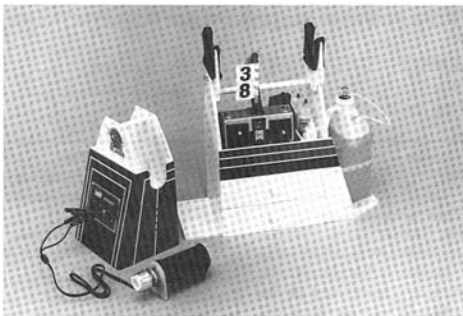


MASTER CADDY

with
AUXILIARY POWER STATION (APS)

ASSEMBLY INSTRUCTIONS



The most convenient field box available!

PLEASE READ THROUGH THIS INSTRUCTION BOOKLET IN ITS ENTIRETY BEFORE BEGINNING ASSEMBLY. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS PRODUCT.

WARNING!

Assembly and operation of this flight box must be done by or under the direct supervision of a responsible adult. It is your responsibility and yours alone to assemble this kit correctly, properly install all electrical components, and to test and use it in a safe and responsible manner.



P.O. BOX 788 URBANA, ILLINOIS 61801 (217) 396-8970

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INTRODUCTION

Thank you for purchasing the GREAT PLANES MASTER CADDY! The MASTER CADDY with its detachable APS (Auxiliary Power Station) is the most convenient field box available. You will not only be able to neatly carry all your flying equipment to the field, but thanks to the APS, you will also be able to start your engine on the flight line or wherever you wish, without carrying the whole field box around.

PRECAUTIONS

You must be very careful when assembling this kit and when working with the adhesives and tools to keep from hurting yourself or damaging personal property.

Take your time and build the MASTER CADDY according to these instructions and you will end up with a straight, nice looking field box that you will be proud to take to the flying field.

You must exercise extreme caution when installing or storing any electronic items on or in your MASTER CADDY.

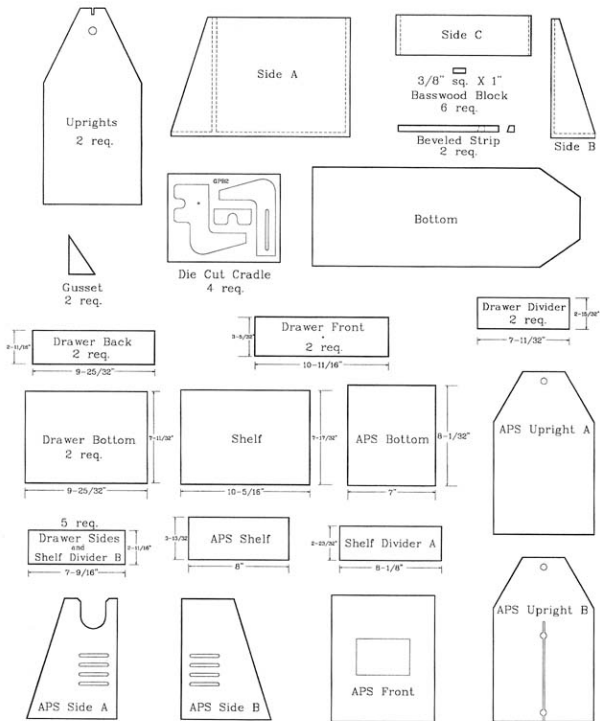
- When mounting a power panel or electric fuel pump make sure the leads can not short out, which could cause sparks or excessive heat.
- Do not allow your glow plug driver, battery or any electrical device to be stored in your MASTER CADDY without the proper insulation in place to prevent short circuits.

Model airplane fuel is **highly flammable and explosive!** Extreme care should be taken at all times. Do not allow anyone to smoke, bring any flame near or allow anything that could set off a spark near the fuel container. If fuel leaks out of its container and onto the MASTER CADDY, clean everything thoroughly being very careful not to ignite the fuel. Model airplane fuel burns very quickly, and cleanly, with a flame that is almost invisible.

Never use the cradles to hold the model while the engine is running. The cradles were designed for holding the plane while assembling and working on it.

PARTS DRAWINGS

Use this drawing to identify and mark each part BEFORE beginning construction



TOOLS NEEDED FOR ASSEMBLY

- “Thick” C/A Glue or 5 - 15 Minute Epoxy
- “Thin” C/A Glue
- C/A Accelerator Spray
- Sanding block
- Several Grades of Sandpaper (80, 120, 220)
- Drill and Bits (5/64", 1/8", 1/2")
- Pen or Pencil
- Screwdriver
- Modeling Knife
- Masking Tape
- Scissors

FINISHING MATERIALS

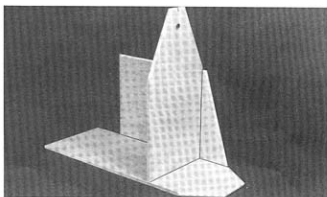
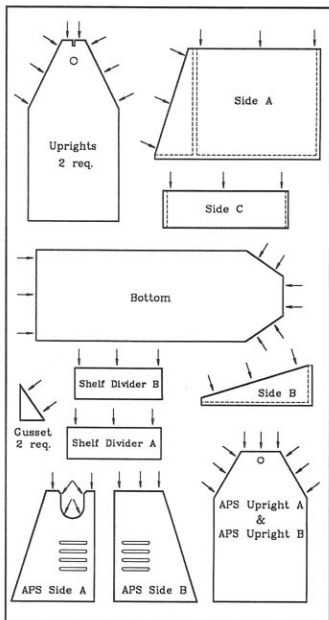
- Small Can of Wood Filler
- Small Can of Wood Sealer (Polyester Resin, Coating Epoxy, Clear Polyurethane etc.)
- Paint (Epoxy or Polyurethane) or Wood Stain
- Thinner for the Paint or Stain
- 400 Grit sandpaper
- Brushes and Mixing Cups if Needed

CONSTRUCTION

MAIN CADDY

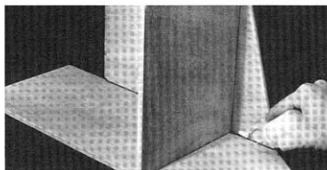
Note: if you are going to use a natural wood stain on your MASTER CADDY, be very careful when applying glue during construction. The stain will not penetrate the wood where glue has been applied or spilled and it will leave a discolored spot.

- 1. Sand the edges of the pieces shown in the following sketch to a rounded shape similar to the cross section shown at the right. The sketch in the next column has arrows pointing to the edges to sand. These edges will be exposed on the completed field box and should be sanded to prevent splinters and to look nice.

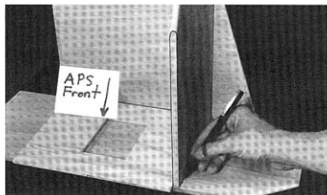


- 2. Trial fit side A in place on the bottom. Line up the edge of side A with the corner of the bottom as shown in the photo. Use one of the uprights to hold it perpendicular. When familiar with the positioning of the side,

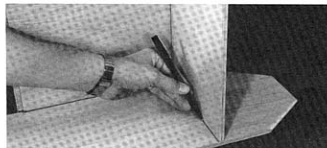
remove it and apply a generous bead of glue along the bottom groove in side A. Replace the side and allow the glue to cure. If you are using C/A, a spray of C/A Accelerator will speed up the process.



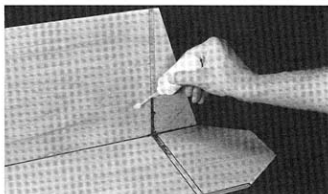
- ☐ 3. Apply a bead of glue along the joint to help strengthen the assembly. Do not get any glue on the upright yet.



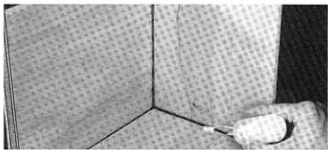
- ☐ 4. Use one of the larger pieces such as the APS front to position the upright perpendicular to side A. Draw a line on the bottom along the edge of the upright.



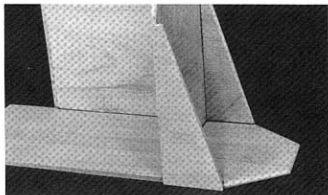
- ☐ 5. Remove the positioning piece and draw a line along the other bottom edge of the upright.



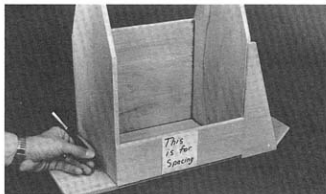
- ☐ 6. Apply a generous bead of glue in the groove and between the two lines you just drew. Position the upright in place and allow the glue to cure. This upright will be referred to as the "first upright".



- ☐ 7. Apply a bead of glue along both sides of the upright for extra strength.



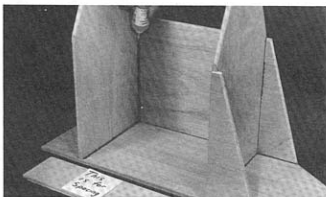
- ☐ 8. Trial fit side B in place. Apply a generous bead of glue along both grooves in side B and glue it in place.



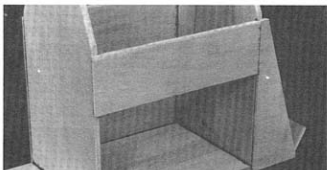
□ 9. Use side C to help position the remaining upright. Notice that side C will only fit correctly one way, with the larger groove toward the unglued upright. Draw a line on the bottom along both the inside and outside bottom edges of the upright.



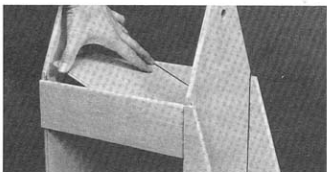
□ 10. Remove the upright and apply a generous bead of glue down the groove in side A and between the lines you just drew on the bottom. Replace the upright and again use side C to hold the upright in position while the glue cures. This upright will be referred to as the "second upright".



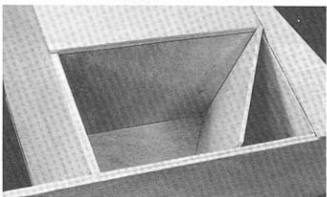
□ 11. After the glue has cured, remove side C and apply a bead of glue along the glue joints of the upright.



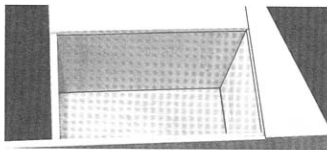
□ 12. Apply a bead of glue to the two grooves in side C and glue it in place. It should line up with the top of side B and be parallel with the top edge of side A. Sand the edges of side A and side C flush with the second upright.



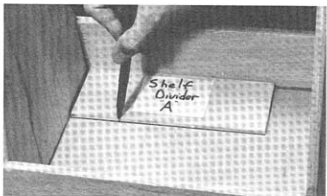
□ 13. Trial fit the shelf in place between the uprights. Sand the edges if necessary for a good fit.



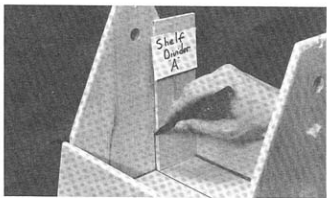
□ 14. The shelf should line up with the bottom of side C and be parallel with the bottom of the MASTER CADDY. An easy way of doing this is to use the APS bottom. Slide it into the drawer opening and up square against one of the uprights to hold the shelf while you tack glue that end in place. Be careful not to glue in the APS bottom. Slide the APS bottom to the other end of the drawer opening and tack glue that end in place.



- 15. Remove the APS bottom and apply a bead of glue around the shelf to securely glue it in place.

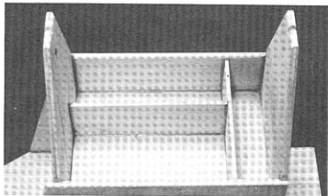


- 16. The compartment which will hold your transmitter should be laid out now. It is best to put it on the same side of the MASTER CADDY as the drawers so you won't hit the transmitter sticks on your leg when you carry it. Use shelf divider A as a spacer and draw a line down the long edge of the divider. Remove the divider and test fit your transmitter in place to make sure it fits. This method makes a compartment approximately 2-5/8" wide which will hold most transmitters. You can put this divider any distance you wish from the side.

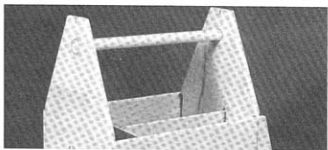


- 17. Use the divider again to mark a vertical line on one of the uprights (it does not matter which one). It just

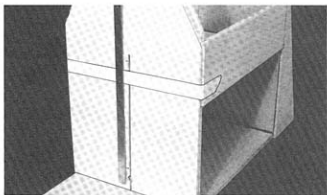
depends on where you would like the compartment to be. We marked the upright closest to the fuel compartment.



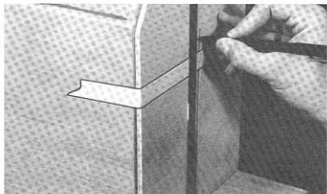
- 18. Glue shelf divider A in place and then glue shelf divider B in place against the end of divider A. With the compartments laid out as shown, you will have a compartment for your transmitter, a compartment for glues and small tools, and the remaining compartment is large enough for your voltmeter, field charger and all kinds of larger support items that most field boxes would have to leave behind.



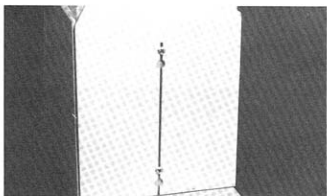
- 19. Slide the wooden dowel handle through the hole in one upright and into the hole in the other upright. If the fit is too tight to slide the dowel through, sand the hole to enlarge it slightly. Glue the dowel in place and sand off any excess dowel flush with the uprights.



□ 20. Tape APS upright B onto the second upright so that it is centered between side A and side C and resting on the bottom. Tape or hold a ruler along the side of the slot in the APS upright.



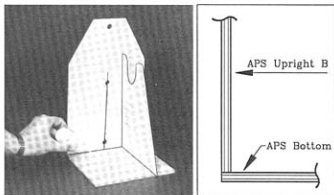
□ 21. Make marks on the second upright 1/2" above the top edge of both holes in the APS upright. This is where the screws will go to hold the APS in place.



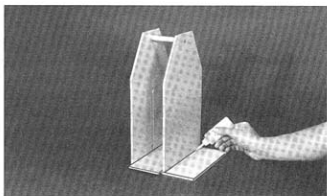
□ 22. Drill a 1/8" diameter hole where you made your marks. You can leave the APS upright in place while you drill the holes, to help keep them centered. Screw the #8 x 5/8" screws into the holes but leave them extended enough so you can remove the APS upright by raising it up so the screw heads pass through the holes.



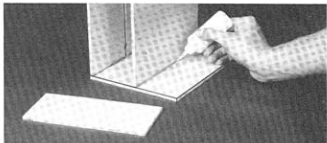
APS CONSTRUCTION



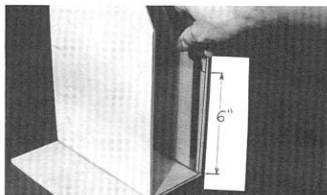
□ 1. Glue the APS upright B to the APS bottom. The upright should be lined up with the back edge of the APS bottom, and you should use one of the APS sides to keep the upright perpendicular.



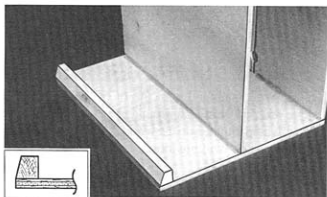
□ 2. Use the APS shelf and the 1/2" Dowel APS Handle to position APS upright A and tack glue the upright in place. It should be lined up with the edges of the APS bottom.



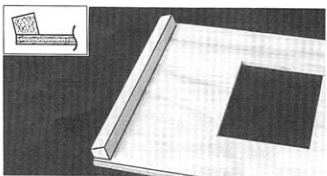
□ 3. Remove the APS shelf and apply a generous bead of glue along both sides of the joint to securely glue upright A in place.



- ☐ 4. Make a mark on the inside of each upright 6" from the bottom. Temporarily position the shelf in place at these marks and then check to make sure your battery will fit in this space. You can adjust the height as necessary but do not put the shelf above the bottom of the top hole in upright B without making a clearance slot in the shelf for the screw to pass. When satisfied with the position of the shelf, securely glue it in place. Glue the dowel handle in place.

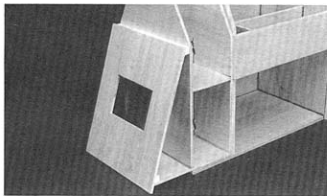


- ☐ 5. Glue one piece of the tapered basswood strip to the edge of the APS bottom as shown in the photo. The slanted edge of the strip goes toward the front edge of the bottom.

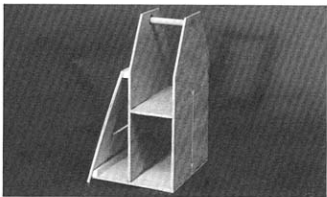


- ☐ 6. Glue the slanted face of the remaining tapered basswood strip to the top back edge of the APS front.

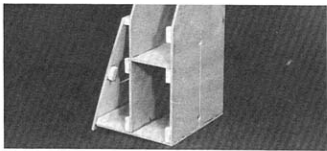
The tapered strip should be centered between the side edges and lined up along top edge of the APS front. It does not matter which end of the APS front is the top since the cutout is centered, but you should use the best looking side for the face.



- ☐ 7. On a nice flat work surface, install the APS in place on the caddy and make sure it is seated properly. Glue the APS front to the tapered strip and the upright so the bottom edge of the APS front is resting on the work surface.

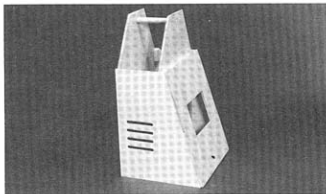


- ☐ 8. When the APS is removed it should look like the photo above.

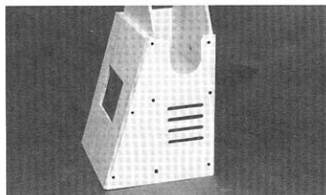


- ☐ 9. Glue the six $\frac{3}{8}$ " x $\frac{3}{8}$ " x 1" basswood blocks in place as shown in the photo. **IMPORTANT** - The

five blocks that are glued to the uprights should be lined up with edge of the uprights, but the block that is glued to the front should be spaced in far enough to allow for the thickness of the APS side (approx. 1/8").



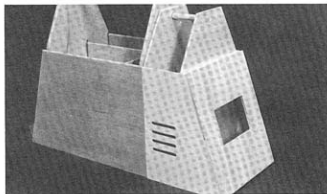
□ 10. Glue the APS side B in place. The top edge should line up with the top of the front and the side should be pressed up tight against the front. Do not worry about lining up the other edges. You will sand those later to fit the caddy.



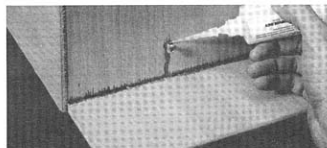
□ 11. Mark the locations of the basswood blocks on APS side A by using a ruler and measuring from different sides to figure out where the blocks are. Hold or tape APS side A in position and drill eight 5/64" holes through the side and into the basswood blocks. Remove the APS side and enlarge the holes you just drilled in the APS side to 1/8" diameter. Attach the side with eight #4 x 3/8" sheet metal screws.



□ 12. Trial fit the APS onto the MASTER CADDY. You may have to sand the back edges of the APS Sides so they will match the sides of the caddy. You should tighten or loosen the two retaining screws until the APS slides on and off easily but is still held firmly in place.

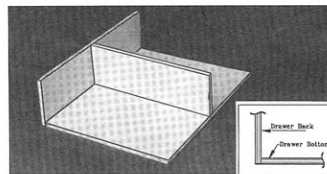


The APS should actually rest on the bottom of the caddy (all the screws do is hold the APS against the caddy upright). You may also have to sand the bottom edges of the APS to make them match up with the bottom edges of the caddy sides.

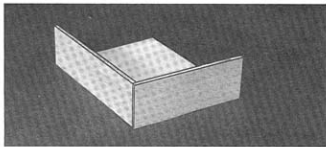


□ 13. When satisfied with the fit of the APS, put a couple drops of thin C/A around each retaining screw. This will help toughen up the wood in this area and keep the screws from working loose.

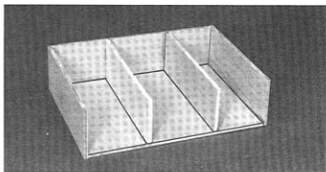
DRAWER ASSEMBLY



□ 1. Glue one of the drawer backs to the long edge of one of the drawer bottoms. Use one of the drawer sides to keep the drawer back perpendicular to the drawer bottom.

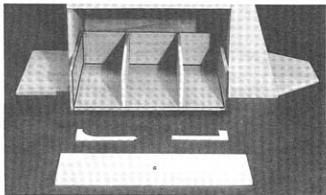


- 2. Glue one of the drawer sides in place against the side edges of the drawer back and the drawer bottom. Glue the other drawer side in place



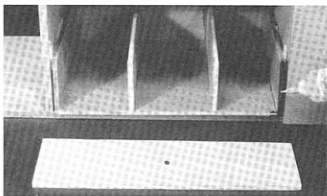
- 3. Glue the two drawer dividers in place. These dividers can be positioned anywhere and in any drawer you prefer. We put both of the dividers in one drawer so we can carry large props in the other drawer. **NOTE-**do not add the drawer fronts yet!

- 4. Assemble the other drawer in the same sequence that you just assembled the first drawer.

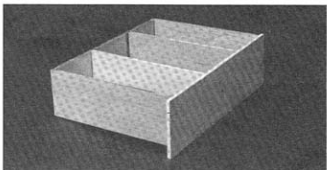


- 5. Break off a couple scrap pieces of 1/8" plywood from the die cut cradle sheet similar to those in the photo.

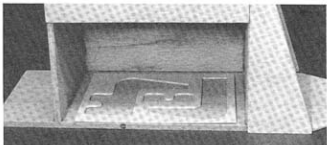
- 6. Use the 1/8" plywood scraps to center the drawer in its space and push the drawer in so that it only sticks out about 1/8". If the 1/8" shims are too thick you can use some cardboard or similar type material for this purpose.



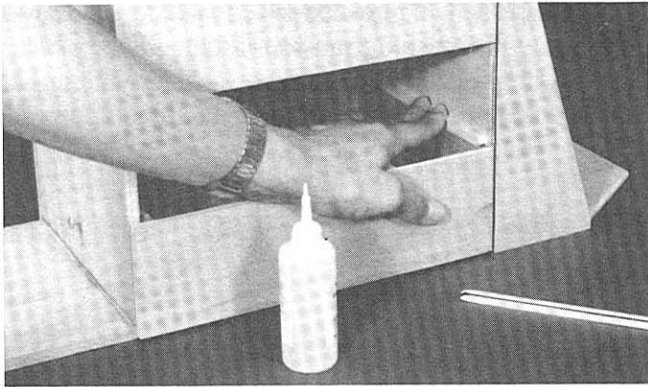
- 7. Apply a couple of drops of thick C/A on the front ends of each drawer side and immediately push the drawer in slightly with the drawer front. At the same time position the drawer front so it is properly positioned in relation to the caddy. Spray some C/A accelerator inside the drawer to cure the glue and then very carefully remove the drawer from the caddy.



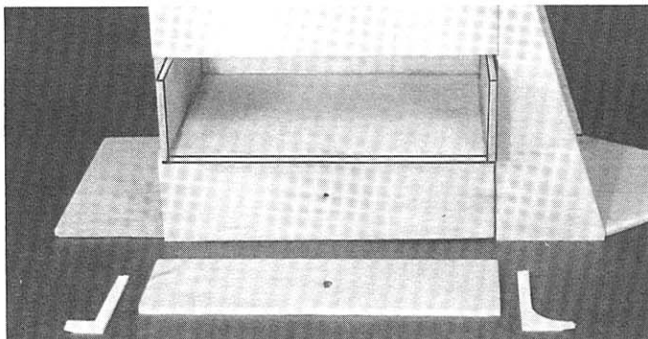
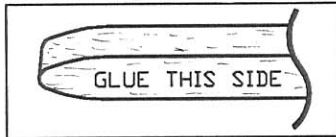
- 8. Check the alignment of the drawer front with the rest of the drawer and if satisfied, apply a generous bead of glue around the inside joints.



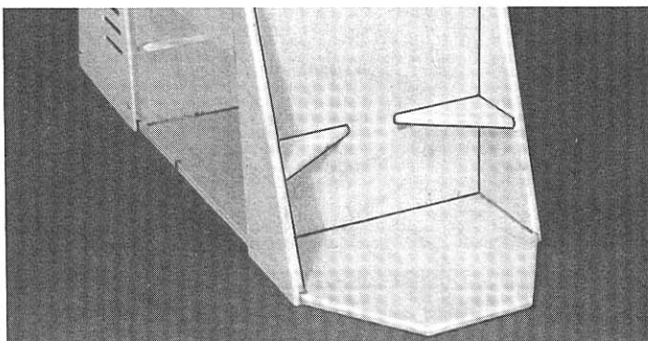
- 9. Punch out the three cradle pieces from one of the die cut cradle sheet and lay the remaining "skeleton" in the bottom of the drawer space. This will be used to properly position the top drawer.



- 10. Slide the bottom drawer in over the top of the die cut sheet. Sand one end of each 1/4" sq. drawer support to a slight taper as shown in the sketch on the right. Apply glue to **one** side of each support and glue it to the upright, being very careful **not** to glue the support to the drawer. The supports should rest on top of the **drawer** sides until the glue has cured. Remove the bottom drawer and remove the die cut sheet. Replace the bottom drawer.

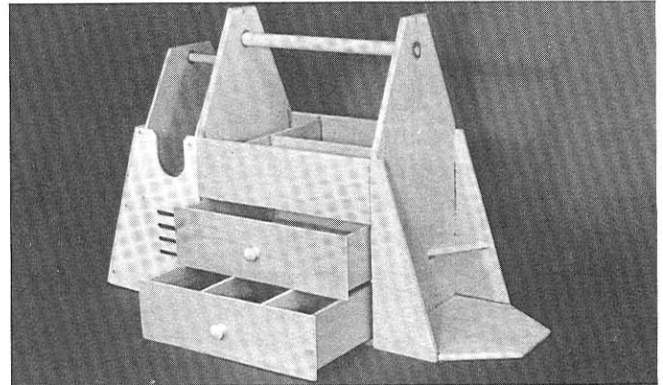


- 11. Slide the top drawer into its slot and use the 1/8" scraps used earlier to center the drawer. Test fit the **drawer front** in place and sand if necessary to make it fit nicely. When satisfied with the fit, glue it in place following the same sequence you used for the bottom drawer.

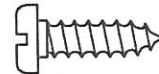


- 12. If you are going to use a round plastic fuel con-

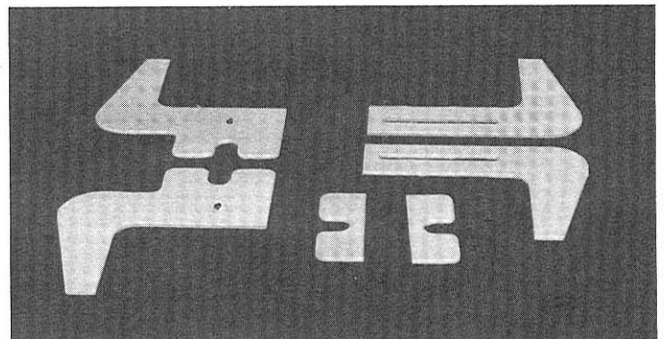
tainer, glue the **plywood gussets** in place approximately 3" above the bottom. If you are using a metal fuel container, do not use the gussets.



- 13. Remove both drawers and install the wooden knobs using the #10 x 5/8" screws. Do not use any glue on the knobs until after the **MASTER CADDY** has been finished.

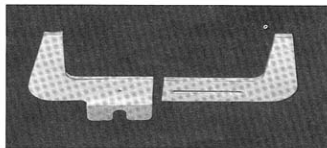
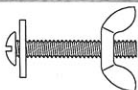
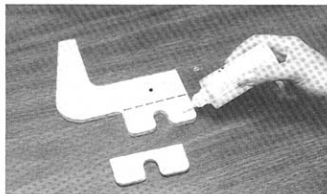


CRADLES



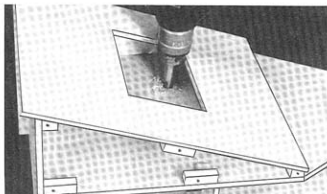
- 1. Punch out the remaining sets of cradles from the 1/8" die cut sheets. You should have four "sets" of these. It takes two sets (as shown above) to assemble one cradle.

- 2. The two sets of cradles shown in step #1 should be laminated to make one cradle as shown at the top of the next page. The two small doublers should be glued together and then they should be glued to the cradle half with the hole in it.



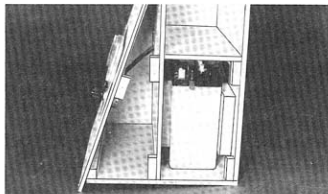
☐ 3. Test fit the cradle assembly to the MASTER CADDY using the 10-24 x 1-1/4" bolt, a #10 washer and a 10-24 wing nut. Assemble the other cradle, but glue the small doubler on the opposite side of the cradle since this cradle will face the other direction when mounted on the caddy. The foam tube cushion will not be added until after the cradles are finished.

MOUNTING THE POWER PANEL, FUEL PUMP AND FUEL CONTAINER



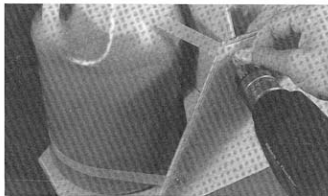
☐ 1. Test fit your power panel into the cutout in the APS front. The cutout was designed to fit, without

modification, one of the smaller power panels on the market so you may have to cut or sand the opening larger to fit your power panel. Once you have the opening shaped to fit your panel, determine where the battery leads will go and drill an appropriately sized hole in APS upright A for the wires to pass through.



☐ 2. The battery should be packed in foam rubber or something similar to hold it so it does not slide around inside the compartment. Foam can also be glued to the APS sides, but do not cover up the vent holes, as air needs to flow through the compartment to keep flammable gases from building up.

☐ 3. Plan where you are going to mount your fuel pump and if it's an electric one, decide where the wires should run. It is a good idea to temporarily mount the fuel pump and then remove it before painting your MASTER CADDY.



☐ 4. Use a modeling knife or scissors to split the nylon strip down the middle and into two pieces 17" long. Drill a 1/8" hole through each nylon strap about 1/2" from one end. Drill two 5/64" holes in one side of the MASTER CADDY for the strap screws. You can

position these straps wherever you prefer but the farther apart they are spaced, the better they will hold the fuel container. Use a #4 x 3/8" sheet metal screw along with a #4 washer to secure each strap in the holes you just drilled. Pull the straps snugly around your fuel container and drill the 5/64" holes on the other side of the MASTER CADDY. Use the two remaining #4 x 3/8" screws and #4 washers to secure the fuel container.

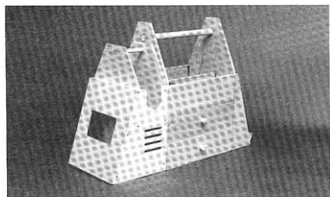
FINISHING

It is very important that you apply some type of finish to your MASTER CADDY. If it is not finished it will become dirty and fuel soaked very quickly. There are three different types of finishes you can apply to your MASTER CADDY. A clear, natural looking finish, A stained, natural looking finish, or a painted finish.

CLEAR FINISH - Seal the wood with either polyester resin, coating epoxy or clear polyurethane.

STAINED FINISH - Apply the stain first and then seal the wood with either polyester resin, coating epoxy or clear polyurethane

PAINTED FINISH - Fill the wood with a wood filler. Seal the wood with a light coat of either polyester resin, coating epoxy or polyurethane. Then, use several coats of primer to fill the grain completely. Apply your choice of **fuelproof** paint but make sure it is compatible with the primer you used.

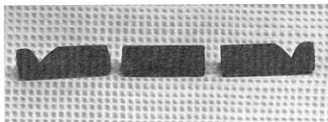
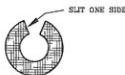


- 1. Whichever finish you choose, it is important that you take your time and properly prepare the surfaces to

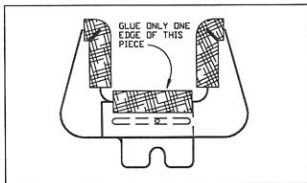
achieve a nice smooth appearance. Use some wood filler compound to fill any gaps in the wood or seams. Remove all knobs and screws, and disassemble the cradles so that it is easier to sand and paint the surfaces. Sand all surfaces with 400 grit sandpaper before each coat of paint. Be careful not to sand through to the bare wood when sanding, especially around the corners.

- 2. When painting the MASTER CADDY, it is a good idea to use primer for a base coat. It will help fill the grain and will give a consistent color to all surfaces. The mahogany plywood used in this kit can vary in color quite noticeably, which can make the same color of paint look like several different colors when applied to wood that is not primed.

FINAL ASSEMBLY



- 1. Use a scissors to slit one side of the foam tubing in a straight line from one end to the other. Cut four pieces of foam tubing 3-1/2" long and two pieces 4-1/2" long. Cut a 90 degree notch 1/2" from one end of each 3-1/2" piece as shown in the photo. The notch should be centered along the lengthwise slit.



- 2. Glue the 3-1/2" long pieces of tubing to the four cradle halves with C/A glue, and use Accelerator to speed

up the curing. Install the cradle assemblies on the MASTER CADDY. Slide the 4-1/2" long pieces onto the cradles as shown above and glue **only one side of the foam to one of the cradles**. The other cradle has to be free to slide under the foam tube.

□ 3. Cut the Velcro strip in half and separate the pieces. Peel the backing off one piece and stick it firmly on the back of the bottom drawer. Gently touch the opposite piece of Velcro to the piece on the back of the drawer, but put a scrap of paper between the two pieces so that it covers approximately 3/4 of the surfaces. This will help the second Velcro piece stick to the caddy. Peel the backing off of the second piece of Velcro and slide the drawer into its slot. Push the drawer against its stops and then gently pull the drawer out. The Velcro should have stuck to the caddy. If it did not, manually stick it on the caddy by estimating where it should be and pressing it in place. In either case, when you have it properly positioned, firmly press it in place. The adhesive used on the Velcro will hold more strongly with time. If the Velcro does not catch when the drawer is in place, you can add a shim between the Velcro and the Drawer Back to help the Velcro grab.

NOTE - If you would like to keep your newly finished MASTER CADDY from sitting directly on the ground we suggest the addition of small plastic or rubber feet which are available at your local hardware store.

This completes the assembly of your **GREAT PLANES MASTER CADDY**. We hope your building experience was enjoyable.

**GOOD LUCK
and
HAPPY FLYING!**

PARTS LIST

STOCK # QTY. DESCRIPTION

DOWEL028	1	3/4" X 11-1/6" Dowel Handle
DOWEL029	1	1/2" X 3-13/16" Dowel APS Handle
FOAM007	1	Foam Cradle Cushion
GPB2F01	1	9mm Plywood Side A
GPB2F02	1	9mm Plywood Side C
GPB2F03	1	9mm Plywood Bottom
GPB2F04	2	9mm Plywood Upright
GPB2F05	1	5.2mm Plywood Shelf
GPB2F06	1	5.2mm Plywood Shelf Divider A
GPB2F08	2	5.2mm Plywood Drawer Bottom
GPB2F09	2	5.2mm Plywood Drawer Front
GPB2F10	2	5.2mm Plywood Drawer Back
GPB2F11	2	5.2mm Plywood Drawer Divider
GPB2F12	5	5.2mm Ply Drawer Side & Divider B
GPB2F13	2	9mm Plywood Gusset
GPB2F14	1	9mm Plywood Side B
GPB2T14	1	5.2mm Plywood APS Shelf
GPB2T15	1	5.2mm Plywood APS Upright A
GPB2T16	1	5.2mm Plywood APS Upright B
GPB2T17	1	5.2mm Plywood APS Front
GPB2T18	1	5.2mm Plywood APS Bottom
GPB2T19	1	3mm Plywood APS Side B
GPB2T20	1	3mm Plywood APS Side A
GPB2T21	2	8" Beveled Basswood Strip
GPB2T22	6	3/8" SQ. X 1" Basswood Block
GPB2T23	2	1/4" SQ. Drawer Support
GPB2H25	4	1/8" Plywood Die-Cut Cradles
NYLON51	1	Nylon Strip
GPB2P01	1	Instruction Book

GPB2M01 1 SUB-PACK HARDWARE

KNOBS01	2	Wooden Drawer Knob
NUTS017	2	10-24 Stamped Wing Nut
SCRW043	12	#4 X 3/8" Slotted Screw
SCRW049	2	10-24 X 1-1/4" Bolt
SCRW050	2	#10 X 5/8" Slotted Screw
SCRW054	2	#8 X 5/8" Phillips Head Screw
VELCRH01	1	VELCRO Hooks Strip 3"
VELCRL01	1	VELCRO Loops Strip 3"
WSHRO05	4	#4 Flat Washer
WSHRO09	2	#10 Flat Washer

If any parts are missing, broken or defective, or if you have any questions about building this kit, please call us at (217) 398-8970 and we will be glad to help. If you are calling for replacement parts, please look up the part numbers and the kit identification number (stamped on the end of the carton) and have them ready when calling.