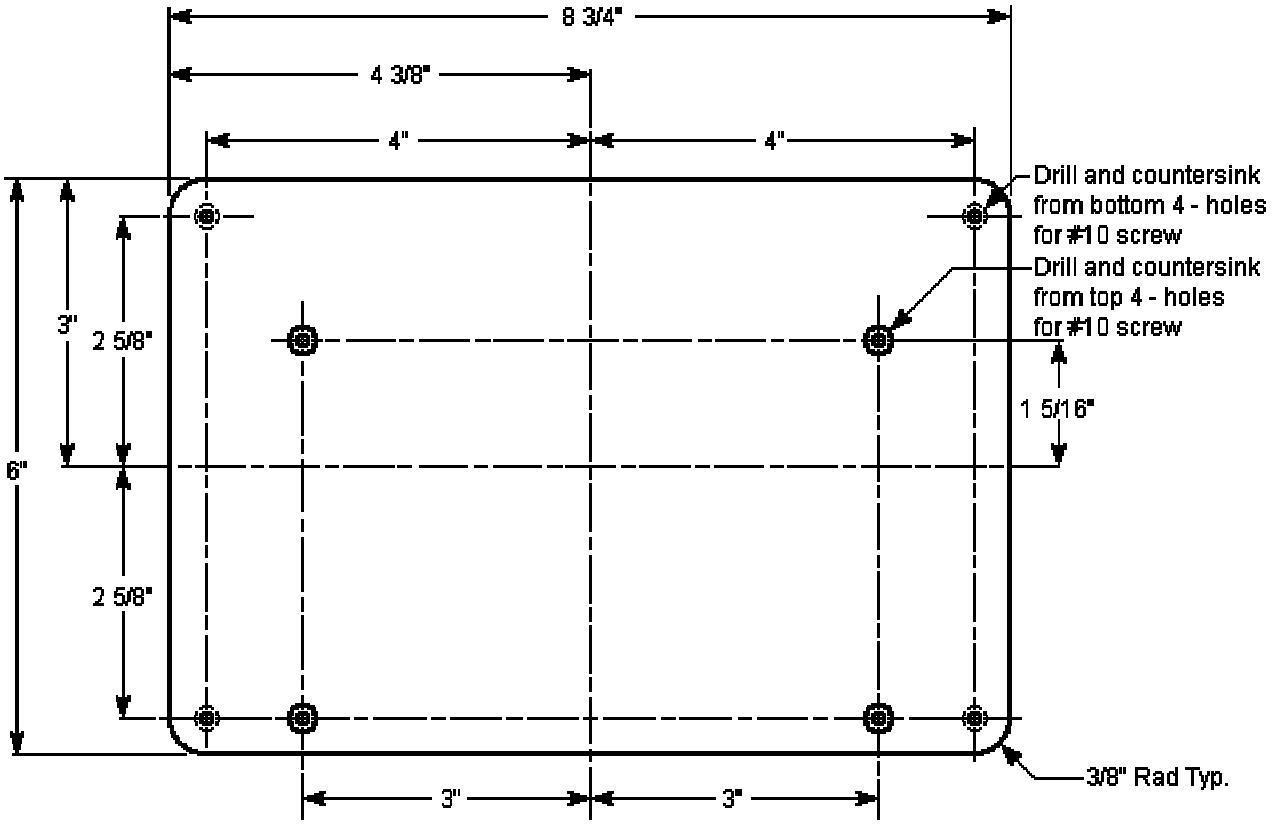


Bill of Materials

Materials listed are for one (1) complete assembly

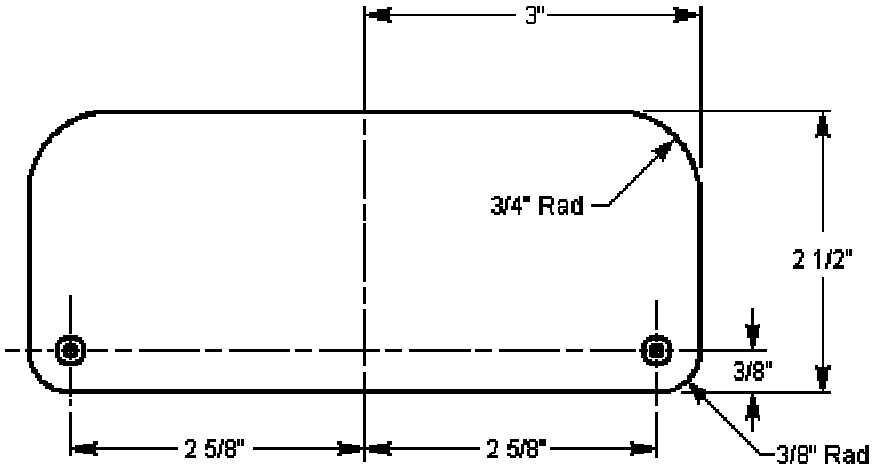
ITEM	QTY.	DESCRIPTION
1	1	1/4" x 6" x 8 3/4" Luaun Plywood
2	2	1/4" x 2 1/2" x 6" Luaun Plywood
3	2	3/32" x 1" x 14" Aluminum
4	4	3/4" Dia. x 3/4" Dowel
5	2	1" x 1" X 6" EPP Foam
6	8	#10 x 1/2" Flat Head Wood Screw
7	2	#10 x 1/2" Flat Head Machine Screw
8	8	#10 x 1/2" Flat Washer
9	8	#10 Hex Nut
	1	Camera Strap with Snap Hooks
	4	1" x 1" Velcro Strip

Construction begins with obtaining the materials required. There is nothing critical about the items listed. A good interior grade plywood can be substituted for the luaun plywood.



Back Plate

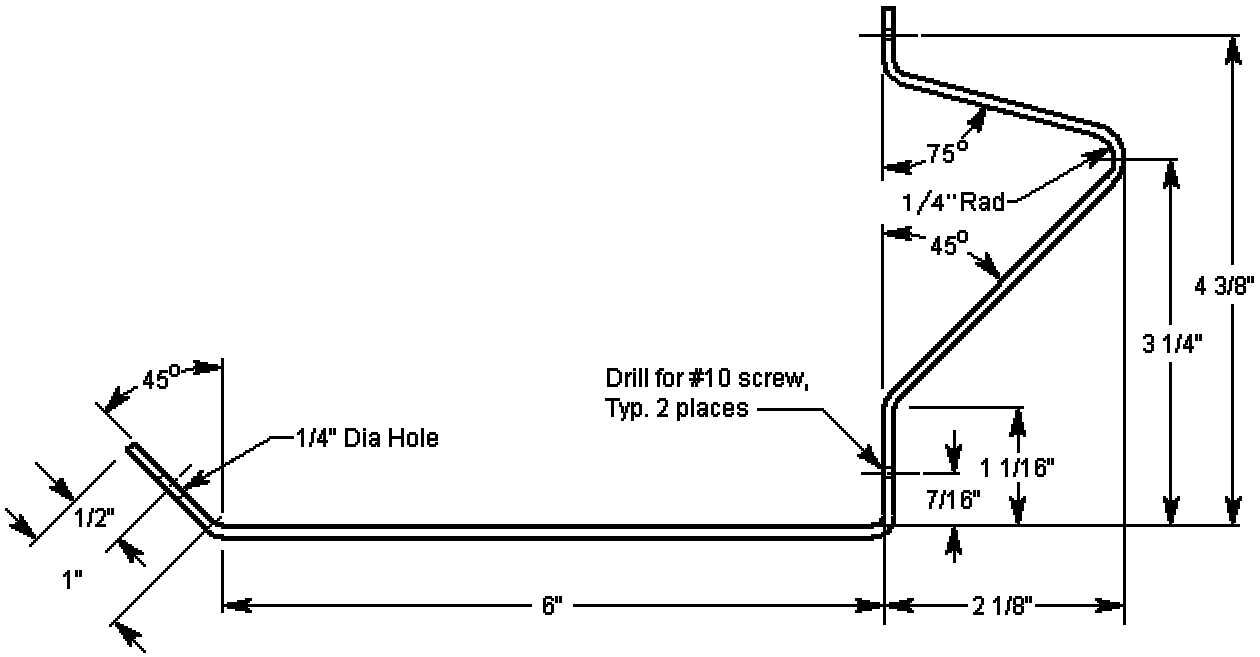
The back plate is first cut to size. A jig saw or coping saw can be used to cut the radii on the corners. The screw holes are then drilled and countersunk. Note that four (4) holes are countersunk from the top side and four (4) holes are countersunk from the bottom side. This is critical for proper assembly. Any holes that are required for clearance or access, such as for a buddy cord, can be or drilled at this time. It is recommended that the countersinks be covered generously with CA adhesive to seal and to add strength to those areas.



Hand Rest

The hand rests are then cut to size. Again, a jig saw or coping saw can be used to cut the radii on the corners. The screw holes are then drilled and countersunk. Both hand rests are the same except for the direction that they are assembled. Again, it is recommended that the countersinks be covered generously with CA adhesive to seal and to add strength to those areas.

The dowels are cut to length and the pilot holes for the wood screws are drilled. It is recommended that a drill press be used to drill the holes and that the holes be as near centre of the dowel as possible. All wooden parts should be sanded with 320 grit or finer sandpaper and finished with a polyurethane based or other appropriate finish. This is to seal the wood to protect it from being stained by the model fuel.



Support

The aluminium supports are then cut to length and bent to shape. It is best to start with the 1" bend at the top of the support. The bend radius should be no less that the thickness of the material to avoid stress cracks in the material. The dimensions of the locations of the bends are not very critical but both pieces should be the same in order for the tray to sit properly on the ground and to hang properly from the strap. The holes for the screws can be marked using the back plate as a guide to assure that proper alignment will be achieved.

Finally, the components are assembled according to the detail. The components should *not* be glued together at this point. The screws will adequately hold the assembly together. A good grade of contact cement or a double stick carpet tape is used to attach the EPP (expanded polypropylene) foam to the vertical members of the support. Clipping the camera strap to the vertical members of the support completes the assembly.

The transmitter is mounted to the tray using the squares of Velcro. These should be the pressure sensitive type so that the squares are attached to the back of the transmitter and then the transmitter is placed on the tray thereby attaching the second Velcro half to the tray.

After the tray is used a few times, it may be found that the hand rests need to be raised or lowered slightly. This is done by using longer or shorter dowels until the most comfortable and natural height has been obtained. When this point is reached, the assembly can be permanently glued together.

Transmitter trays have proven to improve the flying abilities of some people. The only precaution that is required is to avoid getting the strap in the prop when the engine is running. This is true for any piece of loose material, clothing, etc. This particular tray is very inexpensive and very simple to build. It will hold the transmitter precisely at 35 degrees when placed on the ground. It may be worthwhile to at least try one.